

**2021 SEMI-ANNUAL GROUNDWATER MONITORING AND  
CORRECTIVE ACTION REPORT**

**ALABAMA POWER COMPANY  
PLANT GADSDEN  
ASH POND**

**January 31, 2022**

Prepared for

Alabama Power Company  
Birmingham, Alabama

By

Southern Company Services  
Earth Science and Environmental Engineering



## CERTIFICATION STATEMENT

This 2021 *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.



01/31/2022

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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 2021 Semi-Annual Groundwater Monitoring and Corrective Action Report has been prepared to document groundwater monitoring activities and results from the October 2021 semi-annual monitoring event at the Alabama Power Company (APC) Gadsden Electric Generating Plant (Plant Gadsden) 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 § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6). Additionally, in an effort to streamline and provide more thorough reports to ADEM, APC requested approval to combine the information provided in the Semi-Annual Progress Reports described in Part F of AO No. 19-104-GW into the Semi-Annual Groundwater Monitoring and Corrective Action Reports on March 15, 2021.

The Semi-Annual Progress Reports have historically been provided to the Department in May and November. ADEM approved this approach and revised timeline for submittals on March 16, 2021. APC will now provide the Department with the combined semi-annual reports in February and August of each year.

The CCR unit began the monitoring period in Assessment Monitoring pursuant to 40 CFR § 257.95 and ADEM Admin. Code r. 335-13-15-.06(6). 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 2021 first semi-annual monitoring event. The following summarizes semi-annual groundwater monitoring activities at Plant Gadsden Ash Pond:

- Completed the installation and development of five additional vertical delineation wells (GSD-AP-MW-2VC, GSD-AP-MW-21VB, GSD-AP-MW-21VC, GSD-AP-MW-22VB, and GSD-AP-MW-23VB) as part of Phase III delineation efforts between August 17, 2021, and September 30, 2021.
- Completed the first semi-annual assessment groundwater sampling event between October 4, 2021, and October 12, 2021.
- Continued the evaluation of monitored natural attenuation (MNA) and geochemical manipulation as potential groundwater remediation technologies for the Site as described in the Semi-Annual Remedy Selection and Design Progress Report for the ACM submitted in June 2021 in accordance with § 257.97(a) and ADEM Admin. Code r. 335-13-15-.06(8)(a).
- Submitted the Groundwater Remedy Selection Report in accordance with § 257.97, ADEM Admin. Code r. 335-13-15-.06(8), and Part C of AO No.19-104-GW on October 29, 2021.
- Submitted a Corrective Action Groundwater Monitoring Program document presenting the groundwater corrective action remedies to be implemented at the Site to meet § 257.98 and ADEM Admin. Code r. 335-13-15-.06(9) on January 27, 2021.
- 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 assessment monitoring and APC will begin implementing 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:

- Collect soil and groundwater samples for treatability studies using Site aquifer media and impacted groundwater prior to field implementation of an injection treatment pilot study.
- Conduct batch studies for reagents and doses.
- Conduct column studies for effectiveness.
- Prepare Class V UIC permit.
- Conduct the first semi-annual assessment monitoring event of 2022 and submit the annual groundwater monitoring and corrective action report summarizing the findings to ADEM by August 1, 2022.

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

Assessment Monitoring Initiated: July 16, 2019  
 Monitoring Period: August 1, 2021 - December 31, 2021  
 Beginning Status: Assessment  
 Ending Status: Assessment

<b>Statistical Analysis Results *</b>	
<b>Appendix III SSIs</b>	
<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, and GSD-AP-MW-11
Calcium	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, 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, and GSD-AP-MW-10
Fluoride	GSD-AP-MW-5, GSD-AP-MW-10, and GSD-AP-MW-11
pH	GSD-AP-MW-12
Sulfate	GSD-AP-MW-1 and GSD-AP-MW-3
TDS	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-11, and GSD-AP-MW-12
<b>Appendix IV SSLs</b>	
<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.	
<b>Assessment of Corrective Measures &amp; Groundwater Remedy</b>	
<b>Assessment of Corrective Measures</b>	
Date Initiated: April 11, 2020 Date Complete: July 10, 2020 Public Meeting Date: October 19, 2020	
<b>Groundwater Remedy</b>	
Selected During Period: Yes Selection Date: October 2021 Initiated During Period: No Ongoing During Period: No	

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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 2021 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2021 semi-annual assessment groundwater monitoring activities at the Plant Gadsden Ash Pond (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 § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6).

On March 15, 2021, in an effort to streamline reporting cycles and provide a single set of comprehensive semi-annual reports to ADEM, APC requested approval to re-locate the discussion of delineation results routinely provided in Semi-Annual Progress Reports to Semi-Annual Groundwater Monitoring and Corrective Action Reports. The Semi-Annual Progress Reports have historically been provided to the Department in March and September and covers content described in Part F of AO No. 19-104-GW. ADEM approved this approach and revised timeline for submittals on March 16, 2021. Semi-Annual and Annual Groundwater Monitoring and Corrective Action Reports will now include an update on groundwater delineation activities completed since the submittal of the Facility Plan for Groundwater Investigation (September 30, 2019) and will continue until released in writing.

## **2.0 MONITORING PROGRAM STATUS**

The site is currently in assessment monitoring and is evaluating groundwater corrective actions alternatives. In accordance with § 257.94(e) and ADEM Admin. Code r. 335-13-15-.06(5)(e), APC implemented assessment monitoring in July 2019. SSIs of Appendix III and SSLs of Appendix IV parameters were identified at the Gadsden Ash Pond during sampling events conducted in the fall of 2020 and spring of 2021. 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.

In accordance with § 257.97(a), ADEM Admin. Code r. 335-13-15-.06(8)(a), and Part C of AO No. 19-104-GW, Semi-Annual Remedy Selection and Design Progress Report were submitted beginning in December 2020. The semi-annual progress reports were prepared to describe the progress made in selecting and designing a remedy for the Site.

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.

### 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), groundwater elevations were an average of 4 to 6 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 and March 2021 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 Detail, Table 1b. Delineation Monitoring 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 second 2021 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 assessment groundwater monitoring program. New delineation well boring logs and well installation records are included in **Appendix A, Boring and Well Construction Logs**.

#### **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 B, Groundwater Analytical Data**.

### **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, and October 2021 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 C, 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 assessment 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 D, 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 D**.

### **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, Monitoring Parameters and Reporting Limits**, lists Assessment Monitoring constituents analyzed from site groundwater samples. Laboratory reports for the monitoring period are presented in **Appendix D**.

### 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 Assessment Monitoring sampling event that occurred between October 4, 2021 and October 12, 2021.

Groundwater samples were analyzed for the full list of Appendix III and Appendix IV parameters during the Assessment Monitoring event. 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 D**, 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 2021 sampling event, depths to water ranged from 3.02 to 25.74 feet below top of casing (ft BTOC) and groundwater elevations ranged from 530.89 to 508.03 feet above mean seal level (ft NAVD). Based on recent groundwater elevation data, a localized groundwater divide is present in the drier fall season along the north side of the Ash Pond. **Figure 6, Potentiometric Surface Contour Map (October 4, 2021)** 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 dry season monitoring events (i.e., August 2020 and August 2021).

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.

**Figures 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 C**.

#### 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 E, 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 E** presents the estimated horizontal flow velocity calculated using groundwater elevation data from the October 2021 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 first 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 2021 sampling event.

Analytical data reviewed provided low-level or trace detections in field and or equipment blanks during monitoring period sampling events. **Table 4B, Field QC: Blank Detections** provides a summary of low-

level detections observed during the first semi-annual monitoring event. Each of these detections were estimated concentrations, 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.

**Table 4C, Field QC: Validation Results (Blanks)** provides a summarized list of data validation flags that could be applied to site data during the first semi-annual monitoring period. 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 chromium and lead detections in blanks can be explained by low MDL values ranging from 0.00021 to 0.00023 mg/L and 0.00014 mg/L, respectively.

## 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 assessment, 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 assessment 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 2021 assessment 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 assessment 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 F, 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 F**.

##### 5.3.2.1 First Semi-Annual Monitoring Period

Statistical analysis of Appendix IV data identified the following SSLs over GWPS at the listed wells during the first (October 2021) semi-annual monitoring event:

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

Laboratory analysis initially reported a combined radium (226+228) concentration of 6.52 picocuries per liter (pCi/L) in compliance well GSD-AP-MW-10 exceeding the GWPS of 5 pCi/L. However, after reanalyzing the sample, Pace revised the reported concentration to 0.778U pCi/L. This is more in-line with historical concentrations where 75% of sampling events have provided “not-detected” and when detected concentrations have ranged from 0.474 to 0.678 pCi/L. The revised radium laboratory report for the monitoring period is presented in **Appendix D**. Additionally, compliance well GSD-AP-MW-10 was resampled on January 11, 2022, for radium and the results are pending laboratory analysis.

**Table 6, First Semi-Annual Monitoring Event Analytical Summary** provides a summary of all detected constituents for the first 2021 semi-annual sampling event. Statistical reporting output is included as **Appendix F**.

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 first semi-annual sampling event (October 2021):

- 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 the newly installed vertical delineation well GSD-AP-MW-2VB. However, it is not being considered as a potential impact from the Ash Pond. Additional discussion is presented in **Section 6.1.2** outlining rationale for why fluoride is not being considered an impact from the Ash Pond.

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 summary of ACM-related activities and findings is presented in **Section 7**.

## **6.0 GROUNDWATER ASSESSMENT**

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 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 II – 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.

Additionally, with the most recent phase of groundwater investigation and assessment monitoring, fluoride exceedances were observed in 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. 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 **Figures 7 and 8**, respectively, and geologic profiles depicting arsenic and lithium concentrations in cross-section are presented in **Figures 9 and 10**, respectively. **Table 6** identifies the October 2021 sampling event 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 converted to a water-level only piezometers.

### 6.2.1 Arsenic Delineation

As shown on **Figure 7, Arsenic Isoconcentration Map**, arsenic impacts to groundwater include two compliance wells GSD-AP-MW-2 and GSD-AP-MW-4. Phase I of groundwater delineation activities was 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 shown a significant decline since October 2018 and the completion of ash pond closure. From October 2018 to the most recent sampling event, arsenic concentrations in well GSD-AP-MW-2 have decreased from 1.01 mg/L to 0.42 mg/L. This decreasing trend appears related to increasing ORP and decreasing TDS which are symbolic of the continued re-establishment of natural hydraulic conditions post-closure. As previously mentioned, this positive trend has also followed a decreasing lithium concentration trend which has dropped to below the GWPS in well GSD-AP-MW-2.

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 (0.0127 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 a decreasing trend from 0.510 to 0.344 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 **Figure 7**, and **Figure 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 **Figure 8, Lithium Isoconcentration Map**.

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 March 2021 sampling event 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 recent October 2021 sampling event continuing to indicate increased lithium concentrations with depth.

Lithium concentrations in compliance well GSD-AP-MW-2 dropped below the GWPS for the second time during the October 2021 sampling event, and 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 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 have exhibited a steady decreasing trend from 0.825 mg/L in August 2019 to 0.424 mg/L during the most recent sampling event in October 2021.

- Arsenic concentrations in compliance well GSD-AP-MW-4 historically have exhibited a trend of fluctuating concentrations of just slightly above GWPS.
- Lithium concentrations in compliance well GSD-AP-MW-2 have dropped below GWPS during the last two sampling events in March 2021 and October 2021 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. 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.

## **7.0 EVALUATION OF GROUNDWATER CORRECTIVE MEASURES**

Groundwater remedy selection has occurred in the following two stages: 1) completing an ACM to identify potentially feasible remedies for the Site after the initial determination that GWPSs have been exceeded; and 2) evaluating potential remedies to develop a site-specific remedy plan.

### **7.1 REMEDY SELECTION**

Since submittal of the Assessment of Corrective Measures (ACM) in July 2020 (Anchor QEA 2020a), extensive investigations have been performed to select effective corrective measures for arsenic and lithium (constituents of interest [COIs]) in groundwater at the Plant Gadsden Ash Pond (Site). The following corrective measures were selected:

- 1) Source control to include dewatering, consolidation, capping of the Site.
- 2) Monitored Natural Attenuation (MNA).
- 3) Geochemical manipulation via injections in areas of relatively high concentrations of COIs to remove them from groundwater and immobilize them in situ.

#### **7.1.1 Source Control**

The Site was closed in a manner that controls “the source(s) of release so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in Appendix IV to this part into the environment,” as required by 40 CFR § 257.97(b)(3) and ADEM Admin. Code r. 335-13-15-.06(8)(b)(3).

Construction activities associated with Site closure were substantially completed in August 2018. The proposed corrective action strategy incorporates the closure of the Site, which controls the source of CCR constituents to groundwater by removing free liquid from the CCR, consolidating the CCR, encircling the Site with a perimeter dike and drainage ditch, re-grading the Site, and capping the CCR in place to prevent stormwater infiltration.

Free water was removed through pumping, while maintaining compliance with the National Pollutant Discharge Elimination System (NPDES) discharge limits. The wet CCR was dewatered to the extent necessary to allow a stable working surface for earthwork equipment. Interstitial water was removed through one or a combination of trenching, ditching, or well point removal. All water was sent to an on-site water treatment system prior to discharge to ensure compliance with the NPDES discharge limits. Dewatering the existing CCR reduces the potential for COI releases to groundwater as the quantity of vertical flow is drastically reduced.

CCR was removed from certain areas and consolidated to reduce the size of the closure footprint. CCR was removed from the southwestern portion of the impoundment and was used to construct grades to provide draining on top of the consolidated footprint. Areas where CCR was removed were excavated to remove all visible CCR and were over excavated into the subgrade soils. The consolidated footprint area is approximately 55 acres.

The existing CCR was left in place or moved, compacted, and graded to final grades. In general, the surface of the CCR pond slopes at 3% to 5% from the crest in the center to a perimeter ditch around the exterior of the pond area. Side slopes range from 3H:1V to 4H:1V. The perimeter ditch conveys stormwater runoff to discharge points around the closed pond, which ensures positive drainage over the entire closed pond surface and prevents the pooling of water on the cover.

The final cover was constructed to “control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration” of stormwater into the closed CCR unit, which mitigates potential releases of COIs to groundwater. The cover consists of the following (described from the final CCR surface upward):

- 6 inches of protective soil.
- 50-mil low-density polyethylene geosynthetic liner.
- Engineered synthetic turf product and sand infill material with a combined permeability of  $10^{-7}$  cm/sec or less.

Infiltration will also be prevented by providing sufficient grades and slopes to:

- Preclude the probability of future impoundment of water or sediment on the cover system.
- Ensure slope and cover system stability.
- Minimize the need for further maintenance.
- Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

### **7.1.2 Monitored Natural Attenuation**

MNA is a selected remedy for the Plant Gadsden Ash Pond. Based on the geochemical investigations, several lines of evidence support multiple attenuating mechanisms, depending upon the COIs. The major attenuating mechanisms include the following:



- Sorption on and/or coprecipitation with iron or manganese oxides for arsenic and lithium.
- Ion exchange on clays for lithium.
- Precipitation of barium arsenate for arsenic.

Rates of attenuation were determined by results of reactive transport modeling and by extrapolating decreasing trends on the concentration versus time graphs to the GWPS for areas where decreasing trends were observed. For lithium, estimated time to achieve GWPSs by MNA is 13 years or less. Depending on location, estimated time to achieve GWPSs by MNA for arsenic ranges from less than 10 years for GSD-AP-MW-4 to approximately 80 years for GSD-AP-MW-2. Though these time frames are reasonable to achieve GWPSs, source control via closure and injection treatment (enhanced attenuation) are expected to shorten the time to achieve GWPSs, particularly in the area of GSD-AP-MW-2. Source control, geochemical manipulation via injections in the two areas with COIs to remove them from groundwater and immobilize them in situ, and MNA over the entire Site are expected to achieve GWPSs in approximately 13 years, which is a reasonable time frame as compared to the other, more aggressive methods investigated as part of the remedy selection process.

Column studies were performed to assess the ability for the aquifer media (soil) to take up COIs. Arsenic and lithium are attenuated by aquifer media, as arsenic in column effluent remained below 25% of the influent concentrations (i.e., 75% to more than 95% removal). Though not as strongly attenuated by aquifer media, lithium removal in the columns was more variable (30% to 90% removal in shallower soils and less than 10% removal in deeper soils), likely reflecting differences in soil mineralogy with depth. Arsenic and lithium attenuation capacity was extrapolated to the entire mass of the aquifer downgradient of the consolidated Site but within the property boundary. The extrapolation showed that the aquifer has an attenuating capacity of many more times the mass of arsenic and lithium requiring attenuation. SSE studies indicate that most of the mass of both COIs occur in the oxidizable and residual fractions, which are very stable attenuation phases. Therefore, remobilization back into groundwater is not expected. Some of the mass of arsenic occurs in the exchangeable fraction, which is somewhat less stable.

Corrective action performance monitoring consists of two major components: 1) monitoring for sitewide corrective action, which would include MNA and the positive benefits of source control and geochemical manipulation (injections) at the Site scale; and 2) remedial effectiveness monitoring for geochemical manipulation in the areas of injections. Sitewide monitoring applies to MNA because MNA will be implemented over the entire Site.

### **7.1.3 Geochemical Manipulation via Injection**

Geochemical manipulation via subsurface injections is an in-situ remediation technology for inorganic constituents in groundwater. In this technology, treatment solutions are injected to create solid precipitates, which remove COIs from groundwater during their formation and continue to sorb COIs on their surfaces over time. Geochemical manipulation for arsenic is well established under a range of groundwater geochemical conditions. Geochemical manipulation is an emerging technology for lithium and has had significant technological development over the last 3 years.

Geochemical manipulation 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. Site-specific laboratory treatability studies using Site aquifer media and impacted groundwater will be performed prior to field implementation of injection treatment. These studies will evaluate multiple viable treatment solutions and a range of doses.

Because the areas for treatment at the Site are relatively small, pilot- and full-scale implementation are essentially the same. A requisite monitoring period (anticipated to be approximately 1 year) will follow the field implementation. Depending upon the effectiveness of treatment, injections may need to be repeated periodically, though required time between injection treatments is expected to be years (based on other injection treatment precedents). This approach to injection treatment is consistent with adaptive site management for corrective action.

### **7.1.4 Adaptive Site Management**

As applied here, adaptive site management is a component of the corrective action monitoring program, in which monitoring results are continually evaluated to determine if the system is making progress toward achieving remedy goals. Based on system performance—either achieving goals or not making expected progress—the remedy system may need to be adapted or changed. Adaptation of the system may include ceasing actions no longer necessary or changing the system because it is not performing as expected. The adaptive site management approach plans for changes at the Site and provides a process to make changes as necessary.

## 7.2 CORRECTIVE ACTION MONITORING PROGRAM

As required by 40 CFR § 257.98(a) and ADEM Admin. Code r. 335-13-15-.06(9)(a), the owner/operator must implement the groundwater remedy within 90 days of selecting a remedy, including establishing a corrective action groundwater monitoring program. That monitoring program must perform the following actions: 1) meet the assessment monitoring requirements of 40 CFR § 257.95 and ADEM Admin. Code r. 335-13-15-.06(6); 2) document the effectiveness of the remedy; and 3) demonstrate compliance with the GWPS.

A Corrective Action Groundwater Monitoring Program (Anchor QEA 2022) document providing site-specific remedy monitoring details was submitted to ADEM on January 27, 2022. This Corrective Action Groundwater Monitoring Program (Monitoring Program) is provided per U.S. Environmental Protection Agency coal combustion residuals Rule 40 Code of Federal Regulations (CFR) § 257.98 and Alabama Department of Environmental Management (ADEM) Administrative Code (Admin. Code) r. 335-13-15-.06(9). Construction activities associated with Site closure were substantially completed in April 2018. The closure activities are expected to reduce COIs in groundwater over the long term but may have created disequilibrium and variability, including disruption of groundwater flow directions and temporary changes in groundwater chemistry during and immediately following the closure process. The first two years of this Monitoring Program will be composed of collection and analysis of background (in time) groundwater data as a baseline for the remainder of the Monitoring Program.

This Monitoring Program will be implemented during the first semiannual monitoring event of 2022. The Monitoring Program includes the following:

- CCR compliance and assessment monitoring
- Geochemical manipulation injection monitoring (remedial-effectiveness monitoring)
- MNA monitoring
- Sentinel/clean-line boundary monitoring

For the first 2 years (2022 through 2024), background 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.

The corrective action system will utilize long-term performance standards defined in 40 CFR § 257.98(c) and ADEM Admin. Code r. 335-13-15-.06(9)(c): demonstrate compliance with GWPSs at all points that

lie beyond the groundwater monitoring system established under 40 CFR § 257.91 and ADEM Admin. Code r. 335-13-15-.06(2) for three consecutive years based on semiannual monitoring. This Monitoring Program will be utilized to adjust the application of selected remedial technologies as the Site progresses toward these long-term remedial goals. Data and correlations will be reviewed to promote a better understanding of the nature of geochemical changes and the efficacy of the remedial technologies.

## **8.0 SUMMARY AND CONCLUSIONS**

The first semi-annual assessment monitoring event was conducted in October 2021. Statistical evaluations of the October 2021 assessment 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:

- Collect soil and groundwater samples for treatability studies using Site aquifer media and impacted groundwater prior to field implementation of injection treatments.
- Conduct batch studies for reagents and doses.
- Conduct column studies for effectiveness.
- Prepare Class V UIC permit.
- Conduct the first semi-annual assessment monitoring event of 2022 and submit the annual groundwater monitoring and corrective action report summarizing the findings to ADEM by August 1, 2022.

## 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

10/04/2021 - 10/12/2021

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	1-40	mg/L
Fluoride	SM4500F G 2017	0.1-0.3	mg/L
pH_Field	Field Sampling	NA	SU
Sulfate	SM4500SO4 E 2011	1-32	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	0.000203	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
Combined Radium 226 + 228	Total Radium Calculation	NA	pCi/L
Fluoride	SM4500F G 2017	0.1-0.3	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

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 EPA 9315 + EPA 9320
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	Groundwater Elevation								
		(ft AMSL)								
		1/3/2019	2/4/2019	2/25/2019	6/10/2019	8/19/2019	4/13/2020	8/24/2020	3/15/2021	10/4/2021
GSD-AP-MW-1	526.37	--	517.76	519.26	514.50	511.97	517.91	512.36	516.98	513.76
GSD-AP-MW-2	526.16	--	516.64	518.15	514.30	512.01	516.67	512.37	516.10	513.65
GSD-AP-MW-3	526.80	--	515.98	517.38	514.21	512.03	516.42	512.48	515.58	513.71
GSD-AP-MW-4	520.60	--	515.78	517.13	514.13	512.00	515.99	512.57	515.40	513.70
GSD-AP-MW-5	516.27	--	512.09	513.01	511.13	508.72	512.38	510.36	511.63	511.16
GSD-AP-MW-6	515.23	--	510.70	511.64	510.02	507.89	511.28	509.81	510.32	510.19
GSD-AP-MW-7	519.86	--	509.82	513.85	508.34	506.95	510.09	507.64	508.87	508.25
GSD-AP-MW-8	519.22	--	508.46	511.45	507.78	507.62	509.16	507.98	507.18	508.03
GSD-AP-MW-9	520.36	--	508.46	511.42	507.83	507.61	508.71	508.06	507.19	508.06
GSD-AP-MW-10	530.91	--	509.93	511.87	509.34	508.74	509.73	509.13	508.82	509.19
GSD-AP-MW-11	517.01	--	509.06	511.67	508.12	507.59	509.18	507.99	507.92	508.29
GSD-AP-MW-12	521.82	--	514.11	515.43	511.29	508.94	514.20	509.66	513.06	511.21
GSD-AP-MW-14	548.34	--	527.65	528.71	527.07	526.25	528.26	526.07	527.24	526.85
GSD-AP-MW-16	555.83	530.52	531.32	531.98	530.55	529.71	531.91	529.60	530.64	530.09
GSD-AP-MW-17	550.11	532.49	532.25	534.03	531.23	530.30	532.80	530.65	531.68	530.89
GSD-AP-PZ-1	521.64	--	517.29	519.05	513.54	510.14	517.30	510.78	516.46	513.04
GSD-AP-PZ-2	516.49	--	509.02	511.33	508.15	507.31	509.12	508.13	507.85	508.33
GSD-AP-PZ-5	524.26	--	517.72	519.28	513.81	510.37	518.21	511.00	516.90	513.14
GSD-AP-PZ-6	519.60	--	517.43	518.72	513.82	510.30	517.75	510.99	516.73	513.18
GSD-AP-MW-4V	520.33	--	--	--	--	--	516.09	512.39	515.31	513.51
GSD-AP-MW-18H	524.45	--	--	--	--	--	518.59	511.07	517.02	513.14
GSD-AP-MW-19H	517.32	--	--	--	--	--	516.97	511.36	516.29	513.21
GSD-AP-MW-20H	516.68	--	--	--	--	--	516.28	512.47	515.39	513.66
GSD-AP-MW-2V	525.31	--	--	--	--	--	516.60	512.43	516.13	516.13
GSD-AP-MW-2VA	524.94	--	--	--	--	--	519.33	512.43	516.13	516.13
GSD-AP-MW-2VB	522.56	--	--	--	--	--	--	--	516.15	516.15
GSD-AP-MW-2VC <sup>5</sup>	522.87	--	--	--	--	--	--	--	--	483.16
GSD-AP-MW-21VB <sup>5</sup>	520.24	--	--	--	--	--	--	--	--	467.53
GSD-AP-MW-21VC	521.13	--	--	--	--	--	--	--	--	513.09
GSD-AP-MW-22VB	518.01	--	--	--	--	--	--	--	--	513.30
GSD-AP-MW-23VB <sup>5</sup>	519.03	--	--	--	--	--	--	--	--	510.42

Notes:

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



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

Plant Gadsden Ash Pond  
10/05/2021 - 10/12/2021

<b>GSD-AP-MW-14</b>				
<b>Sample Date = 10/12/2021</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Calcium	mg/L	11.8	11.8	0.00%
Chloride	mg/L	2.87	2.89	0.69%
Sulfate	mg/L	95.7	88.9	7.37%
TDS	mg/L	142	132	7.30%
Arsenic	mg/L	0.00131	0.00137	4.48%
Barium	mg/L	0.0268	0.0286	6.50%
Beryllium	mg/L	0.00115	0.00117	1.72%
Cadmium	mg/L	0.00059	0.00051	15.02%
Cobalt	mg/L	0.0291	0.0288	1.04%
Lead	mg/L	0.00156	0.00151	3.26%
Selenium	mg/L	0.00287	0.00291	1.38%
<b>GSD-AP-MW-4</b>				
<b>Sample Date = 10/5/2021</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Boron	mg/L	0.344	0.347	0.87%
Calcium	mg/L	27.4	27.8	1.45%
Chloride	mg/L	9.3	9.83	5.54%
Fluoride	mg/L	0.214	0.205	4.30%
Sulfate	mg/L	37.8	36.9	2.41%
TDS	mg/L	200	197	1.51%
Arsenic	mg/L	0.0147	0.0148	0.68%
Barium	mg/L	0.202	0.208	2.93%
Cobalt	mg/L	0.0238	0.0236	0.84%
Molybdenum	mg/L	0.00111	0.00109	1.82%
<b>GSD-AP-MW-5</b>				
<b>Sample Date = 10/5/2021</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Boron	mg/L	0.26	0.26	0.00%
Calcium	mg/L	36	35.9	0.28%
Chloride	mg/L	6.78	6.84	0.88%
Fluoride	mg/L	0.122	0.104	15.93%
Sulfate	mg/L	14.4	14.5	0.69%
TDS	mg/L	168	180	6.90%
Barium	mg/L	0.221	0.229	3.56%



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

Plant Gadsden Ash Pond  
10/04/2021 - 10/12/2021

GSD-AP-MW-5				
Sample Date = 10/5/2021				
Analyte	Units	Original Result	Duplicate Result	RPD (%)
Cobalt	mg/L	0.00116	0.00108	7.14%

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  
10/04/2021 - 10/12/2021

Parameters Detected Above MDL					
Sample Date	QC Location	Parameter	Blank Concentration	Units	MDL
10/06/2021	FB-2	Chromium	0.00023 J	mg/L	0.0002
10/05/2021	EB-2	Chromium	0.00021 J	mg/L	0.0002
10/05/2021	FB-1	Lead	0.00014 J	mg/L	7E-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 4c – Field QC: Data Validation Results (Blanks)**

Plant Gadsden Ash Pond  
10/04/2021 - 10/12/2021

List of Compliance Sample Concentrations < 5x Blank Concentrations							
Sample Date	QC Sample	Parameter	QC Sample Result (5x)	Sample Location	Result	Units	Validation Flag
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-MW-1	0.00023 J	mg/L	+(U)*
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-MW-12	0.00034 J	mg/L	+(U)*
10/06/2021	FB-2	Chromium	0.00115	GSD-AP-MW-16	0.00046 J	mg/L	+(U)*
10/06/2021	FB-2	Chromium	0.00115	GSD-AP-MW-17	0.00027 J	mg/L	+(U)*
10/06/2021	FB-2	Chromium	0.00115	GSD-AP-MW-21VC	0.00111 v	mg/L	+(U)*
10/06/2021	FB-2	Chromium	0.00115	GSD-AP-MW-2VA	0.00025 J	mg/L	+(U)*
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-MW-3	0.00023 J	mg/L	+(U)*
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-MW-5	0.00028 J	mg/L	+(U)*
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-MW-6	0.00025 J	mg/L	+(U)*
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-MW-7	0.00025 J	mg/L	+(U)*
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-PZ-1	0.00035 J	mg/L	+(U)*
10/05/2021	FB-1	Lead	0.00069	GSD-AP-PZ-2	0.00012 J	mg/L	+(U)*
10/05/2021	EB-2	Chromium	0.00103	GSD-AP-PZ-2	0.00035 J	mg/L	+(U)*

Notes:

1. Lab qualifiers have been appended to result when applicable
2. QC Sample listed represents the source of comparison, validation flag.
3. Only Appendix 4 Constituents were compared and validated. Radium data was not validated.
4. mg/L = milligrams per liter
5. Wells with concentrations less than 5x Blank Detections are flagged with (U)\*.



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

### Plant Gadsden Ash Pond

Appendix IV Analytes			
Analyte	Units	Background	GWPS
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.00614	0.01
Barium	mg/L	0.312	2
Beryllium	mg/L	0.003	0.004
Cadmium	mg/L	0.00101	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.056	0.0538
Combined Radium 226 + 228	pCi/L	2.01	5
Fluoride	mg/L	0.23	4
Lead	mg/L	0.005	0.015
Lithium	mg/L	0.05	0.04
Mercury	mg/L	0.000775	0.002
Molybdenum	mg/L	0.01	0.1
Selenium	mg/L	0.0134	0.05
Thallium	mg/L	0.001	0.002

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 Summary**  
**Gadsden Ash Pond**  
**10/4/2021-10/12/2021**

Analytes	Wells	GSD-AP-MW-14	GSD-AP-MW-10	GSD-AP-MW-16	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-17	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
	Date	10/12/2021	10/11/2021	10/06/2021	10/12/2021	10/05/2021	10/06/2021	10/05/2021	10/11/2021	10/05/2021	10/05/2021	10/05/2021	10/05/2021	10/05/2021
<b>Appendix III</b>	<b>Units</b>													
Boron	mg/L	<0.03	0.09 J	<0.03	0.125	0.0661 J	0.0305 J	1.02	0.459	1.01	0.347	0.26	0.0649 J	0.0673 J
Calcium	mg/L	11.8	38.2	13.4	78.6	55.8	31	198	87.1	65.9	27.4	35.9	11.4	15.9
Chloride	mg/L	2.87	5.72	3.17	5.8	6.26	2.98	6.1	2.43	5.09	9.83	6.78	9.09	6.43
Fluoride	mg/L	<0.06	0.201	<0.06	0.134	<0.06	0.175	0.0601 J	0.283	<0.06	0.214	0.104	<0.06	0.0933 J
pH_Field	SU	4.04	6.72	4.16	6.66	5.19	7.92	5.79	6.59	5.76	6.58	6.24	5.74	6.06
Sulfate	mg/L	88.9	7.75	93.5	142	195	10.2	567	112	228	37.8	14.5	14.2	9.19
TDS	mg/L	132	190	136	352	378	182	964	337	389	200	168	96.7	113
<b>Appendix IV</b>														
Antimony	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Arsenic	mg/L	0.00131	0.0037	0.00207	0.00272	<6.8e-005	0.000263	0.00356	0.424	0.000207	0.0148	0.000133 J	<6.8e-005	6.94e-005 J
Barium	mg/L	0.0286	0.292	0.0215	0.17	0.0417	0.307	0.0304	0.0807	0.0344	0.202	0.229	0.0741	0.0716
Beryllium	mg/L	0.00115	<0.000406	0.000487 J	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	0.000505	<6.8e-005	0.00068	<6.8e-005	0.000367	<6.8e-005	0.000102 J	<6.8e-005	0.000213	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000593 J	0.000285 J	0.000455 J	0.000267 J	0.000339 J	0.000273 J	0.000228 J	0.000479 J	0.000234 J	0.000224 J	0.000281 J	0.000246 J	0.000248 J
Cobalt	mg/L	0.0288	0.000886	0.0321	0.000275	0.00448	0.000126 J	0.0169	0.0165	0.016	0.0238	0.00108	0.00104	0.000182 J
Combined Radium 226 + 228	pCi/L	1.61	6.52	1.16 U	1.02 U	1.48	2.01	1.21	2.38	3.21	1.75	1.44	1.36	1.27
Fluoride	mg/L	<0.06	0.201	<0.06	0.134	<0.06	0.175	0.0601 J	0.283	<0.06	0.214	0.104	<0.06	0.0933 J
Lead	mg/L	0.00151	<6.8e-005	0.00116	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	9.28e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	0.00881 J	<0.007105	0.0225	<0.007105	<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	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<6.8e-005	0.000451	<6.8e-005	0.000152 J	<6.8e-005	0.000453	<6.8e-005	0.0204	<6.8e-005	0.00109	0.000142 J	<6.8e-005	9.55e-005 J
Selenium	mg/L	0.00287	<0.000508	0.00262	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000294	0.000136 J	<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  
4. "<MDL" or "U" indicates non-detect

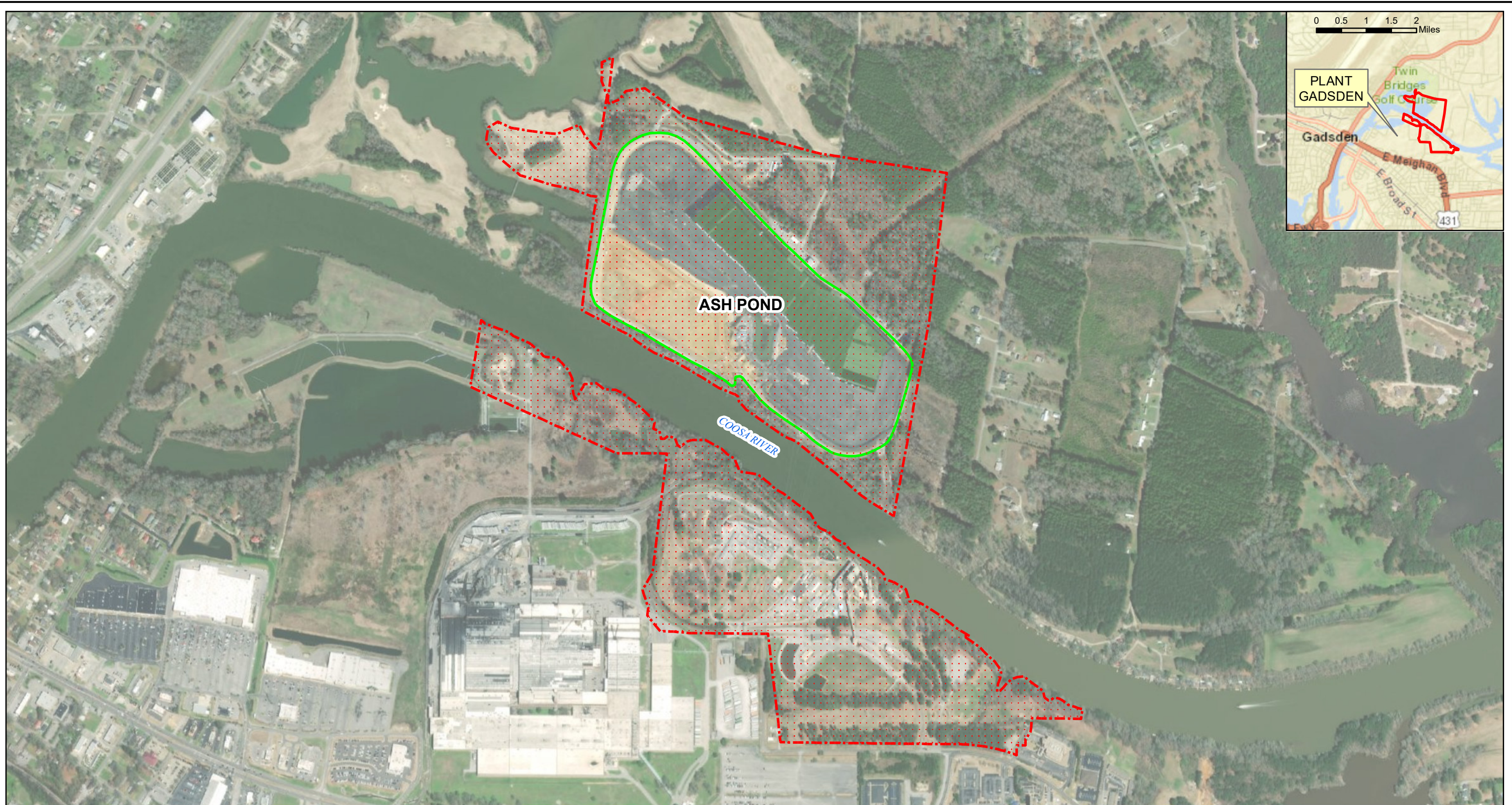




**Table 6.**  
**First Semi-Annual Monitoring Event Analytical Summary**  
**Gadsden Ash Pond**  
**10/4/2021-10/12/2021**

Analytes	Wells	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-4V	GSD-AP-MW-21VC	GSD-AP-MW-22VB	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-20H
	Date	10/12/2021	10/12/2021	10/05/2021	10/05/2021	10/12/2021	10/12/2021	10/06/2021	10/12/2021	10/11/2021	10/06/2021	10/11/2021	10/12/2021	10/11/2021	10/11/2021
<b>Appendix III</b>	<b>Units</b>														
Boron	mg/L	0.0462 J	0.0632 J	<0.03	<0.03	<0.03	<0.03	0.54	0.617	0.0596 J	0.532	0.378	0.0717 J	0.328	0.504
Calcium	mg/L	66.3	35.4	25.4	17.6	2.94	3.29	5.38	3.96	23	3.46	9.35	10.3	40	63.4
Chloride	mg/L	5.6	7.78	3.23	5.79	4.07	3.68	6.82	38	5.65	166	1.72	4.59	7.04	6.37
Fluoride	mg/L	0.123	0.147	<0.06	<0.06	<0.06	<0.06	2.56	5.97	0.23	8.34	1.43	<0.06	0.0779 J	0.127
pH_Field	SU	6.61	6.9	6.46	5.72	5.33	5.41	8.36	8.62	7.82	8.53	8.13	5.12	6.08	6.36
Sulfate	mg/L	16	18	2.17	5.29	0.895 J	1.34	2.44	15.2	1.7	8.35	13.8	36.7	61.7	174
TDS	mg/L	245	169	108	101	38.7	35.3	317	536	220	864	230	78.7	202	384
<b>Appendix IV</b>															
Antimony	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	0.00051 J	0.00167	<0.000508	<0.000508	<0.000508
Arsenic	mg/L	0.00287	0.000635	<6.8e-005	9.28e-005 J	<6.8e-005	<6.8e-005	0.00139	0.000426	0.000366	0.00162	0.00408	0.00019 J	0.000846	0.00191
Barium	mg/L	0.203	0.147	0.0811	0.118	0.0494	0.0303	0.12	0.242	0.483	0.374	0.238	0.0298	0.17	0.134
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	8.42e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000124 J	<6.8e-005
Chromium	mg/L	<0.000203	0.00031 J	0.000352 J	0.000346 J	0.000337 J	0.000307 J	0.00025 J	0.000353 J	0.000314 J	0.00111	0.000412 J	0.000209 J	0.000475 J	0.000246 J
Cobalt	mg/L	0.00298	0.00113	0.000436	0.00287	8.08e-005 J	0.000142 J	<6.8e-005	<6.8e-005	<6.8e-005	0.000205	<6.8e-005	0.000615	0.00579	0.00995
Combined Radium 226 + 228	pCi/L	0.291 U	0.311 U	2.07	1.13	0.963 U	1.57	0.746 U	0.323 U	1.58	1.78	1.29	0.383 U	0.202 U	1.09 U
Fluoride	mg/L	0.123	0.147	<0.06	<0.06	<0.06	<0.06	2.56	5.97	0.23	8.34	1.43	<0.06	0.0779 J	0.127
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	0.000121 J	<6.8e-005	0.000119 J	<6.8e-005	<6.8e-005	<6.8e-005	0.000225	<6.8e-005	<6.8e-005	0.000155 J	8.19e-005 J
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	0.0685	0.129	0.0198 J	0.227	0.0544	<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	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.000319	0.000177 J	7.3e-005 J	0.00028	<6.8e-005	<6.8e-005	0.00363	0.00156	0.00173	0.00107	0.00538	<6.8e-005	0.000118 J	0.000312
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	0.000679 J	<0.000508	<0.000508
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	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.00013 J

- Notes:**  
1. mg/L - Milligrams per Liter  
2. pCi/L - picocuries per Liter  
3. J - Result is an estimated value  
4. "<MDL" or "U" indicates non-detect


# Figures

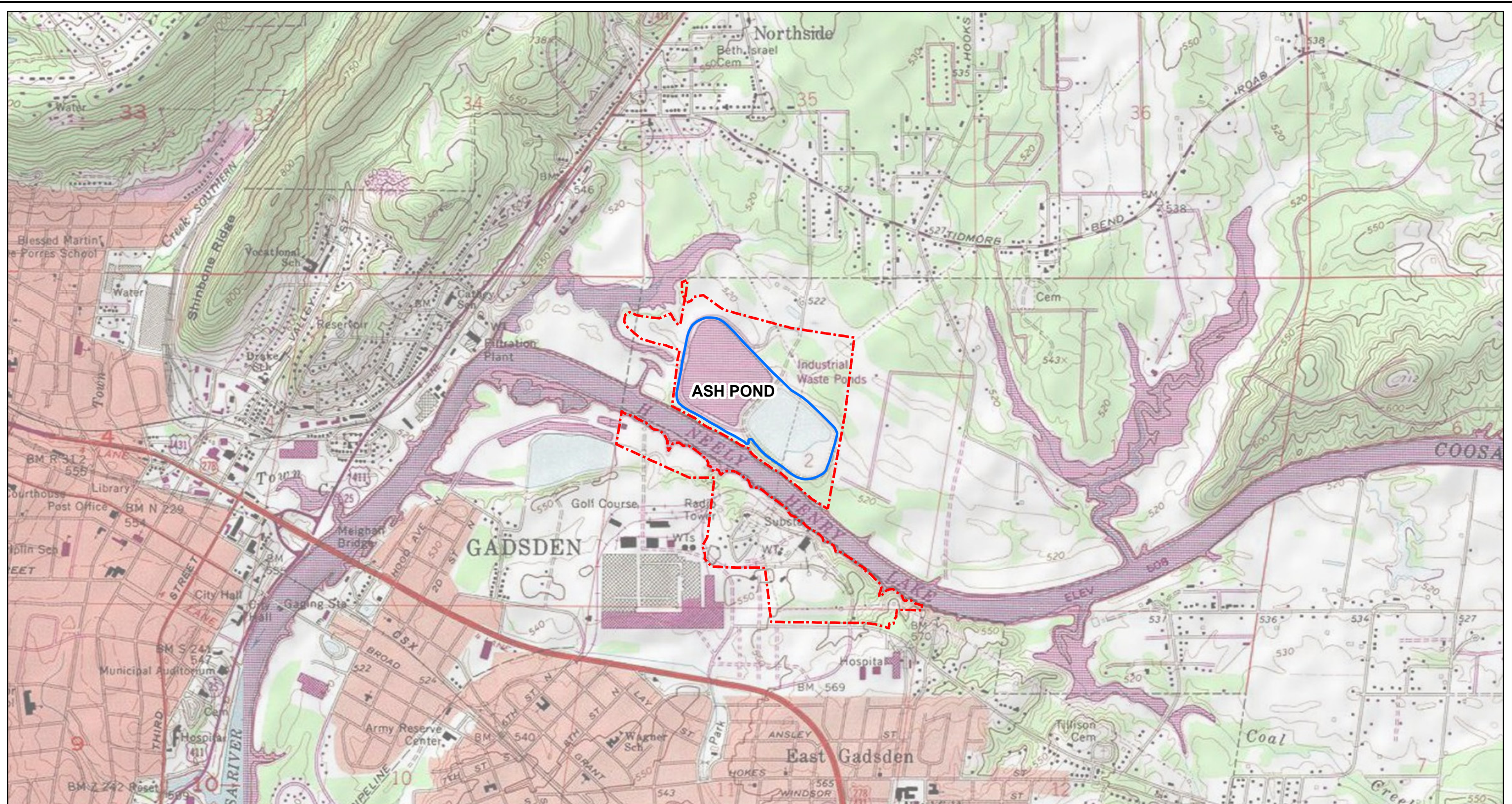


**Legend**  
 Property Boundary (Approximate)  
 Ash Pond Boundary



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

DRAWING TITLE	
<b>SITE LOCATION MAP PLANT GADSDEN ASH POND</b>	
FIGURE NO	<b>FIGURE 1</b>
 Southern Company	



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

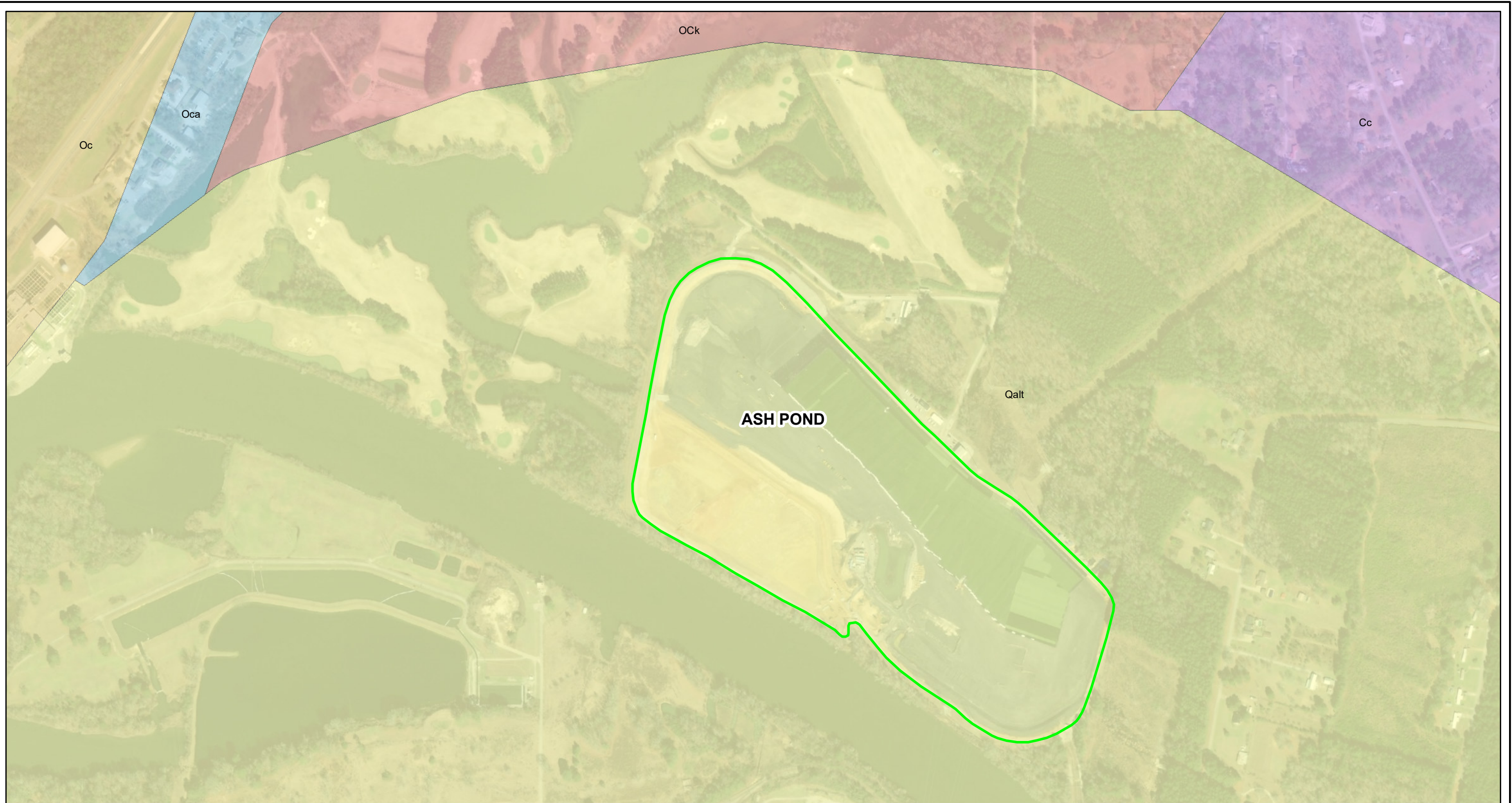


SCALE	1:18000
DATE	11/10/2020
DRAWN BY	KAR
TECH REVIEW	KWR
CHECKED BY	GBD

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

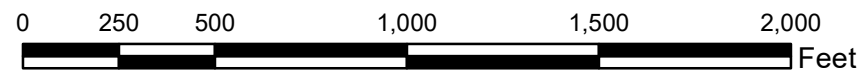
FIGURE NO  
**FIGURE 2**





**Legend**

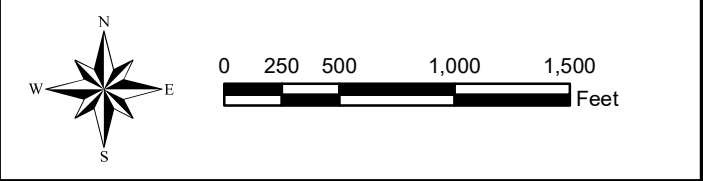
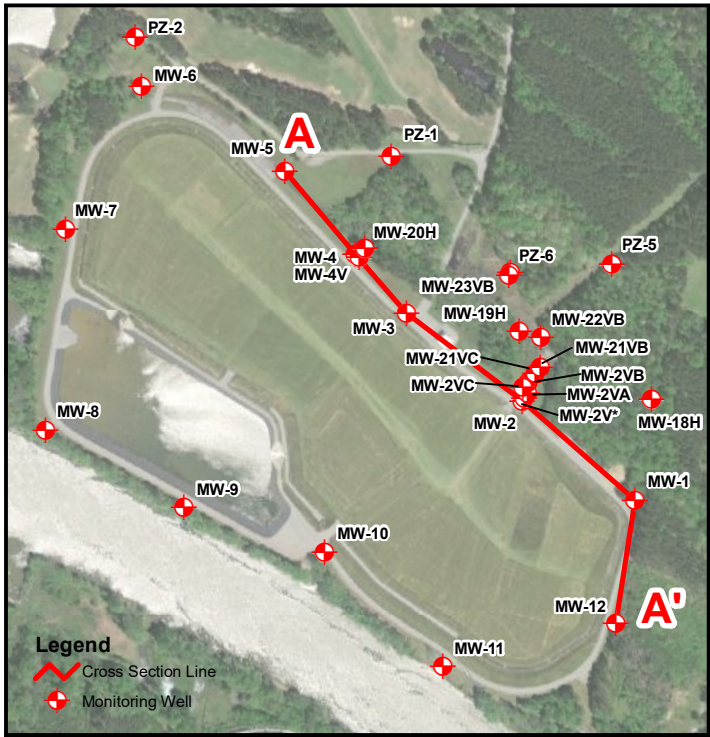
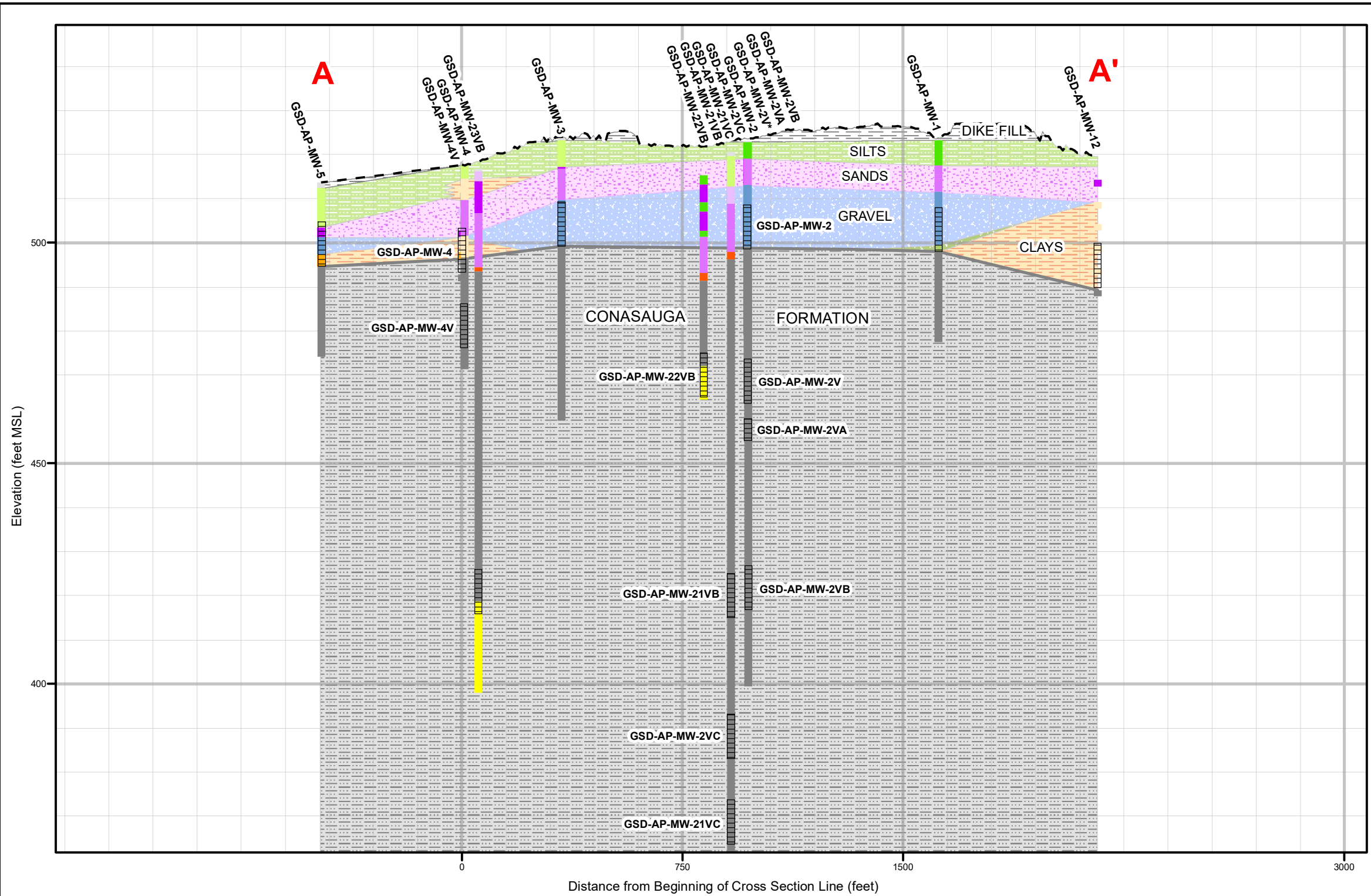
- Ash Pond Boundary
- Geologic Units**
- Alluvial, coastal, and low terrace deposits (Qalt)
- Attalla Chert Conglomerate Member of the Chickamauga Limestone (Oca)
- Chickamauga Limestone (Oc)
- Conasauga Formation (Cc)
- Knox Group undifferentiated (OCK)



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	

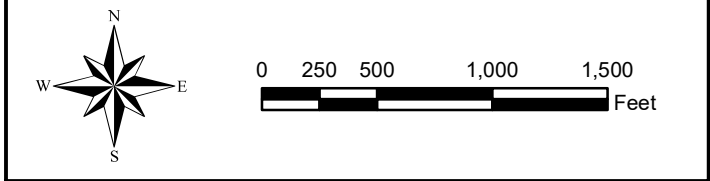
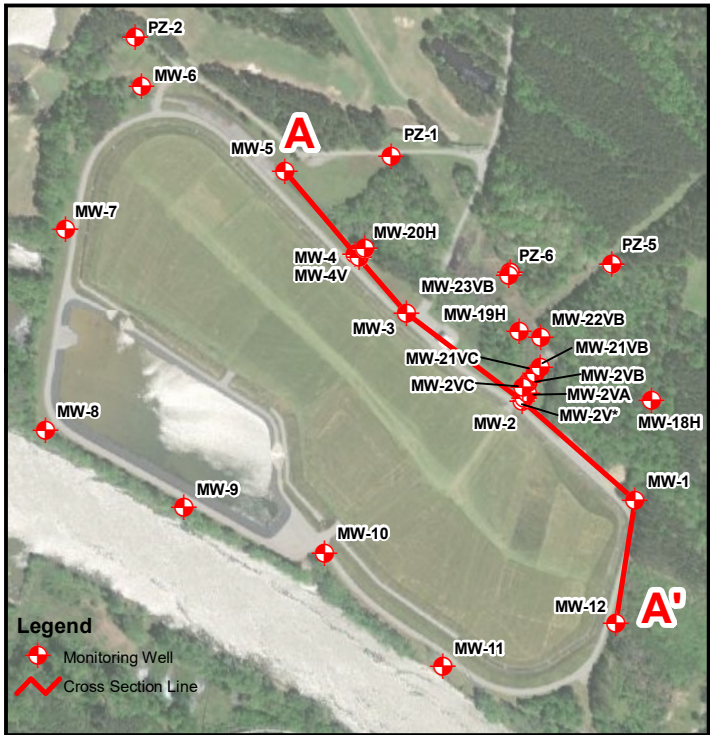
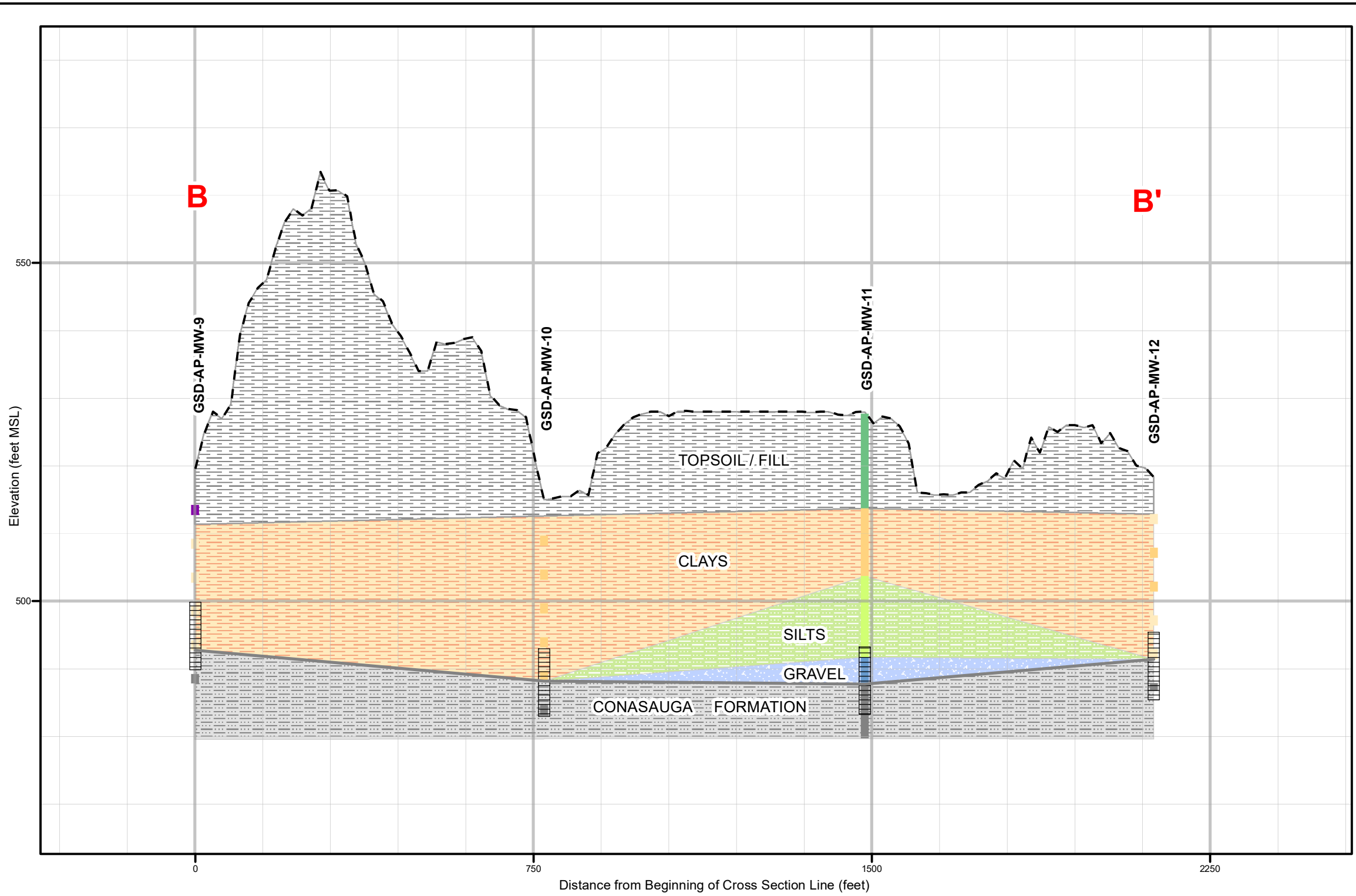




- Notes:
1. Stratigraphic layers were correlated using boring data.
  2. Elevation data are reported using feet above Mean Sea Level (MSL).
  3. Vertical exaggeration is 15x.
  4. \*GSD-AP-MW-2V is utilized for water levels only and was not sampled.
  5. The ground surface shown on the cross section 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		
DRAWN BY	KWR	FIGURE NO	Southern Company
TECH REVIEW	KAR	FIGURE NO	
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	

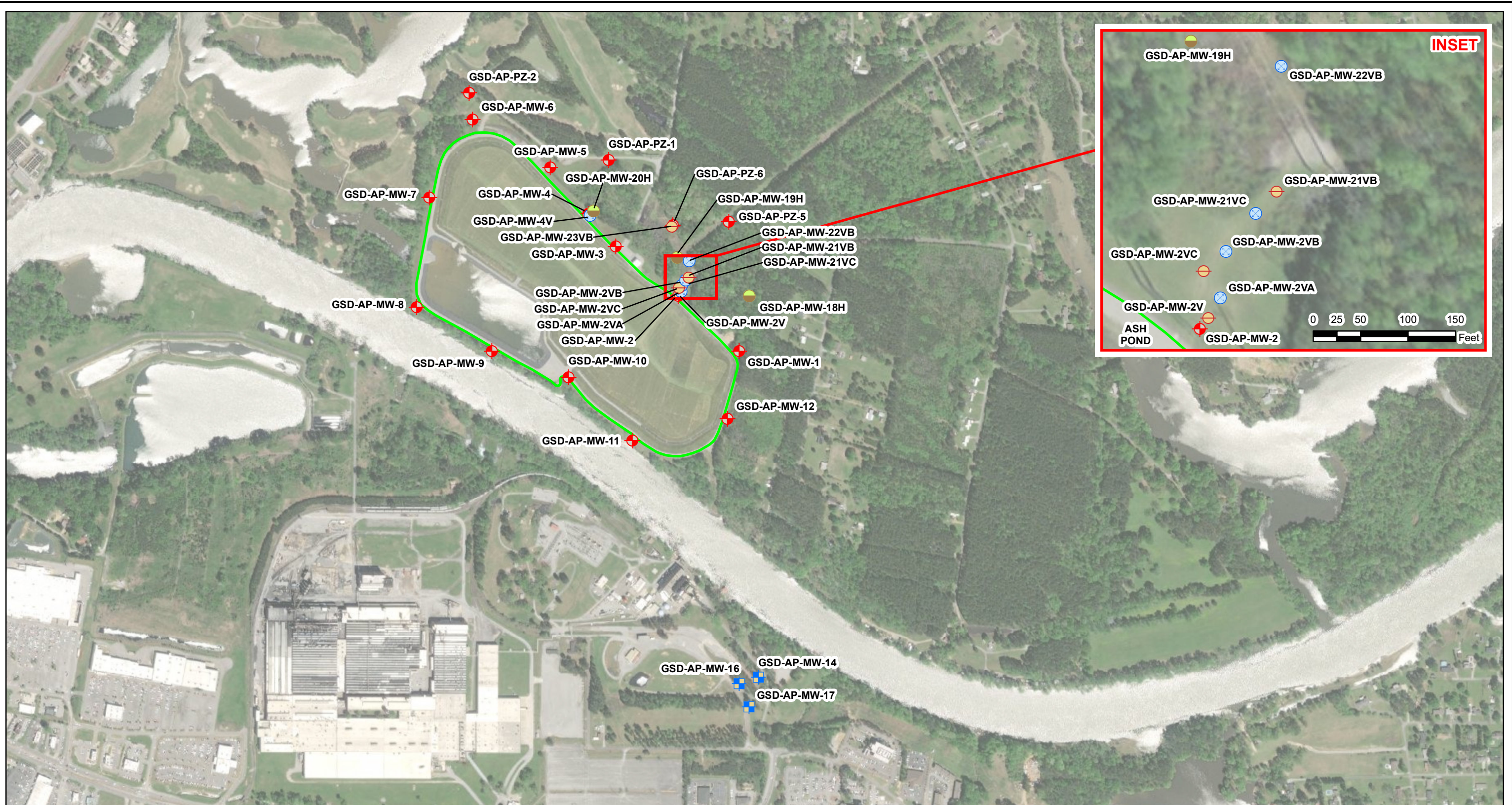
HORIZONTAL SCALE	1:3000
DATE	1/25/2022
DRAWN BY	KAR
CHECKED BY	CTL

DRAWING TITLE

## GEOLOGIC CROSS-SECTION B - B' PLANT GADSDEN ASH POND

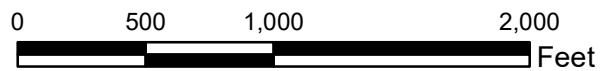
FIGURE NO

### FIGURE 4B



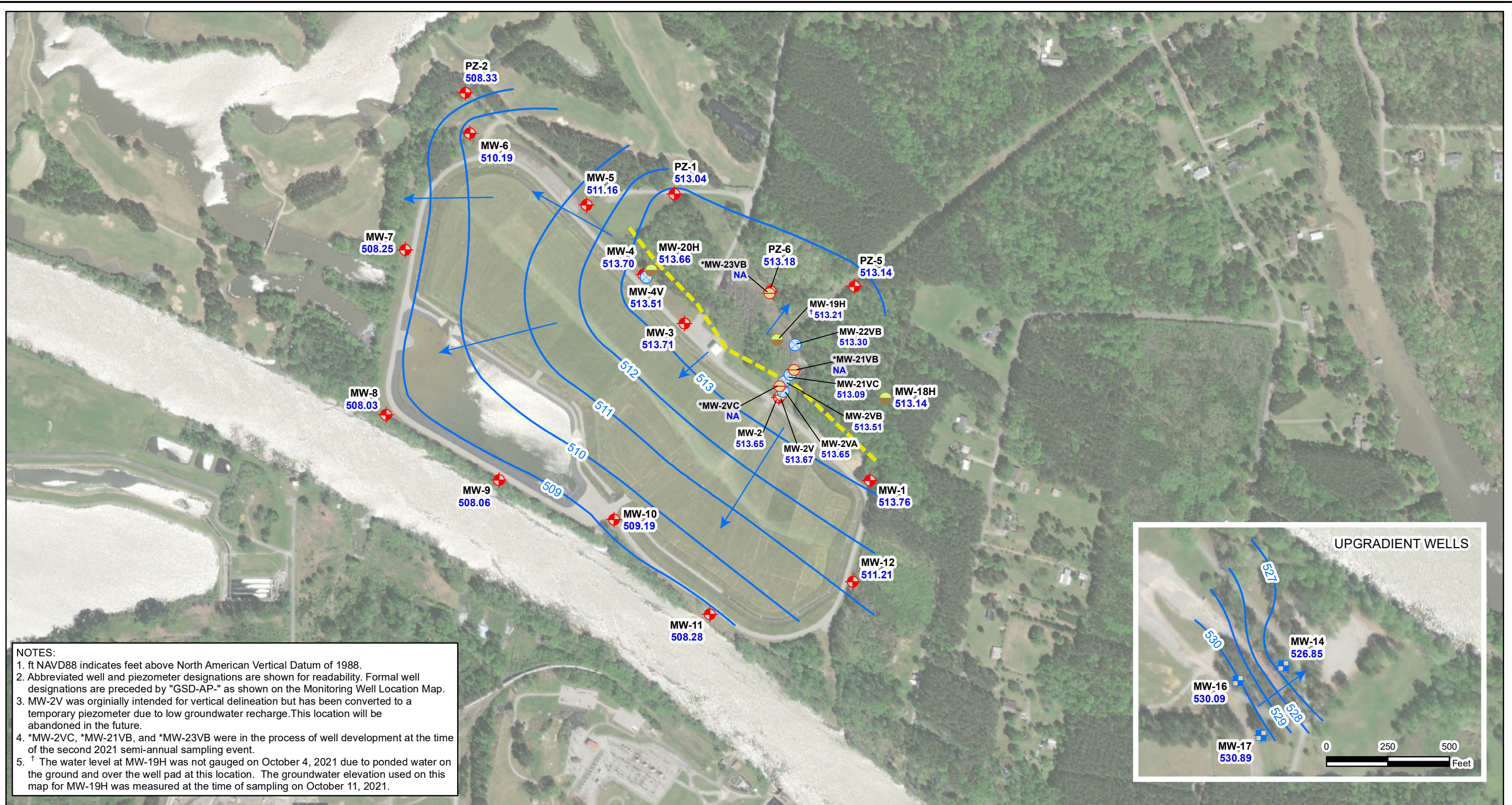
**Legend**

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



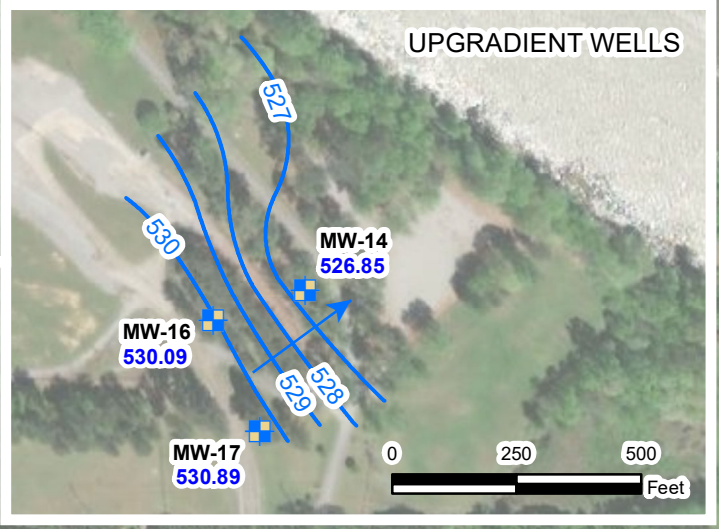
SCALE	1:9000
DATE	1/25/2022
DRAWN BY	KAR
TECH REVIEW	KWR
CHECKED BY	GFB

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



**NOTES:**

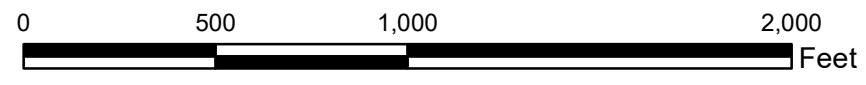
1. ft NAVD88 indicates feet above North American Vertical Datum of 1988.
2. Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.
3. MW-2V was originally intended for vertical delineation but has been converted to a temporary piezometer due to low groundwater recharge. This location will be abandoned in the future.
4. \*MW-2VC, \*MW-21VB, and \*MW-23VB were in the process of well development at the time of the second 2021 semi-annual sampling event.
5. † The water level at MW-19H was not gauged on October 4, 2021 due to ponded water on the ground and over the well pad at this location. The groundwater elevation used on this map for MW-19H was measured at the time of sampling on October 11, 2021.



**Legend**

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

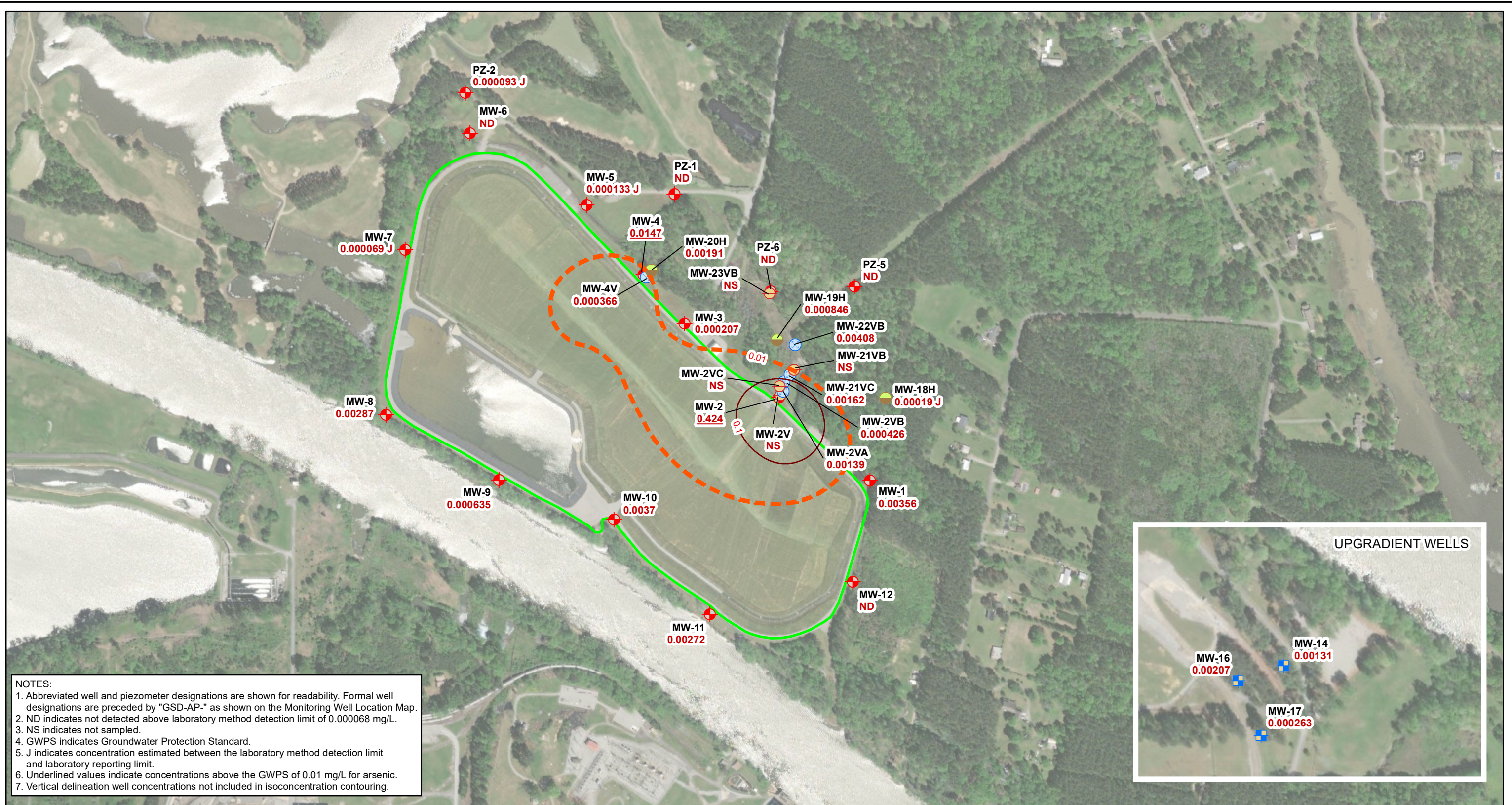
**MW-1**  
513.76 Well ID  
Groundwater Elevation



SCALE	1:6000
DATE	1/25/2022
DRAWN BY	KAR
TECH REVIEW	KWR
CHECKED BY	GBD

DRAWING TITLE  
**POTENTIOMETRIC SURFACE CONTOUR MAP  
OCTOBER 4, 2021  
PLANT GADSDEN ASH POND**

FIGURE NO  
**FIGURE 6**



**NOTES:**

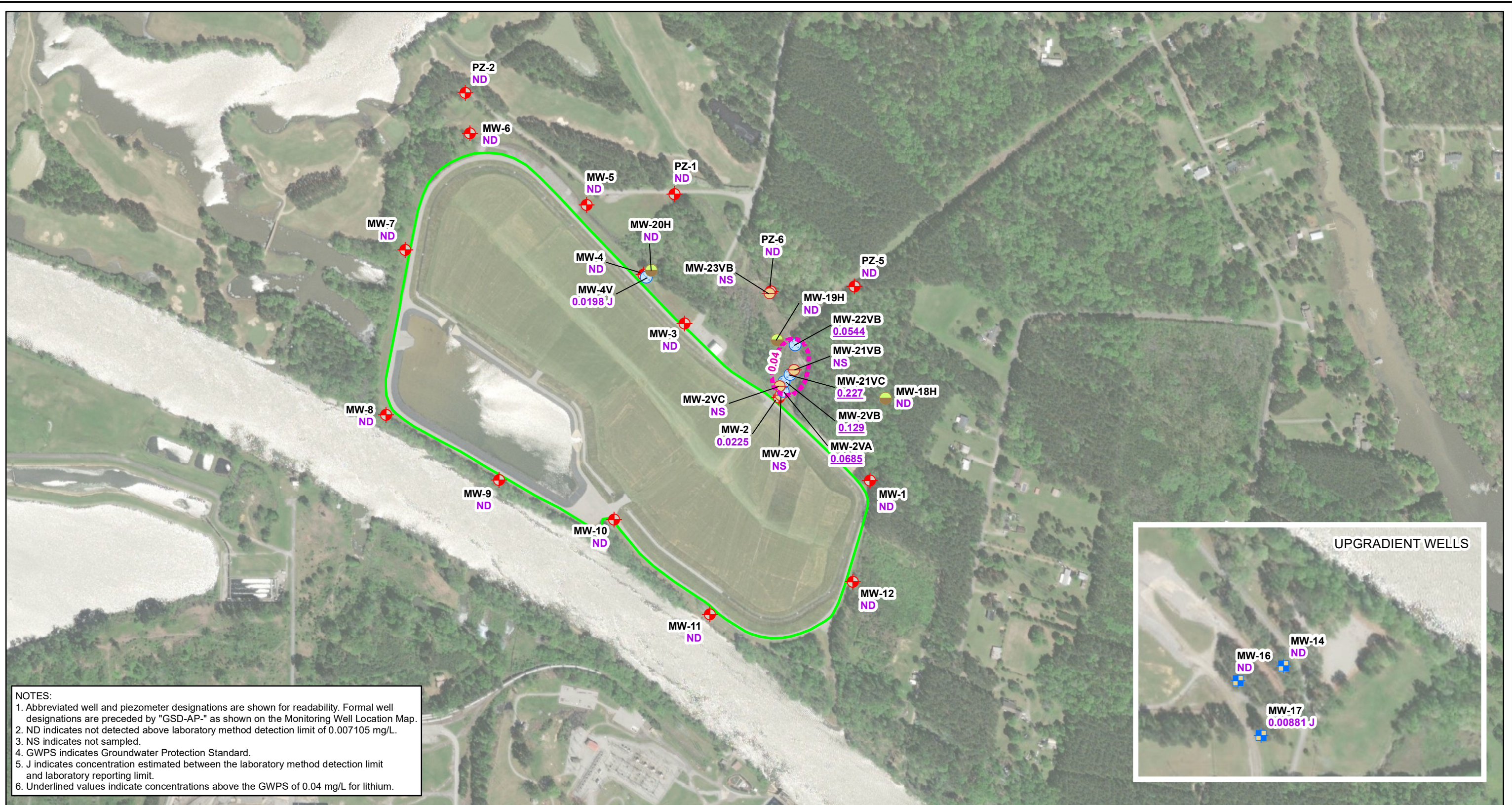
1. Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.
2. ND indicates not detected above laboratory method detection limit of 0.000068 mg/L.
3. NS indicates not sampled.
4. GWPS indicates 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 0.01 mg/L for arsenic.
7. Vertical delineation well concentrations not included in isoconcentration contouring.

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
<b>MW-11</b>	Well ID
<u>0.00272</u>	Arsenic Concentration (mg/L)



SCALE	1:6000
DATE	1/25/2022
DRAWN BY	KWR
TECH REVIEW	KAR
CHECKED BY	GBD

DRAWING TITLE	
<b>ARSENIC ISOCONCENTRATION MAP</b>	
<b>OCTOBER 2021</b>	
<b>PLANT GADSDEN ASH POND</b>	
FIGURE NO	<b>FIGURE 7</b>



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.



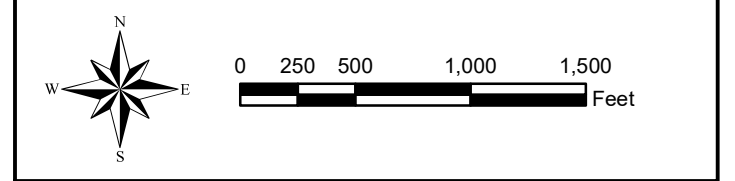
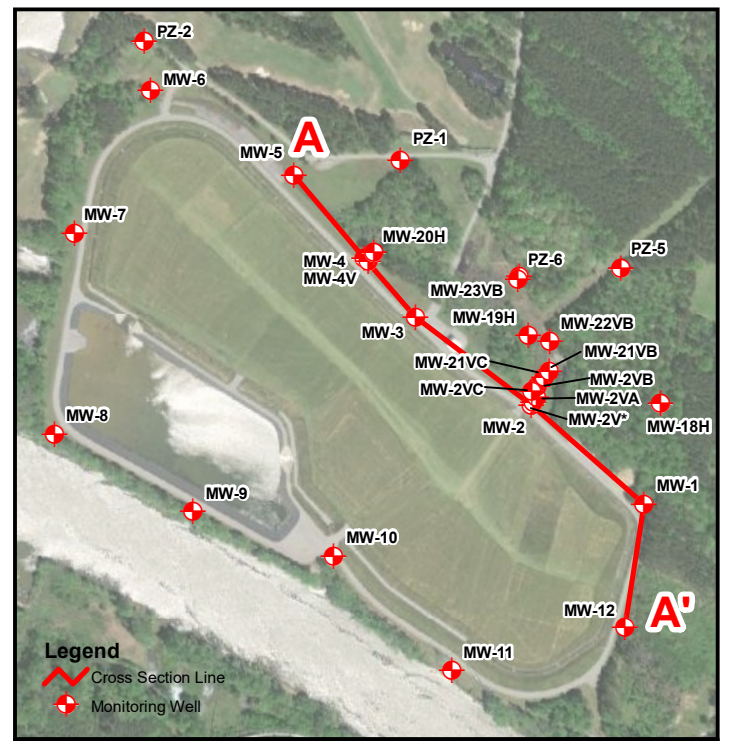
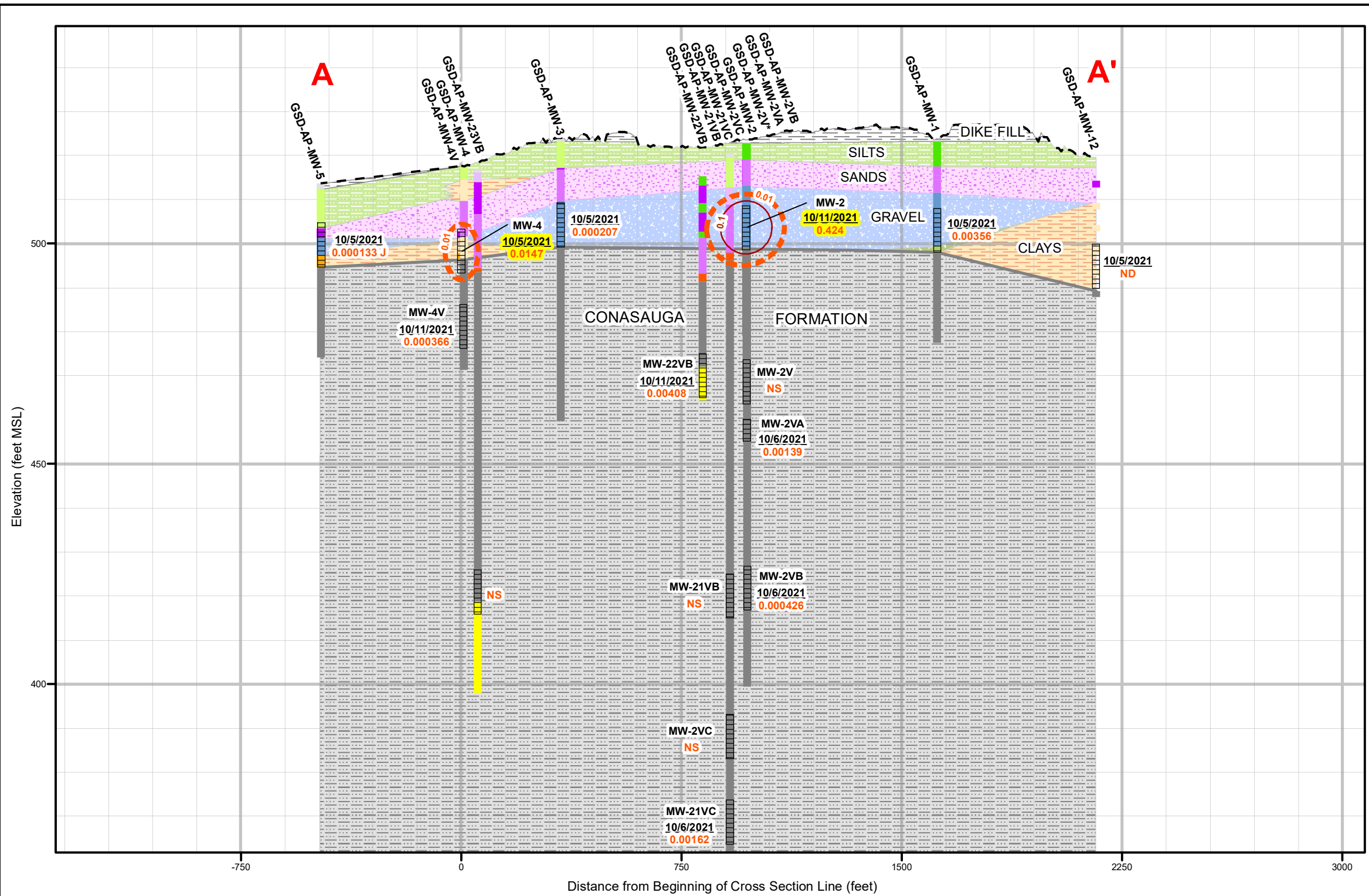
**Legend**

- ◆ 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  
0.0226 Lithium Concentration (mg/L)



SCALE	1:6000
DATE	1/25/2022
DRAWN BY	KWR
TECH REVIEW	KAR
CHECKED BY	GBD

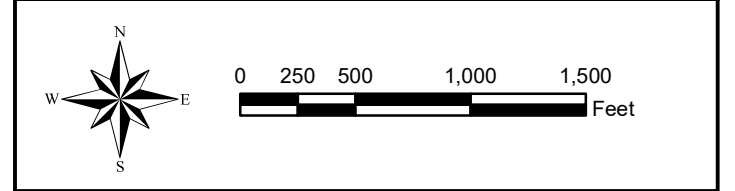
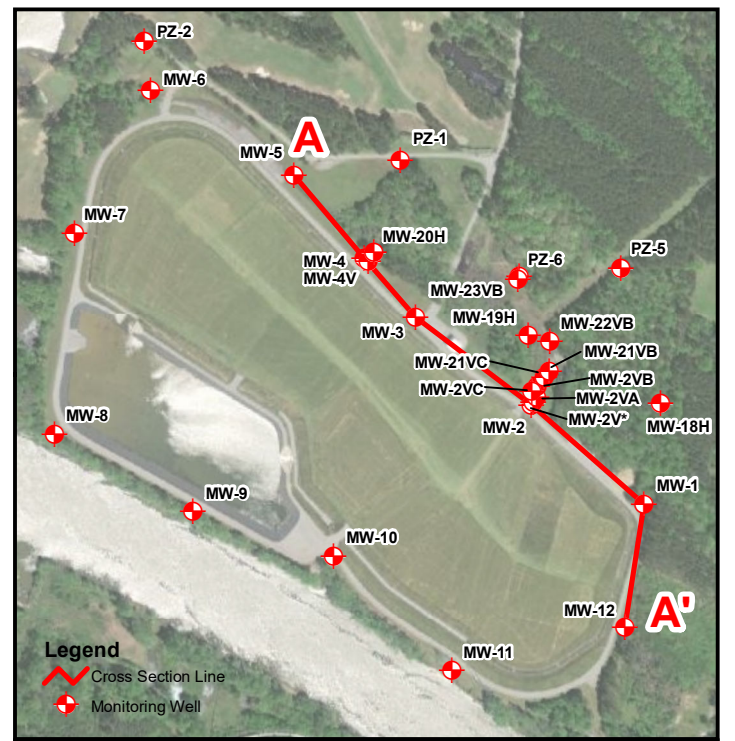
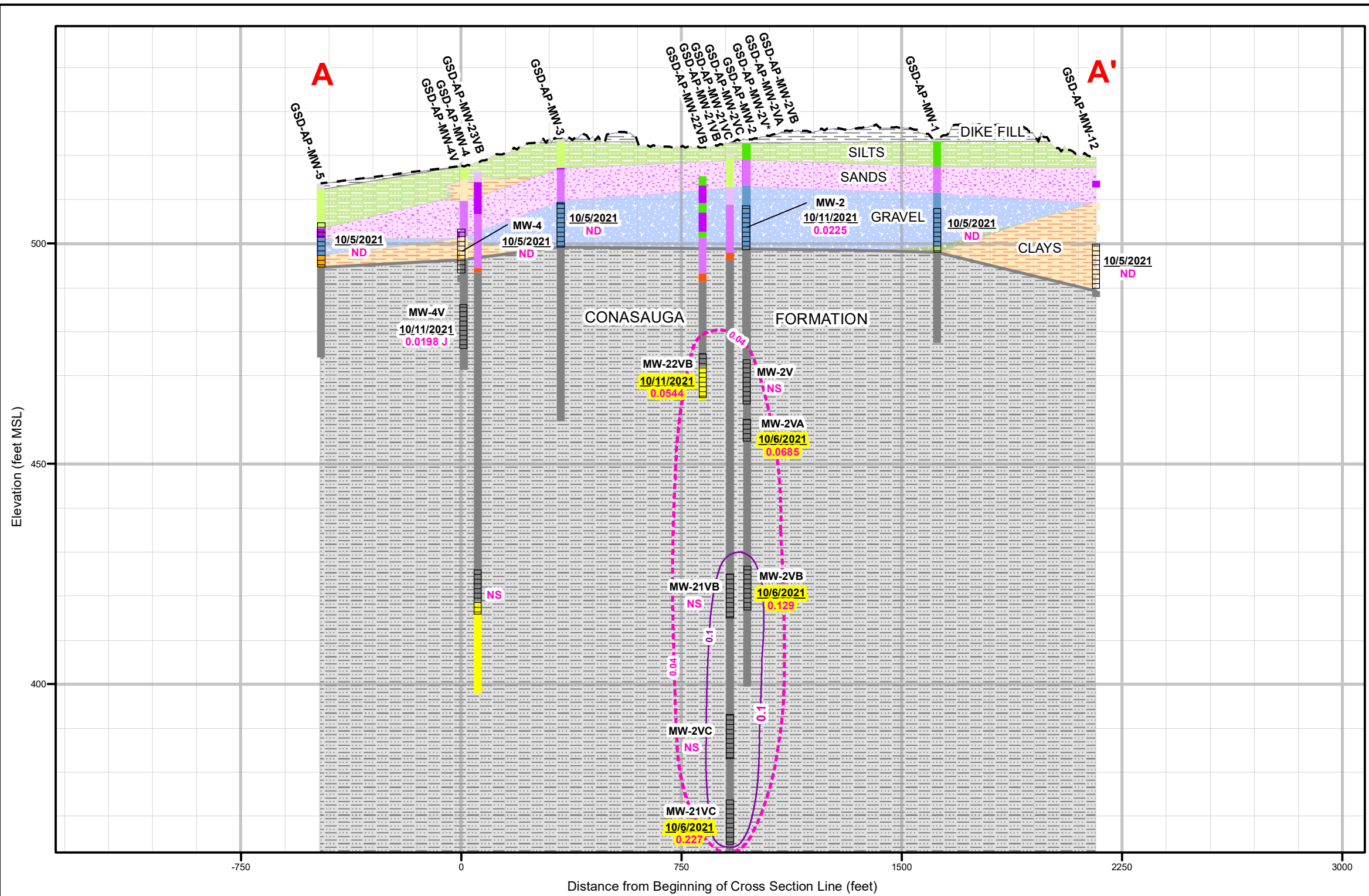
DRAWING TITLE	
LITHIUM ISOCONCENTRATION MAP OCTOBER 2021 PLANT GADSDEN ASH POND	
FIGURE NO	<b>FIGURE 8</b>
Southern Company	



- 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. Groundwater samples were collected between October 5 and 11, 2021.
  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	Dike Fill	Silts	Silts
Arsenic Isoconcentration Contour (mg/L)	Lean and Sandy Lean Clay	Poorly-graded Sands	Clays	Sands	Sands
Screen Interval	Fat Clay	Clay, Sand, and Gravel Mix	Well-graded Gravel	Gravel	Gravel
Ground Surface Elevation	Silty Clay	Well-graded Gravel	Mudstone/Shale	Undifferentiated Clay, Sand, and Gravel	Undifferentiated Clay, Sand, and Gravel
Unit Boundary	Silt	Mudstone/Shale	Gravel	Gravel	Gravel
0.00408 As Concentration (mg/L)	Sandy Silt	Dolomite or Limestone	Mudstone/Shale	Mudstone/Shale	Mudstone/Shale
	Silty Sand				

HORIZONTAL SCALE	1:4600	DRAWING TITLE
DATE	1/26/2022	
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 5 and 11, 2021.
  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	
	Approximate Lithium Groundwater Protection Standard Contour (0.04 mg/L)		Topsoil/Fill		Dike Fill
	Lithium Isoconcentration Contour (mg/L)		Lean and Sandy Lean Clay		Clays
	Screen Interval		Fat Clay		Silts
	Ground Surface Elevation		Silty Clay		Sands
	Unit Boundary		Silt		Gravel
	0.0544 Lithium Concentration (mg/L)		Sandy Silt		Undifferentiated Clay, Sand, and Gravel
			Silty Sand		Mudstone/Shale
			Dolomite or Limestone		Mudstone/Shale

HORIZONTAL SCALE	1:4600	DRAWING TITLE
DATE	1/26/2022	
DRAWN BY	KWR	
TECH REVIEW	KAR	FIGURE NO
CHECKED BY	GBD	<b>FIGURE 10</b>



# Appendix A

Client Borehole ID <u>GSD-AP-MW-21VB</u>	Stantec Boring No. <b>GSD-AP-MW-21VB</b>
Client <u>Southern Company</u>	Boring Location <u>1,280,497.32 N; 614,679.72 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>517.72 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>Plant Gadsden</u>	Date Started <u>8/25/21</u> Completed <u>8/25/21</u>
Project Location <u>Etowah Co, Gadsden, Alabama</u>	Depth to Water <u>117.7 ft</u> Date/Time <u>8/25/21 17:00</u>
Inspector <u>A. Stevens</u> Logger <u>A. Stevens</u>	Depth to Water <u>84.0 ft</u> Date/Time <u>9/3/21 09:30</u>
Drilling Contractor <u>Hawkston (Subcontractor)</u>	Drill Rig Type and ID <u>Boart Longyear LS600</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" X 6" Rotasonic / 6" Air Rotasonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>J. Massey</u>	Approved By <u>E. Smith</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
0	0.0	517.7	Top of Hole						
	0.6	517.1	Topsoil, [FILL]						
	1.9	515.8	SILT LITTLE SAND, ML, 10YR 4/6 (dark yellowish brown) to 10YR 7/6 (yellow), low plasticity, dry, no odor, no staining, weak cementation, Subrounded sand grains		GR	0.0 - 7.0	5.0		
5	5.8	511.9	SILT TRACE SAND, MH, 10YR 4/6 (dark yellowish brown) to 10YR 6/4 (light yellowish brown), high plasticity, dry, no odor, no staining						
	8.5	509.2	SILTY WELL GRADED SAND TRACE GRAVEL, SW, 7.5YR 5/6 (strong brown), fine to coarse, loose, moist, well graded						
10			WELL GRADED SAND WITH GRAVEL, SW, 5YR 4/6 (yellowish red) with 5B 6/1 (bluish gray), fine to coarse, dense, moist, strong cementation, well graded		GR	7.0 - 17.0	10.0		
15	15.0	502.7							
	17.0	500.7	POORLY GRADED SAND TRACE GRAVEL, SW, 7.5YR 5/6 (strong brown), medium to coarse, loose, moist, well graded						
			GRAVELLY WELL GRADED SAND, SW, 5YR 6/6 (reddish yellow), medium to coarse, medium dense, moist, well graded						
20					GR	17.0 - 24.0	7.0		
	23.5	494.2							
	24.0	493.7	FAT CLAY, CH, 5B 6/1 (bluish gray), very fine, high plasticity, hard, wet, no odor, no staining, weak						
25									

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.RD.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VB</u>	Stantec Boring No. <u>GSD-AP-MW-21VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,497.32 N; 614,679.72 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>517.72 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Description	Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
25		cementation, strong HCL reaction, Saprolitic clay with angular mudstone clasts Shale Mudstone, light gray, very fine grained, hard, moderately weathered to highly weathered, dry, no odor, no staining, carbonaceous, Reacts to HCL. (N7) (Continued)						
27.0	490.7				GR	27.0 - 30.0	0.0	
30		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)						
35				GR	30.0 - 40.0	0.0		
40								
45				GR	40.0 - 50.0	0.0		
50	467.7	Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)						
55					GR	50.0 - 60.0	0.0	

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VB</u>	Stantec Boring No. <u>GSD-AP-MW-21VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,497.32 N; 614,679.72 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>517.72 ft</u> Elevation Datum <u>NAVD88</u>

Lithology		Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation		Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
60		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>						
65			GR	60.0 - 70.0	0.0			
70								
75				GR	70.0 - 80.0	0.0		
80								
85	85.0	432.7		GR	80.0 - 90.0	0.0		
		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)						


STANTEC 1755 STD - 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VB</u>	Stantec Boring No. <b>GSD-AP-MW-21VB</b>
Client <u>Southern Company</u>	Boring Location <u>1,280,497.32 N; 614,679.72 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>517.72 ft</u> Elevation Datum <u>NAVD88</u>

Lithology		Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation		Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
90		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>						
95				GR	90.0 - 100.0	0.0		
100								
105				GR	100.0 - 110.0	0.0		
110								
115				GR	110.0 - 120.0	0.0		
	▽							

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VB</u>	Stantec Boring No. <b>GSD-AP-MW-21VB</b>
Client <u>Southern Company</u>	Boring Location <u>1,280,497.32 N; 614,679.72 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>517.72 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
120	120.0	397.7							

No Refusal /  
Bottom of Hole at 120.0 Ft.

Top of Rock = 24.0 Ft.  
Top of Rock Elevation = 493.7 Ft.

1. Depths are reported in feet below ground surface
2. Elevation in reference to feet above NAVD 1988 datum

Client Borehole ID <u>GSD-AP-MW-21VC</u>	Stantec Boring No. <u>GSD-AP-MW-21VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,474.22 N; 614,657.51 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.00 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>Plant Gadsden</u>	Date Started <u>8/22/21</u> Completed <u>8/22/21</u>
Project Location <u>Etowah Co, Gadsden, Alabama</u>	Depth to Water <u>141.2 ft</u> Date/Time <u>8/22/21 18:35</u>
Inspector <u>A. Stevens</u> Logger <u>A. Stevens</u>	Depth to Water <u>8.9 ft</u> Date/Time <u>9/3/21 09:34</u>
Drilling Contractor <u>Hawkston (Subcontractor)</u>	Drill Rig Type and ID <u>Boart Longyear LS600</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" X 6" Rotasonic / 6" Air Rotasonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>J. Massey</u>	Approved By <u>E. Smith</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
0	0.0	519.0	Top of Hole						
	0.5	518.5	Topsoil, [FILL]						
	3.9	515.1	SILT WITH SAND, ML, 10YR 4/6 (dark yellowish brown) to 10YR 7/6 (yellow), low plasticity, dry, no odor, no staining, weak cementation, Subrounded sand grains		GR	0.0 - 7.0	5.0		
5			SILT SOME SAND, MH, 10YR 4/6 (dark yellowish brown) to 10YR 6/4 (light yellowish brown), high plasticity, wet, no odor, no staining						
10	11.0	508.0	FAT CLAY SOME SAND, CH, 7.5YR 5/6 (strong brown) with ( ), fine to coarse, moist, well graded		GR	7.0 - 17.0	8.5		
15	14.0	505.0	POORLY GRADED SAND, SP, 10GY 6/1 (greenish gray), very fine, very dense, moist, strong cementation, well graded						
	15.3	503.7	POORLY GRADED SAND, SP, very fine to fine, low plasticity, loose, wet, weak cementation, poorly graded						
	15.9	503.1	POORLY GRADED SAND, SP, 10GY 6/1 (greenish gray), fine to medium, loose, moist, weak cementation, poorly graded						
	17.0	502.0	GRAVELLY WELL GRADED SAND, SW, 5YR 6/6 (reddish yellow), medium to coarse, medium dense, moist, well graded		GR	17.0 - 25.0	7.0		
20	21.2	497.8	FAT CLAY, CH, 5B 6/1 (bluish gray), very fine, high plasticity, hard, wet, no odor, no staining, weak cementation, strong HCL reaction, Saprolitic clay with angular mudstone clasts						
	22.1	496.9							
25									

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.RD.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VC</u>	Stantec Boring No. <u>GSD-AP-MW-21VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,474.22 N; 614,657.51 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.00 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
25			Shale Mudstone, light gray, very fine grained, moderately hard, moderately weathered to highly weathered, dry, no odor, no staining, carbonaceous, Reacts to HCL. (N7) (Continued)						
	27.0	492.0			GR	25.0 - 30.0	0.0		
30			Shale Mudstone, light gray to gray, very fine grained, moderately hard, Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5)						
35				GR	30.0 - 40.0	0.0			
40									
45				GR	40.0 - 50.0	0.0			
50									
55				GR	50.0 - 60.0	0.0			

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.RD.GDT 11/19/21



Client Borehole ID <u>GSD-AP-MW-21VC</u>	Stantec Boring No. <u>GSD-AP-MW-21VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,474.22 N; 614,657.51 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.00 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Description	Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
60	61.0 458.0	Shale Mudstone, light gray to gray, very fine grained, moderately hard, Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>						
65		Shale Mudstone, light gray to gray, very fine grained, moderately hard, More competent layer. Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5)		GR	60.0 - 70.0	0.0		
75				GR	70.0 - 80.0	0.0		
85	86.0 433.0			GR	80.0 - 90.0	0.0		
	87.0 432.0	Shale Mudstone, light gray to gray, very fine						

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R01.DAT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VC</u>	Stantec Boring No. <u>GSD-AP-MW-21VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,474.22 N; 614,657.51 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.00 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Description	Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
90		grained, soft, Weak layer potential fracture. Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5)						
95		Shale Mudstone, light gray to gray, very fine grained, moderately hard, More competent layer. Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5) (Continued)		GR	90.0 - 100.0	0.0		
100								
105				GR	100.0 - 110.0	0.0		
110								
115				GR	110.0 - 120.0	0.0		

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VC</u>	Stantec Boring No. <b><u>GSD-AP-MW-21VC</u></b>
Client <u>Southern Company</u>	Boring Location <u>1,280,474.22 N; 614,657.51 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.00 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
120	120.0	399.0	Shale Mudstone, light gray to gray, very fine grained, hard, Very competent layer. Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5)						
					GR	120.0 - 130.0	0.0		
135					GR	130.0 - 140.0	0.0		
145					GR	140.0 - 150.0	0.0		

STANTEC 1755 STD - 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R00.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-21VC</u>	Stantec Boring No. <b>GSD-AP-MW-21VC</b>
Client <u>Southern Company</u>	Boring Location <u>1,280,474.22 N; 614,657.51 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.00 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
150			Shale Mudstone, light gray to gray, very fine grained, hard, Very competent layer. Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>		GR	150.0 - 160.5	0.0		
155	155.0	364.0							
	158.0	361.0							
160			Shale Mudstone, light gray to gray, very fine grained, hard, Very competent layer. Reaction to HCL. Few calcite fragment present. No recovery, geologic descriptions based on cuttings. (N7 - N5)						
165									
170	170.5	348.5							

No Refusal /  
Bottom of Hole at 170.5 Ft.

Top of Rock = 22.1 Ft.  
Top of Rock Elevation = 496.9 Ft.

1. Depths are reported in feet below ground surface
2. Elevation in reference to feet above NAVD 1988 datum







STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.R01.DAT 11/19/21

Client Borehole ID <u>GSD-AP-MW-22VB</u>	Stantec Boring No. <b>GSD-AP-MW-22VB</b>
Client <u>Southern Company</u>	Boring Location <u>1,280,629.98 N; 614,685.11 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>515.48 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>Plant Gadsden</u>	Date Started <u>8/27/21</u> Completed <u>8/27/21</u>
Project Location <u>Etowah Co, Gadsden, Alabama</u>	Depth to Water <u>11.8 ft</u> Date/Time <u>8/27/21 11:59</u>
Inspector <u>A. Stevens</u> Logger <u>A. Stevens</u>	Depth to Water <u>2.0 ft</u> Date/Time <u>9/3/21 09:50</u>
Drilling Contractor <u>Hawkston (Subcontractor)</u>	Drill Rig Type and ID <u>Boart Longyear LS600</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" X 6" Rotasonic / 6" Air Rotasonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>J. Massey</u>	Approved By <u>E. Smith</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Rock Core:		RQD %	Run Ft	Rec. Ft	Rec. %		
0	0.0	515.5	Top of Hole						
	2.0	513.5	SILT WITH SAND, ML, 10YR 4/6 (dark yellowish brown) to 10YR 7/6 (yellow), low plasticity, wet, no odor, no staining, weak cementation, Subrounded sand grains						
	6.0	509.5	POORLY GRADED SAND LITTLE SILT, SP, 10GY 6/1 (greenish gray) and 7.5YR 6/6 (reddish yellow), very fine, very dense, moist, strong cementation, well graded		GR	0.0 - 6.0	5.0		
	8.5	507.0	SILT SOME SAND, MH, 7.5YR 4/6 (strong brown), high plasticity, wet, no odor, no staining						
	13.0	502.5	POORLY GRADED SAND LITTLE SILT, SP, 10GY 6/1 (greenish gray) and 7.5YR 6/6 (reddish yellow), very fine, very dense, moist, strong cementation, well graded		GR	6.0 - 16.0	7.0		
	14.0	501.5	SILT WITH SAND, ML, 10YR 4/6 (dark yellowish brown) to 10YR 7/6 (yellow), low plasticity, wet, no odor, no staining, weak cementation						
	16.0	499.5	GRAVELLY WELL GRADED SAND, SW, 5YR 6/6 (reddish yellow), medium to coarse, medium dense, moist, well graded						
			GRAVELLY WELL GRADED SAND WITH CLAY, SW, 5YR 6/6 (reddish yellow), medium to coarse, medium dense, moist, well graded						



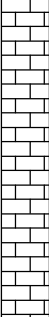
STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.R01.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-22VB</u>	Stantec Boring No. <u>GSD-AP-MW-22VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,629.98 N; 614,685.11 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>515.48 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Description	Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
20								
	493.5	GRAVELLY WELL GRADED SAND WITH CLAY, SW, 5YR 6/6 (reddish yellow), medium to coarse, medium dense, moist, well graded (Continued)		GR	16.0 - 26.0	8.0		
	491.5							
	491.5	FAT CLAY, CH, 5B 6/1 (bluish gray), very fine, high plasticity, hard, wet, no odor, no staining, weak cementation, strong HCL reaction, Saprolitic clay with angular mudstone clasts						
25								
		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)		GR	26.0 - 30.0	0.0		
30								
				GR	30.0 - 40.0	0.0		
35								
				GR	30.0 - 40.0	0.0		
40								

STANTEC 1755 STD - 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R01.DAT 11/19/21

Client Borehole ID <u>GSD-AP-MW-22VB</u>	Stantec Boring No. <u>GSD-AP-MW-22VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,629.98 N; 614,685.11 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>515.48 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Description	Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>						
43.0	472.5							
45	470.5	Limestone (80%) With Shale (20%) Limestone, light blue gray to gray, microcrystalline to very fine grained, hard, no staining, calcareous, Reacts to HCL, Calcite veins present. No recovery, geologic descriptions based on cuttings. (5B 7/1 - N5)		GR	40.0 - 50.0	0.0		
46.0	469.5							
50		Limestone (80%) With Shale (20%) Limestone, light blue gray to gray, microcrystalline to very fine grained, hard, no staining, calcareous, Potential fractue zone. Reacts to HCL, Calcite veins present. No recovery, geologic descriptions based on cuttings. (5B 7/1 - N5)						
51.0	464.5			GR	50.0 - 51.0	0.0		

No Refusal /  
Bottom of Hole at 51.0 Ft.

Top of Rock = 24.0 Ft.  
Top of Rock Elevation = 491.5 Ft.

1. Depths are reported in feet below ground surface
2. Elevation in reference to feet above NAVD 1988 datum

Client Borehole ID <u>GSD-AP-MW-23VB</u>	Stantec Boring No. <u>GSD-AP-MW-23VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,901.32 N; 614,549.19 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>516.58 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>Plant Gadsden</u>	Date Started <u>8/28/21</u> Completed <u>8/28/21</u>
Project Location <u>Etowah Co, Gadsden, Alabama</u>	Depth to Water <u>92.3 ft</u> Date/Time <u>8/28/21 18:30</u>
Inspector <u>A. Stevens</u> Logger <u>A. Stevens</u>	Depth to Water <u>50.0 ft</u> Date/Time <u>9/3/21 09:05</u>
Drilling Contractor <u>Hawkston (Subcontractor)</u>	Drill Rig Type and ID <u>Boart Longyear LS600</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" X 6" Rotasonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>J. Massey</u>	Approved By <u>E. Smith</u>

Lithology		Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation		Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
0	0.0	516.6						
	0.4	516.2						
	1.8	514.8						
				GR	0.0 - 6.0	6.0		
5								
	7.5	509.1						
	8.7	507.9						
	9.2	507.4						
10				GR	6.0 - 16.0	8.5		
15								
	21.0	495.6		GR	16.0 - 26.0	9.0		
	22.5	494.1						
25								

STANTEC 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.RD.GDT 11/19/21



Client Borehole ID <u>GSD-AP-MW-23VB</u>	Stantec Boring No. <u>GSD-AP-MW-23VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,901.32 N; 614,549.19 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>516.58 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
25	26.0	490.6	Mudstone, light gray, finely crystalline, soft, highly weathered, wet, calcareous, Reaction to HCL. (N5)						
30	30.0	486.6	Mudstone, light blue gray to gray, microcrystalline to very fine grained, hard, freshly weathered, damp, no staining, calcareous, Reacts to HCL, Calcite infills present (5B 7/1 - N5)		GR	26.0 - 33.0	7.0		
35									
40					GR	33.0 - 44.0	11.0		
45									
	48.0	468.6	Mudstone, dark gray to gray, microcrystalline, hard, very thin, freshly weathered, damp, no staining, calcareous, Reacts to HCL, small 2-3 cm shale layers present (N6 - N5)		GR	44.0 - 48.0	4.0		
50					GR	48.0 - 52.0	4.0		
55					GR	52.0 - 57.0	5.0		

STANTEC 1755 STD - 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R01.D0T 11/19/21

Client Borehole ID <u>GSD-AP-MW-23VB</u>	Stantec Boring No. <u>GSD-AP-MW-23VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,901.32 N; 614,549.19 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>516.58 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
60			Mudstone, dark gray to gray, microcrystalline, hard, very thin, freshly weathered, damp, no staining, calcareous, Reacts to HCL, small 2-3 cm shale layers present (N6 - N5) <i>(Continued)</i>						
62.0	454.6			GR		57.0 - 65.0	9.0		
63.0	453.6		Fault Gouge Mudstone, dark gray to gray, very fine grained to microcrystalline, soft, thin bedded, freshly weathered, dry, no odor, no staining, calcareous, Potential fault gouge, reacts to HCL						
65			Mudstone, dark gray to gray, very fine grained to microcrystalline, soft, thin bedded, freshly weathered, dry, no odor, no staining, calcareous, Potential fault gouge, weak reaction to HCL, some rocks phyllitic in texture. Slickensides present.						
				GR		65.0 - 69.0	4.0		
70									
75									
80									
85	85.0	431.6							


STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-23VB</u>	Stantec Boring No. <b><u>GSD-AP-MW-23VB</u></b>
Client <u>Southern Company</u>	Boring Location <u>1,280,901.32 N; 614,549.19 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>516.58 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
90			Mudstone, dark gray to gray, microcrystalline, hard, very thin, freshly weathered, damp, no staining, calcareous, Reacts to HCL, small 2-3 cm shale layers present (N6 - N5) <i>(Continued)</i>		GR	85.0 - 93.0	8.0		
	93.0	423.6							
95			Marlstone Fault Gouge, gray to dark gray, very fine grained to very finely crystalline, soft, moderately weathered, dry, no odor, no staining, disturbed, carbonaceous, Weak reaction to HCL. Slickensides present.		GR	93.0 - 97.0	4.0		
	97.0	419.6							
100			Fault Gouge Dolomite, dark gray to gray, very fine grained to microcrystalline, soft, thin bedded, freshly weathered, dry, no odor, no staining, calcareous, Potential fault gouge, weak reaction to HCL, some rocks phyllitic in texture. Slickensides present.		GR	97.0 - 103.0	6.0		
	100.0	416.6							
105			Limestone, light gray, microcrystalline to finely crystalline, hard, dry, dolomitic, (N5)		GR	103.0 - 110.0	7.0		
110					GR	110.0 - 115.0	5.0		
115					GR	115.0 - 119.0	4.0		

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R01.D0T 11/19/21

Client Borehole ID <u>GSD-AP-MW-23VB</u>	Stantec Boring No. <b><u>GSD-AP-MW-23VB</u></b>
Client <u>Southern Company</u>	Boring Location <u>1,280,901.32 N; 614,549.19 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>516.58 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
119.0	397.6								

No Refusal /  
Bottom of Hole at 119.0 Ft.

Top of Rock = 22.5 Ft.  
Top of Rock Elevation = 494.1 Ft.

1. Depths are reported in feet below ground surface
2. Elevation in reference to feet above NAVD 1988 datum

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <u>GSD-AP-MW-2VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>Plant Gadsden</u>	Date Started <u>3/2/21</u> Completed <u>3/6/21</u>
Project Location <u>Etowah Co, Gadsden, Alabama</u>	Depth to Water <u>80.2 ft</u> Date/Time <u>3/6/21</u>
Inspector <u>A. Stevens</u> Logger <u>A. Stevens</u>	Depth to Water <u>N/A</u> Date/Time <u>N/A</u>
Drilling Contractor <u>Cascade (subcontractor)</u>	Drill Rig Type and ID <u>Truck Mounted PS-150 Sonic</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" X 6" Rotosonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>J. Massey</u>	Approved By <u>E. Smith</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Rock Core:		RQD %	Run Ft	Rec. Ft	Rec. %		
0	0.0	519.7	Top of Hole						
	0.5	519.2	WELL GRADED SAND WITH CLAY, SC, 10YR 4/4 (dark yellowish brown), wet, Top soil, roots present						
			WELL GRADED SAND WITH CLAY, SC, 10YR 6/6 (brownish yellow) to 7.5YR 5/3 (brown), non to low plasticity, very loose, moist, no odor, no staining	RS		0.0 - 5.0	1.2	N/A	
5									
	6.5	513.2	WELL GRADED SAND SOME CLAY, SW, 5YR 5/6 (yellowish red), very fine to medium, low to medium plasticity, dry to wet, Quartz, Plagioclase sands	RS		5.0 - 15.0	6.0	N/A	
10									
	15.0	504.7	WELL GRADED SAND WITH GRAVEL, SW, 10YR 7/6 (yellow), medium to coarse, non-plastic, wet, gravel consists of prominently quartz and plagioclase. Few angular mudstone clasts						
15									
	18.0	501.7	WELL GRADED GRAVEL WITH CLAY, GC, 10YR 4/4 (dark yellowish brown) to 10YR 6/8 (brownish yellow), very fine to coarse, medium to high plasticity, moist	RS		15.0 - 25.0	10.0	N/A	
20									
	21.0	498.7	Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins						
25									

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.RD.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <b>GSD-AP-MW-2VB</b>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
25			Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins <i>(Continued)</i>						
30				RS	25.0 - 35.0	2.5	N/A		
35									
40				RS	35.0 - 45.0	3.0	N/A		
45									
50			RS	45.0 - 55.0	4.0	N/A			
55			RS	55.0 - 56.0	1.0	N/A			

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <u>GSD-AP-MW-2VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
			Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins <i>(Continued)</i>						
60				RS	56.0 - 65.0	5.0	N/A		
65									
70				RS	65.0 - 75.0	3.0	N/A		
75									
80									
85									

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.R01.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <u>GSD-AP-MW-2VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
90			Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins <i>(Continued)</i>		RS	85.0 - 95.0	7.0	N/A	
	93.0	426.7		@ 92.0' -93.0' bgs becomes soft, moderately weathered, wet.					
95			Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins						
	96.0	423.7		@ 95.0' to 96.0' bgs becomes soft, moderately weathered, wet.					
100			Mudstone/shale, light gray to gray, very fine grained, very hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins		RS	95.0 - 105.0	7.0	N/A	
105									
110					RS	105.0 - 115.0	10.0	N/A	
115					RS	115.0 - 120.0	5.0	N/A	

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R01.DAT 11/19/21



Client Borehole ID <u>GSD-AP-MW-2VC</u>	Stantec Boring No. <u>GSD-AP-MW-2VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,413.14 N; 614,602.69 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>520.45 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>Plant Gadsden</u>	Date Started <u>8/20/21</u> Completed <u>8/20/21</u>
Project Location <u>Etowah Co, Gadsden, Alabama</u>	Depth to Water <u>141.6 ft</u> Date/Time <u>8/20/21 17:20</u>
Inspector <u>A. Stevens</u> Logger <u>A. Stevens</u>	Depth to Water <u>96.7 ft</u> Date/Time <u>9/3/21 09:20</u>
Drilling Contractor <u>Hawkston (Subcontractor)</u>	Drill Rig Type and ID <u>Boart Longyear LS600</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" X 6" Rotasonic / 6" Air Rotasonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>J. Massey</u>	Approved By <u>E. Smith</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation	Rock Core:		RQD %	Run Ft	Rec. Ft	Rec. %		
0	0.0	520.5	Top of Hole						
	0.6	519.9	Topsoil, [FILL]						
	1.9	518.6	SILT LITTLE SAND, ML, 10YR 4/6 (dark yellowish brown) to 10YR 7/6 (yellow), low plasticity, dry, no odor, no staining, weak cementation, Subrounded sand grains		GR	0.0 - 7.0	5.0		
5			SILT TRACE SAND, MH, 10YR 4/6 (dark yellowish brown) to 10YR 6/4 (light yellowish brown), high plasticity, dry, no odor, no staining						
	6.7	513.8							
			SILTY WELL GRADED SAND TRACE GRAVEL, SW, 7.5YR 5/6 (strong brown), fine to coarse, loose, moist, well graded						
10									
	11.3	509.2							
			WELL GRADED SAND WITH GRAVEL, SW, 5YR 4/6 (yellowish red), medium to coarse, loose, moist, weak cementation, well graded		GR	7.0 - 17.0	8.5		
15									
	17.0	503.5							
			GRAVELLY WELL GRADED SAND, SW, 5YR 6/6 (reddish yellow), medium to coarse, medium dense, moist, well graded						
20									
	21.2	499.3							
	22.1	498.4	FAT CLAY, CH, 5B 6/1 (bluish gray), very fine, high plasticity, hard, wet, no odor, no staining, weak cementation, strong HCL reaction, Saprolitic clay with angular mudstone clasts		GR	17.0 - 27.0			
25									

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.RD.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VC</u>	Stantec Boring No. <u>GSD-AP-MW-2VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,413.14 N; 614,602.69 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>520.45 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
25			Shale Mudstone, light gray, very fine grained, hard, moderately weathered to highly weathered, dry, no odor, no staining, carbonaceous, Reacts to HCL. (N7) (Continued)						
27.0	493.5								
			Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)		GR	27.0 - 30.0	0.0		
30									
35						GR	30.0 - 40.0	0.0	
40									
45					GR	40.0 - 50.0	0.0		
50	470.5		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)						
55						GR	50.0 - 60.0	0.0	

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VC</u>	Stantec Boring No. <u>GSD-AP-MW-2VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,413.14 N; 614,602.69 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>520.45 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
60			Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>						
65					GR	60.0 - 70.0	0.0		
70									
75	75.0	445.5	Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)		GR	70.0 - 80.0	0.0		
80									
85					GR	80.0 - 90.0	0.0		

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R01.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VC</u>	Stantec Boring No. <u>GSD-AP-MW-2VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,413.14 N; 614,602.69 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>520.45 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
90		)	Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>						
95		)							
95		)			GR	90.0 - 100.0	0.0		
100	100.0	420.5							
105		)		Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5)					
105		)				GR	100.0 - 110.0	0.0	
110		)							
115		)				GR	110.0 - 120.0	0.0	

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VC</u>	Stantec Boring No. <u>GSD-AP-MW-2VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,413.14 N; 614,602.69 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>520.45 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
120		)	Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. (N7 - N5) <i>(Continued)</i>						
125		)			GR	120.0 - 130.0	0.0		
130		)							
135		)		GR	130.0 - 140.0	0.0			
138.0	382.5	)							
139.0	381.5	)	Shale Mudstone, light gray to gray, very fine grained, soft, highly weathered, Soft zone, potential fracture. Reaction to HCL. No recovery, geologic descriptions based on cuttings						
140		)	Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. N7 to N5						
145		)			GR	140.0 - 150.0	0.0		

STANTEC 1755 STD 175520212 - GADSDEN.GPJ BC 1755 STD DATAT.R01.DAT 11/19/21

Client Borehole ID <u>GSD-AP-MW-2VC</u>	Stantec Boring No. <u>GSD-AP-MW-2VC</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,413.14 N; 614,602.69 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>520.45 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
150		)	Shale Mudstone, light gray to gray, very fine grained, hard, Reaction to HCL. No recovery, geologic descriptions based on cuttings. N7 to N5 <i>(Continued)</i>						
		)							
		)							
		)							
155		)			GR	150.0 - 160.0	0.0		
		)							
		)							
		)							
160		)							
		)							
		)							
		)							
165		)		GR	160.0 - 170.5	0.0			
		)							
		)							
		)							
170	170.5	350.0							

No Refusal /  
Bottom of Hole at 170.5 Ft.

Top of Rock = 22.1 Ft.  
Top of Rock Elevation = 498.4 Ft.

1. Depths are reported in feet below ground surface
2. Elevation in reference to feet above NAVD 1988 datum

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT.R0.GDT 11/19/21

# Well Installation Field Log

Project Name: <u>Plant Gadsden Phase III Delineation MW Installation</u>	Date Started: <u>8/21/2021</u>	Date Completed: <u>8/22/2021</u>
Borehole/Well No: <u>GSD-AP-MW-2VC</u>	Northing (ft): <u>1280413.69</u>	Easting (ft): <u>614603.04</u>
Plant Name: <u>Plant Gadsden</u>	Latitude: <u>34.0194561</u>	Longitude: <u>-85.9705000</u>
Plant Address: <u>1000 Goodyear Ave, Gadsden, AL 35903</u>	Location Datum: <u>AL East NAD 1983</u>	Elevation Datum: <u>NAVD 1988</u>
Project & Task Number: <u>175520212/300.02</u>	Surface/ Ground Elevation: <u>520.45</u>	Stickup (ft, ags): <u>2.4</u>
Goals/Task: <u>Phase III Vertical Delineation Well</u>	Borehole Diameter (in): <u>6" (0.00-160.5')</u>	Borehole Depth (ft, bgs): <u>160.5</u>
Drilling Company: <u>Hawkston Drilling</u>	Well Casing Diameter (in): <u>2.0"</u>	Well Depth (ft, bgs): <u>137.5</u>
Drilling Equipment/Rig Type: <u>Boart Longyear LS600 Sonic</u>	Top of Casing elev (ft): <u>522.87</u>	Screen length (ft): <u>10</u>
Drilling Method: <u>4" x 6" Rotasonic</u>	DTW at Completion (ft, bgs): <u>96.7</u>	
Sampling Method: <u>Sonic 4" Core Barrel</u>		
Prepared By: <u>Andrew Stevens</u>		
Review By: <u>Edgar Smith</u>		

\*Not to Scale

Depth (feet)	Well Construction	Materials Inventory
— — —	Stick up <u>2.4 ft, ags</u>	Stick up: <u>2.4</u> ft, ags
Ground surface - 0.0'	4" Inch Diameter Protective Cover with Locking Lid Outer casing	
		Casing Type (steel or PVC, schedule 40 or 80): <u>2" PVC, Schedule 40</u>
		Casing Top: <u>2.4</u> ft, ags Bottom: <u>127.1</u> ft, bgs
	Bottom of Grout <u>119.0 ft, bgs</u> Top of Bentonite	Screen Type: <u>Sch 40, 2" ID x 3" OD U-Pack</u>
		Screen Slot Size: <u>0.010"</u>
		Screen Top: <u>127.1</u> ft, bgs Bottom: <u>137.1</u> ft, bgs
	Bottom of Bentonite <u>124.8 ft, bgs</u> Top of Filter Pack	Sump/end cap Top: <u>137.1</u> ft, bgs Bottom: <u>137.5</u> ft, bgs
	2" inch casing 16/40 mesh Filter pack	Grout Quantity: <u>100 gallons</u>
	Top of Screen <u>127.1 ft, bgs</u>	Grout Type: <u>Baroid Aqua Guard 30% Solids Grout</u>
		Grout Top: <u>0.5</u> ft, bgs Bottom: <u>119.0</u> ft, bgs
		Density Initial: <u>NA</u> lbs/gal Return: <u>NA</u> lbs/gal
		Bentonite Type: <u>Pel Plug 3/8" PDS TR30 pellets</u>
		Bentonite Seal Top: <u>119.0</u> ft, bgs Bottom: <u>124.8</u> ft, bgs
		Filter Pack - Pre-pack and Annular Space Type (manufacturer, size): <u>Southern Product &amp; Silica Co. Filter Sand and Gravel #1</u>
		Filter Pack: Top: <u>124.8</u> ft, bgs Bottom: <u>139.9</u> ft, bgs
	Bottom of screen <u>137.1 ft, bgs</u>	Notes: Bentonite seal hydrated a minimum of 4-hours prior to grout backfill placement. Bentonite Pellets placed from 139.9-160.5 ft bgs.
	Top of backfill below filter pack (see notes) <u>139.9 ft, bgs</u>	
	Terminus of borehole <u>160.5 ft, bgs</u>	

# Well Installation Field Log

Project Name: <u>Plant Gadsden Phase III Delineation MW Installation</u>	Date Started: <u>8/26/2021</u>	Date Completed: <u>8/26/2021</u>
Borehole/Well No: <u>GSD-AP-MW-21VB</u>	Northing (ft): <u>1280497.87</u>	Easting (ft): <u>614680.15</u>
Plant Name: <u>Plant Gadsden</u>	Latitude: <u>34.0196877</u>	Longitude: <u>-85.9702462</u>
Plant Address: <u>1000 Goodyear Ave, Gadsden, AL 35903</u>	Location Datum: <u>AL East NAD 1983</u>	Elevation Datum: <u>NAVD 1988</u>
Project & Task Number: <u>175520212/300.02</u>	Surface/ Ground Elevation: <u>517.72</u>	Stickup (ft, ags): <u>2.5</u>
Goals/Task: <u>Phase III Vertical Delineation Well</u>	Borehole Diameter (in): <u>6" (0.00-116.3')</u>	Borehole Depth (ft, bgs): <u>116.3</u>
Drilling Company: <u>Hawksfon Drilling</u>	Well Casing Diameter (in): <u>2.0"</u>	Well Depth (ft, bgs): <u>102.9</u>
Drilling Equipment/Rig Type: <u>Boart Longyear LS600 Sonic</u>	Top of Casing elev (ft): <u>520.24</u>	Screen length (ft): <u>10</u>
Drilling Method: <u>4" x 6" Rotasonic</u>	DTW at Completion (ft, bgs): <u>84.0</u>	
Sampling Method: <u>Sonic 4" Core Barrel</u>		
Prepared By: <u>Andrew Stevens</u>		
Review By: <u>Edgar Smith</u>		

**\*Not to Scale**

Depth (feet)	Well Construction	Materials Inventory
— — —	Stick up <u>2.5 ft, ags</u>	Stick up: <u>2.5</u> ft, ags
	Ground surface - 0.0'	
	4" Inch Diameter Protective Cover with Locking Lid	
	Outer casing	Casing Type (steel or PVC, schedule 40 or 80): <u>2" PVC, Schedule 40</u>
		Casing Top: <u>2.5</u> ft, ags Bottom: <u>92.5</u> ft, bgs
	Bottom of Grout <u>84.9 ft, bgs</u>	Screen Type: <u>Sch 40, 2" ID x 3" OD U-Pack</u>
	Top of Bentonite	Screen Slot Size: <u>0.010"</u>
		Screen Top: <u>92.5</u> ft, bgs Bottom: <u>102.5</u> ft, bgs
	Bottom of Bentonite <u>90.0 ft, bgs</u>	Sump/end cap Top: <u>102.5</u> ft, bgs Bottom: <u>102.9</u> ft, bgs
	Top of Filter Pack	Grout Quantity: <u>80 gallons</u>
	Top of Screen <u>92.5 ft, bgs</u>	Grout Type: <u>Baroid Aqua Guard 30% Solids Grout</u>
		Grout Top: <u>0.5</u> ft, bgs Bottom: <u>84.0</u> ft, bgs
		Density Initial: <u>NA</u> lbs/gal Return: <u>NA</u> lbs/gal
		Bentonite Type: <u>Pel Plug 3/8" PDS TR30 pellets</u>
		Bentonite Seal Top: <u>84.9</u> ft, bgs Bottom: <u>90.0</u> ft, bgs
		Filter Pack - Pre-pack and Annular Space Type (manufacturer, size): <u>Southern Product &amp; Silica Co. Filter Sand and Gravel #1</u>
		Filter Pack: Top: <u>90.0</u> ft, bgs Bottom: <u>105.0</u> ft, bgs
	Bottom of screen <u>102.5 ft, bgs</u>	Notes: Bentonite seal hydrated a minimum of 4-hours prior to grout backfill placement. Bentonite Pellets placed from 105.0-116.3 ft bgs.
	Top of backfill below filter pack (see notes) <u>105.0 ft, bgs</u>	
	Terminus of borehole <u>116.3 ft, bgs</u>	



# Well Installation Field Log

Project Name: <u>Plant Gadsden Phase III Delineation MW Installation</u>	Date Started: <u>8/23/2021</u>	Date Completed: <u>8/24/2021</u>
Borehole/Well No: <u>GSD-AP-MW-21VC</u>	Northing (ft): <u>1280474.22</u>	Easting (ft): <u>614657.51</u>
Plant Name: <u>Plant Gadsden</u>	Latitude: <u>34.0196242</u>	Longitude: <u>-85.9703194</u>
Plant Address: <u>1000 Goodyear Ave, Gadsden, AL 35903</u>	Location Datum: <u>AL East NAD 1983</u>	Elevation Datum: <u>NAVD 1988</u>
Project & Task Number: <u>175520212/300.02</u>	Surface/ Ground Elevation: <u>519.00</u>	Stickup (ft, ags): <u>2.1</u>
Goals/Task: <u>Phase III Vertical Delineation Well</u>	Borehole Diameter (in): <u>6" (0.00-170.5')</u>	Borehole Depth (ft, bgs): <u>170.5</u>
Drilling Company: <u>Hawksfon Drilling</u>	Well Casing Diameter (in): <u>2.0"</u>	Well Depth (ft, bgs): <u>155.9</u>
Drilling Equipment/Rig Type: <u>Boart Longyear LS600 Sonic</u>	Top of Casing elev (ft): <u>521.13</u>	Screen length (ft): <u>10</u>
Drilling Method: <u>4" x 6" Rotasonic</u>	DTW at Completion (ft, bgs): <u>8.9</u>	
Sampling Method: <u>Sonic 4" Core Barrel</u>		
Prepared By: <u>Andrew Stevens</u>		
Review By: <u>Edgar Smith</u>		

\*Not to Scale

Depth (feet)	Well Construction	Materials Inventory
— — —	Stick up <u>2.1 ft, ags</u> Ground surface - 0.0'	Stick up: <u>2.1</u> ft, ags
	4" Inch Diameter Protective Cover with Locking Lid Outer casing	Casing Type (steel or PVC, schedule 40 or 80): <u>2" PVC, Schedule 40</u>
	Bottom of Grout <u>138.7 ft, bgs</u> Top of Bentonite	Casing Top: <u>2.2</u> ft, ags Bottom: <u>145.1</u> ft, bgs
	2" inch casing	Screen Type: <u>Sch 40, 2" ID x 3" OD U-Pack</u>
	Bottom of Bentonite <u>144.2 ft, bgs</u> Top of Filter Pack	Screen Slot Size: <u>0.010"</u>
	16/40 mesh Filter pack	Screen Top: <u>145.1</u> ft, bgs Bottom: <u>155.1</u> ft, bgs
	Top of Screen <u>145.1 ft, bgs</u>	Sump/end cap Top: <u>155.1</u> ft, bgs Bottom: <u>155.5</u> ft, bgs
	0.010 Slot screen	Grout Quantity: <u>120 gallons</u>
	155.5 ft, bgs Sump/end cap	Grout Type: <u>Baroid Aqua Guard 30% Solids Grout</u>
	Top of backfill below filter pack (see notes) <u>160.5 ft, bgs</u>	Grout Top: <u>0.5</u> ft, bgs Bottom: <u>138.7</u> ft, bgs
	160.5 ft, bgs Base of filter pack	Density Initial: <u>NA</u> lbs/gal Return: <u>NA</u> lbs/gal
	Terminus of borehole <u>170.5</u>	Bentonite Type: <u>Pel Plug 3/8" PDS TR30 pellets</u>
		Bentonite Seal Top: <u>138.7</u> ft, bgs Bottom: <u>144.2</u> ft, bgs
		Filter Pack - Pre-pack and Annular Space Type (manufacturer, size): <u>Southern Product &amp; Silica Co. Filter Sand and Gravel #1</u>
		Filter Pack: Top: <u>144.2</u> ft, bgs Bottom: <u>160.5</u> ft, bgs
		Notes: Bentonite seal hydrated a minimum of 4-hours prior to grout backfill placement. Bentonite Pellets placed from 160.5-170.5 ft bgs.

# Well Installation Field Log

Project Name: <u>Plant Gadsden Phase III Delineation MW Installation</u>	Date Started: <u>8/27/2021</u>	Date Completed: <u>8/27/2021</u>
Borehole/Well No: <u>GSD-AP-MW-22VB</u>	Northing (ft): <u>1280629.98</u>	Easting (ft): <u>614685.11</u>
Plant Name: <u>Plant Gadsden</u>	Latitude: <u>34.0207974</u>	Longitude: <u>-85.9706788</u>
Plant Address: <u>1000 Goodyear Ave, Gadsden, AL 35903</u>	Location Datum: <u>AL East NAD 1983</u>	Elevation Datum: <u>NAVD 1988</u>
Project & Task Number: <u>175520212/300.02</u>	Surface/ Ground Elevation: <u>515.48</u>	Stickup (ft, ags): <u>2.5</u>
Goals/Task: <u>Phase III Vertical Delineation Well</u>	Borehole Diameter (in): <u>6" (0.00-51.0')</u>	Borehole Depth (ft, bgs): <u>51.0</u>
Drilling Company: <u>Hawksfon Drilling</u>	Well Casing Diameter (in): <u>2.0"</u>	Well Depth (ft, bgs): <u>50.1</u>
Drilling Equipment/Rig Type: <u>Boart Longyear LS600 Sonic</u>	Top of Casing elev (ft): <u>518.01</u>	Screen length (ft): <u>10</u>
Drilling Method: <u>4" x 6" Rotasonic</u>	DTW at Completion (ft, bgs): <u>2.0</u>	
Sampling Method: <u>Sonic 4" Core Barrel</u>		
Prepared By: <u>Andrew Stevens</u>		
Review By: <u>Edgar Smith</u>		

**\*Not to Scale**

Depth (feet)	Well Construction	Materials Inventory
— — —	Stick up <u>2.5 ft, ags</u> Ground surface - 0.0'	Stick up: <u>2.5</u> ft, ags
	4" Inch Diameter Protective Cover with Locking Lid Outer casing	Casing Type (steel or PVC, schedule 40 or 80): <u>2" PVC, Schedule 40</u>
	Bottom of Grout <u>32.8 ft, bgs</u> Top of Bentonite	Casing Top: <u>2.5</u> ft, ags Bottom: <u>39.7</u> ft, bgs
	2" inch casing	Screen Type: <u>Sch 40, 2" ID x 3" OD U-Pack</u>
	Bottom of Bentonite <u>36.8 ft, bgs</u> Top of Filter Pack	Screen Slot Size: <u>0.010"</u>
	16/40 mesh Filter pack	Screen Top: <u>39.7</u> ft, bgs Bottom: <u>49.7</u> ft, bgs
	Top of Screen <u>39.7 ft, bgs</u>	Sump/end cap Top: <u>49.7</u> ft, bgs Bottom: <u>50.1</u> ft, bgs
	0.010 Slot screen	Grout Quantity: <u>40 gallons</u>
	50.1 ft, bgs Sump/end cap	Grout Type: <u>Baroid Aqua Guard 30% Solids Grout</u>
	Top of backfill below filter pack (see notes) <u>51.0 ft, bgs</u>	Grout Top: <u>0.5</u> ft, bgs Bottom: <u>32.8</u> ft, bgs
	Terminus of borehole <u>51.0 ft, bgs</u>	Density Initial: <u>NA</u> lbs/gal Return: <u>NA</u> lbs/gal
		Bentonite Type: <u>Pei Plug 3/8" PDS TR30 pellets</u>
		Bentonite Seal Top: <u>32.8</u> ft, bgs Bottom: <u>36.8</u> ft, bgs
		Filter Pack - Pre-pack and Annular Space Type (manufacturer, size): <u>Southern Product &amp; Silica Co. Filter Sand and Gravel #1</u>
		Filter Pack: Top: <u>36.8</u> ft, bgs Bottom: <u>51.0</u> ft, bgs
		Notes: Bentonite seal hydrated a minimum of 4-hours prior to grout backfill placement.

# Well Installation Field Log

Project Name: <u>Plant Gadsden Phase III Delineation MW Installation</u>	Date Started: <u>8/29/2021</u>	Date Completed: <u>8/30/2021</u>
Borehole/Well No: <u>GSD-AP-MW-23VB</u>	Northing (ft): <u>1280901.32</u>	Easting (ft): <u>614549.19</u>
Plant Name: <u>Plant Gadsden</u>	Latitude: <u>34.0207974</u>	Longitude: <u>-85.9706788</u>
Plant Address: <u>1000 Goodyear Ave, Gadsden, AL 35903</u>	Location Datum: <u>AL East NAD 1983</u>	Elevation Datum: <u>NAVD 1988</u>
Project & Task Number: <u>175520212/300.02</u>	Surface/ Ground Elevation: <u>516.58</u>	Stickup (ft, ags): <u>2.5</u>
Goals/Task: <u>Phase III Vertical Delineation Well</u>	Borehole Diameter (in): <u>6" (0.00-119.0')</u>	Borehole Depth (ft, bgs): <u>119.0</u>
Drilling Company: <u>Hawksfon Drilling</u>	Well Casing Diameter (in): <u>2.0"</u>	Well Depth (ft, bgs): <u>100.1</u>
Drilling Equipment/Rig Type: <u>Boart Longyear LS600 Sonic</u>	Top of Casing elev (ft): <u>519.03</u>	Screen length (ft): <u>10</u>
Drilling Method: <u>4" x 6" Rotasonic</u>	DTW at Completion (ft, bgs): <u>50.0</u>	
Sampling Method: <u>Sonic 4" Core Barrel</u>		
Prepared By: <u>Andrew Stevens</u>		
Review By: <u>Edgar Smith</u>		

\*Not to Scale

Depth (feet)	Well Construction	Materials Inventory
— — —	Stick up <u>2.5 ft, ags</u> Ground surface - 0.0'	Stick up: <u>2.5</u> ft, ags
	4" Inch Diameter Protective Cover with Locking Lid Outer casing	Casing Type (steel or PVC, schedule 40 or 80): <u>2" PVC, Schedule 40</u>
	Bottom of Grout <u>82.9 ft, bgs</u> Top of Bentonite	Casing Top: <u>2.6</u> ft, ags Bottom: <u>89.7</u> ft, bgs
	2" inch casing	Screen Type: <u>Sch 40, 2" ID x 3" OD U-Pack</u>
	Bottom of Bentonite <u>87.0 ft, bgs</u> Top of Filter Pack	Screen Slot Size: <u>0.010"</u>
	16/40 mesh Filter pack	Screen Top: <u>89.7</u> ft, bgs Bottom: <u>99.7</u> ft, bgs
	Top of Screen <u>89.7 ft, bgs</u>	Sump/end cap Top: <u>99.7</u> ft, bgs Bottom: <u>100.1</u> ft, bgs
	0.010 Slot screen	Grout Quantity: <u>80 Gallons</u>
	100.1 ft, bgs Sump/end cap	Grout Type: <u>Baroid Aqua Guard 30% Solids Grout</u>
	Top of backfill below filter pack (see notes) <u>102.0 ft, bgs</u>	Grout Top: <u>0.5</u> ft, bgs Bottom: <u>82.9</u> ft, bgs
	Terminus of borehole <u>119.0 ft, bgs</u>	Density Initial: <u>NA</u> lbs/gal Return: <u>NA</u> lbs/gal
		Bentonite Type: <u>Pel Plug 3/8" PDS TR30 pellets</u>
		Bentonite Seal Top: <u>82.9</u> ft, bgs Bottom: <u>87.0</u> ft, bgs
		Filter Pack - Pre-pack and Annular Space Type (manufacturer, size): <u>Southern Product &amp; Silica Co. Filter Sand and Gravel #1</u>
		Filter Pack: Top: <u>87.0</u> ft, bgs Bottom: <u>102.0</u> ft, bgs
		Notes: Bentonite seal hydrated a minimum of 4-hours prior to grout backfill placement. Bentonite Pellets placed from 102.0-119.0 ft bgs.



# LOG OF TEST BORING

**BORING GSD-AP-MW-2**  
 PAGE 1 OF 2  
 APC439007

**SOUTHERN COMPANY SERVICES, INC.**  
**EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING**

**PROJECT** Plant Gadsden Ash Pond  
**LOCATION** Plant Gadsden

**DATE STARTED** 8/8/2017 **COMPLETED** 8/10/2017 **SURF. ELEV.** Not Surveyed **COORDINATES:** \_\_\_\_\_

**CONTRACTOR** Cascade Drilling **EQUIPMENT** Supersonic **METHOD** Sonic

**DRILLED BY** T. Taylor **LOGGED BY** S. McDonald **CHECKED BY** B. Coates **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 44 ft. **GROUND WATER DEPTH: DURING** 10 ft. **COMP.** 11.37 ft. **DELAYED** \_\_\_\_\_

**NOTES** ~20' into bedrock Well installed. Refer to well data sheet.

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION Weak Moderate Strong	GROUNDWATER OBSERVATIONS	WELL DATA
					Completion: protective steel cover; 3-foot square concrete pad
0		<b>(FILL)</b> - dark yellowish brown (10YR 4/4) and dark yellowish brown (10YR 4/6) topsoil dry, loose, sandy silt			Surface Seal: concrete
5		<b>Silt (ML)</b> - alluvium dry, slightly cohesive, sandy silt, with organics and sparse black mottles <b>Poorly-graded Sand (SP)</b> - alluvium moist, loose, sand, becoming gravelly, fine- to medium-grained			Annular Fill: cement-bentonite grout
10		<b>Well-graded Gravel (GW)</b> - alluvium WET, loose, gravelly sand, medium- to coarse-grained, with about 25% subrounded gravel to 1"  - GW: alluvium WET, loose, gravelly sand, medium- to coarse-grained			Annular Seal: bentonite pellets
15		- GW: alluvium WET, loose, gravelly sand, medium- to coarse-grained			Filter: silica filter sand
20		- GW: alluvium WET, loose, gravelly sand, with about 30% gravel to 1.5", primarily quartz, subrounded			<b>Standpipe:</b> <b>2" OD PVC (SCH 40)</b> Screen: 10 ft; slotted
25		<b>mudstone</b> - medium dark gray (N4) very fine grain, soft, highly weathered, weathered shale and mudstone, low HCl reaction, somewhat friable			Sump: 0.5 ft.
30					
35		- mudstone: banded with medium gray (N5) and medium dark gray (N4) very fine grain, medium, lower weathered, flow banded, mudstone, with dark gray and gray bands, low HCl reaction, less weathered, with abundant calcite, white (N9.5)			Backfill: Silica Sand over bentonite pellets
40					

(Continued Next Page)

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 2/6/18 08:33 - T:\ESEE MAJOR PROJECTS\PROJECTS - ATTORNEY CLIENT PRIVILEGE - DRAFT\APC\PLANT GADSDEN\SITE CHARACTERIZATION\FIELD DATA\BORING AND PIEZOMETER DATA\GADSDEN 20

SIMPLE GEOLOGY WITH WELL - ESEE DATABASE.GDT - 2/6/18 08:33 - T:\ESEE MAJOR PROJECTS\PROJECTS\_ATTORNEY CLIENT PRIVILEGE\_DRAFT\APC\PLANT GADSDEN\SITE CHARACTERIZATION\FIELD DATA\BORING AND PIEZOMETER DATA\GADSDEN 20



# LOG OF TEST BORING

**BORING GSD-AP-MW-2**  
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 APC439007

**SOUTHERN COMPANY SERVICES, INC.**  
**EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING**

PROJECT Plant Gadsden Ash Pond

LOCATION Plant Gadsden

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION		GROUNDWATER OBSERVATIONS	WELL DATA
			Weak	Moderate Strong		
		<b>mudstone (Cont)</b>				Completion: protective steel cover; 3-foot square concrete pad
						(CONTINUED)
						Backfill: Silica Sand over bentonite pellets
45		Bottom of borehole at 44.0 feet.				
50						
55						
60						
65						
70						
75						
80						
85						



# LOG OF TEST BORING

**BORING GSD-AP-MW-2V**  
 PAGE 1 OF 2  
 APC439007

**SOUTHERN COMPANY SERVICES, INC.**  
**EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING**

**PROJECT** Plant Gadsden Ash Pond  
**LOCATION** Plant Gadsden, Gadsden, Alabama

**DATE STARTED** 10/23/2019 **COMPLETED** 10/23/2019 **SURF. ELEV.** Not Surveyed **COORDINATES:** \_\_\_\_\_

**CONTRACTOR** Cascade **EQUIPMENT** Sonic 8140L **METHOD** Rotosonic

**DRILLED BY** M. Rodrigues **LOGGED BY** S. McDonald **CHECKED BY** B. Coates **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 60 ft. **GROUND WATER DEPTH: DURING** \_\_\_\_\_ **COMP.** 5.42 ft. **DELAYED** \_\_\_\_\_

**NOTES** Well installed. Refer to well data sheet.

GEOLOGY LOG W/COLOR - ESSEE DATABASE.GDT - 10/29/19 08:23 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\AL-GADSDEN\GADSDEN WELL AND BORINGS 2019\GADSDEN 2019.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION Weak Moderate Strong	COMMENTS
5		<b>Topsoil (TOPSOIL)</b> - yellowish brown / moderate yellowish brown (10YR 5/4) topsoil dry, nonplastic, silty, noncohesive, with organics <b>Silt (ML)</b> - grading reddish yellow (5YR 6/8) and red (2.5YR 5/8) alluvium dry, medium stiff to stiff, nonplastic, noncohesive, with sparse black mottles <b>Silty Sand (SM)</b> - mottled yellowish red (5YR 5/8) and reddish yellow (7.5YR 6/8) alluvium dry, loose to medium dense, fine-grained, with sparse (<10%) subangular to subrounded gravel to 1/2", gravel increasing to ~20% by 10'		
10		<b>Well-graded Sand (SW)</b> - mottled light yellowish brown (10YR 6/4) and brownish yellow / dark yellowish orange (10YR 6/6) alluvium wet, fine- to coarse-grained, angular to subrounded grains, with ~25-30% angular to subrounded gravel to 1" - very dark brown / dusky yellowish brown (10YR 2/2) alluvium wet, fine- to coarse-grained, with ~25-30% gravel to 1" - mottled brownish yellow (10YR 6/8) and yellow (10YR 7/8) alluvium wet, loose, fine- to coarse-grained, angular to subrounded grains, with ~30% gravel to 1.5", subrounded to subangular - mottled brownish yellow (10YR 6/8) and yellow (10YR 7/8) alluvium wet, loose, fine- to coarse-grained, with ~40-50% gravel to 2", subangular to subrounded, abundant quartz		
25		<b>Well-graded Gravel (GW)</b> - mottled brownish yellow (10YR 6/8) and yellow (10YR 7/8) alluvium wet, loose, ~50-60% gravel, small to 1.5", subangular to subrounded, abundant quartz <b>Silt (ML)</b> - brownish yellow (10YR 6/8) saprolite dry, stiff, low plasticity, clayey, cohesive <b>mudstone</b> - medium light gray (N6) and medium gray (N5) very fine grain, medium hard to hard, moderately weathered, shaly, low to medium HCL reaction in rock to strong reaction in crushed rock - mudstone: medium dark gray (N4) and medium light gray (N6) very fine grain, medium hard, slightly weathered, flow banded, with 1' alluvial gravel at top, angular to subrounded, low HCL reaction in rock to medium reaction in crushed rock		
30				
35				
40				

(Continued Next Page)



# LOG OF TEST BORING

**BORING GSD-AP-MW-2V**  
 PAGE 2 OF 2  
 APC439007

**SOUTHERN COMPANY SERVICES, INC.**  
**EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING**

**PROJECT** Plant Gadsden Ash Pond  
**LOCATION** Plant Gadsden, Gadsden, Alabama

GEOLOGY LOG W/COLOR - ESEE DATABASE.GDT - 10/29/19 08:23 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\AL-GADSDEN\GADSDEN WELL AND BORINGS 2019\GADSDEN 2019.GPJ

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	HCL REACTION <small>Weak Moderate Strong</small>	COMMENTS
..... ..... .....		<b>mudstone (Con't)</b> - no recovery		
45		- mudstone: medium dark gray (N4) and medium gray (N5) very fine grain, medium hard, slightly weathered, flow banded, with thin calcite infilling, low HCL reaction in rock to medium reaction in crushed rock		
50		- no recovery		
55		- mudstone: medium dark gray (N4) and medium gray (N5) very fine grain, medium hard to hard, slightly weathered, flow banded, bands 2 mm to 1" thick, low HCL reaction in rock to medium reaction in crushed rock, with calcite, shaly/fissile in spots		
60		Bottom of borehole at 60.0 feet.		
65				
70				
75				
80				
85				

2012 WELL CONSTRUCTION RECORD - ESEE DATABASE.GDT - 4/7/20 16:12 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\VAL-GADSDEN\2019 AND OLDER\GADSDEN WELL AND BORINGS 2019\GADSDEN 2



# RECORD OF WELL CONSTRUCTION

**WELL: GSD-AP-MW-2V**  
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**SOUTHERN COMPANY SERVICES, INC.**  
**EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING**

**PROJECT** Plant Gadsden Ash Pond  
**LOCATION** Plant Gadsden, Gadsden, Alabama

**DATE STARTED** 10/23/2019 **COMPLETED** 10/23/2019 **SURF. ELEV.** Not Surveyed **COORDINATES:** \_\_\_\_\_

**CONTRACTOR** Cascade **EQUIPMENT** Sonic 8140L **METHOD** Rotosonic

**DRILLED BY** M. Rodrigues **LOGGED BY** S. McDonald **CHECKED BY** B. Coates **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_

**BORING DEPTH** 60 ft. **GROUND WATER DEPTH: DURING** \_\_\_\_\_ **COMP.** 5.42 ft. **DELAYED** \_\_\_\_\_

**NOTES** Well installed. Refer to well data sheet.

BOREHOLE DATA	WELL DATA	COMMENTS
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">DEPTH (ft)</div> </div>	<p>Protective steel cover 3-foot square concrete pad Top of casing Elev. = _____</p> <p>← Surface Seal: concrete</p> <p>← Annular Fill: cement-bentonite grout</p>	
	(DEPTH)	
	(1.0)	

(Continued Next Page)



2012 WELL CONSTRUCTION RECORD - ESEE DATABASE\_GDT - 4/7/20 16:12 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\VAL-GADSDEN\2019 AND OLDER\GADSDEN WELL AND BORINGS 2019\GADSDEN 2



# RECORD OF WELL CONSTRUCTION

**WELL: GSD-AP-MW-2V**  
 PAGE 2 OF 2  
 APC439007

**SOUTHERN COMPANY SERVICES, INC.**  
**EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING**

PROJECT Plant Gadsden Ash Pond  
 LOCATION Plant Gadsden, Gadsden, Alabama

BOREHOLE DATA	DEPTH (ft)	WELL DATA	COMMENTS
<p>Strata</p>	<p>(CONTINUED)</p> <p>45:</p> <p>50:</p> <p>55:</p> <p>60:</p>	<p>Protective steel cover                      3-foot square concrete pad                      Top of casing Elev. =</p> <p>Annular Seal: 3/8 Bentonite Non-Coated Pellets</p> <p>Filter: 20-40 graded silica filter sand</p> <p>Well: 2" OD PVC (SCH 40)                      Screen: 9.5 ft. 0.010" slot prepack</p> <p>Sump: 0.50 ft.</p>	<p>(DEPTH)</p> <p>(44.7)</p> <p>(47.7)</p> <p>(50.0)</p>

2012 WELL CONSTRUCTION RECORD - ESEE DATABASE.GDT - 4/7/20 16:12 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\VAL-GADSDEN\2019 AND OLDER\GADSDEN WELL AND BORINGS 2019\GADSDEN 2



# RECORD OF WELL CONSTRUCTION

**WELL: GSD-AP-MW-2VA**  
PAGE 1 OF 2  
APC439007

**SOUTHERN COMPANY SERVICES, INC.**  
**EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING**

**PROJECT** Plant Gadsden Ash Pond  
**LOCATION** Plant Gadsden, Gadsden, Alabama

**DATE STARTED** 1/28/2020 **COMPLETED** 1/30/2020 **SURF. ELEV.** Not Surveyed **COORDINATES:** \_\_\_\_\_  
**CONTRACTOR** Cascade **EQUIPMENT** Sonic Truck **METHOD** Rotosonic  
**DRILLED BY** J. Smith **LOGGED BY** S. Baxter **CHECKED BY** B. Coates **ANGLE** \_\_\_\_\_ **BEARING** \_\_\_\_\_  
**BORING DEPTH** 117 ft. **GROUND WATER DEPTH: DURING** 8.5 ft. **COMP.** 40.15 ft. **DELAYED** \_\_\_\_\_  
**NOTES** Well installed. Refer to well data sheet.

BOREHOLE DATA	WELL DATA	COMMENTS
	<p style="text-align: right;">(DEPTH)</p> <p style="text-align: right;">(0.5)</p> <p style="text-align: right;">(57.3)</p>	

(Continued Next Page)

2012 WELL CONSTRUCTION RECORD - ESEE DATABASE.GDT - 4/7/20 16:12 - S:\WORKGROUPS\APC GENERAL SERVICE COMPLEX\CIVIL TECH SUPPORT\DRILLING\PROJECTS\VAL-GADSDEN\2019 AND OLDER\GADSDEN WELL AND BORINGS 2019\GADSDEN 2



# RECORD OF WELL CONSTRUCTION

**WELL: GSD-AP-MW-2VA**  
 PAGE 2 OF 2  
 APC439007

**SOUTHERN COMPANY SERVICES, INC.**  
 EARTH SCIENCE AND ENVIRONMENTAL ENGINEERING

PROJECT Plant Gadsden Ash Pond  
 LOCATION Plant Gadsden, Gadsden, Alabama

BOREHOLE DATA	DEPTH (ft)	WELL DATA	COMMENTS
Strata (CONTINUED)	DEPTH (ft) 70 80 90 100 110	Protective steel cover 3-foot square concrete pad Top of casing Elev. = Annular Seal: 3/8 Bentonite Non-Coated Pellets Filter: 20-40 graded silica filter sand Well: 2" OD PVC (SCH 40) Screen: 10 ft. 0.010" slot prepack Sump: 0.90 ft. Backfill: Silica Sand	(DEPTH) (62.9) (65.0) (75.0) (75.9) (80.0)

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <u>GSD-AP-MW-2VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>
Project Name <u>Plant Gadsden</u>	Date Started <u>3/2/21</u> Completed <u>3/6/21</u>
Project Location <u>Etowah Co, Gadsden, Alabama</u>	Depth to Water <u>80.2 ft</u> Date/Time <u>3/6/21</u>
Inspector <u>A. Stevens</u> Logger <u>A. Stevens</u>	Depth to Water <u>N/A</u> Date/Time <u>N/A</u>
Drilling Contractor <u>Cascade (subcontractor)</u>	Drill Rig Type and ID <u>Truck Mounted PS-150 Sonic</u>
Overburden Drilling and Sampling Tools (Type and Size) <u>4" X 6" Rotosonic</u>	
Sampler Hammer Type <u>N/A</u> Weight <u>N/A</u> Drop <u>N/A</u> Efficiency <u>N/A</u>	
Reviewed By <u>J. Massey</u>	Approved By <u>E. Smith</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
0	0.0	519.7	Top of Hole						
	0.5	519.2	WELL GRADED SAND WITH CLAY, SC, 10YR 4/4 (dark yellowish brown), wet, Top soil, roots present		RS01	0.0 - 5.0	1.2	24	
	6.5	513.2	WELL GRADED SAND WITH CLAY, SC, 10YR 6/6 (brownish yellow) to 7.5YR 5/3 (brown), non to low plasticity, very loose, moist, no odor, no staining						
	15.0	504.7	WELL GRADED SAND SOME CLAY, SW, 5YR 5/6 (yellowish red), very fine to medium, low to medium plasticity, dry to wet, Quartz, Plagioclase sands		RS02	5.0 - 15.0	6.0	60	
	18.0	501.7	WELL GRADED SAND WITH GRAVEL, SW, 10YR 7/6 (yellow), medium to coarse, non-plastic, wet, gravel consists of prominently quartz and plagioclase. Few angular mudstone clasts						
	21.0	498.7	WELL GRADED GRAVEL WITH CLAY, GC, 10YR 4/4 (dark yellowish brown) to 10YR 6/8 (brownish yellow), very fine to coarse, medium to high plasticity, moist		RS03	15.0 - 25.0	10.0	100	
			Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins						
					RS04	25.0 - 35.0	2.5	25	

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATAT R0.GDT 4/15/21

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <u><b>GSD-AP-MW-2VB</b></u>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks	
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %		
		(	Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins <i>(Continued)</i>							
35		(								
		(								
		(								
40		(			RS05	35.0 - 45.0	3.0	30		
		(								
		(								
45		(								
		(								
		(								
50		(			RS06	45.0 - 55.0	4.0	40		
		(								
		(								
55		(		RS07	55.0 - 56.0	1.0	100			
		(								
		(								
60		(		RS08	56.0 - 65.0	5.0	56			
		(								
		(								
65		(								

STANTEC 1755 STD - GARDEN.GPJ BC 1755 STD DATA RIG.DOT 4/15/21

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <u>GSD-AP-MW-2VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks	
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %		
70			Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins <i>(Continued)</i>		RS09	65.0 - 75.0	3.0	30		
75										
80						RS10	75.0 - 85.0	3.0	30	
85										
90					RS11	85.0 - 95.0	7.0	70		
93.0	426.7		@ 92.0' -93.0' bgs becomes soft, moderately weathered, wet.							
95			Mudstone/shale, light gray to dark gray, very fine grained, moderately hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins @ 95.0' to 96.0' bgs becomes soft, moderately weathered, wet.							
96.0	423.7									
100			Mudstone/shale, light gray to gray, very fine grained, very hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins		RS12	95.0 - 105.0	7.0	70		
105										

STANTEC 1755 STD - GADSDEN.GPJ BC 1755 STD DATA1 R0.GDT 4/15/21

Client Borehole ID <u>GSD-AP-MW-2VB</u>	Stantec Boring No. <u>GSD-AP-MW-2VB</u>
Client <u>Southern Company</u>	Boring Location <u>1,280,433.80 N; 614,626.44 E</u>
Project Number <u>175520212</u>	Surface Elevation <u>519.74 ft</u> Elevation Datum <u>NAVD88</u>

Lithology			Description	Overburden:	Sample <sup>1</sup>	Depth Ft <sup>2</sup>	Rec. Ft	Blows/PSI	Remarks
Depth Ft <sup>2</sup>	Elevation			Rock Core:	RQD %	Run Ft	Rec. Ft	Rec. %	
110		)	Mudstone/shale, light gray to gray, very fine grained, very hard, thin bedded, damp, no odor, no staining, calcareous, 60° to 75° bedding angle, Calcite veins <i>(Continued)</i>		RS13	105.0 - 115.0	10.0	100	
115		)			RS14	115.0 - 120.0	5.0	100	
120	120.5	399.2							

No Refusal /  
Bottom of Hole at 120.5 Ft.

Top of Rock = 21.0 Ft.  
Top of Rock Elevation = 498.7 Ft.

1. Depths are reported in feet below ground surface
  2. Elevation in reference to feet above NAVD 1988 datum
- Depths are reported in feet below ground surface

# Well Installation Field Log

Project Name: <u>Plant Gadsden Phase II Delineation MW Installation</u>	Date Started: <u>3/5/2021</u>	Date Completed: <u>3/6/2021</u>
Borehole/Well No: <u>GSD-AP-MW-2VB</u>	Northing (ft): <u>1280433.80</u>	Easting (ft): <u>614626.44</u>
Plant Name: <u>Plant Gadsden</u>	Latitude: <u>34.0195130</u>	Longitude: <u>-85.9704218</u>
Plant Address: <u>1000 Goodyear Ave, Gadsden, AL 35903</u>	Location Datum: <u>AL East NAD 1983</u>	Elevation Datum: <u>NAVD 1988</u>
Project & Task Number: <u>175520212</u>	Surface/ Ground Elevation: <u>519.74' NAVD 1988</u>	Stickup (ft, ags): <u>2.5</u>
Goals/Task: <u>Phase II Vertical Delineation Well</u>	Borehole Diameter (in): <u>6" (0.00-75.00')</u>	Borehole Depth (ft, bgs): <u>120.6</u>
Drilling Company: <u>Cascade</u>	Well Casing Diameter (in): <u>2</u>	Well Depth (ft, bgs): <u>102.7</u>
Drilling Equipment/Rig Type: <u>Truck Mounted PS-150 Sonic</u>	Top of Casing elev (ft): <u>522.56</u>	Screen length (ft): <u>10</u>
Drilling Method: <u>4" x 6" Rotasonic</u>	DTW at Completion (ft, bgs): <u>80.2</u>	
Sampling Method: <u>Sonic 4" core barrel</u>		
Prepared By: <u>Andrew Stevens</u>		
Review By: <u>Josh Massey</u>		

\*Not to Scale

Depth (feet)	Well Construction	Materials Inventory
— — —	Stick up <u>2.5 ft, ags</u> Ground surface - 0.0'	Stick up: <u>2.5</u> ft, ags
	4" Inch Diameter Protective Cover with Locking Lid Outer casing	Casing Type (steel or PVC, schedule 40 or 80): <u>2" PVC, Schedule 40</u>
	Bottom of Grout <u>84.8 ft, bgs</u> Top of Bentonite	Casing Top: <u>2.5</u> ft, ags Bottom: <u>92.3</u> ft, bgs
	2" inch casing	Screen Type: <u>Sch 40, 2" ID x 3" OD U-Pack</u>
	Bottom of Bentonite <u>89.9 ft, bgs</u> Top of Filter Pack	Screen Slot Size: <u>0.010"</u>
	16/40 mesh Filter pack	Screen Top: <u>92.3</u> ft, bgs Bottom: <u>102.3</u> ft, bgs
	Top of Screen <u>92.3 ft, bgs</u>	Sump/end cap Top: <u>102.3</u> ft, bgs Bottom: <u>102.7</u> ft, bgs
	0.010 Slot screen	Grout Quantity: <u>130 gal</u>
		Grout Type: <u>Baroid Aqua Guard 30% Solids Grout</u>
		Grout Top: <u>3.8</u> ft, bgs Bottom: <u>84.8</u> ft, bgs
		Density Initial: <u>NA</u> lbs/gal Return: <u>NA</u> lbs/gal
		Bentonite Type: <u>Pel Plug 3/8" PDS TR30 pellets</u>
		Bentonite Seal Top: <u>84.8</u> ft, bgs Bottom: <u>89.9</u> ft, bgs
		Filter Pack - Pre-pack and Annular Space Type (manufacturer, size): <u>Southern Product &amp; Silica Co. Filter Sand and Gravel #1</u>
		Filter Pack: Top: <u>89.9</u> ft, bgs Bottom: <u>105.8</u> ft, bgs
	Bottom of screen <u>102.3 ft, bgs</u>	Notes: Bentonite seal hydrated a minimum of 4-hours prior to grout backfill placement. Bentonite Pellets placed from 105.8-120.6 ft bgs.
	Top of backfill below filter pack (see notes) <u>105.8 ft, bgs</u>	
	102.7 ft, bgs Sump/end cap	
	105.8 ft, bgs Base of filter pack	
	Terminus of borehole <u>120.6 ft, bgs</u>	









# Appendix B



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-14													
		Date	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	08/25/2020	03/22/2021
<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	<0.03	<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	13.1	12.2	11.8
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	3.03	3.15	2.87
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	<0.06	<0.06	<0.06
pH_Field	pH	3.95	4.02	4.07	4.07	4.07	4.1	4.1	4.02	3.94	4	3.93	4.03	3.25	4.04
Sulfate	mg/L	120	120	110	86	80	68	54	126	207	106	191	98.4	83.8	95.7
TDS	mg/L	219	195	175	153	127	125	101	180	287	265	280	160	126	132
<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	<0.0008	<0.000507	<0.000508
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	0.002 J	0.00188	0.00137
Barium	mg/L	0.0338	0.03	0.0274	0.0275	0.0264	0.0276	0.0256	0.0314	--	0.0274	0.0327	0.0291	0.0254	0.0268
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	0.00117 J	0.000918 J	0.00115
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	0.000584 J	0.000407	0.000505
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000771 J	0.00061 J
Cobalt	mg/L	0.0382	0.0366	0.0308	0.0291	0.0286	0.0269	0.0215	0.0359	--	0.0391	0.056	0.0365	0.0262	0.0288
Combined Radium 226 + 228	pCi/L	0.616	0.859	0.654	0.855	0.787	1.14	0.64	0.873	--	0.774	0.865	0.976	1.04	1.61
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	0.0018 J	0.00143	0.00151
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
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	<0.0003	0.000363 J	<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	<0.002	<6.8e-005	<6.8e-005
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	0.00247 J	0.00488	0.00287
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-10													
		Date	12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/07/2018	10/22/2018	12/04/2018	02/06/2019	02/26/2019	08/22/2019	04/15/2020	08/26/2020	03/23/2021
<b>Appendix III</b>															
Boron	mg/L	0.135	0.12	0.144	0.0903 J	0.106	0.107	0.103	0.105	0.146	0.0951 J	0.164	0.108	0.188	0.09 J
Calcium	mg/L	42	47.6	50.1	37.1	37.4	36.3	42.1	41.3	53.3	38.5	54.1	37.8	57	38.2
Chloride	mg/L	6.9	6.1	--	5.6	5.1	5.5	5.6	6.24	8.28	5.66	6.49	5.39	7.14	5.72
Fluoride	mg/L	0.09 J	0.08 J	--	0.09 J	0.04 J	0.1	0.07 J	0.107	0.0813 J	0.084 J	0.112	0.0997 J	0.101	0.201
pH_Field	pH	6.83	6.82	6.74	6.67	6.72	6.73	6.77	6.67	6.77	6.37	6.85	6.73	6.87	6.72
Sulfate	mg/L	11	19	--	<1.4	<1.4	<1.4	11	16.8	38.4	6.74	50.7	10.5	60.1	7.75
TDS	mg/L	215	237	242	194	195	184	215	208	252	194	262	186	273	190
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00247 J	0.00192 J	0.00218 J	0.00419 J	0.00365 J	0.00404 J	0.00332 J	0.00333 J	--	0.00394 J	0.00236 J	0.00422 J	0.00163	0.0037
Barium	mg/L	0.308	0.289	0.359	0.307	0.25	0.29	0.305	0.265	--	0.302	0.35	0.322	0.395	0.292
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00035 J	0.000285 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00037	0.000886
Combined Radium 226 + 228	pCi/L	0.585 U	0.474	0.463 U	0.678	0.495 U	0.36 U	0.407 U	0.537	--	-0.021 U	0.64 U	0.221 U	0.83 U	6.52
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	0.000302 J	<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	--	<0.002	<0.002	<0.002	0.000204	0.000451
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-16													
		Date	10/24/2018	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	03/22/2021
<b>Appendix III</b>															
Boron	mg/L	0.0261 J	0.0209 J	0.0239 J	<0.02	<0.02	--	0.0271 J	0.0245 J	<0.02	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	18	14.9	14.8	14.8	16.4	--	19.6	20.8	21.5	12.8	13.1	12.2	18.4	13.4
Chloride	mg/L	3.3	3.6	3.5	3.3	3.6	3.4	3.91	3.94	4.15	3.42	3.39	2.94	3.61	3.17
Fluoride	mg/L	0.11	0.1	0.1	0.11	0.14	0.16	<0.05	<0.05	<0.05	<0.05	<0.06	0.0863 J	<0.06	<0.06
pH_Field	pH	5.27	4.99	4.74	4.76	4.57	--	4.45	4.3	4.35	4.57	4.49	4.2	3.45	4.16
Sulfate	mg/L	44	44	46	51	76	94	135	183	192	66.6	92.8	74.1	128	93.5
TDS	mg/L	107	96.7	102	103	126	--	212	269	261	121	155	131	204	136
<b>Appendix IV</b>															
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	--	0.000922 J	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<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	0.00614	0.00207
Barium	mg/L	0.0499	0.0458	0.0476	0.0475	0.0461	--	0.0485	0.0354	--	0.0314	0.028	0.0261	0.0278	0.0215
Beryllium	mg/L	<0.0006	<0.0006	0.00133 J	<0.0006	0.000761 J	--	0.000703 J	0.000711 J	--	<0.0006	<0.0006	<0.0006	0.000537 J	0.000487 J
Cadmium	mg/L	0.000307 J	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	0.000852	0.00068
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000546 J	0.000455 J
Cobalt	mg/L	0.0129	0.0114	0.0168	0.0161	0.0234	--	0.04	0.0538	--	0.0247	0.0373	0.0294	0.0469	0.0321
Combined Radium 226 + 228	pCi/L	0.564	-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	0.942 U	1.16 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	--	0.00114 J	0.00135 J	--	<0.001	<0.001	0.0011 J	0.0016	0.00116
Lithium	mg/L	<0.01	<0.01	<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	<0.00025	--	0.000411 J	0.000473 J	--	<0.0003	<0.0003	<0.0003	0.000775	<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	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<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	0.0134	0.00262
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-11													
		Date	12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/04/2018	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	0.12	0.109	0.124	0.111	0.135	0.114	0.124	0.112	0.14	0.272	0.154	0.257	0.142	0.125
Calcium	mg/L	70	72.4	72.3	73.1	76	70.2	74	73.1	82.2	133	82.4	111	75.9	78.6
Chloride	mg/L	6.3	5.4	--	5.4	5.2	5.4	5.3	5.89	6.2	4.64	5.46	4.74	5.54	5.8
Fluoride	mg/L	0.06 J	0.05 J	--	0.06 J	0.06 J	0.06 J	<0.032	0.0678 J	0.0985 J	<0.05	0.0878 J	<0.06	0.0819 J	0.134
pH_Field	pH	6.81	6.74	6.62	6.69	6.67	6.73	6.67	6.58	6.56	6.26	6.63	6.38	6.58	6.66
Sulfate	mg/L	83	84	--	95	110	78	97	113	135	305	146	280	135	142
TDS	mg/L	312	323	324	333	346	311	343	317	360	555	372	517	361	352
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00279 J	0.00252 J	0.00283 J	0.00289 J	0.00265 J	0.00287 J	0.00271 J	0.00272 J	--	0.00229 J	0.00286 J	0.00246 J	0.00275	0.00272
Barium	mg/L	0.349	0.297	0.338	0.338	0.307	0.311	0.331	0.286	--	0.214	0.168	0.165	0.169	0.17
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000513 J	0.000267 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	0.00756	<0.002	0.00599	0.000388	0.000275
Combined Radium 226 + 228	pCi/L	0.891 U	0.786	0.935	0.537	1.28	1.3	1.05	0.779	--	1.34 U	0.922 U	1.28	0.592 U	1.02 U
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	--	<0.002	<0.002	<0.002	0.000124 J	0.000152 J
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect





**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-12													
		Date	12/06/2017	02/08/2018	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	0.0605 J	0.0527 J	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	0.0661 J
Calcium	mg/L	49	50	50.5	56.3	65.7	68.3	64.3	52.3	60.2	89.4	40	68.4	42	55.8
Chloride	mg/L	6.2	6.1	--	5.5	5.3	5.8	6	5.92	5.88	6.31	5.74	5.91	6.3	6.26
Fluoride	mg/L	<0.032	<0.032	--	<0.032	<0.032	0.04 J	<0.032	<0.05	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06
pH_Field	pH	5.6	5.44	5.41	5.45	5.46	5.47	5.45	5.31	5.4	5.35	5.39	5.63	5.5	5.19
Sulfate	mg/L	200	200	--	240	260	280	280	249	257	339	155	282	160	195
TDS	mg/L	371	367	365	421	479	507	479	385	422	501	278	472	286	378
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Barium	mg/L	0.0501	0.0375	0.0405	0.0466	0.0448	0.054	0.0493	0.0357	--	0.0455	0.0279	0.0503	0.0315	0.0417
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	0.000596 J	0.00064 J	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	0.000367
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000431 J	0.000339 J
Cobalt	mg/L	0.00221 J	0.00221 J	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	0.00448
Combined Radium 226 + 228	pCi/L	0.435 U	0.477	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	1.48
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-17													
		Date	10/24/2018	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	04/16/2020	08/24/2020	03/22/2021
<b>Appendix III</b>															
Boron	mg/L	0.0357 J	0.0348 J	0.0313 J	0.0363 J	0.033 J	--	0.0307 J	0.0306 J	0.0206 J	0.0341 J	0.0331 J	0.0303 J	0.0333 J	0.0305 J
Calcium	mg/L	28.3	27.5	20.7	25.3	20.9	--	17	17.1	18.6	25.3	30.7	30.8	31	31
Chloride	mg/L	4	3.6	3.5	3.2	3.4	3.2	3.15	2.98	3.05	2.8	2.93	2.82	2.94	2.98
Fluoride	mg/L	0.23	0.2	0.19	0.19	0.15	0.19	0.168	0.192	0.182	0.187	0.166	0.163	0.18	0.175
pH_Field	pH	7.92	8.23	8.95	8.77	8.99	--	9.42	9.23	9.48	7.93	8.1	8.17	7.85	7.92
Sulfate	mg/L	16	13	11	12	11	10	10.2	10.4	9.86	8.74	11.5	10	10.6	10.2
TDS	mg/L	184	170	167	185	164	--	137	138	140	240	166	162	157	182
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	--	<0.001	<0.001	<0.001	0.00031	0.000263
Barium	mg/L	0.218	0.203	0.191	0.209	0.199	--	0.206	0.168	--	0.259	0.257	0.312	0.29	0.307
Beryllium	mg/L	<0.0006	<0.0006	<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	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	0.00267 J	<0.002	0.000509 J	0.000273 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000133 J	0.000126 J
Combined Radium 226 + 228	pCi/L	0.694	0.398 U	0.428 U	0.302 U	0.535 U	0.64	0.331 U	0.307 U	--	0.683	0.603	0.404 U	0.497 U	2.01
Lead	mg/L	<0.001	<0.001	<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	0.0111 J	0.0124 J	0.0121 J	--	0.0134 J	0.0126 J	--	<0.01	0.0127 J	<0.01	0.0083 J	0.00881 J
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.00507 J	0.00358 J	0.00322 J	0.00256 J	0.00215 J	--	0.00211 J	0.00205 J	--	<0.002	<0.002	<0.002	0.000723	0.000453
Selenium	mg/L	<0.002	<0.002	<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	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-1													
		Date	12/06/2017	02/06/2018	04/23/2018	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
<b>Appendix III</b>															
Boron	mg/L	1.28	1.29	1.21	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	271	275	269	268	259	240	254	292	254	272	231	218	218	198
Chloride	mg/L	6.2	5.9	--	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	0.1	0.08 J	--	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	pH	6.5	6.48	6.36	6.32	6.32	6.2	6.31	6.1	6.11	6.01	5.65	6	5.87	5.79
Sulfate	mg/L	650	560	--	670	660	580	580	702	748	708	647	642	593	567
TDS	mg/L	1300	1310	1210	1250	1220	1150	1090	1200	1210	1200	1060	1060	1040	964
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00179 J	0.00191 J	0.0023 J	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	0.0807	0.0546	0.0488	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	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<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	--	<0.002	<0.002	<0.002	0.000376 J	0.000228 J
Cobalt	mg/L	0.00818 J	0.0123	0.0204	0.0224	0.0193	0.0243	0.0166	0.0264	--	0.0242	0.0178	0.0193	0.0184	0.0169
Combined Radium 226 + 228	pCi/L	0.694 U	0.641	-0.0527 U	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	--	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-2													
		Date	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	08/20/2019	04/15/2020	08/25/2020	03/24/2021
<b>Appendix III</b>															
Boron	mg/L	0.758	0.733	0.608	0.619	0.697	0.754	0.737	0.575	0.566	0.566	0.461	0.528	0.437	0.459
Calcium	mg/L	128	130	95.9	99.4	107	107	120	80.6	79.6	92.3	69.2	80.5	61.5	87.1
Chloride	mg/L	4.1	3.1	--	2.2	2.6	2.8	4.1	2.56	3.03	2.24	2.16	2	2.29	2.43
Fluoride	mg/L	0.3	0.27	--	0.28	0.24	0.24	0.15	0.207	0.264	0.252	0.21	0.273	0.194	0.283
pH_Field	pH	6.61	6.66	6.54	6.63	6.57	6.55	6.52	6.47	6.54	6.3	6.45	6.65	6.49	6.59
Sulfate	mg/L	210	190	--	130	150	160	170	145	148	110	116	114	101	112
TDS	mg/L	574	572	414	440	485	484	504	366	372	369	300	339	287	337
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.809	0.774	0.643	1.01	0.988	1.01	0.553	0.74	--	0.825	0.709	0.727	0.489	0.424
Barium	mg/L	0.0842	0.0716	0.0518	0.0578	0.0566	0.0536	0.0589	0.0418	--	0.0685	0.0607	0.0812	0.0676	0.0807
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	6.88e-005 J	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00047 J	0.000479 J
Cobalt	mg/L	0.0246	0.0243	0.0258	0.0362	0.0332	0.0438	0.0252	0.0362	--	0.0366	0.0324	0.0298	0.0316	0.0165
Combined Radium 226 + 228	pCi/L	0.772 U	0.679	0.447 U	0.117 U	1.22	0.996	0.739	1.09	--	0.553 U	0.182 U	0.43 U	0.769 U	2.38
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	9.28e-005 J
Lithium	mg/L	0.092	0.0817	0.051	0.0734	0.0764	0.0804	0.0474	0.0545	--	0.0583	0.0406	0.041	0.0318	0.0225
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.0254	0.0239	0.0165	0.0302	0.0209	0.0198	0.0118	0.0196	--	0.027	0.0202	0.0269	0.0164	0.0204
Selenium	mg/L	<0.002	<0.002	<0.002	<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	0.000213 J	<0.0002	0.000256 J	--	0.000322 J	0.000318 J	0.000347 J	0.00037	0.000294

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-3													
		Date	12/06/2017	02/06/2018	04/24/2018	06/27/2018	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
<b>Appendix III</b>															
Boron	mg/L	0.959	1.04	0.979	0.982	1	1.08	1.05	1.01	1.08	1.06	1.19	1.16	1.13	1.01
Calcium	mg/L	125	110	88.8	80.8	88.5	92.7	105	68.6	70.6	74.1	69.5	75.7	64.9	65.9
Chloride	mg/L	7.6	7.6	--	7.3	7.6	6.9	6.8	6.95	6.55	6.07	5.95	5.89	5.26	5.09
Fluoride	mg/L	0.13	0.08 J	--	0.07 J	0.09 J	0.11	0.08 J	0.064 J	<0.05	0.0592 J	<0.06	<0.06	<0.06	<0.06
pH_Field	pH	6.54	6.39	6.02	6.07	6.28	6.3	6.38	5.83	5.93	5.73	5.83	5.87	5.51	5.76
Sulfate	mg/L	250	230	--	230	200	190	200	263	246	222	256	246	254	228
TDS	mg/L	628	556	510	486	487	450	492	428	441	416	433	455	427	389
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00101 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	0.0002 J	0.000207
Barium	mg/L	0.126	0.0721	0.0492	0.0453	0.0431	0.0541	0.0545	0.0363	--	0.0405	0.0349	0.0363	0.0354	0.0344
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	0.000438 J	<0.0003	0.00039	0.000213
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000293 J	0.000234 J
Cobalt	mg/L	0.0302	0.0371	0.0251	0.0234	0.0223	0.03	0.0238	0.0232	--	0.0257	0.0209	0.0191	0.0183	0.016
Combined Radium 226 + 228	pCi/L	0.643 U	0.209 U	0.596	0.363 U	0.788	0.749	0.749	0.299 U	--	0.709 U	0.942 U	0.177 U	0.263 U	3.21
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	0.000121 J	0.000136 J

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-4													
		Date	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	04/15/2020	08/26/2020	03/24/2021
<b>Appendix III</b>															
Boron	mg/L	0.515	0.541	0.475	0.444	0.474	0.496	0.51	0.43	0.411	0.399	0.344	0.398	0.326	0.347
Calcium	mg/L	30.1	30.6	27.8	26.2	27.5	27.7	32.3	25.5	26.4	23.5	22	22.8	23.1	27.8
Chloride	mg/L	8.5	8.8	--	8.7	11	8.6	9.1	9.81	13	9.62	9.27	8.96	8.61	9.83
Fluoride	mg/L	0.25	0.24	--	0.22	0.22	0.24	0.22	0.259	0.246	0.197	0.238	0.251	0.227	0.214
pH_Field	pH	6.73	6.76	6.66	6.61	6.68	6.63	6.67	6.63	6.64	6.33	6.77	6.68	6.86	6.58
Sulfate	mg/L	<1.4	<1.4	--	<1.4	<1.4	<1.4	<1.4	5.38	5.1	7.34	17.2	15.5	19.9	36.9
TDS	mg/L	189	206	193	180	182	204	168	158	191	164	170	168	180	197
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.0132	0.0105	0.0124	0.0132	0.013	0.0144	0.0119	0.0107	--	0.0141	0.0121	0.0133	0.011	0.0147
Barium	mg/L	0.239	0.206	0.217	0.208	0.189	0.209	0.214	0.173	--	0.188	0.159	0.181	0.171	0.208
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000323 J	0.000224 J
Cobalt	mg/L	0.0252	0.0243	0.027	0.0242	0.0205	0.0259	0.0228	0.0263	--	0.0293	0.0252	0.0231	0.0268	0.0238
Combined Radium 226 + 228	pCi/L	1.04 U	0.989	0.405 U	1.03	0.622	1.06	0.697	0.467 U	--	0.814	-0.0841 U	0.26 U	0.664 U	1.75
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	--	<0.002	<0.002	<0.002	0.00118	0.00111
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-5													
		Date	12/07/2017	02/06/2018	04/25/2018	06/27/2018	08/07/2018	10/23/2018	12/05/2018	02/05/2019	02/27/2019	08/20/2019	04/13/2020	08/24/2020	03/16/2021
<b>Appendix III</b>															
Boron	mg/L	0.566	0.614	0.498	0.446	0.442	0.436	0.456	0.453	0.457	0.378	0.359	0.329	0.328	0.26
Calcium	mg/L	48.2	47.8	41.8	36.9	37.6	35.3	36.3	36.6	39.6	33.7	43	35.5	38.1	35.9
Chloride	mg/L	8.7	8.5	--	7.1	6.9	6.7	6.7	7.24	7.38	6.53	6.48	6.64	7.14	6.78
Fluoride	mg/L	0.06 J	0.05 J	--	0.06 J	0.06 J	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
pH_Field	pH	6.32	6.27	6.14	6.15	6.18	6.15	6.15	6.08	6.11	6.11	6.18	6.11	6.22	6.24
Sulfate	mg/L	19	20	--	18	20	18	20	24.3	24.7	21.3	21.9	21.2	18.8	14.5
TDS	mg/L	215	204	192	180	183	169	177	198	185	174	192	175	184	180
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	8.17e-005 J	0.000133 J
Barium	mg/L	0.279	0.195	0.26	0.249	0.216	0.26	0.245	0.215	--	0.238	0.241	0.238	0.217	0.221
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000397 J	0.000281 J
Cobalt	mg/L	0.00331 J	0.00323 J	0.00258 J	0.00218 J	<0.002	0.0023 J	0.00233 J	0.0021 J	--	0.00223 J	<0.002	0.00222 J	0.00136	0.00108
Combined Radium 226 + 228	pCi/L	0.885 U	0.524	0.341 U	0.546	1.09	1.01	0.876	0.551 U	--	0.206 U	1.19	0.482 U	0.709 U	1.44
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	--	<0.002	<0.002	<0.002	<6.8e-005	0.00015 J
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-6													
		Date	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	08/26/2020	03/17/2021
<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	0.0633 J	0.0563 J	0.0649 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	12.9	11.3	11.4
Chloride	mg/L	10	9.5	--	9.5	9	9.9	8.7	8.76	8.63	9.55	8.6	9.21	8.59	9.09
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	<0.06	<0.06	<0.06
pH_Field	pH	6.38	6.29	6.15	6.09	6.16	6.1	6.09	6.04	6.17	5.4	5.82	5.96	5.92	5.74
Sulfate	mg/L	10	11	--	11	12	11	12	13.7	14	12.3	13.9	13.1	13.7	14.2
TDS	mg/L	136	122	102	106	71.3	105	102	86.7	91.3	98.7	90.7	91.3	80	96.7
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Barium	mg/L	0.0809	0.0566	0.0553	0.0604	0.0542	0.0608	0.0633	0.05	--	0.0731	0.0635	0.0771	0.0656	0.0741
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000338 J	0.000246 J
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	<0.002	0.00102	0.00104
Combined Radium 226 + 228	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	0.416 U	0.539 U	1.36
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect





**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-7													
		Date	12/07/2017	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	04/15/2020	08/26/2020	03/23/2021
<b>Appendix III</b>															
Boron	mg/L	0.102	0.0787 J	0.0734 J	0.094 J	0.103	0.106	0.085 J	0.0733 J	0.0548 J	0.091 J	0.0534 J	0.0665 J	0.0587 J	0.0673 J
Calcium	mg/L	23.4	20.1	17.4	21.8	25.4	25.6	19	16.4	15.6	23.5	14	16.7	12.5	15.9
Chloride	mg/L	7.9	6.7	--	7.4	7.7	8	6.7	6.84	6.21	7.35	4.99	6.19	4.87	6.43
Fluoride	mg/L	0.09 J	0.07 J	--	0.09 J	0.1	0.1	0.06 J	<0.05	0.0824 J	0.068 J	0.0775 J	<0.06	<0.06	0.0933 J
pH_Field	pH	6.62	6.39	6.17	6.38	6.56	6.54	6.33	6.13	6.12	5.97	6.16	6.11	6.04	6.06
Sulfate	mg/L	14	10	--	11	13	13	9.8	10.8	8.98	11.8	7.95	9.19	8.08	9.19
TDS	mg/L	137	124	106	129	142	142	121	108	103	133	102	109	92.7	113
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	6.94e-005 J
Barium	mg/L	0.083	0.0756	0.0764	0.0799	0.0791	0.0898	0.0789	0.0685	--	0.0946	0.0653	0.0845	0.0602	0.0716
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	9.7e-005 J	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000406 J	0.000248 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00102	0.000182 J
Combined Radium 226 + 228	pCi/L	0.895 U	0.322 U	0.0097 U	0.587	0.364 U	0.703	0.325 U	0.0774 U	--	-0.0134 U	0.526 U	0.691 U	0.45 U	1.27
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	0.00034 J	<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	--	<0.002	<0.002	<0.002	<6.8e-005	9.55e-005 J
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-8													
		Date	12/07/2017	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	03/23/2021
<b>Appendix III</b>															
Boron	mg/L	0.0828 J	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	0.0476 J	0.0462 J
Calcium	mg/L	66.1	58	56.3	57.7	51.2	50.9	51.9	55	53.4	71.5	56.2	55.5	48.9	66.3
Chloride	mg/L	5.2	4.1	--	5	4.8	4.4	4.2	5.84	6.52	5.89	5.21	5.16	5.3	5.6
Fluoride	mg/L	0.14	0.11	--	0.1	0.1	0.11	0.08 J	<0.05	0.108	0.0648 J	0.0845 J	0.0732 J	0.0802 J	0.123
pH_Field	pH	6.81	6.73	6.61	6.59	6.6	6.64	6.68	6.62	6.56	6.16	6.49	6.29	6.47	6.61
Sulfate	mg/L	6.5	8.9	--	7.5	7.3	7.8	8.2	9.53	8.25	10.8	12.5	16.1	9.21	16
TDS	mg/L	253	229	223	232	208	209	213	212	211	226	222	215	200	245
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00313 J	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	0.00282	0.00287
Barium	mg/L	0.244	0.135	0.224	0.181	0.134	0.17	0.189	0.226	--	0.194	0.262	0.235	0.249	0.203
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	8.32e-005 J	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.0003 J	<0.000203
Cobalt	mg/L	0.00212 J	<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	0.003	0.00298
Combined Radium 226 + 228	pCi/L	7.45 U	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	0.662 U	0.291 U
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	0.000284 J	<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	--	<0.002	<0.002	<0.002	0.000357	0.000319
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-9													
		Date	12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/05/2018	02/06/2019	02/27/2019	08/21/2019	04/14/2020	08/26/2020	03/23/2021
<b>Appendix III</b>															
Boron	mg/L	0.0614 J	0.0531 J	0.0551 J	0.0568 J	0.0524 J	0.0576 J	0.0561 J	0.0627 J	0.0474 J	0.0524 J	0.0562 J	0.0565 J	0.0609 J	0.0632 J
Calcium	mg/L	38.7	38.8	40.3	39.9	42.3	39.8	43.8	34.9	42.5	50.9	43.6	43.2	38.1	35.4
Chloride	mg/L	7	--	--	6.4	5.5	6.7	5.9	7.26	6.77	6.16	7.27	6.57	7.42	7.78
Fluoride	mg/L	0.12	--	--	0.13	0.12	0.13	0.04 J	<0.05	0.147	0.0984 J	0.133	0.13	0.132	0.147
pH_Field	pH	6.93	6.96	6.89	6.85	6.94	6.93	6.94	6.73	6.85	6.61	7.02	6.75	6.85	6.9
Sulfate	mg/L	9	--	--	8.5	6.7	9.4	7.8	17	12.4	11.3	15.9	12.9	15.7	18
TDS	mg/L	183	--	180	191	192	185	200	151	186	200	187	192	178	169
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00112 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.00111 J	<0.001	--	<0.001	0.00118 J	<0.001	0.00063	0.000635
Barium	mg/L	0.187	0.148	0.158	0.16	0.161	0.183	0.186	0.128	--	0.183	0.186	0.202	0.157	0.147
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000422 J	0.00031 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00103	0.00113
Combined Radium 226 + 228	pCi/L	0.226 U	0.071 U	0.569	0.43 U	0.656	0.395 U	0.52 U	0.244 U	--	1.53 U	0.119 U	1.18	0.694 U	0.311 U
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	<0.002	<0.002	0.00027	0.000177 J
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-PZ-1													
		Date	06/27/2018	07/18/2018	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	<0.02	<0.02	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	39.4	38.4	36.7	43.6	44.5	45	33.7	30.1	25.3	38.3	25.9	29	22.2	25.4
Chloride	mg/L	3.6	3.8	3.3	3.4	3.8	3.3	3.2	3.78	3.75	3.52	3.36	3.35	3.45	3.23
Fluoride	mg/L	0.13	0.11	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	<0.06
pH_Field	pH	6.79	6.8	6.73	6.75	6.83	6.76	6.6	6.66	6.6	6.3	6.66	6.64	5.85	6.46
Sulfate	mg/L	2.2 J	2.5 J	<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	2.17
TDS	mg/L	144	156	140	154	165	148	127	113	107	141	104	114	94	108
<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	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Barium	mg/L	0.115	0.116	0.0906	0.116	0.125	0.102	0.0784	0.0578	--	0.097	0.0529	0.0733	0.0525	0.0811
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<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	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000442 J	0.000352 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005	0.000436
Combined Radium 226 + 228	pCi/L	0.188 U	0.314 U	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	2.07
Lead	mg/L	<0.001	<0.001	<0.001	<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	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<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	<0.002	<0.002	9.88e-005 J	7.3e-005 J
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-PZ-2				GSD-AP-PZ-5													
		Date	04/13/2020	08/24/2020	03/17/2021	10/05/2021	06/27/2018	07/18/2018	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	<0.03	<0.03	<0.03	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	16.1	24.8	5.21	17.6	4.56	3.92	3.74	3.38	3.25	3.37	3.67	2.89	2.95	3.04	2.93	2.94	2.9	2.94
Chloride	mg/L	5.42	5.46	5.53	5.79	4.2	4.1	3.3	3.7	3.9	4	3.6	3.72	3.95	3.85	3.83	3.96	3.98	4.07
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	0.05 J	0.04 J	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	<0.06
pH_Field	pH	5.84	6	5.34	5.72	5.81	5.74	5.7	5.61	5.59	5.6	5.73	5.44	5.46	5.13	5.31	4.65	5.47	5.33
Sulfate	mg/L	1.48	3.88	1.64	5.29	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	0.639 J	<0.5	1.21	0.554 J	<0.5	1.02	0.895 J
TDS	mg/L	88	115	53.3	101	48.7	46	48	47.3	44.7	35.3	48.7	42.7	40.7	46	41.3	42.7	42	38.7
<b>Appendix IV</b>																			
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.00114 J	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	8.26e-005 J	9.28e-005 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	8.08e-005 J	<6.8e-005
Barium	mg/L	0.0832	0.132	0.045	0.118	0.154	0.15	0.119	0.123	0.112	0.125	0.126	0.0602	--	0.085	0.0535	0.0565	0.0553	0.0494
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<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	<6.8e-005	<6.8e-005	0.000304 J	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	8.42e-005 J
Chromium	mg/L	<0.002	<0.002	0.000764 J	0.000346 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000534 J	0.000337 J
Cobalt	mg/L	0.00489 J	0.00237 J	0.00616	0.00287	0.00341 J	0.00341 J	0.00221 J	0.00202 J	<0.002	<0.002	0.00227 J	<0.002	--	0.00225 J	<0.002	<0.002	0.000384	8.08e-005 J
Combined Radium 226 + 228	pCi/L	0.472 U	-0.00312 U	0.756 U	1.13	0.259 U	0.434	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	0.963 U
Lead	mg/L	<0.001	<0.001	0.000191 J	0.000121 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	0.00013 J	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
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	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<6.8e-005	0.00028	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	<0.000507	<0.000508	<0.002	<0.002	<0.002	<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	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-PZ-6													
	Date	06/27/2018	07/18/2018	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	10/12/2021
<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	<0.03	<0.03	<0.03
Calcium	mg/L	3.89	3.8	3.89	3.78	3.73	3.79	3.79	3.75	3.81	3.71	3.56	3.45	3.44	3.29
Chloride	mg/L	4.1	4.3	3.8	3.9	4.2	4.1	3.8	4.15	4.2	4	3.71	3.59	3.66	3.68
Fluoride	mg/L	0.04 J	0.04 J	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	<0.06
pH_Field	pH	5.44	5.58	5.55	5.56	5.57	5.55	5.6	5.51	5.54	5.44	5.52	5.38	5.56	5.41
Sulfate	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	1.69	1.53	1.62	1.68	1.31	1.7	1.34
TDS	mg/L	44	42.7	46	67.3	49.3	31.3	46	32.7	31.3	42.7	37.3	37.3	41.3	35.3
<b>Appendix IV</b>															
Antimony	mg/L	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.00181 J	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Barium	mg/L	0.0298	0.0312	0.0265	0.0291	0.029	0.0298	0.0307	0.028	--	0.0312	0.0296	0.031	0.0293	0.0303
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<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	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000534 J	0.000307 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000108 J	0.000142 J
Combined Radium 226 + 228	pCi/L	0.231 U	0.676	0.496	0.62	-0.12 U	0.352 U	0.238 U	0.395 U	--	-0.00256 U	0.000738 U	0.404 U	0.589 U	1.57
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	8.35e-005 J	0.000119 J
Lithium	mg/L	<0.01	<0.01	<0.01	<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	<0.00025	<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	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	<0.002	<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	--	<0.0002	<0.0002	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-2VA					GSD-AP-MW-2VB		GSD-AP-MW-4V				GSD-AP-MW-21VC	GSD-AP-MW-22VB
		Date	04/15/2020	07/01/2020	08/25/2020	03/22/2021	10/06/2021	03/30/2021	10/12/2021	04/15/2020	08/26/2020	03/24/2021	10/11/2021	10/06/2021
<b>Appendix III</b>														
Boron	mg/L	0.587	--	0.552	0.537	0.54	0.605	0.617	0.0634 J	0.0611 J	0.0618 J	0.0596 J	0.532	0.378
Calcium	mg/L	5	--	4.97	5.71	5.38	3.71	3.96	23.9	23.5	22.9	23	3.46	9.35
Chloride	mg/L	6.47	--	6.4	6.65	6.82	32	38	5.16	5.37	5.55	5.65	166	1.72
Fluoride	mg/L	2.51	--	2.4	2.33	2.56	6.09	5.97	0.218	0.217	0.212	0.23	8.34	1.43
pH_Field	pH	8.6	8.36	8.43	8.34	8.36	8.52	8.62	7.93	7.83	8.01	7.82	8.53	8.13
Sulfate	mg/L	4.18	--	4.83	2.04	2.44	10.3	15.2	1.25	1.21	1.39	1.7	8.35	13.8
TDS	mg/L	324	--	321	314	317	528	536	218	239	222	220	864	230
<b>Appendix IV</b>														
Antimony	mg/L	<0.0008	--	<0.0008	<0.000507	<0.000508	<0.000507	<0.000508	<0.0008	<0.0008	<0.000507	<0.000508	0.00051 J	0.00167
Arsenic	mg/L	<0.001	--	0.00135 J	0.00145	0.00139	0.000278	0.000426	<0.001	<0.001	0.00034	0.000366	0.00162	0.00408
Barium	mg/L	0.2	--	0.135	0.114	0.12	0.313	0.242	0.457	0.534	0.477	0.483	0.374	0.238
Beryllium	mg/L	<0.0006	--	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<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	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	--	<0.002	0.000433 J	0.00025 J	0.00112	0.000353 J	<0.002	<0.002	0.000402 J	0.000314 J	0.00111	0.000412 J
Cobalt	mg/L	<0.002	--	<0.002	<6.8e-005	<6.8e-005	0.000116 J	<6.8e-005	<0.002	<0.002	8.16e-005 J	<6.8e-005	0.000205	<6.8e-005
Combined Radium 226 + 228	pCi/L	0.231 U	--	0.807	0.58 U	0.746 U	0.185 U	0.323 U	0.329 U	0.839	0.725 U	1.58	1.78	1.29
Lead	mg/L	<0.001	--	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<6.8e-005	<6.8e-005	0.000225	<6.8e-005
Lithium	mg/L	0.0783	0.069	0.0666	0.0666	0.0685	0.13	0.129	0.0219	0.0203	0.0203	0.0198 J	0.227	0.0544
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	<0.0003
Molybdenum	mg/L	<0.002	--	0.00323 J	0.00386	0.00363	0.000673	0.00156	<0.002	<0.002	0.00188	0.00173	0.00107	0.00538
Selenium	mg/L	<0.002	--	<0.002	<0.000507	<0.000508	<0.000507	<0.000508	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	--	<0.0002	<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
4. "<MDL" or "U" indicates non-detect



**Appendix B.  
Historical Analytical Data  
Gadsden Ash Pond  
2017-Present**

Analytes	Wells	GSD-AP-MW-18H				GSD-AP-MW-19H					GSD-AP-MW-20H			
		Date	04/15/2020	08/25/2020	03/16/2021	10/12/2021	04/14/2020	06/01/2020	08/26/2020	03/23/2021	10/11/2021	04/14/2020	08/26/2020	03/23/2021
<b>Appendix III</b>														
Boron	mg/L	0.124	0.105	0.0545 J	0.0717 J	0.448	--	0.39	0.41	0.328	0.308	0.308	0.419	0.504
Calcium	mg/L	19.1	14.9	5.77	10.3	32.9	--	39.3	31.7	40	51.5	47.6	57.6	63.4
Chloride	mg/L	6	5.79	3.85	4.59	7.35	--	7.03	7.11	7.04	6.64	6.73	6.33	6.37
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	--	<0.06	<0.06	0.0779 J	0.125	0.103	0.108	0.127
pH_Field	pH	5.1	5.13	5.08	5.12	5.79	--	6.33	5.88	6.08	6.02	6.36	6.38	6.36
Sulfate	mg/L	67.1	52.6	18.5	36.7	75.3	--	72.9	71.8	61.7	135	112	168	174
TDS	mg/L	126	107	52	78.7	190	--	202	174	202	323	310	385	384
<b>Appendix IV</b>														
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508	<0.0008	--	<0.0008	<0.000507	<0.000508	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	0.000136 J	0.00019 J	<0.001	--	<0.001	0.000512	0.000846	0.00287 J	0.00186 J	0.00226	0.00191
Barium	mg/L	0.0389	0.0388	0.0243	0.0298	0.153	--	0.201	0.148	0.17	0.189	0.197	0.217	0.134
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406	<0.0006	--	<0.0006	<0.000406	<0.000406	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<0.0003	--	<0.0003	<6.8e-005	0.000124 J	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	0.000363 J	0.000209 J	<0.002	--	<0.002	0.000404 J	0.000475 J	<0.002	<0.002	0.000417 J	0.000246 J
Cobalt	mg/L	<0.002	<0.002	0.000577	0.000615	0.00886	--	0.0101	0.00674	0.00579	0.0122	0.0104	0.0125	0.00995
Combined Radium 226 + 228	pCi/L	0.419 U	1.45	0.405 U	0.383 U	42.6	0.215 U	0.265 U	0.562 U	0.202 U	0.0962 U	0.413 U	0.847 U	1.09 U
Lead	mg/L	<0.001	<0.001	<6.8e-005	<6.8e-005	<0.001	--	<0.001	0.000201 J	0.000155 J	<0.001	<0.001	<6.8e-005	8.19e-005 J
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105	<0.01	--	<0.01	<0.007105	<0.007105	<0.01	<0.01	<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	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.002	--	<0.002	<6.8e-005	0.000118 J	<0.002	<0.002	0.000481	0.000312
Selenium	mg/L	<0.002	<0.002	0.000935 J	0.000679 J	<0.002	--	<0.002	<0.000507	<0.000508	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<0.0002	--	<0.0002	<6.8e-005	<6.8e-005	<0.0002	<0.0002	0.000145 J	0.00013 J

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value
4. "<MDL" or "U" indicates non-detect



# Appendix C

## Appendix C. Historical Groundwater Elevations Summary

Well Name	Top of Casing Elevation	Groundwater Elevation													
		(ft AMSL)													
		12/4/2017	2/6/2018	2/9/2018	3/19/2018	3/28/2018	4/9/2018	4/23/2018	5/9/2018	5/16/2018	5/21/2018	5/23/2018	5/25/2018	5/31/2018	6/4/2018
GSD-AP-MW-1	526.37	513.72	514.90	515.77	517.56	517.24	516.72	517.40	516.17	515.59	515.20	515.13	515.05	514.81	514.65
GSD-AP-MW-2	526.16	513.78	514.70	515.20	516.58	516.30	515.95	516.38	515.53	515.11	514.82	514.82	514.73	514.60	514.46
GSD-AP-MW-3	526.80	513.81	514.75	515.11	515.92	515.73	515.41	516.19	514.95	514.64	514.43	514.61	514.46	514.50	514.26
GSD-AP-MW-4	520.60	513.76	514.69	515.01	515.76	515.59	515.27	516.05	514.83	514.51	514.32	514.55	514.38	514.45	514.18
GSD-AP-MW-5	516.27	510.81	511.80	512.14	512.25	512.09	511.85	512.49	511.46	511.22	511.12	511.32	511.24	511.24	511.09
GSD-AP-MW-6	515.23	509.89	510.60	510.88	510.72	510.59	510.36	511.08	510.16	510.02	509.97	510.15	510.06	510.10	509.98
GSD-AP-MW-7	519.86	507.66	508.62	509.44	509.33	509.14	508.62	509.52	508.85	508.67	508.49	508.61	508.55	508.34	508.39
GSD-AP-MW-8	519.22	506.85	506.90	508.22	506.94	507.09	506.60	508.02	507.99	507.84	507.96	508.03	507.85	507.70	508.20
GSD-AP-MW-9	520.36	505.87	506.86	508.09	506.98	507.04	506.60	507.85	507.99	507.88	508.01	508.01	507.88	507.74	508.20
GSD-AP-MW-10	530.91	509.82	509.68	510.06	509.78	509.25	509.14	509.75	509.61	509.55	509.56	509.64	509.52	509.56	509.52
GSD-AP-MW-11	517.01	507.46	507.93	508.88	507.96	507.98	507.59	508.66	508.43	508.24	508.27	508.35	508.21	508.07	508.39
GSD-AP-MW-12	521.82	511.62	513.11	513.83	513.99	513.71	513.20	514.13	512.81	512.33	511.87	512.12	511.94	512.73	511.60
GSD-AP-MW-14	548.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-16	555.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-17	550.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-PZ-1	521.64	512.46	514.59	516.13	517.26	517.01	516.42	517.21	515.69	514.88	514.30	514.40	514.26	514.01	513.76
GSD-AP-PZ-2	516.49	506.92	507.81	508.83	507.87	507.96	507.47	508.58	508.37	508.15	508.25	508.35	508.19	508.04	508.29
GSD-AP-PZ-5	524.26	--	--	--	--	--	516.71	--	515.97	515.11	514.46	514.59	514.43	514.16	513.87
GSD-AP-PZ-6	519.60	--	--	--	--	--	516.57	--	515.86	515.03	514.45	514.58	514.42	514.18	513.88
GSD-AP-MW-4V	520.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-18H	524.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-19H	517.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-20H	516.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2V	525.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VA	524.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VB	522.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VC	522.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VB	520.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VC	521.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-22VB	518.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-23VB	519.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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

## Appendix C. Historical Groundwater Elevations Summary

Well Name	Top of Casing Elevation	Groundwater Elevation (ft AMSL)													
		6/7/2018	6/11/2018	6/14/2018	6/18/2018	6/21/2018	6/25/2018	6/28/2018	7/2/2018	7/5/2018	7/9/2018	7/12/2018	7/18/2018	7/19/2018	7/23/2018
		GSD-AP-MW-1	526.37	514.49	514.27	514.14	513.94	513.83	513.69	513.61	513.51	513.44	513.30	513.21	--
GSD-AP-MW-2	526.16	514.32	514.12	514.00	513.83	513.73	513.63	513.55	513.49	513.40	513.30	513.21	--	513.05	512.93
GSD-AP-MW-3	526.80	514.11	513.91	513.86	513.67	513.61	513.55	513.51	513.48	513.37	513.26	513.17	--	513.05	512.92
GSD-AP-MW-4	520.60	514.02	513.85	513.71	513.60	513.56	513.46	513.45	513.41	513.29	513.17	513.09	--	512.98	512.85
GSD-AP-MW-5	516.27	510.88	510.66	510.41	510.52	510.60	510.60	510.83	510.81	510.49	510.18	509.95	--	510.06	509.68
GSD-AP-MW-6	515.23	509.85	509.61	509.46	509.72	509.73	509.72	509.90	509.89	509.67	509.32	509.13	--	509.27	508.86
GSD-AP-MW-7	519.86	508.33	508.18	508.05	507.92	508.01	507.90	507.87	507.97	507.82	507.71	507.65	--	507.58	507.42
GSD-AP-MW-8	519.22	507.87	507.69	507.68	507.86	507.84	507.88	507.55	507.79	507.81	507.43	507.69	--	507.54	507.39
GSD-AP-MW-9	520.36	507.91	507.70	507.72	507.90	507.88	507.90	507.60	507.83	507.83	507.48	507.73	--	507.59	507.45
GSD-AP-MW-10	530.91	509.44	509.31	509.26	509.43	509.51	509.56	509.41	509.51	509.41	509.26	509.24	--	509.23	509.10
GSD-AP-MW-11	517.01	508.19	507.98	507.95	508.03	508.09	508.09	507.86	508.03	507.99	507.73	507.85	--	507.74	507.62
GSD-AP-MW-12	521.82	511.43	511.20	511.06	510.92	510.89	510.80	510.75	510.75	510.61	510.47	510.35	--	510.24	510.07
GSD-AP-MW-14	548.34	--	--	--	--	--	526.46	--	--	--	--	--	--	526.24	--
GSD-AP-MW-16	555.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-17	550.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-PZ-1	521.64	513.50	513.23	513.00	512.73	512.65	512.43	512.40	512.24	512.08	511.89	511.73	511.47	511.49	511.26
GSD-AP-PZ-2	516.49	508.08	507.92	507.81	507.88	508.00	507.98	507.79	508.00	507.91	507.61	507.67	--	507.62	507.41
GSD-AP-PZ-5	524.26	513.61	513.38	513.18	512.91	512.85	512.60	512.52	512.39	512.24	512.06	511.92	511.72	511.67	511.46
GSD-AP-PZ-6	519.60	513.61	513.35	513.16	512.90	512.80	512.57	512.51	512.39	512.28	512.02	511.90	511.70	511.65	511.42
GSD-AP-MW-4V	520.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-18H	524.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-19H	517.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-20H	516.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2V	525.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VA	524.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VB	522.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VC	522.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VB	520.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VC	521.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-22VB	518.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-23VB	519.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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

## Appendix C. Historical Groundwater Elevations Summary

Well Name	Top of Casing Elevation	Groundwater Elevation (ft AMSL)													
		7/26/2018	8/2/2018	8/6/2018	8/20/2018	8/23/2018	8/27/2018	8/30/2018	9/6/2018	9/10/2018	9/13/2018	9/20/2018	9/24/2018	9/27/2018	10/1/2018
		GSD-AP-MW-1	526.37	512.81	512.90	512.90	512.69	512.63	512.54	512.48	512.27	512.17	512.08	511.88	
GSD-AP-MW-2	526.16	512.85	513.01	513.03	512.78	512.71	512.61	512.54	512.36	512.25	512.16	511.97		512.05	512.23
GSD-AP-MW-3	526.80	512.83	513.38	513.09	512.88	512.82	512.67	512.60	512.42	512.30	512.23	512.05		512.53	512.55
GSD-AP-MW-4	520.60	512.77	513.42	513.08	512.86	512.79	514.66	512.57	512.38	512.28	512.19	512.01		512.63	512.58
GSD-AP-MW-5	516.27	509.48	510.79	510.60	510.62	510.32	510.00	509.79	509.37	509.25	509.21	508.88		510.63	510.63
GSD-AP-MW-6	515.23	508.68	510.15	509.85	509.81	509.61	509.26	509.11	508.68	508.56	508.56	508.21		510.16	509.95
GSD-AP-MW-7	519.86	507.33	507.82	507.96	507.92	507.85	507.68	507.54	507.24	507.15	507.11	506.97		507.68	507.98
GSD-AP-MW-8	519.22	507.48	508.25	507.98	507.76	507.78	507.70	507.79	507.77	507.61	507.74	507.75		508.30	507.81
GSD-AP-MW-9	520.36	507.54	508.25	508.06	507.76	507.82	507.70	507.84	507.79	507.66	507.79	507.82		508.28	507.86
GSD-AP-MW-10	530.91	509.04	509.96	509.81	509.35	509.32	509.19	509.18	509.09	509.05	509.10	509.09		509.54	509.55
GSD-AP-MW-11	517.01	507.64	508.55	508.26	507.93	507.95	507.89	507.92	507.88	507.74	507.82	507.84		508.48	508.14
GSD-AP-MW-12	521.82	509.93	511.43	510.99	510.70	510.54	510.35	510.24	510.00	509.79	509.69	509.68		510.31	510.57
GSD-AP-MW-14	548.34	--	--	526.24	--	--	--	--	526.00	--	--	--	525.80	--	--
GSD-AP-MW-16	555.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-17	550.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-PZ-1	521.64	511.10	511.48	511.38	511.18	511.11	510.87	510.74	510.46	510.29	510.18	509.86	509.63	510.16	510.48
GSD-AP-PZ-2	516.49	507.39	508.46	508.19	508.03	507.96	507.81	507.83	507.70	507.56	507.62	507.50	--	508.50	508.22
GSD-AP-PZ-5	524.26	511.31	511.54	511.42	511.24	511.11	510.98	510.88	510.62	510.44	510.36	510.07	509.95	510.12	
GSD-AP-PZ-6	519.60	511.28	511.60	511.44	511.26	511.15	510.98	510.89	510.61	510.45	510.34	509.93	509.91	510.19	
GSD-AP-MW-4V	520.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-18H	524.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-19H	517.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-20H	516.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2V	525.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VA	524.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VB	522.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-2VC	522.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VB	520.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VC	521.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-22VB	518.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-23VB	519.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

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

## Appendix C. Historical Groundwater Elevations Summary

Well Name	Top of Casing Elevation	Groundwater Elevation														
		(ft AMSL)														
		10/4/2018	10/15/2018	10/22/2018	11/14/2018	11/28/2018	12/3/2018	12/18/2018	1/3/2019	2/4/2019	2/25/2019	6/10/2019	8/19/2019	4/13/2020	8/24/2020	
GSD-AP-MW-1	526.37	511.94	511.70	511.57	--	--	513.12	--	--	517.76	519.26	514.50	511.97	517.91	512.36	516.98
GSD-AP-MW-2	526.16	512.12	511.84	511.73	--	--	513.15	--	--	516.64	518.15	514.30	512.01	516.67	512.37	516.10
GSD-AP-MW-3	526.80	512.39	512.03	511.90	--	--	513.50	--	--	515.98	517.38	514.21	512.03	516.42	512.48	515.58
GSD-AP-MW-4	520.60	512.40	512.03	511.89	--	--	513.54	--	--	515.78	517.13	514.13	512.00	515.99	512.57	515.41
GSD-AP-MW-5	516.27	510.40	509.76	509.64	--	--	511.52	--	--	512.09	513.01	511.13	508.72	512.38	510.36	511.63
GSD-AP-MW-6	515.23	509.78	509.17	509.05	--	--	510.58	--	--	510.70	511.64	510.02	507.89	511.28	509.81	510.32
GSD-AP-MW-7	519.86	507.94	507.76	507.54	--	--	509.41	--	--	509.82	513.85	508.34	506.95	510.09	507.64	508.87
GSD-AP-MW-8	519.22	507.90	507.62	507.37	--	--	508.98	--	--	508.46	511.45	507.78	507.62	509.16	507.98	507.18
GSD-AP-MW-9	520.36	507.93	507.63	507.39	--	--	508.69	--	--	508.46	511.42	507.83	507.61	508.71	508.06	507.19
GSD-AP-MW-10	530.91	509.39	509.03	508.97	--	--	509.66	--	--	509.93	511.87	509.34	508.74	509.73	509.13	508.82
GSD-AP-MW-11	517.01	508.07	507.77	507.53	--	--	509.29	--	--	509.06	511.67	508.12	507.59	509.18	507.99	507.92
GSD-AP-MW-12	521.82	510.38	509.87	509.64	--	--	512.76	--	--	514.11	515.43	511.29	508.94	514.20	509.66	513.06
GSD-AP-MW-14	548.34	--	--	525.80	--	--	526.19	--	--	527.65	528.71	527.07	526.25	528.26	526.07	527.24
GSD-AP-MW-16	555.83	--	--	529.67	529.34	529.51	529.75	529.98	530.52	531.32	531.98	530.55	529.71	531.91	529.60	530.64
GSD-AP-MW-17	550.11	--	--	531.30	530.47	530.50	530.77	531.44	532.49	532.25	534.03	531.23	530.30	532.80	530.65	531.68
GSD-AP-PZ-1	521.64	512.40	510.01	509.86	--	--	512.99	--	--	517.29	519.05	513.54	510.14	517.30	510.78	516.46
GSD-AP-PZ-2	516.49	508.16	507.79	507.51	--	--	509.29	--	--	509.02	511.33	508.15	507.31	509.12	508.13	507.85
GSD-AP-PZ-5	524.26	510.25	510.02	509.93	--	--	512.73	--	--	517.72	519.28	513.81	510.37	518.21	511.00	516.90
GSD-AP-PZ-6	519.60	510.33	510.06	509.95	--	--	513.05	--	--	517.43	518.72	513.82	510.30	517.75	510.99	516.73
GSD-AP-MW-4V	520.33	--	--	--	--	--	--	--	--	--	--	--	--	516.09	512.39	515.31
GSD-AP-MW-18H	524.45	--	--	--	--	--	--	--	--	--	--	--	--	518.59	511.07	517.02
GSD-AP-MW-19H	517.32	--	--	--	--	--	--	--	--	--	--	--	--	516.97	511.36	516.29
GSD-AP-MW-20H	516.68	--	--	--	--	--	--	--	--	--	--	--	--	516.28	512.47	515.39
GSD-AP-MW-2V	525.31	--	--	--	--	--	--	--	--	--	--	--	--	516.60	512.43	516.13
GSD-AP-MW-2VA	524.94	--	--	--	--	--	--	--	--	--	--	--	--	519.33	512.43	516.13
GSD-AP-MW-2VB	522.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	516.15
GSD-AP-MW-2VC	522.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VB	520.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-21VC	521.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-22VB	518.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GSD-AP-MW-23VB	519.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1. ft. AMSL - feet above mean sea level

2. -- Not Measured

## Appendix C. Historical Groundwater Elevations Summary

Well Name	Top of Casing Elevation	
		10/4/2021
GSD-AP-MW-1	526.37	513.76
GSD-AP-MW-2	526.16	513.65
GSD-AP-MW-3	526.80	513.71
GSD-AP-MW-4	520.60	513.70
GSD-AP-MW-5	516.27	511.16
GSD-AP-MW-6	515.23	510.19
GSD-AP-MW-7	519.86	508.25
GSD-AP-MW-8	519.22	508.03
GSD-AP-MW-9	520.36	508.06
GSD-AP-MW-10	530.91	509.19
GSD-AP-MW-11	517.01	508.29
GSD-AP-MW-12	521.82	511.21
GSD-AP-MW-14	548.34	526.85
GSD-AP-MW-16	555.83	530.09
GSD-AP-MW-17	550.11	530.89
GSD-AP-PZ-1	521.64	513.04
GSD-AP-PZ-2	516.49	508.33
GSD-AP-PZ-5	524.26	513.14
GSD-AP-PZ-6	519.60	513.18
GSD-AP-MW-4V	520.33	513.51
GSD-AP-MW-18H	524.45	513.14
GSD-AP-MW-19H	517.32	517.32
GSD-AP-MW-20H	516.68	513.66
GSD-AP-MW-2V	525.31	513.67
GSD-AP-MW-2VA	524.94	513.65
GSD-AP-MW-2VB	522.56	513.51
GSD-AP-MW-2VC	522.81	483.10
GSD-AP-MW-21VB	520.24	467.53
GSD-AP-MW-21VC	521.13	513.09
GSD-AP-MW-22VB	518.01	513.30
GSD-AP-MW-23VB	519.03	510.42

Notes:

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

# Appendix D

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**

## **2021 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).

Light rain was present when pumping and sampling wells MW-2VA & FB-2.

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.



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

# *Analytical Report*



**Sample Group :** WMWGADAP\_1341

**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 :** Laura Midkiff  
lbmidkif@southernco.com  
(205) 664-6197

November 19, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory between October 06, 2021 and October 13, 2021. 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, 2022

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

Sincerely,

Quality Control: **Laura Midkiff**  
Digitally signed by Laura Midkiff  
DN: cn=Laura Midkiff, o=Alabama Power  
Company, ou=Environmental Affairs,  
email=lmidkif@southernco.com, c=US  
Date: 2021.11.19 13:36:15 -0600

Supervision: **T. Durant Maske**  
Digitally signed by T. Durant Maske  
DN: cn=T. Durant Maske, o=Alabama  
Power Company, ou=Environmental  
Affairs, email=tdmaske@southernco.com,  
c=US  
Date: 2021.11.19 15:08:23 -0600



### 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.



Total Metals ICP

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710248	WMWGADAP_1341
BB18669	710248	WMWGADAP_1341
BB18670	710248	WMWGADAP_1341
BB18671	710248	WMWGADAP_1341
BB18672	710248	WMWGADAP_1341
BB18673	710248	WMWGADAP_1341
BB18674	710248	WMWGADAP_1341
BB18675	710248	WMWGADAP_1341
BB18737	710248	WMWGADAP_1341
BB18738	710248	WMWGADAP_1341
BB18739	710249	WMWGADAP_1341
BB18740	710249	WMWGADAP_1341
BB18741	710249	WMWGADAP_1341
BB18742	710249	WMWGADAP_1341
BB18743	710249	WMWGADAP_1341
BB18744	710249	WMWGADAP_1341
BB18745	710249	WMWGADAP_1341
BB18746	710249	WMWGADAP_1341
BB18995	711002	WMWGADAP_1341
BB18996	711002	WMWGADAP_1341
BB18997	711002	WMWGADAP_1341
BB18998	711002	WMWGADAP_1341
BB18999	711002	WMWGADAP_1341
BB19000	711002	WMWGADAP_1341
BB19001	711002	WMWGADAP_1341
BB19002	711002	WMWGADAP_1341
BB19003	711002	WMWGADAP_1341
BB19004	711002	WMWGADAP_1341
BB19005	711003	WMWGADAP_1341
BB19006	711003	WMWGADAP_1341
BB19007	711003	WMWGADAP_1341

BB19008	711003	WMWGADAP_1341
BB19009	711003	WMWGADAP_1341
BB19010	711003	WMWGADAP_1341
BB19011	711003	WMWGADAP_1341

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 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.
- 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.
- 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>
BB18670	Calcium	10.15
BB18671	Iron	101.5
BB18672	Iron	101.5
BB18741	Calcium	10.15
BB18742	Calcium & Magnesium	10.15
BB18744	Sodium	101.5
BB18745	Sodium	101.5
BB18995	Sodium	10.15
BB18997	Calcium & Iron	10.15
BB18999	Sodium	101.5
BB19003	Sodium	10.15
BB19004	Calcium	10.15
BB19005	Iron	10.15
BB19008	Calcium & Iron	10.15
BB19010	Calcium & Iron	10.15

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

Dissolved Metals ICP

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710212	WMWGADAP_1341
BB18669	710212	WMWGADAP_1341
BB18670	710212	WMWGADAP_1341
BB18671	710212	WMWGADAP_1341
BB18672	710212	WMWGADAP_1341
BB18674	710212	WMWGADAP_1341
BB18675	710212	WMWGADAP_1341
BB18738	710212	WMWGADAP_1341
BB18739	710212	WMWGADAP_1341
BB18740	710212	WMWGADAP_1341
BB18741	710213	WMWGADAP_1341
BB18742	710213	WMWGADAP_1341
BB18743	710213	WMWGADAP_1341
BB18744	710213	WMWGADAP_1341
BB18745	710213	WMWGADAP_1341
BB18995	710932	WMWGADAP_1341
BB18996	710932	WMWGADAP_1341
BB18997	710932	WMWGADAP_1341
BB18999	710932	WMWGADAP_1341
BB19000	710932	WMWGADAP_1341
BB19001	710932	WMWGADAP_1341
BB19002	710932	WMWGADAP_1341
BB19003	710932	WMWGADAP_1341
BB19004	710932	WMWGADAP_1341
BB19005	710932	WMWGADAP_1341
BB19006	710933	WMWGADAP_1341
BB19007	710933	WMWGADAP_1341
BB19008	710933	WMWGADAP_1341
BB19009	710933	WMWGADAP_1341
BB19010	710933	WMWGADAP_1341

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 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 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:
  - BB19005 and BB19010 Iron 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:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BB18671	Iron	101.5
BB18672	Iron	101.5
BB18997	Iron	10.15
BB19005	Iron	10.15
BB19008	Iron	10.15
BB19010	Iron	10.15

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



Total Metals ICPMS

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710792	WMWGADAP_1341
BB18669	710792	WMWGADAP_1341
BB18670	710792	WMWGADAP_1341
BB18671	710792	WMWGADAP_1341
BB18672	710792	WMWGADAP_1341
BB18673	710792	WMWGADAP_1341
BB18674	710792	WMWGADAP_1341
BB18675	710792	WMWGADAP_1341
BB18737	710792	WMWGADAP_1341
BB18738	710792	WMWGADAP_1341
BB18739	710793	WMWGADAP_1341
BB18740	710793	WMWGADAP_1341
BB18741	710793	WMWGADAP_1341
BB18742	710793	WMWGADAP_1341
BB18743	710793	WMWGADAP_1341
BB18744	710793	WMWGADAP_1341
BB18745	710793	WMWGADAP_1341
BB18746	710793	WMWGADAP_1341
BB18995	710820	WMWGADAP_1341
BB18996	710820	WMWGADAP_1341
BB18997	710820	WMWGADAP_1341
BB18998	710820	WMWGADAP_1341
BB18999	710820	WMWGADAP_1341
BB19000	710820	WMWGADAP_1341
BB19001	710820	WMWGADAP_1341
BB19002	710820	WMWGADAP_1341
BB19003	710820	WMWGADAP_1341
BB19004	710820	WMWGADAP_1341
BB19005	710821	WMWGADAP_1341
BB19006	710821	WMWGADAP_1341
BB19007	710821	WMWGADAP_1341

BB19008	710821	WMWGADAP_1341
BB19009	710821	WMWGADAP_1341
BB19010	710821	WMWGADAP_1341
BB19011	710821	WMWGADAP_1341

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:
  - BB19004 Manganese MS/MSD spike level was <30% of the sample concentration.
- 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:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BB18670	Manganese	92.365
BB18671	Manganese	5.075
BB18672	Manganese	5.075
BB18741	Manganese	5.075
BB18742	Manganese	5.075
BB18997	Manganese	5.075
BB19004	Manganese	92.365
BB19008	Manganese	5.075
BB19009	Manganese	5.075

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

Dissolved Metals ICPMS

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710722	WMWGADAP_1341
BB18669	710722	WMWGADAP_1341
BB18670	710722	WMWGADAP_1341
BB18671	710722	WMWGADAP_1341
BB18672	710722	WMWGADAP_1341
BB18674	710722	WMWGADAP_1341
BB18675	710722	WMWGADAP_1341
BB18738	710722	WMWGADAP_1341
BB18739	710722	WMWGADAP_1341
BB18740	710722	WMWGADAP_1341
BB18741	710723	WMWGADAP_1341
BB18742	710723	WMWGADAP_1341
BB18743	710723	WMWGADAP_1341
BB18744	710723	WMWGADAP_1341
BB18745	710723	WMWGADAP_1341
BB18995	710731	WMWGADAP_1341
BB18996	710731	WMWGADAP_1341
BB18997	710731	WMWGADAP_1341
BB18999	710731	WMWGADAP_1341
BB19000	710731	WMWGADAP_1341
BB19001	710731	WMWGADAP_1341
BB19002	710731	WMWGADAP_1341
BB19003	710731	WMWGADAP_1341
BB19004	710731	WMWGADAP_1341
BB19005	710731	WMWGADAP_1341
BB19006	710732	WMWGADAP_1341
BB19007	710732	WMWGADAP_1341
BB19008	710732	WMWGADAP_1341
BB19009	710732	WMWGADAP_1341
BB19010	710732	WMWGADAP_1341

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.
- 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>
BB18670	Manganese	92.365
BB18671	Manganese	5.075
BB18672	Manganese	5.075
BB18741	Manganese	5.075
BB18742	Manganese	5.075
BB18997	Manganese	5.075
BB19004	Manganese	92.365
BB19008	Manganese	5.075
BB19009	Manganese	5.075

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

Mercury

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710155	WMWGADAP_1341
BB18669	710155	WMWGADAP_1341
BB18670	710155	WMWGADAP_1341
BB18671	710155	WMWGADAP_1341
BB18672	710155	WMWGADAP_1341
BB18673	710155	WMWGADAP_1341
BB18674	710155	WMWGADAP_1341
BB18675	710155	WMWGADAP_1341
BB18737	710155	WMWGADAP_1341
BB18738	710155	WMWGADAP_1341
BB18739	710156	WMWGADAP_1341
BB18740	710156	WMWGADAP_1341
BB18741	710156	WMWGADAP_1341
BB18742	710156	WMWGADAP_1341
BB18743	710156	WMWGADAP_1341
BB18744	710156	WMWGADAP_1341
BB18745	710156	WMWGADAP_1341
BB18746	710156	WMWGADAP_1341
BB18995	710867	WMWGADAP_1341
BB18996	710867	WMWGADAP_1341
BB18997	710867	WMWGADAP_1341
BB18998	710867	WMWGADAP_1341
BB18999	710867	WMWGADAP_1341
BB19000	710867	WMWGADAP_1341
BB19001	710867	WMWGADAP_1341
BB19002	710867	WMWGADAP_1341
BB19003	710867	WMWGADAP_1341
BB19004	710867	WMWGADAP_1341
BB19005	710868	WMWGADAP_1341
BB19006	710868	WMWGADAP_1341
BB19007	710868	WMWGADAP_1341

BB19008	710868	WMWGADAP_1341
BB19009	710868	WMWGADAP_1341
BB19010	710868	WMWGADAP_1341
BB19011	710868	WMWGADAP_1341

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 batch. All acceptance criteria for accuracy were met.
- A matrix spike and matrix spike duplicate were digested and analyzed with each batch. All acceptance criteria for precision were met.

7. All samples were analyzed without a dilution.
8. The raw data results are shown with dilution factors included.



TDS

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710066	WMWGADAP_1341
BB18669	710066	WMWGADAP_1341
BB18670	710066	WMWGADAP_1341
BB18671	710066	WMWGADAP_1341
BB18672	710066	WMWGADAP_1341
BB18673	710066	WMWGADAP_1341
BB18674	710066	WMWGADAP_1341
BB18675	710144	WMWGADAP_1341
BB18737	710067	WMWGADAP_1341
BB18738	710066	WMWGADAP_1341
BB18739	710067	WMWGADAP_1341
BB18740	710067	WMWGADAP_1341
BB18741	710067	WMWGADAP_1341
BB18742	710067	WMWGADAP_1341
BB18743	710067	WMWGADAP_1341
BB18744	710144	WMWGADAP_1341
BB18745	710144	WMWGADAP_1341
BB18746	710144	WMWGADAP_1341
BB18995	710395	WMWGADAP_1341
BB18996	710395	WMWGADAP_1341
BB18997	710395	WMWGADAP_1341
BB18998	710395	WMWGADAP_1341
BB18999	710395	WMWGADAP_1341
BB19000	710395	WMWGADAP_1341
BB19001	710395	WMWGADAP_1341
BB19002	710396	WMWGADAP_1341
BB19003	710396	WMWGADAP_1341
BB19004	710396	WMWGADAP_1341
BB19005	710396	WMWGADAP_1341
BB19006	710396	WMWGADAP_1341
BB19007	710396	WMWGADAP_1341

BB19008	710396	WMWGADAP_1341
BB19009	710396	WMWGADAP_1341
BB19010	710396	WMWGADAP_1341
BB19011	710396	WMWGADAP_1341

4. All of the above samples were analyzed and prepared 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. RPD/2 was less than 5%.
- 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 <2.5mg had the maximum volume of 150mL filtered. Affected samples are as follows:
  - BB18673
  - BB18737
  - BB18746
  - BB18998
  - BB19011

Anions

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710076, 710334, & 710088	WMWGADAP_1341
BB18669	710076, 710334, & 710088	WMWGADAP_1341
BB18670	710076, 710334, & 710088	WMWGADAP_1341
BB18671	710076, 710334, & 710088	WMWGADAP_1341
BB18672	710076, 710334, & 710088	WMWGADAP_1341
BB18673	710076, 710334, & 710088	WMWGADAP_1341
BB18674	710076, 710334, & 710088	WMWGADAP_1341
BB18675	710076, 710334, & 710088	WMWGADAP_1341
BB18737	710077, 710334, & 710089	WMWGADAP_1341
BB18738	710077, 710334, & 710089	WMWGADAP_1341
BB18739	710077, 710335, & 710089	WMWGADAP_1341
BB18740	710077, 710335, & 710089	WMWGADAP_1341
BB18741	710077, 710335, & 710089	WMWGADAP_1341
BB18742	710077, 710335, & 710089	WMWGADAP_1341
BB18743	710077, 710335, & 710089	WMWGADAP_1341
BB18744	710077, 710335, & 710089	WMWGADAP_1341
BB18745	710077, 710335, & 710089	WMWGADAP_1341
BB18746	710077, 710335, & 710089	WMWGADAP_1341
BB18995	710405, 710336, & 710964	WMWGADAP_1341
BB18996	710405, 710336, & 710964	WMWGADAP_1341
BB18997	710405, 710336, & 710964	WMWGADAP_1341
BB18998	710405, 710336, & 710964	WMWGADAP_1341
BB18999	710405, 710336, & 710964	WMWGADAP_1341
BB19000	710405, 710336, & 710964	WMWGADAP_1341
BB19001	710405, 710336, & 710964	WMWGADAP_1341
BB19002	710405, 710336, & 710964	WMWGADAP_1341
BB19003	710405, 710336, & 710964	WMWGADAP_1341
BB19004	710405, 710336, & 710964	WMWGADAP_1341
BB19005	710406, 710337, & 710965	WMWGADAP_1341
BB19006	710406, 710337, & 710965	WMWGADAP_1341
BB19007	710406, 710337, & 710965	WMWGADAP_1341

BB19008	710406, 710337, & 710965	WMWGADAP_1341
BB19009	710406, 710337, & 710965	WMWGADAP_1341
BB19010	710406, 710337, & 710965	WMWGADAP_1341
BB19011	710406, 710337, & 710965	WMWGADAP_1341

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 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 was analyzed with each batch. Acceptance criteria for accuracy were met.
  - A sample duplicate was analyzed with each batch. Acceptance criteria for precision were met, except for the following:
    - BB19011 Sulfate precision is invalid due to sample concentration.
7. Samples BB18675, BB19006, & BB19007 results for Fluoride are qualified due to potential matrix interferences.

8. 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>
BB18670	Sulfate	16
BB18675	Sulfate	5
BB18741	Sulfate	16
BB18742	Sulfate	32
BB18745	Chloride & Fluoride	40 & 3
BB18996	Sulfate	2
BB18997	Sulfate	5
BB18999	Chloride & Fluoride	4 & 2
BB19004	Sulfate	16
BB19006	Sulfate	5
BB19007	Sulfate	5
BB19010	Sulfate	8

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

Alkalinity

Gadsden Ash Pond

WMWGADAP\_1341

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>
BB18668	710513 & 710514	WMWGADAP_1341
BB18669	710513 & 710514	WMWGADAP_1341
BB18670	710513 & 710514	WMWGADAP_1341
BB18671	710513 & 710514	WMWGADAP_1341
BB18672	710513 & 710514	WMWGADAP_1341
BB18674	710513 & 710514	WMWGADAP_1341
BB18675	710513 & 710514	WMWGADAP_1341
BB18738	710513 & 710514	WMWGADAP_1341
BB18739	710513 & 710514	WMWGADAP_1341
BB18740	710513 & 710514	WMWGADAP_1341
BB18741	710513 & 710514	WMWGADAP_1341
BB18742	710513 & 710514	WMWGADAP_1341
BB18743	710513 & 710514	WMWGADAP_1341
BB18744	710513 & 710514	WMWGADAP_1341
BB18745	710513 & 710514	WMWGADAP_1341
BB18995	710513 & 710514	WMWGADAP_1341
BB18996	710513 & 710514	WMWGADAP_1341
BB18997	710513 & 710514	WMWGADAP_1341
BB18999	710513 & 710514	WMWGADAP_1341
BB19000	710513 & 710514	WMWGADAP_1341
BB19001	710927 & 710928	WMWGADAP_1341
BB19002	710927 & 710928	WMWGADAP_1341
BB19003	710927 & 710928	WMWGADAP_1341
BB19004	710927 & 710928	WMWGADAP_1341
BB19005	710927 & 710928	WMWGADAP_1341
BB19006	710927 & 710928	WMWGADAP_1341
BB19007	710927 & 710928	WMWGADAP_1341
BB19008	710927 & 710928	WMWGADAP_1341
BB19009	710927 & 710928	WMWGADAP_1341
BB19010	710927 & 710928	WMWGADAP_1341

4. All of the above samples were analyzed and prepared by Standard Method 2320B, except for the following:
  - a. Samples BB18675, BB19006, & BB19007 were not analyzed for Alkalinity due to the initial pH readings were below the titration end point.
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.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:00  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18668

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:07		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/13/21 10:10	10/15/21 11:07		1.015	17.6	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 11:07		1.015	0.170	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 11:07		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:07		1.015	3.58	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:07		1.015	6.56	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:15		1.015	0.0923	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 11:29		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.0000928	mg/L	0.000068	0.000203	J
* Barium, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.118	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 11:29		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 11:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.000346	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.00287	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.000121	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.000280	mg/L	0.000068	0.000203	
* Potassium, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.535	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 11:29		1.015	0.195	mg/L	0.000068	0.000203	
* Selenium, Total	10/8/21 11:18	10/11/21 11:29		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 11:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/8/21 11:57	10/8/21 14:25		1.015	0.191	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/14/21 16:58	10/14/21 21:54		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	67.4	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	101	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:00  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18668

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	67.4	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.01	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:21	10/7/21 12:21		1	5.79	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:25	10/13/21 10:25		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/7/21 10:14	10/7/21 10:14		1	5.29	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/5/21 10:55	10/5/21 10:55			165.56	uS/cm			FA
pH	10/5/21 10:55	10/5/21 10:55			5.72	SU			FA
Temperature	10/5/21 10:55	10/5/21 10:55			21.06	C			FA
Turbidity	10/5/21 10:55	10/5/21 10:55			4.86	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 11:00  
**Customer ID:**  
**Delivery Date:** 10/6/21 15:07

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

**Laboratory ID Number:** BB18668

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec
				Limit					Standard	Limit	Rec	Limit	
BB18738	Barium, Total	mg/L	0.000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Arsenic, Total	mg/L	-0.000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18738	Manganese, Total	mg/L	0.000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Cadmium, Total	mg/L	0.000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 11:00

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

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

**Laboratory ID Number:** BB18668

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-6

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 12:10  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18669

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/13/21 10:10	10/15/21 11:10		1.015	0.0649	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/13/21 10:10	10/15/21 11:10		1.015	11.4	mg/L	0.070035	0.406		
* Iron, Total	10/13/21 10:10	10/15/21 11:10		1.015	0.0726	mg/L	0.008120	0.0406		
* Lithium, Total	10/13/21 10:10	10/15/21 11:10		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/13/21 10:10	10/15/21 11:10		1.015	3.29	mg/L	0.021315	0.406		
* Sodium, Total	10/13/21 10:10	10/15/21 11:10		1.015	11.8	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>								
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:18		1.015	0.0714	mg/L	0.008120	0.0406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Barium, Total	10/8/21 11:18	10/11/21 11:33		1.015	0.0741	mg/L	0.000102	0.000203		
* Beryllium, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/8/21 11:18	10/11/21 11:33		1.015	0.000246	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/8/21 11:18	10/11/21 11:33		1.015	0.00104	mg/L	0.000068	0.000203		
* Lead, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Potassium, Total	10/8/21 11:18	10/11/21 11:33		1.015	0.979	mg/L	0.169505	0.5075		
* Manganese, Total	10/8/21 11:18	10/11/21 11:33		1.015	0.241	mg/L	0.000068	0.000203		
* Selenium, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/8/21 11:18	10/11/21 11:33		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>								
* Manganese, Dissolved	10/8/21 11:57	10/8/21 14:29		1.015	0.231	mg/L	0.000068	0.000203		
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	10/14/21 16:58	10/14/21 21:58		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>								
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	45.5	mg/L		0.1		
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	96.7	mg/L		25		

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-6

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 12:10  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18669

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	45.5	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.01	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:22	10/7/21 12:22		1	9.09	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:26	10/13/21 10:26		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/7/21 10:17	10/7/21 10:17		1	14.2	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/5/21 12:05	10/5/21 12:05			166.61	uS/cm			FA
pH	10/5/21 12:05	10/5/21 12:05			5.74	SU			FA
Temperature	10/5/21 12:05	10/5/21 12:05			20.04	C			FA
Turbidity	10/5/21 12:05	10/5/21 12:05			0.56	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 12:10  
**Customer ID:**  
**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-6

**Laboratory ID Number:** BB18669

Sample	Analysis	Units	MB				Standard		Rec		Prec	Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec			Limit
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 12:10

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-6

**Laboratory ID Number:** BB18669

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-3

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 13:25  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18670

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:13		1.015	1.01	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 13:31		10.15	65.9	mg/L	0.70035	4.06	
* Iron, Total	10/13/21 10:10	10/15/21 11:13		1.015	0.256	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 11:13		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:13		1.015	16.8	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:13		1.015	12.4	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:21		1.015	0.244	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 11:36		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 11:36		1.015	0.000207	mg/L	0.000068	0.000203	
* Barium, Total	10/8/21 11:18	10/11/21 11:36		1.015	0.0344	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 11:36		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 11:36		1.015	0.000213	mg/L	0.000068	0.000203	
* Chromium, Total	10/8/21 11:18	10/11/21 11:36		1.015	0.000234	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 11:36		1.015	0.0160	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 11:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/8/21 11:18	10/11/21 11:36		1.015	3.32	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 13:09		92.365	24.8	mg/L	0.006188	0.018473	
* Selenium, Total	10/8/21 11:18	10/11/21 11:36		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 11:36		1.015	0.000136	mg/L	0.000068	0.000203	J
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/8/21 11:57	10/11/21 10:54		92.365	25.1	mg/L	0.006188	0.018473	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/14/21 16:58	10/14/21 22:02		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	74.0	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	389	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-3

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 13:25  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18670

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	74.0	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.01	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:25	10/7/21 12:25		1	5.09	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:27	10/13/21 10:27		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/7/21 10:26	10/7/21 10:26		16	228	mg/L	8.00	16	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/5/21 13:21	10/5/21 13:21			622.14	uS/cm			FA
pH	10/5/21 13:21	10/5/21 13:21			5.76	SU			FA
Temperature	10/5/21 13:21	10/5/21 13:21			21.28	C			FA
Turbidity	10/5/21 13:21	10/5/21 13:21			0.41	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 13:25  
**Customer ID:**  
**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-3

**Laboratory ID Number:** BB18670

Sample	Analysis	Units	MB				Standard		Rec			Prec Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		Prec
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 13:25

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-3

**Laboratory ID Number:** BB18670

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 14:35  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18671

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:17		1.015	0.344	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 11:17		1.015	27.4	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 13:34		101.5	44.5	mg/L	0.8120	4.06	
* Lithium, Total	10/13/21 10:10	10/15/21 11:17		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:17		1.015	7.93	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:17		1.015	14.3	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/13/21 09:10	10/14/21 13:36		101.5	45.0	mg/L	0.8120	4.06	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 11:40		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 11:40		1.015	0.0147	mg/L	0.000068	0.000203	
* Barium, Total	10/8/21 11:18	10/11/21 11:40		1.015	0.202	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 11:40		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 11:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 11:40		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/8/21 11:18	10/11/21 11:40		1.015	0.0238	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 11:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:40		1.015	0.00111	mg/L	0.000068	0.000203	
* Potassium, Total	10/8/21 11:18	10/11/21 11:40		1.015	2.46	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 13:13		5.075	1.24	mg/L	0.000340	0.001015	
* Selenium, Total	10/8/21 11:18	10/11/21 11:40		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 11:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/8/21 11:57	10/11/21 10:57		5.075	1.31	mg/L	0.000340	0.001015	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/14/21 16:58	10/14/21 22:06		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	113	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	200	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 14:35  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18671

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	113	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.03	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:26	10/7/21 12:26		1	9.30	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:29	10/13/21 10:29		1	0.214	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/7/21 10:19	10/7/21 10:19		1	37.8	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/5/21 14:34	10/5/21 14:34			431.22	uS/cm			FA
pH	10/5/21 14:34	10/5/21 14:34			6.58	SU			FA
Temperature	10/5/21 14:34	10/5/21 14:34			20.73	C			FA
Turbidity	10/5/21 14:34	10/5/21 14:34			2.08	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 14:35  
**Customer ID:**  
**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-4

**Laboratory ID Number:** BB18671

Sample	Analysis	Units	MB				Standard		Rec		Prec	Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec			Limit
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 14:35

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-4

**Laboratory ID Number:** BB18671

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4 DUP

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 14:35  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18672

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:20		1.015	0.347	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 11:20		1.015	27.8	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 13:37		101.5	44.9	mg/L	0.8120	4.06	
* Lithium, Total	10/13/21 10:10	10/15/21 11:20		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:20		1.015	7.98	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:20		1.015	14.4	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>						
* Iron, Dissolved	10/13/21 09:10	10/14/21 13:39		101.5	44.5	mg/L	0.8120	4.06	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 11:44		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 11:44		1.015	0.0148	mg/L	0.000068	0.000203	
* Barium, Total	10/8/21 11:18	10/11/21 11:44		1.015	0.208	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 11:44		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 11:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 11:44		1.015	0.000224	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 11:44		1.015	0.0236	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 11:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:44		1.015	0.00109	mg/L	0.000068	0.000203	
* Potassium, Total	10/8/21 11:18	10/11/21 11:44		1.015	2.48	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 13:16		5.075	1.29	mg/L	0.000340	0.001015	
* Selenium, Total	10/8/21 11:18	10/11/21 11:44		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 11:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>						
* Manganese, Dissolved	10/8/21 11:57	10/11/21 11:01		5.075	1.33	mg/L	0.000340	0.001015	
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: CRB</b>						
* Mercury, Total by CVAA	10/14/21 16:58	10/14/21 22:10		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>			<b>Analyst: JAG</b>						
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	118	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>			<b>Analyst: CNJ</b>						
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	197	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4 DUP

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 14:35  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18672

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	118	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.03	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:27	10/7/21 12:27		1	9.83	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:30	10/13/21 10:30		1	0.205	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/7/21 10:20	10/7/21 10:20		1	36.9	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/5/21 14:34	10/5/21 14:34			431.22	uS/cm			FA
pH	10/5/21 14:34	10/5/21 14:34			6.58	SU			FA
Temperature	10/5/21 14:34	10/5/21 14:34			20.73	C			FA
Turbidity	10/5/21 14:34	10/5/21 14:34			2.08	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 14:35

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-4 DUP

**Laboratory ID Number:** BB18672

Sample	Analysis	Units	MB				Standard		Rec			Prec Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		Prec
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 14:35

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-4 DUP

**Laboratory ID Number:** BB18672

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAPFB  
**Collected:** 10/5/21 15:30  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18673

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/13/21 10:10	10/15/21 11:23		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/13/21 10:10	10/15/21 11:23		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	10/13/21 10:10	10/15/21 11:23		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/13/21 10:10	10/15/21 11:23		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/13/21 10:10	10/15/21 11:23		1.015	Not Detected	mg/L	0.021315	0.406	U	
* Sodium, Total	10/13/21 10:10	10/15/21 11:23		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	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Barium, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Beryllium, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/8/21 11:18	10/11/21 11:47		1.015	0.000138	mg/L	0.000068	0.000203	J	
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Potassium, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	10/8/21 11:18	10/11/21 11:47		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/8/21 11:18	10/11/21 11:47		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	10/14/21 16:58	10/14/21 22:14		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	Not Detected	mg/L		25	U	
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>								
* Chloride	10/7/21 12:28	10/7/21 12:28		1	Not Detected	mg/L	0.50	1	U	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>								
* Fluoride	10/13/21 10:31	10/13/21 10:31		1	Not Detected	mg/L	0.06	0.1	U	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>								
* Sulfate	10/7/21 10:21	10/7/21 10:21		1	Not Detected	mg/L	0.50	1	U	

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/5/21 15:30

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

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

**Laboratory ID Number:** BB18673

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18738	Lead, Total	mg/L	0.000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/5/21 15:30

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

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

**Laboratory ID Number:** BB18673

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0

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**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-17

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 08:45  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18674

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/13/21 10:10	10/15/21 11:27		1.015	0.0305	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/13/21 10:10	10/15/21 11:27		1.015	31.0	mg/L	0.070035	0.406		
* Iron, Total	10/13/21 10:10	10/15/21 11:27		1.015	0.0754	mg/L	0.008120	0.0406		
* Lithium, Total	10/13/21 10:10	10/15/21 11:27		1.015	0.00881	mg/L	0.007105	0.01999956	J	
* Magnesium, Total	10/13/21 10:10	10/15/21 11:27		1.015	5.30	mg/L	0.021315	0.406		
* Sodium, Total	10/13/21 10:10	10/15/21 11:27		1.015	26.7	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>								
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:32		1.015	0.0106	mg/L	0.008120	0.0406	J	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/8/21 11:18	10/11/21 11:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/8/21 11:18	10/11/21 11:51		1.015	0.000263	mg/L	0.000068	0.000203		
* Barium, Total	10/8/21 11:18	10/11/21 11:51		1.015	0.307	mg/L	0.000102	0.000203		
* Beryllium, Total	10/8/21 11:18	10/11/21 11:51		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/8/21 11:18	10/11/21 11:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/8/21 11:18	10/11/21 11:51		1.015	0.000273	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/8/21 11:18	10/11/21 11:51		1.015	0.000126	mg/L	0.000068	0.000203	J	
* Lead, Total	10/8/21 11:18	10/11/21 11:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:51		1.015	0.000453	mg/L	0.000068	0.000203		
* Potassium, Total	10/8/21 11:18	10/11/21 11:51		1.015	0.567	mg/L	0.169505	0.5075		
* Manganese, Total	10/8/21 11:18	10/11/21 11:51		1.015	0.0175	mg/L	0.000068	0.000203		
* Selenium, Total	10/8/21 11:18	10/11/21 11:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/8/21 11:18	10/11/21 11:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>								
* Manganese, Dissolved	10/8/21 11:57	10/8/21 14:43		1.015	0.0169	mg/L	0.000068	0.000203		
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	10/14/21 16:58	10/14/21 22:18		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>								
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	123	mg/L		0.1		
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	182	mg/L		25		

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-17

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 08:45  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18674

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	122	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	1.23	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:23	10/7/21 12:23		1	2.98	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:32	10/13/21 10:32		1	0.175	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/7/21 10:15	10/7/21 10:15		1	10.2	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/6/21 08:42	10/6/21 08:42			317.65	uS/cm			FA
pH	10/6/21 08:42	10/6/21 08:42			7.92	SU			FA
Temperature	10/6/21 08:42	10/6/21 08:42			20.50	C			FA
Turbidity	10/6/21 08:42	10/6/21 08:42			8.25	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/6/21 08:45  
**Customer ID:**  
**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-17

**Laboratory ID Number:** BB18674

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/6/21 08:45

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-17

**Laboratory ID Number:** BB18674

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-16

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 10:10  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18675

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:30		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/13/21 10:10	10/15/21 11:30		1.015	13.4	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 11:30		1.015	0.00888	mg/L	0.008120	0.0406	J
* Lithium, Total	10/13/21 10:10	10/15/21 11:30		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:30		1.015	5.08	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:30		1.015	2.74	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:35		1.015	Not Detected	mg/L	0.008120	0.0406	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 11:54		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.00207	mg/L	0.000068	0.000203	
* Barium, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.0215	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.000487	mg/L	0.000406	0.001015	J
* Cadmium, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.000680	mg/L	0.000068	0.000203	
* Chromium, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.000455	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.0321	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.00116	mg/L	0.000068	0.000203	
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.349	mg/L	0.169505	0.5075	J
* Manganese, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.382	mg/L	0.000068	0.000203	
* Selenium, Total	10/8/21 11:18	10/11/21 11:54		1.015	0.00262	mg/L	0.000508	0.001015	
* Thallium, Total	10/8/21 11:18	10/11/21 11:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/8/21 11:57	10/8/21 14:46		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	10/14/21 16:58	10/14/21 22:22		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/12/21 11:15	10/13/21 12:56		1	136	mg/L		25	
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:29	10/7/21 12:29		1	3.17	mg/L	0.50	1	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB18675 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-16

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 10:10  
**Customer ID:**  
**Submittal Date:** 10/6/21 15:07

**Laboratory ID Number:** BB18675

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:33	10/13/21 10:33		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/7/21 10:24	10/7/21 10:24		5	93.5	mg/L	2.50	5	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/6/21 10:08	10/6/21 10:08			272.73	uS/cm			FA
pH	10/6/21 10:08	10/6/21 10:08			4.16	SU			FA
Temperature	10/6/21 10:08	10/6/21 10:08			19.55	C			FA
Turbidity	10/6/21 10:08	10/6/21 10:08			3.19	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB18675 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/6/21 10:10  
**Customer ID:**  
**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-16

**Laboratory ID Number:** BB18675

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB18675 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/6/21 10:10

**Customer ID:**

**Delivery Date:** 10/6/21 15:07

**Description:** Gadsden Ash Pond - MW-16

**Laboratory ID Number:** BB18675

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
BB18675	Chloride	mg/L	0.0266	1.00	10.0	13.7	3.25	10.1	9.00 to 11.0	105	80.0 to 120	2.49	20.0
BB18675	Sulfate	mg/L	0.420	1.00	100	201	83.5	20.3	18.0 to 22.0	108	80.0 to 120	11.3	20.0
BB18744	Solids, Dissolved	mg/L	1.00	25.0			326	50.0	40.0 to 60.0			1.40	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB18675 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Equipment Blank-2

**Location Code:** WMWGADAPEB  
**Collected:** 10/5/21 10:20  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18737

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:34		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/13/21 10:10	10/15/21 11:34		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	10/13/21 10:10	10/15/21 11:34		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	10/13/21 10:10	10/15/21 11:34		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:34		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	10/13/21 10:10	10/15/21 11:34		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	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 11:58		1.015	0.000206	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	10/8/21 11:18	10/11/21 11:58		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 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	10/14/21 16:58	10/14/21 22:26		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: CNJ</b>						
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	10/7/21 12:43	10/7/21 12:43		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/13/21 10:35	10/13/21 10:35		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>			<b>Analyst: JCC</b>						
* Sulfate	10/11/21 12:21	10/11/21 12:21		1	Not Detected	mg/L	0.50	1	U

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPEB

**Sample Date:** 10/5/21 10:20

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond Equipment Blank-2

**Laboratory ID Number:** BB18737

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB18738	Lead, Total	mg/L	0.000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0

**Comments:**



## Batch QC Summary

**Customer Account:** WMWGADAPEB

**Sample Date:** 10/5/21 10:20

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond Equipment Blank-2

**Laboratory ID Number:** BB18737

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB18741	Solids, Dissolved	mg/L	0.0000	25.0			377	49.0	40.0 to 60.0			0.132	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

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**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-1

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:00  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18738

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:37		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/13/21 10:10	10/15/21 11:37		1.015	25.4	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 11:37		1.015	0.0485	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 11:37		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:37		1.015	3.87	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:37		1.015	3.90	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:38		1.015	Not Detected	mg/L	0.008120	0.0406	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 12:01		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 12:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	10/8/21 11:18	10/11/21 12:01		1.015	0.0811	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 12:01		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 12:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 12:01		1.015	0.000352	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 12:01		1.015	0.000436	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 12:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:01		1.015	0.0000730	mg/L	0.000068	0.000203	J
* Potassium, Total	10/8/21 11:18	10/11/21 12:01		1.015	0.497	mg/L	0.169505	0.5075	J
* Manganese, Total	10/8/21 11:18	10/11/21 12:01		1.015	0.0494	mg/L	0.000068	0.000203	
* Selenium, Total	10/8/21 11:18	10/11/21 12:01		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 12:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Manganese, Dissolved	10/8/21 11:57	10/8/21 14:50		1.015	0.0265	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>			<b>Preparation Method: EPA 1638</b>				
* Mercury, Total by CVAA	10/14/21 16:58	10/14/21 22:30		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>			<b>Preparation Method: EPA 1638</b>				
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	81.2	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>			<b>Preparation Method: EPA 1638</b>				
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	108	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-1

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:00  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18738

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	81.2	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.03	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:44	10/7/21 12:44		1	3.23	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 10:36	10/13/21 10:36		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:22	10/11/21 12:22		1	2.17	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/5/21 10:57	10/5/21 10:57			168.13	uS/cm			FA
pH	10/5/21 10:57	10/5/21 10:57			6.46	SU			FA
Temperature	10/5/21 10:57	10/5/21 10:57			19.85	C			FA
Turbidity	10/5/21 10:57	10/5/21 10:57			0.96	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 11:00  
**Customer ID:**  
**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - PZ-1

**Laboratory ID Number:** BB18738

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18738	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.106	0.104	0.102	0.0850 to 0.115	106	70.0 to 130	1.90	20.0
BB18738	Sodium, Total	mg/L	0.00361	0.0660	5.00	9.14	9.19	5.00	4.25 to 5.75	105	70.0 to 130	0.546	20.0
BB18738	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.148	0.152	0.101	0.0850 to 0.115	98.6	70.0 to 130	2.67	20.0
BB18738	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0998	0.102	0.100	0.0850 to 0.115	99.4	70.0 to 130	2.18	20.0
BB18738	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.169	0.168	0.0995	0.0850 to 0.115	87.9	70.0 to 130	0.593	20.0
BB18738	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.105	0.0961	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB18738	Iron, Total	mg/L	0.000319	0.0176	0.2	0.244	0.248	0.203	0.170 to 0.230	97.8	70.0 to 130	1.63	20.0
BB18738	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0914	0.0919	0.0919	0.0850 to 0.115	91.4	70.0 to 130	0.546	20.0
BB18738	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	8.97	9.07	5.14	4.25 to 5.75	102	70.0 to 130	1.11	20.0
BB18738	Potassium, Total	mg/L	0.00310	0.367	10.0	10.5	10.6	9.99	8.50 to 11.5	100	70.0 to 130	0.948	20.0
BB18738	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0962	0.0937	0.0952	0.0850 to 0.115	96.2	70.0 to 130	2.63	20.0
BB18738	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0988	0.0942	0.0913	0.0850 to 0.115	98.8	70.0 to 130	4.77	20.0
BB18738	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.202	0.206	0.198	0.170 to 0.230	101	70.0 to 130	1.96	20.0
BB18738	Calcium, Total	mg/L	0.00499	0.152	5.00	30.3	30.5	5.12	4.25 to 5.75	98.0	70.0 to 130	0.658	20.0
BB18738	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0993	0.0995	0.0962	0.0850 to 0.115	99.2	70.0 to 130	0.201	20.0
BB18738	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00409	0.00403	0.0038	0.00340 to 0.00460	102	70.0 to 130	1.48	20.0
BB18738	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0989	0.0999	0.0973	0.0850 to 0.115	98.9	70.0 to 130	1.01	20.0
BB18738	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0984	0.102	0.0988	0.0850 to 0.115	98.0	70.0 to 130	3.59	20.0
BB18738	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0999	0.104	0.102	0.0850 to 0.115	99.9	70.0 to 130	4.02	20.0
BB18738	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.987	0.999	0.989	0.850 to 1.15	98.7	70.0 to 130	1.21	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 11:00

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - PZ-1

**Laboratory ID Number:** BB18738

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18674	Solids, Dissolved	mg/L	0.0000	25.0			173	49.0	40.0 to 60.0			2.54	10.0
BB18738	Fluoride	mg/L	-0.0124	0.100	2.50	2.60	0.0527	2.38	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:53  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18739

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:54		1.015	0.260	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 11:54		1.015	36.0	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 11:54		1.015	0.283	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 11:54		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:54		1.015	7.42	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:54		1.015	13.7	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:42		1.015	0.213	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 12:23		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 12:23		1.015	0.000133	mg/L	0.000068	0.000203	J
* Barium, Total	10/8/21 11:18	10/11/21 12:23		1.015	0.221	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 12:23		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 12:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 12:23		1.015	0.000281	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 12:23		1.015	0.00116	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 12:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:23		1.015	0.000150	mg/L	0.000068	0.000203	J
* Potassium, Total	10/8/21 11:18	10/11/21 12:23		1.015	0.736	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 12:23		1.015	0.166	mg/L	0.000068	0.000203	
* Selenium, Total	10/8/21 11:18	10/11/21 12:23		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 12:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/8/21 11:57	10/8/21 14:53		1.015	0.174	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: ABB</b>							
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:22		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	135	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	168	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:53  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18739

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	135	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.03	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:45	10/7/21 12:45		1	6.78	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 12:41	10/13/21 12:41		1	0.122	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:24	10/11/21 12:24		1	14.4	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/5/21 11:50	10/5/21 11:50			267.75	uS/cm			FA
pH	10/5/21 11:50	10/5/21 11:50			6.24	SU			FA
Temperature	10/5/21 11:50	10/5/21 11:50			21.08	C			FA
Turbidity	10/5/21 11:50	10/5/21 11:50			2.81	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 11:53

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-5

**Laboratory ID Number:** BB18739

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 11:53

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-5

**Laboratory ID Number:** BB18739

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0
BB18741	Solids, Dissolved	mg/L	0.0000	25.0			377	49.0	40.0 to 60.0			0.132	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5 DUP

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:53  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18740

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 11:57		1.015	0.260	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 11:57		1.015	35.9	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 11:57		1.015	0.286	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 11:57		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 11:57		1.015	7.37	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 11:57		1.015	13.7	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/13/21 09:10	10/14/21 12:45		1.015	0.214	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 12:26		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 12:26		1.015	0.000162	mg/L	0.000068	0.000203	J
* Barium, Total	10/8/21 11:18	10/11/21 12:26		1.015	0.229	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 12:26		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 12:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 12:26		1.015	0.000275	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 12:26		1.015	0.00108	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 12:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:26		1.015	0.000142	mg/L	0.000068	0.000203	J
* Potassium, Total	10/8/21 11:18	10/11/21 12:26		1.015	0.689	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 12:26		1.015	0.160	mg/L	0.000068	0.000203	
* Selenium, Total	10/8/21 11:18	10/11/21 12:26		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 12:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/8/21 11:57	10/8/21 14:57		1.015	0.167	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: ABB</b>							
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:26		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	142	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	180	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5 DUP

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 11:53  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18740

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	142	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.04	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:46	10/7/21 12:46		1	6.84	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 12:42	10/13/21 12:42		1	0.104	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:25	10/11/21 12:25		1	14.5	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/5/21 11:50	10/5/21 11:50			267.75	uS/cm			FA
pH	10/5/21 11:50	10/5/21 11:50			6.24	SU			FA
Temperature	10/5/21 11:50	10/5/21 11:50			21.08	C			FA
Turbidity	10/5/21 11:50	10/5/21 11:50			2.81	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 11:53  
**Customer ID:**  
**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-5 DUP

**Laboratory ID Number:** BB18740

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18740	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.408	0.412	0.203	0.170 to 0.230	97.0	70.0 to 130	0.976	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18740	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.268	0.275	0.101	0.0850 to 0.115	101	70.0 to 130	2.58	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 11:53  
**Customer ID:**  
**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-5 DUP

**Laboratory ID Number:** BB18740

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18741	Solids, Dissolved	mg/L	0.0000	25.0			377	49.0	40.0 to 60.0			0.132	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-12

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 12:58  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18741

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/13/21 10:10	10/15/21 12:01		1.015	0.0661	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/13/21 10:10	10/15/21 13:41		10.15	55.8	mg/L	0.70035	4.06		
* Iron, Total	10/13/21 10:10	10/15/21 12:01		1.015	0.0729	mg/L	0.008120	0.0406		
* Lithium, Total	10/13/21 10:10	10/15/21 12:01		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/13/21 10:10	10/15/21 12:01		1.015	26.0	mg/L	0.021315	0.406		
* Sodium, Total	10/13/21 10:10	10/15/21 12:01		1.015	15.7	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>								
* Iron, Dissolved	10/13/21 09:10	10/14/21 13:02		1.015	0.0602	mg/L	0.008120	0.0406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/8/21 11:18	10/11/21 12:30		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/8/21 11:18	10/11/21 12:30		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Barium, Total	10/8/21 11:18	10/11/21 12:30		1.015	0.0417	mg/L	0.000102	0.000203		
* Beryllium, Total	10/8/21 11:18	10/11/21 12:30		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/8/21 11:18	10/11/21 12:30		1.015	0.000367	mg/L	0.000068	0.000203		
* Chromium, Total	10/8/21 11:18	10/11/21 12:30		1.015	0.000339	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/8/21 11:18	10/11/21 12:30		1.015	0.00448	mg/L	0.000068	0.000203		
* Lead, Total	10/8/21 11:18	10/11/21 12:30		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:30		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Potassium, Total	10/8/21 11:18	10/11/21 12:30		1.015	0.853	mg/L	0.169505	0.5075		
* Manganese, Total	10/8/21 11:18	10/11/21 13:20		5.075	1.87	mg/L	0.000340	0.001015		
* Selenium, Total	10/8/21 11:18	10/11/21 12:30		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/8/21 11:18	10/11/21 12:30		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>								
* Manganese, Dissolved	10/8/21 11:57	10/11/21 11:04		5.075	1.86	mg/L	0.000340	0.001015		
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: ABB</b>								
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:30		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>								
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	39.6	mg/L		0.1		
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	378	mg/L		25		

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-12

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 12:58  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18741

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	39.6	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.00	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:48	10/7/21 12:48		1	6.26	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 12:44	10/13/21 12:44		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:26	10/11/21 12:26		16	195	mg/L	8.00	16	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/5/21 12:55	10/5/21 12:55			510.48	uS/cm			FA
pH	10/5/21 12:55	10/5/21 12:55			5.19	SU			FA
Temperature	10/5/21 12:55	10/5/21 12:55			18.44	C			FA
Turbidity	10/5/21 12:55	10/5/21 12:55			0.39	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 12:58  
**Customer ID:**  
**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-12

**Laboratory ID Number:** BB18741

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18745	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.103	0.104	0.101	0.0850 to 0.115	97.1	70.0 to 130	0.966	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18745	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.211	0.214	0.203	0.170 to 0.230	99.2	70.0 to 130	1.41	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 12:58

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-12

**Laboratory ID Number:** BB18741

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0
BB18741	Solids, Dissolved	mg/L	0.0000	25.0			377	49.0	40.0 to 60.0			0.132	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-1

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 14:18  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18742

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 12:04		1.015	1.02	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 13:44		10.15	198	mg/L	0.70035	4.06	
* Iron, Total	10/13/21 10:10	10/15/21 12:04		1.015	2.38	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 12:04		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 13:44		10.15	41.7	mg/L	0.21315	4.06	
* Sodium, Total	10/13/21 10:10	10/15/21 12:04		1.015	21.8	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/13/21 09:10	10/14/21 13:05		1.015	2.39	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 12:34		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 12:34		1.015	0.00356	mg/L	0.000068	0.000203	
* Barium, Total	10/8/21 11:18	10/11/21 12:34		1.015	0.0304	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 12:34		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 12:34		1.015	0.000102	mg/L	0.000068	0.000203	J
* Chromium, Total	10/8/21 11:18	10/11/21 12:34		1.015	0.000228	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 12:34		1.015	0.0169	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 12:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/8/21 11:18	10/11/21 12:34		1.015	8.76	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 13:24		5.075	3.57	mg/L	0.000340	0.001015	
* Selenium, Total	10/8/21 11:18	10/11/21 12:34		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 12:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/8/21 11:57	10/11/21 11:08		5.075	3.74	mg/L	0.000340	0.001015	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: ABB</b>							
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:34		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	107	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	964	mg/L		50	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-1

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 14:18  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18742

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	107	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.01	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:49	10/7/21 12:49		1	6.10	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 12:45	10/13/21 12:45		1	0.0601	mg/L	0.06	0.1	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:27	10/11/21 12:27		32	567	mg/L	16.00	32	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/5/21 14:15	10/5/21 14:15			1200.42	uS/cm			FA
pH	10/5/21 14:15	10/5/21 14:15			5.79	SU			FA
Temperature	10/5/21 14:15	10/5/21 14:15			18.80	C			FA
Turbidity	10/5/21 14:15	10/5/21 14:15			2.76	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/5/21 14:18  
**Customer ID:**  
**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-1

**Laboratory ID Number:** BB18742

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18745	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.211	0.214	0.203	0.170 to 0.230	99.2	70.0 to 130	1.41	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18745	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.103	0.104	0.101	0.0850 to 0.115	97.1	70.0 to 130	0.966	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 14:18

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-1

**Laboratory ID Number:** BB18742

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0
BB18741	Solids, Dissolved	mg/L	0.0000	25.0			377	49.0	40.0 to 60.0			0.132	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-7

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 15:11  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18743

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/13/21 10:10	10/15/21 12:07		1.015	0.0673	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/13/21 10:10	10/15/21 12:07		1.015	15.9	mg/L	0.070035	0.406		
* Iron, Total	10/13/21 10:10	10/15/21 12:07		1.015	0.0213	mg/L	0.008120	0.0406	J	
* Lithium, Total	10/13/21 10:10	10/15/21 12:07		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/13/21 10:10	10/15/21 12:07		1.015	3.51	mg/L	0.021315	0.406		
* Sodium, Total	10/13/21 10:10	10/15/21 12:07		1.015	15.9	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>								
* Iron, Dissolved	10/13/21 09:10	10/14/21 13:09		1.015	Not Detected	mg/L	0.008120	0.0406	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/8/21 11:18	10/11/21 12:37		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/8/21 11:18	10/11/21 12:37		1.015	0.0000694	mg/L	0.000068	0.000203	J	
* Barium, Total	10/8/21 11:18	10/11/21 12:37		1.015	0.0716	mg/L	0.000102	0.000203		
* Beryllium, Total	10/8/21 11:18	10/11/21 12:37		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/8/21 11:18	10/11/21 12:37		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/8/21 11:18	10/11/21 12:37		1.015	0.000248	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/8/21 11:18	10/11/21 12:37		1.015	0.000182	mg/L	0.000068	0.000203	J	
* Lead, Total	10/8/21 11:18	10/11/21 12:37		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:37		1.015	0.0000955	mg/L	0.000068	0.000203	J	
* Potassium, Total	10/8/21 11:18	10/11/21 12:37		1.015	0.292	mg/L	0.169505	0.5075	J	
* Manganese, Total	10/8/21 11:18	10/11/21 12:37		1.015	0.0486	mg/L	0.000068	0.000203		
* Selenium, Total	10/8/21 11:18	10/11/21 12:37		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/8/21 11:18	10/11/21 12:37		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>								
* Manganese, Dissolved	10/8/21 11:57	10/8/21 15:26		1.015	0.0551	mg/L	0.000068	0.000203		
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: ABB</b>								
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:38		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>								
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	70.2	mg/L		0.1		
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/11/21 12:09	10/12/21 13:44		1	113	mg/L		25		

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-7

**Location Code:** WMWGADAP  
**Collected:** 10/5/21 15:11  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18743

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	70.2	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.02	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:50	10/7/21 12:50		1	6.43	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 12:46	10/13/21 12:46		1	0.0933	mg/L	0.06	0.1	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:28	10/11/21 12:28		1	9.19	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/5/21 15:08	10/5/21 15:08			162.09	uS/cm			FA
pH	10/5/21 15:08	10/5/21 15:08			6.06	SU			FA
Temperature	10/5/21 15:08	10/5/21 15:08			19.14	C			FA
Turbidity	10/5/21 15:08	10/5/21 15:08			0.99	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 15:11

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-7

**Laboratory ID Number:** BB18743

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18745	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.103	0.104	0.101	0.0850 to 0.115	97.1	70.0 to 130	0.966	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18745	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.211	0.214	0.203	0.170 to 0.230	99.2	70.0 to 130	1.41	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/5/21 15:11

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond - MW-7

**Laboratory ID Number:** BB18743

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0
BB18741	Solids, Dissolved	mg/L	0.0000	25.0			377	49.0	40.0 to 60.0			0.132	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 10:25  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18744

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 12:11		1.015	0.540	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 12:11		1.015	5.38	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 12:11		1.015	0.0933	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 12:11		1.015	0.0685	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/13/21 10:10	10/15/21 12:11		1.015	1.31	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 13:47		101.5	126	mg/L	3.045	40.6	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>						
* Iron, Dissolved	10/13/21 09:10	10/14/21 13:12		1.015	0.0384	mg/L	0.008120	0.0406	J
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 12:41		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 12:41		1.015	0.00139	mg/L	0.000068	0.000203	
* Barium, Total	10/8/21 11:18	10/11/21 12:41		1.015	0.120	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 12:41		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 12:41		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 12:41		1.015	0.000250	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 12:41		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/8/21 11:18	10/11/21 12:41		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:41		1.015	0.00363	mg/L	0.000068	0.000203	
* Potassium, Total	10/8/21 11:18	10/11/21 12:41		1.015	0.706	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 12:41		1.015	0.0144	mg/L	0.000068	0.000203	
* Selenium, Total	10/8/21 11:18	10/11/21 12:41		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 12:41		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>						
* Manganese, Dissolved	10/8/21 11:57	10/8/21 15:29		1.015	0.0135	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: ABB</b>						
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:42		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>			<b>Analyst: JAG</b>						
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	269	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>			<b>Analyst: CNJ</b>						
* Solids, Dissolved	10/12/21 11:15	10/13/21 12:56		1	317	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 10:25  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18744

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	265	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	4.23	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:51	10/7/21 12:51		1	6.82	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 12:47	10/13/21 12:47		1	2.56	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:30	10/11/21 12:30		1	2.44	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/6/21 10:22	10/6/21 10:22			470.65	uS/cm			FA
pH	10/6/21 10:22	10/6/21 10:22			8.36	SU			FA
Temperature	10/6/21 10:22	10/6/21 10:22			22.40	C			FA
Turbidity	10/6/21 10:22	10/6/21 10:22			0.62	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/6/21 10:25  
**Customer ID:**  
**Delivery Date:** 10/7/21 10:17

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

**Laboratory ID Number:** BB18744

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18745	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.211	0.214	0.203	0.170 to 0.230	99.2	70.0 to 130	1.41	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18745	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.103	0.104	0.101	0.0850 to 0.115	97.1	70.0 to 130	0.966	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/6/21 10:25

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

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

**Laboratory ID Number:** BB18744

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0
BB18744	Solids, Dissolved	mg/L	1.00	25.0			326	50.0	40.0 to 60.0			1.40	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 12:46  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18745

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 12:14		1.015	0.532	mg/L	0.030000	0.1015	
* Calcium, Total	10/13/21 10:10	10/15/21 12:14		1.015	3.46	mg/L	0.070035	0.406	
* Iron, Total	10/13/21 10:10	10/15/21 12:14		1.015	0.536	mg/L	0.008120	0.0406	
* Lithium, Total	10/13/21 10:10	10/15/21 12:14		1.015	0.227	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/13/21 10:10	10/15/21 12:14		1.015	1.16	mg/L	0.021315	0.406	
* Sodium, Total	10/13/21 10:10	10/15/21 13:51		101.5	357	mg/L	3.045	40.6	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>						
* Iron, Dissolved	10/13/21 09:10	10/14/21 13:15		1.015	0.0126	mg/L	0.008120	0.0406	J
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.000510	mg/L	0.000508	0.001015	J
* Arsenic, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.00162	mg/L	0.000068	0.000203	
* Barium, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.374	mg/L	0.000102	0.000203	
* Beryllium, Total	10/8/21 11:18	10/11/21 12:44		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 12:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.00111	mg/L	0.000203	0.001015	
* Cobalt, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.000205	mg/L	0.000068	0.000203	
* Lead, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.000225	mg/L	0.000068	0.000203	
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.00107	mg/L	0.000068	0.000203	
* Potassium, Total	10/8/21 11:18	10/11/21 12:44		1.015	1.08	mg/L	0.169505	0.5075	
* Manganese, Total	10/8/21 11:18	10/11/21 12:44		1.015	0.00930	mg/L	0.000068	0.000203	
* Selenium, Total	10/8/21 11:18	10/11/21 12:44		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 12:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>						
* Manganese, Dissolved	10/8/21 11:57	10/8/21 15:33		1.015	0.00586	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: ABB</b>						
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:46		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>			<b>Analyst: JAG</b>						
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	549	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>			<b>Analyst: CNJ</b>						
* Solids, Dissolved	10/12/21 11:15	10/13/21 12:56		1	864	mg/L		75.8	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/6/21 12:46  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18745

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	533	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	16.2	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/7/21 12:58	10/7/21 12:58		40	166	mg/L	20.00	40	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 12:53	10/13/21 12:53		3	8.34	mg/L	0.18	0.3	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/11/21 12:31	10/11/21 12:31		1	8.35	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/6/21 12:43	10/6/21 12:43			1478.62	uS/cm			FA
pH	10/6/21 12:43	10/6/21 12:43			8.53	SU			FA
Temperature	10/6/21 12:43	10/6/21 12:43			19.22	C			FA
Turbidity	10/6/21 12:43	10/6/21 12:43			9.3	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/6/21 12:46  
**Customer ID:**  
**Delivery Date:** 10/7/21 10:17

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

**Laboratory ID Number:** BB18745

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18745	Manganese, Dissolved	mg/L	-0.0000191	0.000147	0.100	0.103	0.104	0.101	0.0850 to 0.115	97.1	70.0 to 130	0.966	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18745	Iron, Dissolved	mg/L	-4.310E-05	0.0176	0.2	0.211	0.214	0.203	0.170 to 0.230	99.2	70.0 to 130	1.41	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



## Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/6/21 12:46

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

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

**Laboratory ID Number:** BB18745

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18744	Solids, Dissolved	mg/L	1.00	25.0			326	50.0	40.0 to 60.0			1.40	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-2

**Location Code:** WMWGADAPFB  
**Collected:** 10/6/21 13:15  
**Customer ID:**  
**Submittal Date:** 10/7/21 10:17

**Laboratory ID Number:** BB18746

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/13/21 10:10	10/15/21 12:18		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/13/21 10:10	10/15/21 12:18		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	10/13/21 10:10	10/15/21 12:18		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	10/13/21 10:10	10/15/21 12:18		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/13/21 10:10	10/15/21 12:18		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	10/13/21 10:10	10/15/21 12:18		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	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/8/21 11:18	10/11/21 12:48		1.015	0.000230	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/8/21 11:18	10/11/21 12:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: ABB</b>						
* Mercury, Total by CVAA	10/15/21 10:53	10/15/21 15:50		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: CNJ</b>						
* Solids, Dissolved	10/12/21 11:15	10/13/21 12:56		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	10/7/21 12:57	10/7/21 12:57		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	10/13/21 12:50	10/13/21 12:50		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>			<b>Analyst: JCC</b>						
* Sulfate	10/11/21 12:32	10/11/21 12:32		1	Not Detected	mg/L	0.50	1	U

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/6/21 13:15

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond Field Blank-2

**Laboratory ID Number:** BB18746

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BB18746	Selenium, Total	mg/L	0.0000698	0.00100	0.100	0.0976	0.0975	0.0973	0.0850 to 0.115	97.6	70.0 to 130	0.103	20.0
BB18746	Magnesium, Total	mg/L	-0.00772	0.0462	5.00	5.05	5.11	5.14	4.25 to 5.75	101	70.0 to 130	1.18	20.0
BB18746	Boron, Total	mg/L	-1.620E-05	0.0650	1.00	0.967	0.973	0.989	0.850 to 1.15	96.7	70.0 to 130	0.619	20.0
BB18746	Chromium, Total	mg/L	-0.0000170	0.000440	0.100	0.0979	0.0983	0.0988	0.0850 to 0.115	97.7	70.0 to 130	0.408	20.0
BB18746	Mercury, Total by CVAA	mg/L	5.000E-05	0.000500	0.004	0.0029	0.00311	0.00359	0.00340 to 0.00460	72.5	70.0 to 130	6.99	20.0
BB18746	Calcium, Total	mg/L	0.00499	0.152	5.00	5.04	5.08	5.12	4.25 to 5.75	101	70.0 to 130	0.791	20.0
BB18746	Antimony, Total	mg/L	0.000163	0.00100	0.100	0.0904	0.0913	0.0919	0.0850 to 0.115	90.4	70.0 to 130	0.991	20.0
BB18746	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0918	0.0935	0.0952	0.0850 to 0.115	91.8	70.0 to 130	1.83	20.0
BB18746	Arsenic, Total	mg/L	-0.0000050	0.000147	0.100	0.0998	0.0982	0.102	0.0850 to 0.115	99.8	70.0 to 130	1.62	20.0
BB18746	Molybdenum, Total	mg/L	0.0000224	0.000147	0.100	0.0936	0.0980	0.0962	0.0850 to 0.115	93.6	70.0 to 130	4.59	20.0
BB18746	Cobalt, Total	mg/L	-0.0000028	0.000147	0.100	0.0983	0.100	0.100	0.0850 to 0.115	98.3	70.0 to 130	1.71	20.0
BB18746	Potassium, Total	mg/L	0.00310	0.367	10.0	9.92	9.86	9.99	8.50 to 11.5	99.2	70.0 to 130	0.607	20.0
BB18746	Lithium, Total	mg/L	-5.480E-05	0.0154	0.200	0.193	0.196	0.198	0.170 to 0.230	96.5	70.0 to 130	1.54	20.0
BB18746	Lead, Total	mg/L	0.0000022	0.000147	0.100	0.105	0.102	0.102	0.0850 to 0.115	105	70.0 to 130	2.90	20.0
BB18746	Iron, Total	mg/L	0.000319	0.0176	0.2	0.201	0.203	0.203	0.170 to 0.230	100	70.0 to 130	0.990	20.0
BB18746	Beryllium, Total	mg/L	0.0000303	0.000880	0.100	0.0975	0.0886	0.0913	0.0850 to 0.115	97.5	70.0 to 130	9.56	20.0
BB18746	Thallium, Total	mg/L	0.0000035	0.000147	0.100	0.103	0.101	0.0961	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB18746	Manganese, Total	mg/L	0.0000059	0.000147	0.100	0.0992	0.0986	0.101	0.0850 to 0.115	99.2	70.0 to 130	0.607	20.0
BB18746	Barium, Total	mg/L	0.0000090	0.000200	0.100	0.0965	0.100	0.0995	0.0850 to 0.115	96.5	70.0 to 130	3.56	20.0
BB18746	Sodium, Total	mg/L	0.00361	0.0660	5.00	4.88	4.93	5.00	4.25 to 5.75	97.6	70.0 to 130	1.02	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/6/21 13:15

**Customer ID:**

**Delivery Date:** 10/7/21 10:17

**Description:** Gadsden Ash Pond Field Blank-2

**Laboratory ID Number:** BB18746

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
BB18746	Chloride	mg/L	0.0118	1.00	10.0	9.96	0.0703	10.1	9.00 to 11.0	99.6	80.0 to 120	0.00	20.0
BB18746	Fluoride	mg/L	0.026	0.100	2.50	2.72	0.0256	2.62	2.25 to 2.75	109	80.0 to 120	0.00	20.0
BB18744	Solids, Dissolved	mg/L	1.00	25.0			326	50.0	40.0 to 60.0			1.40	10.0
BB18746	Sulfate	mg/L	0.312	1.00	20.0	20.0	0.414	19.6	18.0 to 22.0	100	80.0 to 120	0.00	20.0

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**Comments:**

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 11:37  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18995

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 09:58		1.015	0.378	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 09:58		1.015	9.35	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 09:58		1.015	0.102	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 09:58		1.015	0.0544	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/21/21 12:00	10/22/21 09:58		1.015	2.05	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 13:39		10.15	85.5	mg/L	0.3045	4.06	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 09:54		1.015	Not Detected	mg/L	0.008120	0.0406	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 17:40		1.015	0.00167	mg/L	0.000508	0.001015	
* Arsenic, Total	10/13/21 14:45	10/14/21 17:40		1.015	0.00408	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 17:40		1.015	0.238	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 17:40		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 17:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 17:40		1.015	0.000412	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 17:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/13/21 14:45	10/14/21 17:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 17:40		1.015	0.00538	mg/L	0.000068	0.000203	
* Potassium, Total	10/13/21 14:45	10/14/21 17:40		1.015	0.586	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 17:40		1.015	0.0151	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 17:40		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 17:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 10:33		1.015	0.0147	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 17:29		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	231	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	230	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 11:37  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18995

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	226	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	4.87	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:12	10/14/21 11:12		1	1.72	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:45	10/13/21 13:45		1	1.43	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:00	10/20/21 13:00		1	13.8	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/11/21 11:34	10/11/21 11:34			370.58	uS/cm			FA
pH	10/11/21 11:34	10/11/21 11:34			8.13	SU			FA
Temperature	10/11/21 11:34	10/11/21 11:34			18.07	C			FA
Turbidity	10/11/21 11:34	10/11/21 11:34			2.76	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 11:37  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18995

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 11:37  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18995

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
BB18997	Solids, Dissolved	mg/L	0.0000	25.0			342	50.0	40.0 to 60.0			0.736	10.0
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 12:57  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18996

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:01		1.015	0.328	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 10:01		1.015	40.0	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 10:01		1.015	2.14	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:01		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:01		1.015	8.00	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:01		1.015	14.1	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 09:58		1.015	1.92	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 17:44		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.000846	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.170	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 17:44		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.000124	mg/L	0.000068	0.000203	J
* Chromium, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.000475	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.00579	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.000155	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.000118	mg/L	0.000068	0.000203	J
* Potassium, Total	10/13/21 14:45	10/14/21 17:44		1.015	0.999	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 17:44		1.015	1.01	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 17:44		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 17:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 10:37		1.015	1.01	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 17:33		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	95.6	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	202	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 12:57  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18996

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	95.6	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.02	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:13	10/14/21 11:13		1	7.04	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:46	10/13/21 13:46		1	0.0779	mg/L	0.06	0.1	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:01	10/20/21 13:01		2	61.7	mg/L	1.00	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/11/21 12:54	10/11/21 12:54			315.23	uS/cm			FA
pH	10/11/21 12:54	10/11/21 12:54			6.08	SU			FA
Temperature	10/11/21 12:54	10/11/21 12:54			24.19	C			FA
Turbidity	10/11/21 12:54	10/11/21 12:54			7.48	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 12:57  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18996

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 12:57  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18996

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18997	Solids, Dissolved	mg/L	0.0000	25.0			342	50.0	40.0 to 60.0			0.736	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 14:49  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18997

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:04		1.015	0.459	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 13:42		10.15	87.1	mg/L	0.70035	4.06	
* Iron, Total	10/21/21 12:00	10/22/21 13:42		10.15	6.30	mg/L	0.08120	0.406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:04		1.015	0.0225	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/21/21 12:00	10/22/21 10:04		1.015	11.2	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:04		1.015	5.42	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 13:06		10.15	6.02	mg/L	0.08120	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 17:48		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 17:48		1.015	0.424	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 17:48		1.015	0.0807	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 17:48		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 17:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 17:48		1.015	0.000479	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 17:48		1.015	0.0165	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 17:48		1.015	0.0000928	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/13/21 14:45	10/14/21 17:48		1.015	0.0204	mg/L	0.000068	0.000203	
* Potassium, Total	10/13/21 14:45	10/14/21 17:48		1.015	7.84	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 19:17		5.075	5.30	mg/L	0.000340	0.001015	
* Selenium, Total	10/13/21 14:45	10/14/21 17:48		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 17:48		1.015	0.000294	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 11:52		5.075	5.19	mg/L	0.000340	0.001015	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 17:37		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	175	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	337	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 14:49  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18997

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	175	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.12	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:14	10/14/21 11:14		1	2.43	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:47	10/13/21 13:47		1	0.283	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:02	10/20/21 13:02		5	112	mg/L	2.50	5	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/11/21 14:46	10/11/21 14:46			524.27	uS/cm			FA
pH	10/11/21 14:46	10/11/21 14:46			6.59	SU			FA
Temperature	10/11/21 14:46	10/11/21 14:46			21.20	C			FA
Turbidity	10/11/21 14:46	10/11/21 14:46			6.7	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 14:49  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18997

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 14:49  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18997

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18997	Solids, Dissolved	mg/L	0.0000	25.0			342	50.0	40.0 to 60.0			0.736	10.0
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-3

**Location Code:** WMWGADAPFB  
**Collected:** 10/11/21 15:15  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18998

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/21/21 12:00	10/22/21 10:08		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/21/21 12:00	10/22/21 10:08		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	10/21/21 12:00	10/22/21 10:08		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/21/21 12:00	10/22/21 10:08		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/21/21 12:00	10/22/21 10:08		1.015	Not Detected	mg/L	0.021315	0.406	U	
* Sodium, Total	10/21/21 12:00	10/22/21 10:08		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	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Barium, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Beryllium, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/13/21 14:45	10/14/21 17:51		1.015	0.0000787	mg/L	0.000068	0.000203	J	
* Potassium, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	10/13/21 14:45	10/14/21 17:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/13/21 14:45	10/14/21 17:51		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	10/19/21 13:32	10/19/21 17:41		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	Not Detected	mg/L		25	U	
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>								
* Chloride	10/14/21 11:15	10/14/21 11:15		1	Not Detected	mg/L	0.50	1	U	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>								
* Fluoride	10/13/21 13:49	10/13/21 13:49		1	Not Detected	mg/L	0.06	0.1	U	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>								
* Sulfate	10/20/21 13:03	10/20/21 13:03		1	Not Detected	mg/L	0.50	1	U	

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

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/11/21 15:15

**Customer ID:**

**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond Field Blank-3

**Laboratory ID Number:** BB18998

Sample	Analysis	Units	MB	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
				Limit	Spike					Rec	Limit		
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/11/21 15:15

**Customer ID:**

**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond Field Blank-3

**Laboratory ID Number:** BB18998

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0
BB18997	Solids, Dissolved	mg/L	0.0000	25.0			342	50.0	40.0 to 60.0			0.736	10.0
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0

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**Comments:**

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 09:28  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18999

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:11		1.015	0.617	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 10:11		1.015	3.96	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 10:11		1.015	0.181	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:11		1.015	0.129	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/21/21 12:00	10/22/21 10:11		1.015	1.33	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 13:46		101.5	222	mg/L	3.045	40.6	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>						
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:05		1.015	0.0290	mg/L	0.008120	0.0406	J
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 17:55		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 17:55		1.015	0.000426	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 17:55		1.015	0.242	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 17:55		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 17:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 17:55		1.015	0.000353	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 17:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/13/21 14:45	10/14/21 17:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 17:55		1.015	0.00156	mg/L	0.000068	0.000203	
* Potassium, Total	10/13/21 14:45	10/14/21 17:55		1.015	1.06	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 17:55		1.015	0.0396	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 17:55		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 17:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>						
* Manganese, Dissolved	10/13/21 14:19	10/14/21 10:44		1.015	0.0415	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: CRB</b>						
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 17:45		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>			<b>Analyst: JAG</b>						
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	406	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>			<b>Analyst: CNJ</b>						
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	536	mg/L		50	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 09:28  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB18999

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	394	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	12.3	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:26	10/14/21 11:26		4	38.0	mg/L	2.00	4	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:50	10/13/21 13:50		2	5.97	mg/L	0.12	0.2	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:04	10/20/21 13:04		1	15.2	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/12/21 09:25	10/12/21 09:25			901.38	uS/cm			FA
pH	10/12/21 09:25	10/12/21 09:25			8.62	SU			FA
Temperature	10/12/21 09:25	10/12/21 09:25			19.31	C			FA
Turbidity	10/12/21 09:25	10/12/21 09:25			4.01	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 09:28  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18999

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 09:28  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB18999

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0
BB18997	Solids, Dissolved	mg/L	0.0000	25.0			342	50.0	40.0 to 60.0			0.736	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-18H

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 11:17  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19000

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:15		1.015	0.0717	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 10:15		1.015	10.3	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 10:15		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	10/21/21 12:00	10/22/21 10:15		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:15		1.015	4.15	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:15		1.015	4.44	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:08		1.015	Not Detected	mg/L	0.008120	0.0406	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 17:58		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 17:58		1.015	0.000190	mg/L	0.000068	0.000203	J
* Barium, Total	10/13/21 14:45	10/14/21 17:58		1.015	0.0298	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 17:58		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 17:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 17:58		1.015	0.000209	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 17:58		1.015	0.000615	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 17:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 17:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/13/21 14:45	10/14/21 17:58		1.015	0.921	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 17:58		1.015	0.0254	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 17:58		1.015	0.000679	mg/L	0.000508	0.001015	J
* Thallium, Total	10/13/21 14:45	10/14/21 17:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 10:48		1.015	0.0258	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 17:49		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/15/21 10:30	10/15/21 11:41		1	4.00	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	78.7	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-18H

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 11:17  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19000

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	4.00	mg/L			
Carbonate Alkalinity, (calc.)	10/15/21 10:30	10/15/21 11:41		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:18	10/14/21 11:18		1	4.59	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:51	10/13/21 13:51		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:06	10/20/21 13:06		1	36.7	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/12/21 11:14	10/12/21 11:14			115.05	uS/cm			FA
pH	10/12/21 11:14	10/12/21 11:14			5.12	SU			FA
Temperature	10/12/21 11:14	10/12/21 11:14			17.56	C			FA
Turbidity	10/12/21 11:14	10/12/21 11:14			1.54	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 11:17  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-18H

**Laboratory ID Number:** BB19000

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 11:17  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-18H

**Laboratory ID Number:** BB19000

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0
BB19000	Alkalinity, Total as CaCO3	mg/L					4.20	50.9	45.0 to 55.0			4.88	10.0
BB18997	Solids, Dissolved	mg/L	0.0000	25.0			342	50.0	40.0 to 60.0			0.736	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-5

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 12:16  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19001

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/21/21 12:00	10/22/21 10:18		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/21/21 12:00	10/22/21 10:18		1.015	2.94	mg/L	0.070035	0.406		
* Iron, Total	10/21/21 12:00	10/22/21 10:18		1.015	0.0164	mg/L	0.008120	0.0406	J	
* Lithium, Total	10/21/21 12:00	10/22/21 10:18		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/21/21 12:00	10/22/21 10:18		1.015	1.10	mg/L	0.021315	0.406		
* Sodium, Total	10/21/21 12:00	10/22/21 10:18		1.015	3.68	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:11		1.015	Not Detected	mg/L	0.008120	0.0406	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/13/21 14:45	10/14/21 18:02		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/13/21 14:45	10/14/21 18:02		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Barium, Total	10/13/21 14:45	10/14/21 18:02		1.015	0.0494	mg/L	0.000102	0.000203		
* Beryllium, Total	10/13/21 14:45	10/14/21 18:02		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/13/21 14:45	10/14/21 18:02		1.015	0.0000842	mg/L	0.000068	0.000203	J	
* Chromium, Total	10/13/21 14:45	10/14/21 18:02		1.015	0.000337	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/13/21 14:45	10/14/21 18:02		1.015	0.0000808	mg/L	0.000068	0.000203	J	
* Lead, Total	10/13/21 14:45	10/14/21 18:02		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:02		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Potassium, Total	10/13/21 14:45	10/14/21 18:02		1.015	0.549	mg/L	0.169505	0.5075		
* Manganese, Total	10/13/21 14:45	10/14/21 18:02		1.015	0.0125	mg/L	0.000068	0.000203		
* Selenium, Total	10/13/21 14:45	10/14/21 18:02		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/13/21 14:45	10/14/21 18:02		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Manganese, Dissolved	10/13/21 14:19	10/14/21 10:51		1.015	0.00663	mg/L	0.000068	0.000203		
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>			<b>Preparation Method: EPA 1638</b>					
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 17:53		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>			<b>Preparation Method: EPA 1638</b>					
Alkalinity, Total as CaCO3	10/20/21 09:45	10/20/21 10:40		1	23.7	mg/L		0.1		
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>			<b>Preparation Method: EPA 1638</b>					
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	38.7	mg/L		25		

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-5

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 12:16  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19001

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	23.7	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	0.00	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:19	10/14/21 11:19		1	4.07	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:52	10/13/21 13:52		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:07	10/20/21 13:07		1	0.895	mg/L	0.50	1	J
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/12/21 12:13	10/12/21 12:13			41.42	uS/cm			FA
pH	10/12/21 12:13	10/12/21 12:13			5.33	SU			FA
Temperature	10/12/21 12:13	10/12/21 12:13			17.84	C			FA
Turbidity	10/12/21 12:13	10/12/21 12:13			2.08	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 12:16  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - PZ-5

**Laboratory ID Number:** BB19001

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 12:16  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - PZ-5

**Laboratory ID Number:** BB19001

Sample	Analysis	Units	MB	MB			Sample		Standard		Rec		Limit	
				Limit	Spike	MS	Duplicate	Standard	Limit	Rec	Prec			
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75		106	80.0 to 120	0.784	20.0
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0		112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0		100	80.0 to 120	0.157	20.0
BB19010	Alkalinity, Total as CaCO3	mg/L					153	50.9	45.0 to 55.0				0.651	10.0
BB18997	Solids, Dissolved	mg/L	0.0000	25.0			342	50.0	40.0 to 60.0				0.736	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-6

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 13:40  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19002

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:21		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/21/21 12:00	10/22/21 10:21		1.015	3.29	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 10:21		1.015	0.0571	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:21		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:21		1.015	1.07	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:21		1.015	3.74	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:15		1.015	Not Detected	mg/L	0.008120	0.0406	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 18:06		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	10/13/21 14:45	10/14/21 18:06		1.015	0.0303	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 18:06		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 18:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 18:06		1.015	0.000307	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 18:06		1.015	0.000142	mg/L	0.000068	0.000203	J
* Lead, Total	10/13/21 14:45	10/14/21 18:06		1.015	0.000119	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/13/21 14:45	10/14/21 18:06		1.015	0.507	mg/L	0.169505	0.5075	J
* Manganese, Total	10/13/21 14:45	10/14/21 18:06		1.015	0.00422	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 18:06		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 18:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 10:55		1.015	0.00377	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 17:57		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/20/21 09:45	10/20/21 10:40		1	23.6	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	35.3	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-6

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 13:40  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19002

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	23.6	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	0.00	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:20	10/14/21 11:20		1	3.68	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:53	10/13/21 13:53		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:08	10/20/21 13:08		1	1.34	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/12/21 13:37	10/12/21 13:37			42.98	uS/cm			FA
pH	10/12/21 13:37	10/12/21 13:37			5.41	SU			FA
Temperature	10/12/21 13:37	10/12/21 13:37			19.58	C			FA
Turbidity	10/12/21 13:37	10/12/21 13:37			6.06	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 13:40  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - PZ-6

**Laboratory ID Number:** BB19002

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec		
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0	
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0	
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0	
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0	
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0	
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0	
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0	
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0	
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0	
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0	
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0	
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0	
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0	
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0	
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0	
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0	
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0	
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0	
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0	
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0	
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0	
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0	

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 13:40  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - PZ-6

**Laboratory ID Number:** BB19002

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0
BB19010	Alkalinity, Total as CaCO3	mg/L					153	50.9	45.0 to 55.0			0.651	10.0
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4V

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 12:40  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19003

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/21/21 12:00	10/22/21 10:25		1.015	0.0596	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/21/21 12:00	10/22/21 10:25		1.015	23.0	mg/L	0.070035	0.406		
* Iron, Total	10/21/21 12:00	10/22/21 10:25		1.015	0.452	mg/L	0.008120	0.0406		
* Lithium, Total	10/21/21 12:00	10/22/21 10:25		1.015	0.0198	mg/L	0.007105	0.01999956	J	
* Magnesium, Total	10/21/21 12:00	10/22/21 10:25		1.015	5.50	mg/L	0.021315	0.406		
* Sodium, Total	10/21/21 12:00	10/22/21 13:49		10.15	58.5	mg/L	0.3045	4.06		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>								
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:18		1.015	0.425	mg/L	0.008120	0.0406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/13/21 14:45	10/14/21 18:09		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/13/21 14:45	10/14/21 18:09		1.015	0.000366	mg/L	0.000068	0.000203		
* Barium, Total	10/13/21 14:45	10/14/21 18:09		1.015	0.483	mg/L	0.000102	0.000203		
* Beryllium, Total	10/13/21 14:45	10/14/21 18:09		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/13/21 14:45	10/14/21 18:09		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/13/21 14:45	10/14/21 18:09		1.015	0.000314	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/13/21 14:45	10/14/21 18:09		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/13/21 14:45	10/14/21 18:09		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:09		1.015	0.00173	mg/L	0.000068	0.000203		
* Potassium, Total	10/13/21 14:45	10/14/21 18:09		1.015	0.865	mg/L	0.169505	0.5075		
* Manganese, Total	10/13/21 14:45	10/14/21 18:09		1.015	0.0485	mg/L	0.000068	0.000203		
* Selenium, Total	10/13/21 14:45	10/14/21 18:09		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/13/21 14:45	10/14/21 18:09		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>								
* Manganese, Dissolved	10/13/21 14:19	10/14/21 10:58		1.015	0.0480	mg/L	0.000068	0.000203		
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:01		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>								
Alkalinity, Total as CaCO3	10/20/21 09:45	10/20/21 10:40		1	236	mg/L		0.1		
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	220	mg/L		25		

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4V

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 12:40  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19003

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	234	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	2.10	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:21	10/14/21 11:21		1	5.65	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:55	10/13/21 13:55		1	0.230	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:09	10/20/21 13:09		1	1.70	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/11/21 12:34	10/11/21 12:34			439.07	uS/cm			FA
pH	10/11/21 12:34	10/11/21 12:34			7.82	SU			FA
Temperature	10/11/21 12:34	10/11/21 12:34			19.61	C			FA
Turbidity	10/11/21 12:34	10/11/21 12:34			1.17	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 12:40  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-4V

**Laboratory ID Number:** BB19003

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 12:40  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-4V

**Laboratory ID Number:** BB19003

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
BB19010	Alkalinity, Total as CaCO3	mg/L					153	50.9	45.0 to 55.0			0.651	10.0
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-20H

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 13:30  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19004

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:28		1.015	0.504	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 13:53		10.15	63.4	mg/L	0.70035	4.06	
* Iron, Total	10/21/21 12:00	10/22/21 10:28		1.015	2.87	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:28		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:28		1.015	18.3	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:28		1.015	17.4	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:21		1.015	2.40	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 18:13		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:13		1.015	0.00191	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 18:13		1.015	0.134	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 18:13		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 18:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 18:13		1.015	0.000246	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 18:13		1.015	0.00995	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 18:13		1.015	0.0000819	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:13		1.015	0.000312	mg/L	0.000068	0.000203	
* Potassium, Total	10/13/21 14:45	10/14/21 18:13		1.015	3.00	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 19:21		92.365	31.9	mg/L	0.006188	0.018473	RA
* Selenium, Total	10/13/21 14:45	10/14/21 18:13		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 18:13		1.015	0.000130	mg/L	0.000068	0.000203	J
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 11:56		92.365	32.1	mg/L	0.006188	0.018473	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:05		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/20/21 09:45	10/20/21 10:40		1	140	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	384	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-20H

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 13:30  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19004

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	140	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	0.05	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:23	10/14/21 11:23		1	6.37	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 13:56	10/13/21 13:56		1	0.127	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:10	10/20/21 13:10		16	174	mg/L	8.00	16	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/11/21 13:25	10/11/21 13:25			672.64	uS/cm			FA
pH	10/11/21 13:25	10/11/21 13:25			6.36	SU			FA
Temperature	10/11/21 13:25	10/11/21 13:25			19.78	C			FA
Turbidity	10/11/21 13:25	10/11/21 13:25			8.97	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 13:30  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-20H

**Laboratory ID Number:** BB19004

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19004	Potassium, Total	mg/L	-0.00835	0.367	10.0	13.1	13.3	10.4	8.50 to 11.5	101	70.0 to 130	1.52	20.0
BB19004	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0995	0.102	0.102	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19004	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.0041	0.00411	0.00406	0.00340 to 0.00460	102	70.0 to 130	0.244	20.0
BB19004	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.103	0.101	0.103	0.0850 to 0.115	101	70.0 to 130	1.96	20.0
BB19004	Boron, Total	mg/L	0.00185	0.0650	1.00	1.52	1.53	1.01	0.850 to 1.15	102	70.0 to 130	0.656	20.0
BB19004	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0978	0.0964	0.0973	0.0850 to 0.115	97.5	70.0 to 130	1.44	20.0
BB19004	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.101	0.100	0.105	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BB19004	Iron, Total	mg/L	0.00115	0.0176	0.2	3.06	3.04	0.203	0.170 to 0.230	95.0	70.0 to 130	0.656	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19004	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0974	0.0981	0.0993	0.0850 to 0.115	97.2	70.0 to 130	0.716	20.0
BB19004	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19004	Magnesium, Total	mg/L	0.00137	0.0462	5.00	23.3	23.3	5.13	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BB19004	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.0998	0.102	0.102	0.0850 to 0.115	99.8	70.0 to 130	2.18	20.0
BB19004	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.219	0.220	0.200	0.170 to 0.230	110	70.0 to 130	0.456	20.0
BB19004	Calcium, Total	mg/L	0.00219	0.152	5.00	69.3	67.7	5.05	4.25 to 5.75	118	70.0 to 130	2.34	20.0
BB19004	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0949	0.0935	0.0987	0.0850 to 0.115	94.8	70.0 to 130	1.49	20.0
BB19004	Sodium, Total	mg/L	0.000246	0.0660	5.00	23.0	23.1	5.04	4.25 to 5.75	112	70.0 to 130	0.434	20.0
BB19004	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.236	0.236	0.0970	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BB19004	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	30.6	31.2	0.0985	0.0850 to 0.115	-1300	70.0 to 130	1.94	20.0
BB19004	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0999	0.100	0.0965	0.0850 to 0.115	99.9	70.0 to 130	0.100	20.0
BB19004	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.107	0.108	0.101	0.0850 to 0.115	97.0	70.0 to 130	0.930	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 13:30  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-20H

**Laboratory ID Number:** BB19004

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19004	Sulfate	mg/L	-0.00907	1.00	320	533	175	19.7	18.0 to 22.0	112	80.0 to 120	0.573	20.0
BB19004	Chloride	mg/L	0.000283	1.00	10.0	16.4	6.36	9.96	9.00 to 11.0	100	80.0 to 120	0.157	20.0
BB19010	Alkalinity, Total as CaCO3	mg/L					153	50.9	45.0 to 55.0			0.651	10.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0
BB19004	Fluoride	mg/L	0.0194	0.100	2.50	2.78	0.128	2.61	2.25 to 2.75	106	80.0 to 120	0.784	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-10

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 14:40  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19005

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:45		1.015	0.0900	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 10:45		1.015	38.2	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 14:03		10.15	21.6	mg/L	0.08120	0.406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:45		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:45		1.015	6.18	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:45		1.015	12.6	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 13:09		10.15	21.2	mg/L	0.08120	0.406	RA
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 18:34		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:34		1.015	0.00370	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 18:34		1.015	0.292	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 18:34		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 18:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 18:34		1.015	0.000285	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 18:34		1.015	0.000886	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 18:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:34		1.015	0.000451	mg/L	0.000068	0.000203	
* Potassium, Total	10/13/21 14:45	10/14/21 18:34		1.015	0.585	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 18:34		1.015	0.689	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 18:34		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 18:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 11:05		1.015	0.692	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:32		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO <sub>3</sub>	10/20/21 09:45	10/20/21 10:40		1	151	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	190	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-10

**Location Code:** WMWGADAP  
**Collected:** 10/11/21 14:40  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19005

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	151	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	0.11	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:36	10/14/21 11:36		1	5.72	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 14:08	10/13/21 14:08		1	0.201	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:28	10/20/21 13:28		1	7.75	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/11/21 14:37	10/11/21 14:37			371.08	uS/cm			FA
pH	10/11/21 14:37	10/11/21 14:37			6.72	SU			FA
Temperature	10/11/21 14:37	10/11/21 14:37			20.11	C			FA
Turbidity	10/11/21 14:37	10/11/21 14:37			2.95	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 14:40  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-10

**Laboratory ID Number:** BB19005

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BB19011	Iron, Total	mg/L	0.00115	0.0176	0.2	0.205	0.248	0.203	0.170 to 0.230	102	70.0 to 130	19.0	20.0
BB19011	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.102	0.0996	0.0970	0.0850 to 0.115	102	70.0 to 130	2.38	20.0
BB19005	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	0.790	0.786	0.102	0.0850 to 0.115	98.0	70.0 to 130	0.508	20.0
BB19011	Magnesium, Total	mg/L	0.00137	0.0462	5.00	5.16	5.12	5.13	4.25 to 5.75	103	70.0 to 130	0.778	20.0
BB19011	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	0.0985	0.0960	0.0985	0.0850 to 0.115	98.4	70.0 to 130	2.57	20.0
BB19011	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.101	0.0999	0.102	0.0850 to 0.115	101	70.0 to 130	1.10	20.0
BB19005	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	21.3	21.0	0.202	0.170 to 0.230	50.0	70.0 to 130	1.42	20.0
BB19011	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.201	0.201	0.200	0.170 to 0.230	100	70.0 to 130	0.00	20.0
BB19011	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.0973	0.0991	0.103	0.0850 to 0.115	97.3	70.0 to 130	1.83	20.0
BB19011	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.100	0.0982	0.101	0.0850 to 0.115	100	70.0 to 130	1.82	20.0
BB19011	Calcium, Total	mg/L	0.00219	0.152	5.00	5.09	5.10	5.05	4.25 to 5.75	102	70.0 to 130	0.196	20.0
BB19011	Potassium, Total	mg/L	-0.00835	0.367	10.0	10.4	10.1	10.4	8.50 to 11.5	104	70.0 to 130	2.93	20.0
BB19011	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00405	0.00414	0.00399	0.00340 to 0.00460	101	70.0 to 130	2.20	20.0
BB19011	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0985	0.0983	0.0973	0.0850 to 0.115	98.5	70.0 to 130	0.203	20.0
BB19011	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0984	0.0963	0.0993	0.0850 to 0.115	98.4	70.0 to 130	2.16	20.0
BB19011	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0997	0.102	0.102	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BB19011	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0969	0.0956	0.0987	0.0850 to 0.115	96.9	70.0 to 130	1.35	20.0
BB19011	Sodium, Total	mg/L	0.000246	0.0660	5.00	5.05	5.03	5.04	4.25 to 5.75	101	70.0 to 130	0.397	20.0
BB19011	Boron, Total	mg/L	0.00185	0.0650	1.00	1.01	1.01	1.01	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB19011	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0988	0.0967	0.0965	0.0850 to 0.115	98.8	70.0 to 130	2.15	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/11/21 14:40  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-10

**Laboratory ID Number:** BB19005

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19011	Fluoride	mg/L	0.0275	0.100	2.50	2.61	0.0253	2.28	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB19011	Sulfate	mg/L	-0.210	1.00	20.0	18.9	-0.732	19.2	18.0 to 22.0	91.3	80.0 to 120	3160	20.0
BB19010	Alkalinity, Total as CaCO3	mg/L					153	50.9	45.0 to 55.0			0.651	10.0
BB19011	Chloride	mg/L	-0.00836	1.00	10.0	10.0	0.0829	10.0	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 08:30  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19006

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:48		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/21/21 12:00	10/22/21 10:48		1.015	11.8	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 10:48		1.015	0.0140	mg/L	0.008120	0.0406	J
* Lithium, Total	10/21/21 12:00	10/22/21 10:48		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:48		1.015	4.39	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:48		1.015	2.29	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:42		1.015	Not Detected	mg/L	0.008120	0.0406	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 18:38		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.00131	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.0268	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.00115	mg/L	0.000406	0.001015	
* Cadmium, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.000587	mg/L	0.000068	0.000203	
* Chromium, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.000593	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.0291	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.00156	mg/L	0.000068	0.000203	
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:38		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.383	mg/L	0.169505	0.5075	J
* Manganese, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.393	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 18:38		1.015	0.00287	mg/L	0.000508	0.001015	
* Thallium, Total	10/13/21 14:45	10/14/21 18:38		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 11:27		1.015	0.394	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:36		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	142	mg/L		25	
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:37	10/14/21 11:37		1	2.87	mg/L	0.50	1	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19006 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 08:30  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19006

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 14:09	10/13/21 14:09		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:39	10/20/21 13:39		5	95.7	mg/L	2.50	5	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/12/21 08:28	10/12/21 08:28			276.99	uS/cm			FA
pH	10/12/21 08:28	10/12/21 08:28			4.04	SU			FA
Temperature	10/12/21 08:28	10/12/21 08:28			19.12	C			FA
Turbidity	10/12/21 08:28	10/12/21 08:28			2.99	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19006 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 08:30  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-14

**Laboratory ID Number:** BB19006

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19010	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	1.13	1.13	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB19011	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	0.0985	0.0960	0.0985	0.0850 to 0.115	98.4	70.0 to 130	2.57	20.0
BB19011	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.101	0.0999	0.102	0.0850 to 0.115	101	70.0 to 130	1.10	20.0
BB19011	Iron, Total	mg/L	0.00115	0.0176	0.2	0.205	0.248	0.203	0.170 to 0.230	102	70.0 to 130	19.0	20.0
BB19011	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.102	0.0996	0.0970	0.0850 to 0.115	102	70.0 to 130	2.38	20.0
BB19010	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	13.2	13.7	0.202	0.170 to 0.230	-150	70.0 to 130	3.72	20.0
BB19011	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.201	0.201	0.200	0.170 to 0.230	100	70.0 to 130	0.00	20.0
BB19011	Magnesium, Total	mg/L	0.00137	0.0462	5.00	5.16	5.12	5.13	4.25 to 5.75	103	70.0 to 130	0.778	20.0
BB19011	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.0973	0.0991	0.103	0.0850 to 0.115	97.3	70.0 to 130	1.83	20.0
BB19011	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.100	0.0982	0.101	0.0850 to 0.115	100	70.0 to 130	1.82	20.0
BB19011	Calcium, Total	mg/L	0.00219	0.152	5.00	5.09	5.10	5.05	4.25 to 5.75	102	70.0 to 130	0.196	20.0
BB19011	Potassium, Total	mg/L	-0.00835	0.367	10.0	10.4	10.1	10.4	8.50 to 11.5	104	70.0 to 130	2.93	20.0
BB19011	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00405	0.00414	0.00399	0.00340 to 0.00460	101	70.0 to 130	2.20	20.0
BB19011	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0985	0.0983	0.0973	0.0850 to 0.115	98.5	70.0 to 130	0.203	20.0
BB19011	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0984	0.0963	0.0993	0.0850 to 0.115	98.4	70.0 to 130	2.16	20.0
BB19011	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0997	0.102	0.102	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BB19011	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0969	0.0956	0.0987	0.0850 to 0.115	96.9	70.0 to 130	1.35	20.0
BB19011	Sodium, Total	mg/L	0.000246	0.0660	5.00	5.05	5.03	5.04	4.25 to 5.75	101	70.0 to 130	0.397	20.0
BB19011	Boron, Total	mg/L	0.00185	0.0650	1.00	1.01	1.01	1.01	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB19011	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0988	0.0967	0.0965	0.0850 to 0.115	98.8	70.0 to 130	2.15	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19006 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 08:30  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-14

**Laboratory ID Number:** BB19006

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19011	Fluoride	mg/L	0.0275	0.100	2.50	2.61	0.0253	2.28	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB19011	Sulfate	mg/L	-0.210	1.00	20.0	18.9	-0.732	19.2	18.0 to 22.0	91.3	80.0 to 120	3160	20.0
BB19011	Chloride	mg/L	-0.00836	1.00	10.0	10.0	0.0829	10.0	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19006 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14 DUP

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 08:30  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19007

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/21/21 12:00	10/22/21 10:52		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/21/21 12:00	10/22/21 10:52		1.015	11.8	mg/L	0.070035	0.406		
* Iron, Total	10/21/21 12:00	10/22/21 10:52		1.015	0.0149	mg/L	0.008120	0.0406	J	
* Lithium, Total	10/21/21 12:00	10/22/21 10:52		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/21/21 12:00	10/22/21 10:52		1.015	4.38	mg/L	0.021315	0.406		
* Sodium, Total	10/21/21 12:00	10/22/21 10:52		1.015	2.28	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>								
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:45		1.015	Not Detected	mg/L	0.008120	0.0406	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/13/21 14:45	10/14/21 18:41		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.00137	mg/L	0.000068	0.000203		
* Barium, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.0286	mg/L	0.000102	0.000203		
* Beryllium, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.00117	mg/L	0.000406	0.001015		
* Cadmium, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.000505	mg/L	0.000068	0.000203		
* Chromium, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.000610	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.0288	mg/L	0.000068	0.000203		
* Lead, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.00151	mg/L	0.000068	0.000203		
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:41		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Potassium, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.355	mg/L	0.169505	0.5075	J	
* Manganese, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.393	mg/L	0.000068	0.000203		
* Selenium, Total	10/13/21 14:45	10/14/21 18:41		1.015	0.00291	mg/L	0.000508	0.001015		
* Thallium, Total	10/13/21 14:45	10/14/21 18:41		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>								
* Manganese, Dissolved	10/13/21 14:19	10/14/21 11:30		1.015	0.409	mg/L	0.000068	0.000203		
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:40		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	132	mg/L		25		
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>								
* Chloride	10/14/21 11:38	10/14/21 11:38		1	2.89	mg/L	0.50	1		

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19007 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14 DUP

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 08:30  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19007

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 14:10	10/13/21 14:10		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:40	10/20/21 13:40		5	88.9	mg/L	2.50	5	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/12/21 08:28	10/12/21 08:28			276.99	uS/cm			FA
pH	10/12/21 08:28	10/12/21 08:28			4.04	SU			FA
Temperature	10/12/21 08:28	10/12/21 08:28			19.12	C			FA
Turbidity	10/12/21 08:28	10/12/21 08:28			2.99	NTU			FA

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

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**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19007 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 08:30  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-14 DUP

**Laboratory ID Number:** BB19007

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19011	Iron, Total	mg/L	0.00115	0.0176	0.2	0.205	0.248	0.203	0.170 to 0.230	102	70.0 to 130	19.0	20.0
BB19011	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.102	0.0996	0.0970	0.0850 to 0.115	102	70.0 to 130	2.38	20.0
BB19010	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	1.13	1.13	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB19011	Magnesium, Total	mg/L	0.00137	0.0462	5.00	5.16	5.12	5.13	4.25 to 5.75	103	70.0 to 130	0.778	20.0
BB19011	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	0.0985	0.0960	0.0985	0.0850 to 0.115	98.4	70.0 to 130	2.57	20.0
BB19011	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.101	0.0999	0.102	0.0850 to 0.115	101	70.0 to 130	1.10	20.0
BB19011	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.0973	0.0991	0.103	0.0850 to 0.115	97.3	70.0 to 130	1.83	20.0
BB19011	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.100	0.0982	0.101	0.0850 to 0.115	100	70.0 to 130	1.82	20.0
BB19011	Calcium, Total	mg/L	0.00219	0.152	5.00	5.09	5.10	5.05	4.25 to 5.75	102	70.0 to 130	0.196	20.0
BB19010	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	13.2	13.7	0.202	0.170 to 0.230	-150	70.0 to 130	3.72	20.0
BB19011	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.201	0.201	0.200	0.170 to 0.230	100	70.0 to 130	0.00	20.0
BB19011	Potassium, Total	mg/L	-0.00835	0.367	10.0	10.4	10.1	10.4	8.50 to 11.5	104	70.0 to 130	2.93	20.0
BB19011	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00405	0.00414	0.00399	0.00340 to 0.00460	101	70.0 to 130	2.20	20.0
BB19011	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0985	0.0983	0.0973	0.0850 to 0.115	98.5	70.0 to 130	0.203	20.0
BB19011	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0984	0.0963	0.0993	0.0850 to 0.115	98.4	70.0 to 130	2.16	20.0
BB19011	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0997	0.102	0.102	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BB19011	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0969	0.0956	0.0987	0.0850 to 0.115	96.9	70.0 to 130	1.35	20.0
BB19011	Sodium, Total	mg/L	0.000246	0.0660	5.00	5.05	5.03	5.04	4.25 to 5.75	101	70.0 to 130	0.397	20.0
BB19011	Boron, Total	mg/L	0.00185	0.0650	1.00	1.01	1.01	1.01	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB19011	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0988	0.0967	0.0965	0.0850 to 0.115	98.8	70.0 to 130	2.15	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19007 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 08:30  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-14 DUP

**Laboratory ID Number:** BB19007

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19011	Fluoride	mg/L	0.0275	0.100	2.50	2.61	0.0253	2.28	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB19011	Sulfate	mg/L	-0.210	1.00	20.0	18.9	-0.732	19.2	18.0 to 22.0	91.3	80.0 to 120	3160	20.0
BB19011	Chloride	mg/L	-0.00836	1.00	10.0	10.0	0.0829	10.0	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified. Sample BB19007 was not analyzed for Alkalinity due to the initial sample pH reading was below the Alkalinity titration end point of 4.5 SU. Fluoride result is qualified due to potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-8

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 10:48  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19008

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:55		1.015	0.0462	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 14:06		10.15	66.3	mg/L	0.70035	4.06	
* Iron, Total	10/21/21 12:00	10/22/21 14:06		10.15	8.84	mg/L	0.08120	0.406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:55		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:55		1.015	6.51	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:55		1.015	9.59	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 13:19		10.15	8.40	mg/L	0.08120	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 18:45		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:45		1.015	0.00287	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 18:45		1.015	0.203	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 18:45		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 18:45		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 18:45		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/13/21 14:45	10/14/21 18:45		1.015	0.00298	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 18:45		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:45		1.015	0.000319	mg/L	0.000068	0.000203	
* Potassium, Total	10/13/21 14:45	10/14/21 18:45		1.015	0.446	mg/L	0.169505	0.5075	J
* Manganese, Total	10/13/21 14:45	10/14/21 19:35		5.075	2.00	mg/L	0.000340	0.001015	
* Selenium, Total	10/13/21 14:45	10/14/21 18:45		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 18:45		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 11:59		5.075	1.96	mg/L	0.000340	0.001015	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:44		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO <sub>3</sub>	10/20/21 09:45	10/20/21 10:40		1	202	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	245	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-8

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 10:48  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19008

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	202	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	0.12	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:40	10/14/21 11:40		1	5.60	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 14:12	10/13/21 14:12		1	0.123	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:32	10/20/21 13:32		1	16.0	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/12/21 10:45	10/12/21 10:45			441.79	uS/cm			FA
pH	10/12/21 10:45	10/12/21 10:45			6.61	SU			FA
Temperature	10/12/21 10:45	10/12/21 10:45			18.42	C			FA
Turbidity	10/12/21 10:45	10/12/21 10:45			5.89	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 10:48  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-8

**Laboratory ID Number:** BB19008

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19010	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	1.13	1.13	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB19011	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	0.0985	0.0960	0.0985	0.0850 to 0.115	98.4	70.0 to 130	2.57	20.0
BB19011	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.101	0.0999	0.102	0.0850 to 0.115	101	70.0 to 130	1.10	20.0
BB19011	Iron, Total	mg/L	0.00115	0.0176	0.2	0.205	0.248	0.203	0.170 to 0.230	102	70.0 to 130	19.0	20.0
BB19011	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.102	0.0996	0.0970	0.0850 to 0.115	102	70.0 to 130	2.38	20.0
BB19011	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.0973	0.0991	0.103	0.0850 to 0.115	97.3	70.0 to 130	1.83	20.0
BB19011	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.100	0.0982	0.101	0.0850 to 0.115	100	70.0 to 130	1.82	20.0
BB19011	Calcium, Total	mg/L	0.00219	0.152	5.00	5.09	5.10	5.05	4.25 to 5.75	102	70.0 to 130	0.196	20.0
BB19011	Magnesium, Total	mg/L	0.00137	0.0462	5.00	5.16	5.12	5.13	4.25 to 5.75	103	70.0 to 130	0.778	20.0
BB19011	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19010	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	13.2	13.7	0.202	0.170 to 0.230	-150	70.0 to 130	3.72	20.0
BB19011	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.201	0.201	0.200	0.170 to 0.230	100	70.0 to 130	0.00	20.0
BB19011	Potassium, Total	mg/L	-0.00835	0.367	10.0	10.4	10.1	10.4	8.50 to 11.5	104	70.0 to 130	2.93	20.0
BB19011	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00405	0.00414	0.00399	0.00340 to 0.00460	101	70.0 to 130	2.20	20.0
BB19011	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0985	0.0983	0.0973	0.0850 to 0.115	98.5	70.0 to 130	0.203	20.0
BB19011	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0984	0.0963	0.0993	0.0850 to 0.115	98.4	70.0 to 130	2.16	20.0
BB19011	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0997	0.102	0.102	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BB19011	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0969	0.0956	0.0987	0.0850 to 0.115	96.9	70.0 to 130	1.35	20.0
BB19011	Sodium, Total	mg/L	0.000246	0.0660	5.00	5.05	5.03	5.04	4.25 to 5.75	101	70.0 to 130	0.397	20.0
BB19011	Boron, Total	mg/L	0.00185	0.0650	1.00	1.01	1.01	1.01	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB19011	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0988	0.0967	0.0965	0.0850 to 0.115	98.8	70.0 to 130	2.15	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 10:48  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-8

**Laboratory ID Number:** BB19008

Sample	Analysis	Units	MB	MB			Sample		Standard		Rec			Prec Limit	
				Limit	Spike	MS	Duplicate	Standard	Limit	Rec	Limit	Prec			
BB19011	Fluoride	mg/L	0.0275	0.100	2.50	2.61	0.0253	2.28	2.25 to 2.75		104	80.0 to 120		0.00	20.0
BB19011	Sulfate	mg/L	-0.210	1.00	20.0	18.9	-0.732	19.2	18.0 to 22.0		91.3	80.0 to 120		3160	20.0
BB19010	Alkalinity, Total as CaCO <sub>3</sub>	mg/L					153	50.9	45.0 to 55.0					0.651	10.0
BB19011	Chloride	mg/L	-0.00836	1.00	10.0	10.0	0.0829	10.0	9.00 to 11.0		100	80.0 to 120		0.00	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0					0.142	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-9

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 11:55  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19009

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 10:59		1.015	0.0632	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 10:59		1.015	35.4	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 10:59		1.015	1.33	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 10:59		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 10:59		1.015	6.76	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 10:59		1.015	13.9	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	10/20/21 14:00	10/21/21 10:52		1.015	1.27	mg/L	0.008120	0.0406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 18:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:49		1.015	0.000635	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 18:49		1.015	0.147	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 18:49		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 18:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 18:49		1.015	0.000310	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 18:49		1.015	0.00113	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 18:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:49		1.015	0.000177	mg/L	0.000068	0.000203	J
* Potassium, Total	10/13/21 14:45	10/14/21 18:49		1.015	1.80	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 19:39		5.075	1.50	mg/L	0.000340	0.001015	
* Selenium, Total	10/13/21 14:45	10/14/21 18:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 18:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/13/21 14:19	10/14/21 12:03		5.075	1.49	mg/L	0.000340	0.001015	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:48		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: JAG</b>							
Alkalinity, Total as CaCO3	10/20/21 09:45	10/20/21 10:40		1	117	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	169	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-9

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 11:55  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19009

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	117	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	0.13	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:41	10/14/21 11:41		1	7.78	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 14:13	10/13/21 14:13		1	0.147	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:33	10/20/21 13:33		1	18.0	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/12/21 11:51	10/12/21 11:51			313.11	uS/cm			FA
pH	10/12/21 11:51	10/12/21 11:51			6.90	SU			FA
Temperature	10/12/21 11:51	10/12/21 11:51			18.97	C			FA
Turbidity	10/12/21 11:51	10/12/21 11:51			2.25	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 11:55  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-9

**Laboratory ID Number:** BB19009

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19011	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	0.0985	0.0960	0.0985	0.0850 to 0.115	98.4	70.0 to 130	2.57	20.0
BB19011	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.101	0.0999	0.102	0.0850 to 0.115	101	70.0 to 130	1.10	20.0
BB19010	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	1.13	1.13	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB19011	Iron, Total	mg/L	0.00115	0.0176	0.2	0.205	0.248	0.203	0.170 to 0.230	102	70.0 to 130	19.0	20.0
BB19011	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.102	0.0996	0.0970	0.0850 to 0.115	102	70.0 to 130	2.38	20.0
BB19011	Magnesium, Total	mg/L	0.00137	0.0462	5.00	5.16	5.12	5.13	4.25 to 5.75	103	70.0 to 130	0.778	20.0
BB19011	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19010	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	13.2	13.7	0.202	0.170 to 0.230	-150	70.0 to 130	3.72	20.0
BB19011	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.201	0.201	0.200	0.170 to 0.230	100	70.0 to 130	0.00	20.0
BB19011	Potassium, Total	mg/L	-0.00835	0.367	10.0	10.4	10.1	10.4	8.50 to 11.5	104	70.0 to 130	2.93	20.0
BB19011	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00405	0.00414	0.00399	0.00340 to 0.00460	101	70.0 to 130	2.20	20.0
BB19011	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0985	0.0983	0.0973	0.0850 to 0.115	98.5	70.0 to 130	0.203	20.0
BB19011	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0984	0.0963	0.0993	0.0850 to 0.115	98.4	70.0 to 130	2.16	20.0
BB19011	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.0973	0.0991	0.103	0.0850 to 0.115	97.3	70.0 to 130	1.83	20.0
BB19011	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.100	0.0982	0.101	0.0850 to 0.115	100	70.0 to 130	1.82	20.0
BB19011	Calcium, Total	mg/L	0.00219	0.152	5.00	5.09	5.10	5.05	4.25 to 5.75	102	70.0 to 130	0.196	20.0
BB19011	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0997	0.102	0.102	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BB19011	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0969	0.0956	0.0987	0.0850 to 0.115	96.9	70.0 to 130	1.35	20.0
BB19011	Sodium, Total	mg/L	0.000246	0.0660	5.00	5.05	5.03	5.04	4.25 to 5.75	101	70.0 to 130	0.397	20.0
BB19011	Boron, Total	mg/L	0.00185	0.0650	1.00	1.01	1.01	1.01	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB19011	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0988	0.0967	0.0965	0.0850 to 0.115	98.8	70.0 to 130	2.15	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 11:55  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-9

**Laboratory ID Number:** BB19009

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19011	Chloride	mg/L	-0.00836	1.00	10.0	10.0	0.0829	10.0	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0
BB19011	Fluoride	mg/L	0.0275	0.100	2.50	2.61	0.0253	2.28	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB19011	Sulfate	mg/L	-0.210	1.00	20.0	18.9	-0.732	19.2	18.0 to 22.0	91.3	80.0 to 120	3160	20.0
BB19010	Alkalinity, Total as CaCO3	mg/L					153	50.9	45.0 to 55.0			0.651	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-11

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 12:55  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19010

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 11:02		1.015	0.125	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 14:09		10.15	78.6	mg/L	0.70035	4.06	
* Iron, Total	10/21/21 12:00	10/22/21 14:09		10.15	13.6	mg/L	0.08120	0.406	
* Lithium, Total	10/21/21 12:00	10/22/21 11:02		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 11:02		1.015	11.4	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 11:02		1.015	13.0	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: RDA</b>						
* Iron, Dissolved	10/20/21 14:00	10/21/21 13:23		10.15	13.5	mg/L	0.08120	0.406	RA
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/13/21 14:45	10/14/21 18:52		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:52		1.015	0.00272	mg/L	0.000068	0.000203	
* Barium, Total	10/13/21 14:45	10/14/21 18:52		1.015	0.170	mg/L	0.000102	0.000203	
* Beryllium, Total	10/13/21 14:45	10/14/21 18:52		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 18:52		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 18:52		1.015	0.000267	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/13/21 14:45	10/14/21 18:52		1.015	0.000275	mg/L	0.000068	0.000203	
* Lead, Total	10/13/21 14:45	10/14/21 18:52		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:52		1.015	0.000152	mg/L	0.000068	0.000203	J
* Potassium, Total	10/13/21 14:45	10/14/21 18:52		1.015	1.30	mg/L	0.169505	0.5075	
* Manganese, Total	10/13/21 14:45	10/14/21 18:52		1.015	0.983	mg/L	0.000068	0.000203	
* Selenium, Total	10/13/21 14:45	10/14/21 18:52		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 18:52		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>						
* Manganese, Dissolved	10/13/21 14:19	10/14/21 11:41		1.015	1.03	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: CRB</b>						
* Mercury, Total by CVAA	10/19/21 13:32	10/19/21 18:52		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2320 B</b>			<b>Analyst: JAG</b>						
Alkalinity, Total as CaCO3	10/20/21 09:45	10/20/21 10:40		1	154	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>			<b>Analyst: CNJ</b>						
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	352	mg/L		25	

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-11

**Location Code:** WMWGADAP  
**Collected:** 10/12/21 12:55  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19010

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: JAG</b>							
Bicarbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	154	mg/L			
Carbonate Alkalinity, (calc.)	10/20/21 09:45	10/20/21 10:40		1	0.08	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:42	10/14/21 11:42		1	5.80	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 14:14	10/13/21 14:14		1	0.134	mg/L	0.06	0.1	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:41	10/20/21 13:41		8	142	mg/L	4.00	8	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/12/21 12:52	10/12/21 12:52			577.54	uS/cm			FA
pH	10/12/21 12:52	10/12/21 12:52			6.66	SU			FA
Temperature	10/12/21 12:52	10/12/21 12:52			19.95	C			FA
Turbidity	10/12/21 12:52	10/12/21 12:52			7.01	NTU			FA

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

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 12:55  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-11

**Laboratory ID Number:** BB19010

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19011	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	0.0985	0.0960	0.0985	0.0850 to 0.115	98.4	70.0 to 130	2.57	20.0
BB19011	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.101	0.0999	0.102	0.0850 to 0.115	101	70.0 to 130	1.10	20.0
BB19010	Manganese, Dissolved	mg/L	-0.0000354	0.000147	0.100	1.13	1.13	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB19011	Magnesium, Total	mg/L	0.00137	0.0462	5.00	5.16	5.12	5.13	4.25 to 5.75	103	70.0 to 130	0.778	20.0
BB19011	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Potassium, Total	mg/L	-0.00835	0.367	10.0	10.4	10.1	10.4	8.50 to 11.5	104	70.0 to 130	2.93	20.0
BB19011	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00405	0.00414	0.00399	0.00340 to 0.00460	101	70.0 to 130	2.20	20.0
BB19011	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0985	0.0983	0.0973	0.0850 to 0.115	98.5	70.0 to 130	0.203	20.0
BB19011	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0984	0.0963	0.0993	0.0850 to 0.115	98.4	70.0 to 130	2.16	20.0
BB19011	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0997	0.102	0.102	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BB19011	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0969	0.0956	0.0987	0.0850 to 0.115	96.9	70.0 to 130	1.35	20.0
BB19011	Sodium, Total	mg/L	0.000246	0.0660	5.00	5.05	5.03	5.04	4.25 to 5.75	101	70.0 to 130	0.397	20.0
BB19011	Boron, Total	mg/L	0.00185	0.0650	1.00	1.01	1.01	1.01	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB19011	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0988	0.0967	0.0965	0.0850 to 0.115	98.8	70.0 to 130	2.15	20.0
BB19011	Iron, Total	mg/L	0.00115	0.0176	0.2	0.205	0.248	0.203	0.170 to 0.230	102	70.0 to 130	19.0	20.0
BB19011	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.102	0.0996	0.0970	0.0850 to 0.115	102	70.0 to 130	2.38	20.0
BB19010	Iron, Dissolved	mg/L	3.760E-05	0.0176	0.2	13.2	13.7	0.202	0.170 to 0.230	-150	70.0 to 130	3.72	20.0
BB19011	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.201	0.201	0.200	0.170 to 0.230	100	70.0 to 130	0.00	20.0
BB19011	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.0973	0.0991	0.103	0.0850 to 0.115	97.3	70.0 to 130	1.83	20.0
BB19011	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.100	0.0982	0.101	0.0850 to 0.115	100	70.0 to 130	1.82	20.0
BB19011	Calcium, Total	mg/L	0.00219	0.152	5.00	5.09	5.10	5.05	4.25 to 5.75	102	70.0 to 130	0.196	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/12/21 12:55  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

**Description:** Gadsden Ash Pond - MW-11

**Laboratory ID Number:** BB19010

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19011	Chloride	mg/L	-0.00836	1.00	10.0	10.0	0.0829	10.0	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0
BB19011	Fluoride	mg/L	0.0275	0.100	2.50	2.61	0.0253	2.28	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB19011	Sulfate	mg/L	-0.210	1.00	20.0	18.9	-0.732	19.2	18.0 to 22.0	91.3	80.0 to 120	3160	20.0
BB19010	Alkalinity, Total as CaCO3	mg/L					153	50.9	45.0 to 55.0			0.651	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.

# Certificate Of Analysis

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

**Location Code:** WMWGADAPEB  
**Collected:** 10/12/21 13:30  
**Customer ID:**  
**Submittal Date:** 10/13/21 09:46

**Laboratory ID Number:** BB19011

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/21/21 12:00	10/22/21 11:05		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/21/21 12:00	10/22/21 11:05		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	10/21/21 12:00	10/22/21 11:05		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	10/21/21 12:00	10/22/21 11:05		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 11:05		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	10/21/21 12:00	10/22/21 11:05		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	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/13/21 14:45	10/14/21 18:56		1.015	0.0000783	mg/L	0.000068	0.000203	J
* Potassium, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	10/13/21 14:45	10/14/21 18:56		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/13/21 14:45	10/14/21 18:56		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	10/19/21 13:32	10/19/21 18:56		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/14/21 10:52	10/15/21 13:04		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/14/21 11:43	10/14/21 11:43		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/13/21 14:15	10/13/21 14:15		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/20/21 13:35	10/20/21 13:35		1	0.645	mg/L	0.50	1	J

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

**Comments:** Sulfate precision is invalid due to sample concentration.

# Batch QC Summary

**Customer Account:** WMWGADAPEB  
**Sample Date:** 10/12/21 13:30  
**Customer ID:**  
**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB19011

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19011	Iron, Total	mg/L	0.00115	0.0176	0.2	0.205	0.248	0.203	0.170 to 0.230	102	70.0 to 130	19.0	20.0
BB19011	Barium, Total	mg/L	0.0000000	0.000200	0.100	0.102	0.0996	0.0970	0.0850 to 0.115	102	70.0 to 130	2.38	20.0
BB19011	Manganese, Total	mg/L	-0.0000042	0.000147	0.100	0.0985	0.0960	0.0985	0.0850 to 0.115	98.4	70.0 to 130	2.57	20.0
BB19011	Cadmium, Total	mg/L	0.0000114	0.000147	0.100	0.101	0.0999	0.102	0.0850 to 0.115	101	70.0 to 130	1.10	20.0
BB19011	Lithium, Total	mg/L	-3.720E-05	0.0154	0.200	0.201	0.201	0.200	0.170 to 0.230	100	70.0 to 130	0.00	20.0
BB19011	Magnesium, Total	mg/L	0.00137	0.0462	5.00	5.16	5.12	5.13	4.25 to 5.75	103	70.0 to 130	0.778	20.0
BB19011	Lead, Total	mg/L	0.0000123	0.000147	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Potassium, Total	mg/L	-0.00835	0.367	10.0	10.4	10.1	10.4	8.50 to 11.5	104	70.0 to 130	2.93	20.0
BB19011	Mercury, Total by CVAA	mg/L	6.000E-05	0.000500	0.004	0.00405	0.00414	0.00399	0.00340 to 0.00460	101	70.0 to 130	2.20	20.0
BB19011	Molybdenum, Total	mg/L	0.0000340	0.000147	0.100	0.0985	0.0983	0.0973	0.0850 to 0.115	98.5	70.0 to 130	0.203	20.0
BB19011	Chromium, Total	mg/L	-0.0000467	0.000440	0.100	0.0984	0.0963	0.0993	0.0850 to 0.115	98.4	70.0 to 130	2.16	20.0
BB19011	Arsenic, Total	mg/L	-0.0000440	0.000147	0.100	0.0973	0.0991	0.103	0.0850 to 0.115	97.3	70.0 to 130	1.83	20.0
BB19011	Cobalt, Total	mg/L	0.0000042	0.000147	0.100	0.100	0.0982	0.101	0.0850 to 0.115	100	70.0 to 130	1.82	20.0
BB19011	Calcium, Total	mg/L	0.00219	0.152	5.00	5.09	5.10	5.05	4.25 to 5.75	102	70.0 to 130	0.196	20.0
BB19011	Selenium, Total	mg/L	0.0000000	0.00100	0.100	0.0997	0.102	0.102	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BB19011	Beryllium, Total	mg/L	0.0000297	0.000880	0.100	0.103	0.102	0.105	0.0850 to 0.115	103	70.0 to 130	0.976	20.0
BB19011	Thallium, Total	mg/L	-0.0000007	0.000147	0.100	0.0969	0.0956	0.0987	0.0850 to 0.115	96.9	70.0 to 130	1.35	20.0
BB19011	Sodium, Total	mg/L	0.000246	0.0660	5.00	5.05	5.03	5.04	4.25 to 5.75	101	70.0 to 130	0.397	20.0
BB19011	Boron, Total	mg/L	0.00185	0.0650	1.00	1.01	1.01	1.01	0.850 to 1.15	101	70.0 to 130	0.00	20.0
BB19011	Antimony, Total	mg/L	0.000138	0.00100	0.100	0.0988	0.0967	0.0965	0.0850 to 0.115	98.8	70.0 to 130	2.15	20.0

**Comments:** Sulfate precision is invalid due to sample concentration.

## Batch QC Summary

**Customer Account:** WMWGADAPEB

**Sample Date:** 10/12/21 13:30

**Customer ID:**

**Delivery Date:** 10/13/21 09:46

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

**Laboratory ID Number:** BB19011

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19011	Fluoride	mg/L	0.0275	0.100	2.50	2.61	0.0253	2.28	2.25 to 2.75	104	80.0 to 120	0.00	20.0
BB19011	Sulfate	mg/L	-0.210	1.00	20.0	18.9	-0.732	19.2	18.0 to 22.0	91.3	80.0 to 120	3160	20.0
BB19011	Chloride	mg/L	-0.00836	1.00	10.0	10.0	0.0829	10.0	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BB19010	Solids, Dissolved	mg/L	0.0000	25.0			351	50.0	40.0 to 60.0			0.142	10.0

**Comments:** Sulfate precision is invalid due to sample concentration.

# Definitions

**Project Number:** WMWGADAP\_1341

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
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.
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	TJ Daugherty	Requested By	Greg Dyer
		Location	Gadsden Ash Pond

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
PZ-2	10/05/2021	11:00	6	Groundwater		BB18668
MW-6	10/05/2021	12:10	6	Groundwater		BB18669
MW-3	10/05/2021	13:25	6	Groundwater		BB18670
MW-4	10/05/2021	14:35	6	Groundwater		BB18671
MW-4 Dup	10/05/2021	14:35	6	Sample Duplicate		BB18672
FB-1	10/05/2021	15:30	4	Field Blank		BB18673
MW-17	10/06/2021	08:45	6	Groundwater		BB18674
MW-16	10/06/2021	10:10	6	Groundwater		BB18675

Relinquished By	Received By	Date/Time
		10/06/2021 14:14

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	4677-23342-4-1	
Sample Event	1341	
Cooler Temp	0.0 degrees C	
Thermometer ID	5408-27568-2-2	
pH Strip ID	8440-53679-10-5	

Bottles/Pre-Preserved Bottles are provided by the GTL





# 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	Anions	250 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
EB-2	10/05/2021	10:20	4	Equipment Blank		BB18737
PZ-1	10/05/2021	11:00	6	Groundwater		BB18738
MW-5	10/05/2021	11:53	6	Groundwater		BB18739
MW-5 dup	10/05/2021	11:53	6	Sample Duplicate		BB18740
MW-12	10/05/2021	12:58	6	Groundwater		BB18741
MW-1	10/05/2021	14:18	6	Groundwater		BB18742
MW-7	10/05/2021	15:11	6	Groundwater		BB18743
MW-2VA	10/06/2021	10:25	6	Groundwater		BB18744
MW-21VC	10/06/2021	12:46	6	Groundwater		BB18745
FB-2	10/06/2021	13:15	4	Field Blank		BB18746

Relinquished By	Received By	Date/Time
		10/07/2021 08:24

SmarTroll ID	7586-41444-5-3	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> Cooler Temp Thermometer ID pH Strip ID	
Turbidity ID	3901-20010-2-2		0.9 degrees C
Sample Event	1341		5408-27568-2-2
			8440-53679-10-5

Bottles/Pre-Preserved Bottles are provided by the GTL



# 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	Anions	250 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments: Samples relinquished to secure location. GSC Building 8 shipping lab on 10/13/21 @ 07:31. Correcting bottle count for MW-19H & FB-3. LBM 10/13/21

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-22VB	10/11/2021	11:37	6	Groundwater		BB18995
MW-19H	10/11/2021	12:57	6	Groundwater		BB18996
MW-2	10/11/2021	14:49	6	Groundwater		BB18997
FB-3	10/11/2021	15:15	4	Field Blank		BB18998
MW-2VB	10/12/2021	09:28	6	Groundwater		BB18999
MW-18H	10/12/2021	11:17	6	Groundwater		BB19000
PZ-5	10/12/2021	12:16	6	Groundwater		BB19001
PZ-6	10/12/2021	13:40	6	Groundwater		BB19002

Relinquished By	Received By	Date/Time
	Laura Midkiff <small>Digitally signed by Laura Midkiff Date: 2021.10.13 08:52:41 -05'00'</small>	10/13/2021 08:52

SmarTroll ID	7586-41444-5-3	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	3901-20010-2-2	
Sample Event	1341	
Cooler Temp	0.1 degrees C	
Thermometer ID	5408-27568-2-2	
pH Strip ID	8440-53679-10-5	

Bottles/Pre-Preserved Bottles are provided by the GTL



# 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

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	Anions	250 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	TDS	500 mL	6	Alkalinity	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-4V	10/11/2021	12:40	6	Groundwater		BB19003
MW-20H	10/11/2021	13:30	6	Groundwater		BB19004
MW-10	10/11/2021	14:40	6	Groundwater		BB19005
MW-14	10/12/2021	08:30	6	Groundwater		BB19006
MW-14 Dup	10/12/2021	08:30	6	Sample Duplicate		BB19007
MW-8	10/12/2021	10:48	6	Groundwater		BB19008
MW-9	10/12/2021	11:55	6	Groundwater		BB19009
MW-11	10/12/2021	12:55	6	Groundwater		BB19010
EB-1	10/12/2021	13:30	4	Equipment Blank		BB19011

Relinquished By	Received By	Date/Time
		10/13/2021 08:40

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>		
Turbidity ID	4677-23342-4-1		Cooler Temp	0.0 degrees C
Sample Event	1341		Thermometer ID	5408-27568-2-2
			pH Strip ID	8440-53679-10-5

Bottles/Pre-Preserved Bottles are provided by the GTL



# 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: MS/MSD collected at MW-6

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
PZ-2	10/05/2021	11:00	1	Groundwater		BB18676
MW-6	10/05/2021	12:10	3	Groundwater		BB18677
MW-3	10/05/2021	13:25	1	Groundwater		BB18678
MW-4	10/05/2021	14:35	1	Groundwater		BB18679
MW-4 Dup	10/05/2021	14:35	1	Sample Duplicate		BB18680
FB-1	10/05/2021	15:30	1	Field Blank		BB18681
MW-17	10/06/2021	08:45	1	Groundwater		BB18682
MW-16	10/06/2021	10:10	1	Groundwater		BB18683

Relinquished By	Received By	Date/Time
		10/06/2021 14:14

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	4677-23342-4-1		
Sample Event	1341		
		Cooler Temp	N/A
		Thermometer ID	N/A
		pH Strip ID	8440-53679-10-5

Bottles/Pre-Preserved Bottles are provided by the GTL



# 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
		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 PZ-1

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
EB-2	10/05/2021	10:20	1	Equipment Blank		BB18747
PZ-1	10/05/2021	11:00	3	Groundwater		BB18748
MW-5	10/05/2021	11:53	1	Groundwater		BB18749
MW-5 dup	10/05/2021	11:53	1	Sample Duplicate		BB18750
MW-12	10/05/2021	12:58	1	Groundwater		BB18751
MW-1	10/05/2021	14:18	1	Groundwater		BB18752
MW-7	10/05/2021	15:11	1	Groundwater		BB18753
MW-2VA	10/06/2021	10:25	1	Groundwater		BB18754
MW-21VC	10/06/2021	12:46	1	Groundwater		BB18755
FB-2	10/06/2021	13:15	1	Field Blank		BB18756

Relinquished By	Received By	Date/Time
<i>Mel Dyer</i>	<i>Laura M. Dyer</i>	10/07/2021 08:24

SmarTroll ID	7586-41444-5-3	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	3901-20010-2-2		
Sample Event	1341		
		Cooler Temp	N/A
		Thermometer ID	N/A
		pH Strip ID	8440-53679-10-5

Bottles/Pre-Preserved Bottles are provided by the GTL



# 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-22VB. Samples relinquished to secure location, GSC Building 8 shipping lab on 10/13/21 @ 07:30.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-22VB	10/11/2021	11:37	3	Groundwater		BB19012
MW-19H	10/11/2021	12:57	1	Groundwater		BB19013
MW-2	10/11/2021	14:49	1	Groundwater		BB19014
FB-3	10/11/2021	15:15	1	Field Blank		BB19015
MW-2VB	10/12/2021	09:28	1	Groundwater		BB19016
MW-18H	10/12/2021	11:17	1	Groundwater		BB19017
PZ-5	10/12/2021	12:16	1	Groundwater		BB19018
PZ-6	10/12/2021	13:40	1	Groundwater		BB19019

Relinquished By	Received By	Date/Time
	<b>Laura Midkiff</b> <small>Digitally signed by Laura Midkiff Date: 2021.10.13 08:52:57 -05'00'</small>	10/13/2021 08:52

SmarTroll ID	7586-41444-5-3	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>	
Turbidity ID	3901-20010-2-2	Cooler Temp	N/A
Sample Event	1341	Thermometer ID	N/A
		pH Strip ID	8440-53679-10-5

Bottles/Pre-Preserved Bottles are provided by the GTL



# 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-4V	10/11/2021	12:40	1	Groundwater		BB19020
MW-20H	10/11/2021	13:30	1	Groundwater		BB19021
MW-10	10/11/2021	14:40	1	Groundwater		BB19022
MW-14	10/12/2021	08:30	1	Groundwater		BB19023
MW-14 Dup	10/12/2021	08:30	1	Sample Duplicate		BB19024
MW-8	10/12/2021	10:48	1	Groundwater		BB19025
MW-9	10/12/2021	11:55	1	Groundwater		BB19026
MW-11	10/12/2021	12:55	1	Groundwater		BB19027
EB-1	10/12/2021	13:30	1	Equipment Blank		BB19028

Relinquished By	Received By	Date/Time
		10/13/2021 08:40

SmarTroll ID	7586-41443-5-2	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/> Cooler Temp <span style="border: 1px solid black; display: inline-block; width: 150px; height: 15px; background-color: #d3d3d3;">N/A</span> Thermometer ID <span style="border: 1px solid black; display: inline-block; width: 150px; height: 15px; background-color: #d3d3d3;">N/A</span> pH Strip ID <span style="border: 1px solid black; display: inline-block; width: 150px; height: 15px; background-color: #d3d3d3;">8440-53679-10-5</span>
Turbidity ID	4677-23342-4-1	
Sample Event	1341	

Bottles/Pre-Preserved Bottles are provided by the GTL

December 13, 2021

Laura Midkiff  
Alabama Power  
744 Highway 87  
GSC #8  
Calera, AL 35040

RE: Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on October 19, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

cc: Brooke Caton, Alabama Power  
Renee Jernigan, Alabama Power



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

---

### **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 #: 9526  
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: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92567366001	BB18676 PZ-2	Water	10/05/21 11:00	10/19/21 00:00
92567366002	BB18677 MW-6	Water	10/05/21 12:10	10/19/21 00:00
92567366003	BB18677 MW-6 MS	Water	10/05/21 12:10	10/19/21 00:00
92567366004	BB18677 MW-6 MSD	Water	10/05/21 12:10	10/19/21 00:00
92567366005	BB18678 MW-3	Water	10/05/21 13:25	10/19/21 00:00
92567366006	BB18679 MW-4	Water	10/05/21 14:35	10/19/21 00:00
92567366007	BB18680 MW-4 DUP	Water	10/05/21 14:35	10/19/21 00:00
92567366008	BB18681 FB-1	Water	10/05/21 15:30	10/19/21 00:00
92567366009	BB18682 MW-17	Water	10/06/21 08:45	10/19/21 00:00
92567366010	BB18683 MW-16	Water	10/06/21 10:10	10/19/21 00:00
92567366011	BB18747 EB-2	Water	10/05/21 10:20	10/19/21 00:00
92567366012	BB18748 PZ-1	Water	10/05/21 11:00	10/19/21 00:00
92567366013	BB18748 PZ-1 MS	Water	10/05/21 11:00	10/19/21 00:00
92567366014	BB18748 PZ-1 MSD	Water	10/05/21 11:00	10/19/21 00:00
92567366015	BB18749 MW-5	Water	10/05/21 11:53	10/19/21 00:00
92567366016	BB18750 MW-5 DUP	Water	10/05/21 11:53	10/19/21 00:00
92567366017	BB18751 MW-12	Water	10/05/21 12:58	10/19/21 00:00
92567366018	BB18752 MW-1	Water	10/05/21 14:18	10/19/21 00:00
92567366019	BB18753 MW-7	Water	10/05/21 15:11	10/19/21 00:00
92567366020	BB18754 MW-2VA	Water	10/06/21 10:25	10/19/21 00:00
92567366021	BB18755 MW-21VC	Water	10/06/21 12:46	10/19/21 00:00
92567366022	BB18756 FB-2	Water	10/06/21 13:15	10/19/21 00:00
92567366023	BB19012 MW-22VB	Water	10/11/21 11:37	10/19/21 00:00
92567366024	BB19012 MW-22VB MS	Water	10/11/21 11:37	10/19/21 00:00
92567366025	BB19012 MW-22VB MSD	Water	10/11/21 11:37	10/19/21 00:00
92567366026	BB19013 MW-19H	Water	10/11/21 12:57	10/19/21 00:00
92567366027	BB19014 MW-2	Water	10/11/21 14:49	10/19/21 00:00
92567366028	BB19015 FB-3	Water	10/11/21 15:15	10/19/21 00:00
92567366029	BB19016 MW-2VB	Water	10/12/21 09:28	10/19/21 00:00
92567366030	BB19017 MW-18H	Water	10/12/21 11:17	10/19/21 00:00
92567366031	BB19018 PZ-5	Water	10/12/21 12:16	10/19/21 00:00
92567366032	BB19019 PZ-6	Water	10/12/21 13:40	10/19/21 00:00
92567366033	BB19020 MW-4V	Water	10/11/21 12:40	10/19/21 00:00
92567366034	BB19021 MW-20H	Water	10/11/21 13:30	10/19/21 00:00
92567366035	BB19022 MW-10	Water	10/11/21 14:40	10/19/21 00:00
92567366036	BB19023 MW-14	Water	10/12/21 08:30	10/19/21 00:00
92567366037	BB19024 MW-14 DUP	Water	10/12/21 08:30	10/19/21 00:00

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92567366038	BB19025 MW-8	Water	10/12/21 10:48	10/19/21 00:00
92567366039	BB19026 MW-9	Water	10/12/21 11:55	10/19/21 00:00
92567366040	BB19027 MW-11	Water	10/12/21 12:55	10/19/21 00:00
92567366041	BB19028 EB-1	Water	10/12/21 13:30	10/19/21 00:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366001	BB18676 PZ-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366002	BB18677 MW-6	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366003	BB18677 MW-6 MS	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366004	BB18677 MW-6 MSD	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366005	BB18678 MW-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366006	BB18679 MW-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366007	BB18680 MW-4 DUP	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366008	BB18681 FB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366009	BB18682 MW-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366010	BB18683 MW-16	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366011	BB18747 EB-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366012	BB18748 PZ-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366013	BB18748 PZ-1 MS	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366014	BB18748 PZ-1 MSD	EPA 9315	LAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366015	BB18749 MW-5	EPA 9320	VAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366016	BB18750 MW-5 DUP	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366017	BB18751 MW-12	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366018	BB18752 MW-1	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366019	BB18753 MW-7	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366020	BB18754 MW-2VA	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366021	BB18755 MW-21VC	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366022	BB18756 FB-2	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366023	BB19012 MW-22VB	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366024	BB19012 MW-22VB MS	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366025	BB19012 MW-22VB MSD	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366026	BB19013 MW-19H	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366027	BB19014 MW-2	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366028	BB19015 FB-3	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366029	BB19016 MW-2VB	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366030	BB19017 MW-18H	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366031	BB19018 PZ-5	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366032	BB19019 PZ-6	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366033	BB19020 MW-4V	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366034	BB19021 MW-20H	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366035	BB19022 MW-10	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366036	BB19023 MW-14	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366037	BB19024 MW-14 DUP	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366038	BB19025 MW-8	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366039	BB19026 MW-9	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366040	BB19027 MW-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366041	BB19028 EB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

---

**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** December 13, 2021

**General Information:**

41 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: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

---

**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** December 13, 2021

**General Information:**

41 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: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

---

**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** December 13, 2021

**General Information:**

35 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: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18676 PZ-2**      **Lab ID: 92567366001**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>0.184U ± 0.173 (0.315)</b> <b>C:93% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.941 ± 0.426 (0.713)</b> <b>C:82% T:83%</b>	pCi/L	11/08/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.13 ± 0.599 (1.03)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18677 MW-6**      **Lab ID: 92567366002**      Collected: 10/05/21 12:10      Received: 10/19/21 00:00      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>0.107U ± 0.155 (0.335)</b> <b>C:93% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.25 ± 0.527 (0.863)</b> <b>C:78% T:81%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.36 ± 0.682 (1.20)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18677 MW-6 MS**      **Lab ID: 92567366003**      Collected: 10/05/21 12:10      Received: 10/19/21 00:00      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>98.32 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>130.33 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/08/21 14:35	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18677 MW-6 MSD**      **Lab ID: 92567366004**      Collected: 10/05/21 12:10      Received: 10/19/21 00:00      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>106.30 %REC 7.80 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>145.98 %REC 11.33 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/08/21 14:35	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18678 MW-3**      **Lab ID: 92567366005**      Collected: 10/05/21 13:25      Received: 10/19/21 00:00      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>0.231U ± 0.176 (0.310)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.98 ± 0.812 (0.891)</b> <b>C:74% T:80%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>3.21 ± 0.988 (1.20)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18679 MW-4**      **Lab ID: 92567366006**      Collected: 10/05/21 14:35      Received: 10/19/21 00:00      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>0.804 ± 0.308 (0.341)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.950 ± 0.474 (0.839)</b> <b>C:74% T:88%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.75 ± 0.782 (1.18)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18680 MW-4 DUP**      **Lab ID: 92567366007**      Collected: 10/05/21 14:35      Received: 10/19/21 00:00      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>0.366 ± 0.205 (0.300)</b> <b>C:99% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.943 ± 0.429 (0.705)</b> <b>C:72% T:93%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.31 ± 0.634 (1.01)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18681 FB-1**      **Lab ID: 92567366008**      Collected: 10/05/21 15:30      Received: 10/19/21 00:00      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>-0.0744U ± 0.0619 (0.273)</b> <b>C:99% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.16 ± 0.489 (0.798)</b> <b>C:75% T:91%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.16 ± 0.551 (1.07)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18682 MW-17**      **Lab ID: 92567366009**      Collected: 10/06/21 08:45      Received: 10/19/21 00:00      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>0.319U ± 0.217 (0.394)</b> <b>C:99% T:NA</b>	pCi/L	12/03/21 08:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.69 ± 0.600 (0.871)</b> <b>C:71% T:83%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.01 ± 0.817 (1.27)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18683 MW-16**      **Lab ID: 92567366010**      Collected: 10/06/21 10:10      Received: 10/19/21 00:00      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>0.193U ± 0.270 (0.597)</b> <b>C:91% T:NA</b>	pCi/L	12/03/21 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.962 ± 0.486 (0.852)</b> <b>C:73% T:82%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.16U ± 0.756 (1.45)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18747 EB-2**      **Lab ID: 92567366011**      Collected: 10/05/21 10:20      Received: 10/19/21 00:00      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>-0.145U ± 0.196 (0.564)</b> <b>C:91% T:NA</b>	pCi/L	12/03/21 08:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.87 ± 0.757 (0.795)</b> <b>C:78% T:88%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.87 ± 0.953 (1.36)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18748 PZ-1**      **Lab ID: 92567366012**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>0.0760U ± 0.174 (0.406)</b> <b>C:92% T:NA</b>	pCi/L	12/03/21 08:13	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>1.99 ± 0.628 (0.844)</b> <b>C:71% T:86%</b>	pCi/L	11/15/21 11:02	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>2.07 ± 0.802 (1.25)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

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**Sample: BB18748 PZ-1 MS**      **Lab ID: 92567366013**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>105.98 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>63.31 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/15/21 11:01	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18748 PZ-1 MSD**      **Lab ID: 92567366014**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>94.82 %REC 11.11 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>70.69 %REC 11.03 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/15/21 11:01	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18749 MW-5**      **Lab ID: 92567366015**      Collected: 10/05/21 11:53      Received: 10/19/21 00:00      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>0.332U ± 0.225 (0.408)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 14:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.11 ± 0.465 (0.750)</b> <b>C:73% T:94%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.44 ± 0.690 (1.16)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18750 MW-5 DUP**      **Lab ID: 92567366016**      Collected: 10/05/21 11:53      Received: 10/19/21 00:00      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>0.231U ± 0.182 (0.329)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 14:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.28 ± 0.510 (0.787)</b> <b>C:75% T:83%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.51 ± 0.692 (1.12)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18751 MW-12**      **Lab ID: 92567366017**      Collected: 10/05/21 12:58      Received: 10/19/21 00:00      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>0.214U ± 0.194 (0.383)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.27 ± 0.493 (0.760)</b> <b>C:77% T:88%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.48 ± 0.687 (1.14)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18752 MW-1**      **Lab ID: 92567366018**      Collected: 10/05/21 14:18      Received: 10/19/21 00:00      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>0.812 ± 0.281 (0.218)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.395U ± 0.408 (0.845)</b> <b>C:75% T:83%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.21 ± 0.689 (1.06)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18753 MW-7**      **Lab ID: 92567366019**      Collected: 10/05/21 15:11      Received: 10/19/21 00:00      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>0.402 ± 0.215 (0.318)</b> <b>C:96% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.869 ± 0.441 (0.783)</b> <b>C:80% T:89%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.27 ± 0.656 (1.10)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18754 MW-2VA**      **Lab ID: 92567366020**      Collected: 10/06/21 10:25      Received: 10/19/21 00:00      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>0.458 ± 0.242 (0.356)</b> <b>C:89% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.288U ± 0.313 (0.651)</b> <b>C:85% T:89%</b>	pCi/L	11/08/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.746U ± 0.555 (1.01)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18755 MW-21VC**      **Lab ID: 92567366021**      Collected: 10/06/21 12:46      Received: 10/19/21 00:00      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>0.243U ± 0.261 (0.554)</b> <b>C:96% T:NA</b>	pCi/L	12/03/21 08:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.54 ± 0.558 (0.847)</b> <b>C:74% T:88%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.78 ± 0.819 (1.40)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB18756 FB-2**      **Lab ID: 92567366022**      Collected: 10/06/21 13:15      Received: 10/19/21 00:00      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>0.246U ± 0.221 (0.433)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.412U ± 0.393 (0.806)</b> <b>C:71% T:85%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.658U ± 0.614 (1.24)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19012 MW-22VB**      **Lab ID: 92567366023**      Collected: 10/11/21 11:37      Received: 10/19/21 00:00      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>1.18 ± 0.378 (0.361)</b> <b>C:80% T:NA</b>	pCi/L	12/03/21 08:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.113U ± 0.360 (0.812)</b> <b>C:70% T:85%</b>	pCi/L	11/17/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.29 ± 0.738 (1.17)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19012 MW-22VB MS**      **Lab ID: 92567366024**      Collected: 10/11/21 11:37      Received: 10/19/21 00:00      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>87.64 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>88.82 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/17/21 11:24	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19012 MW-22VB MSD**      **Lab ID: 92567366025**      Collected: 10/11/21 11:37      Received: 10/19/21 00:00      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>95.89 %REC 9.00 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>91.27 %REC 2.72 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/17/21 11:24	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19013 MW-19H**      **Lab ID: 92567366026**      Collected: 10/11/21 12:57      Received: 10/19/21 00:00      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>0.202U ± 0.185 (0.364)</b> <b>C:96% T:NA</b>	pCi/L	12/03/21 08:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0132U ± 0.345 (0.813)</b> <b>C:68% T:84%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.202U ± 0.530 (1.18)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19014 MW-2**      **Lab ID: 92567366027**      Collected: 10/11/21 14:49      Received: 10/19/21 00:00      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>0.569 ± 0.264 (0.390)</b> <b>C:101% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.81 ± 0.567 (0.728)</b> <b>C:70% T:89%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.38 ± 0.831 (1.12)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19015 FB-3**      **Lab ID: 92567366028**      Collected: 10/11/21 15:15      Received: 10/19/21 00:00      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>0.109U ± 0.225 (0.520)</b> <b>C:87% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.898 ± 0.440 (0.760)</b> <b>C:69% T:88%</b>	pCi/L	11/15/21 11:02	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.01U ± 0.665 (1.28)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19016 MW-2VB**      **Lab ID: 92567366029**      Collected: 10/12/21 09:28      Received: 10/19/21 00:00      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>0.0902U ± 0.202 (0.471)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.233U ± 0.374 (0.812)</b> <b>C:70% T:82%</b>	pCi/L	11/15/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.323U ± 0.576 (1.28)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19017 MW-18H**      **Lab ID: 92567366030**      Collected: 10/12/21 11:17      Received: 10/19/21 00:00      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>0.0898U ± 0.136 (0.299)</b> <b>C:91% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.293U ± 0.376 (0.800)</b> <b>C:70% T:84%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.383U ± 0.512 (1.10)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19018 PZ-5**      **Lab ID: 92567366031**      Collected: 10/12/21 12:16      Received: 10/19/21 00:00      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>0.114U ± 0.167 (0.368)</b> <b>C:89% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.849 ± 0.420 (0.741)</b> <b>C:72% T:96%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.963U ± 0.587 (1.11)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19019 PZ-6**      **Lab ID: 92567366032**      Collected: 10/12/21 13:40      Received: 10/19/21 00:00      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>0.823 ± 0.312 (0.397)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.743U ± 0.445 (0.832)</b> <b>C:71% T:85%</b>	pCi/L	11/15/21 11:02	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.57 ± 0.757 (1.23)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19020 MW-4V**      **Lab ID: 92567366033**      Collected: 10/11/21 12:40      Received: 10/19/21 00:00      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>0.410U ± 0.254 (0.425)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.17 ± 0.511 (0.850)</b> <b>C:68% T:85%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.58 ± 0.765 (1.28)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19021 MW-20H**      **Lab ID: 92567366034**      Collected: 10/11/21 13:30      Received: 10/19/21 00:00      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>0.506 ± 0.236 (0.289)</b> <b>C:94% T:NA</b>	pCi/L	12/03/21 08:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.585U ± 0.455 (0.906)</b> <b>C:70% T:82%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.09U ± 0.691 (1.20)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19022 MW-10**      **Lab ID: 92567366035**      Collected: 10/11/21 14:40      Received: 10/19/21 00:00      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>6.07 ± 1.13 (0.520)</b> <b>C:94% T:NA</b>	pCi/L	12/03/21 08:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.448U ± 0.397 (0.810)</b> <b>C:71% T:93%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>6.52 ± 1.53 (1.33)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19023 MW-14**      **Lab ID: 92567366036**      Collected: 10/12/21 08:30      Received: 10/19/21 00:00      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>1.14 ± 0.388 (0.450)</b> <b>C:94% T:NA</b>	pCi/L	12/03/21 08:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.468U ± 0.365 (0.724)</b> <b>C:74% T:87%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.61 ± 0.753 (1.17)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19024 MW-14 DUP**      **Lab ID: 92567366037**      Collected: 10/12/21 08:30      Received: 10/19/21 00:00      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>0.526 ± 0.280 (0.415)</b> <b>C:94% T:NA</b>	pCi/L	12/03/21 10:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.08 ± 0.493 (0.837)</b> <b>C:73% T:82%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.61 ± 0.773 (1.25)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19025 MW-8**      **Lab ID: 92567366038**      Collected: 10/12/21 10:48      Received: 10/19/21 00:00      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>0.291U ± 0.209 (0.346)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0878U ± 0.347 (0.820)</b> <b>C:76% T:85%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.291U ± 0.556 (1.17)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19026 MW-9**      **Lab ID: 92567366039**      Collected: 10/12/21 11:55      Received: 10/19/21 00:00      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>0.311U ± 0.242 (0.454)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0569U ± 0.341 (0.797)</b> <b>C:76% T:91%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.311U ± 0.583 (1.25)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19027 MW-11**      **Lab ID: 92567366040**      Collected: 10/12/21 12:55      Received: 10/19/21 00:00      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>0.641 ± 0.322 (0.528)</b> <b>C:102% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.374U ± 0.383 (0.796)</b> <b>C:70% T:89%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.02U ± 0.705 (1.32)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

**Sample: BB19028 EB-1**      **Lab ID: 92567366041**      Collected: 10/12/21 13:30      Received: 10/19/21 00:00      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>0.338U ± 0.217 (0.350)</b> <b>C:85% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.0413U ± 0.298 (0.692)</b> <b>C:68% T:85%</b>	pCi/L	11/17/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.379U ± 0.515 (1.04)</b>	pCi/L	12/03/21 17:11	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

QC Batch: 470012 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366038, 92567366039, 92567366040, 92567366041

METHOD BLANK: 2269081 Matrix: Water

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366038, 92567366039, 92567366040, 92567366041

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.522 ± 0.345 (0.615) C:92% T:NA	pCi/L	12/03/21 08:39	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

QC Batch: 470011

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366012, 92567366013, 92567366014, 92567366021, 92567366022, 92567366026, 92567366027, 92567366028, 92567366029, 92567366030, 92567366031, 92567366032, 92567366033, 92567366034, 92567366035, 92567366036, 92567366037

METHOD BLANK: 2269079

Matrix: Water

Associated Lab Samples: 92567366012, 92567366013, 92567366014, 92567366021, 92567366022, 92567366026, 92567366027, 92567366028, 92567366029, 92567366030, 92567366031, 92567366032, 92567366033, 92567366034, 92567366035, 92567366036, 92567366037

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.276 ± 0.303 (0.633) C:96% T:NA	pCi/L	12/03/21 08:13	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

QC Batch:	470829	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366041

METHOD BLANK: 2272897 Matrix: Water

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366041

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.00736 ± 0.282 (0.665) C:71% T:86%	pCi/L	11/17/21 14:28	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

QC Batch: 470828

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366012, 92567366013, 92567366014, 92567366021, 92567366022, 92567366026, 92567366027, 92567366028, 92567366029, 92567366030, 92567366031, 92567366032, 92567366033, 92567366034, 92567366035, 92567366036, 92567366037, 92567366038, 92567366039, 92567366040

METHOD BLANK: 2272896

Matrix: Water

Associated Lab Samples: 92567366012, 92567366013, 92567366014, 92567366021, 92567366022, 92567366026, 92567366027, 92567366028, 92567366029, 92567366030, 92567366031, 92567366032, 92567366033, 92567366034, 92567366035, 92567366036, 92567366037, 92567366038, 92567366039, 92567366040

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.309 ± 0.352 (0.742) C:77% T:92%	pCi/L	11/15/21 11:01	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

QC Batch: 470009

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366001, 92567366002, 92567366003, 92567366004, 92567366005, 92567366006, 92567366007, 92567366008, 92567366009, 92567366010, 92567366011, 92567366015, 92567366016, 92567366017, 92567366018, 92567366019, 92567366020

METHOD BLANK: 2269074

Matrix: Water

Associated Lab Samples: 92567366001, 92567366002, 92567366003, 92567366004, 92567366005, 92567366006, 92567366007, 92567366008, 92567366009, 92567366010, 92567366011, 92567366015, 92567366016, 92567366017, 92567366018, 92567366019, 92567366020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0230 ± 0.117 (0.365) C:97% T:NA	pCi/L	12/03/21 08:48	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

QC Batch: 470827

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366001, 92567366002, 92567366003, 92567366004, 92567366005, 92567366006, 92567366007, 92567366008, 92567366009, 92567366010, 92567366011, 92567366015, 92567366016, 92567366017, 92567366018, 92567366019, 92567366020

METHOD BLANK: 2272895

Matrix: Water

Associated Lab Samples: 92567366001, 92567366002, 92567366003, 92567366004, 92567366005, 92567366006, 92567366007, 92567366008, 92567366009, 92567366010, 92567366011, 92567366015, 92567366016, 92567366017, 92567366018, 92567366019, 92567366020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.897 ± 0.395 (0.647) C:80% T:87%	pCi/L	11/08/21 11:14	

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## QUALIFIERS

Project: GADSEDN ASH POND WMWGADAP\_1341

Pace Project No.: 92567366

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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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92567366001	BB18676 PZ-2	EPA 9315	470009		
92567366002	BB18677 MW-6	EPA 9315	470009		
92567366003	BB18677 MW-6 MS	EPA 9315	470009		
92567366004	BB18677 MW-6 MSD	EPA 9315	470009		
92567366005	BB18678 MW-3	EPA 9315	470009		
92567366006	BB18679 MW-4	EPA 9315	470009		
92567366007	BB18680 MW-4 DUP	EPA 9315	470009		
92567366008	BB18681 FB-1	EPA 9315	470009		
92567366009	BB18682 MW-17	EPA 9315	470009		
92567366010	BB18683 MW-16	EPA 9315	470009		
92567366011	BB18747 EB-2	EPA 9315	470009		
92567366012	BB18748 PZ-1	EPA 9315	470011		
92567366013	BB18748 PZ-1 MS	EPA 9315	470011		
92567366014	BB18748 PZ-1 MSD	EPA 9315	470011		
92567366015	BB18749 MW-5	EPA 9315	470009		
92567366016	BB18750 MW-5 DUP	EPA 9315	470009		
92567366017	BB18751 MW-12	EPA 9315	470009		
92567366018	BB18752 MW-1	EPA 9315	470009		
92567366019	BB18753 MW-7	EPA 9315	470009		
92567366020	BB18754 MW-2VA	EPA 9315	470009		
92567366021	BB18755 MW-21VC	EPA 9315	470011		
92567366022	BB18756 FB-2	EPA 9315	470011		
92567366023	BB19012 MW-22VB	EPA 9315	470012		
92567366024	BB19012 MW-22VB MS	EPA 9315	470012		
92567366025	BB19012 MW-22VB MSD	EPA 9315	470012		
92567366026	BB19013 MW-19H	EPA 9315	470011		
92567366027	BB19014 MW-2	EPA 9315	470011		
92567366028	BB19015 FB-3	EPA 9315	470011		
92567366029	BB19016 MW-2VB	EPA 9315	470011		
92567366030	BB19017 MW-18H	EPA 9315	470011		
92567366031	BB19018 PZ-5	EPA 9315	470011		
92567366032	BB19019 PZ-6	EPA 9315	470011		
92567366033	BB19020 MW-4V	EPA 9315	470011		
92567366034	BB19021 MW-20H	EPA 9315	470011		
92567366035	BB19022 MW-10	EPA 9315	470011		
92567366036	BB19023 MW-14	EPA 9315	470011		
92567366037	BB19024 MW-14 DUP	EPA 9315	470011		
92567366038	BB19025 MW-8	EPA 9315	470012		
92567366039	BB19026 MW-9	EPA 9315	470012		
92567366040	BB19027 MW-11	EPA 9315	470012		
92567366041	BB19028 EB-1	EPA 9315	470012		
92567366001	BB18676 PZ-2	EPA 9320	470827		
92567366002	BB18677 MW-6	EPA 9320	470827		
92567366003	BB18677 MW-6 MS	EPA 9320	470827		
92567366004	BB18677 MW-6 MSD	EPA 9320	470827		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92567366005	BB18678 MW-3	EPA 9320	470827		
92567366006	BB18679 MW-4	EPA 9320	470827		
92567366007	BB18680 MW-4 DUP	EPA 9320	470827		
92567366008	BB18681 FB-1	EPA 9320	470827		
92567366009	BB18682 MW-17	EPA 9320	470827		
92567366010	BB18683 MW-16	EPA 9320	470827		
92567366011	BB18747 EB-2	EPA 9320	470827		
92567366012	BB18748 PZ-1	EPA 9320	470828		
92567366013	BB18748 PZ-1 MS	EPA 9320	470828		
92567366014	BB18748 PZ-1 MSD	EPA 9320	470828		
92567366015	BB18749 MW-5	EPA 9320	470827		
92567366016	BB18750 MW-5 DUP	EPA 9320	470827		
92567366017	BB18751 MW-12	EPA 9320	470827		
92567366018	BB18752 MW-1	EPA 9320	470827		
92567366019	BB18753 MW-7	EPA 9320	470827		
92567366020	BB18754 MW-2VA	EPA 9320	470827		
92567366021	BB18755 MW-21VC	EPA 9320	470828		
92567366022	BB18756 FB-2	EPA 9320	470828		
92567366023	BB19012 MW-22VB	EPA 9320	470829		
92567366024	BB19012 MW-22VB MS	EPA 9320	470829		
92567366025	BB19012 MW-22VB MSD	EPA 9320	470829		
92567366026	BB19013 MW-19H	EPA 9320	470828		
92567366027	BB19014 MW-2	EPA 9320	470828		
92567366028	BB19015 FB-3	EPA 9320	470828		
92567366029	BB19016 MW-2VB	EPA 9320	470828		
92567366030	BB19017 MW-18H	EPA 9320	470828		
92567366031	BB19018 PZ-5	EPA 9320	470828		
92567366032	BB19019 PZ-6	EPA 9320	470828		
92567366033	BB19020 MW-4V	EPA 9320	470828		
92567366034	BB19021 MW-20H	EPA 9320	470828		
92567366035	BB19022 MW-10	EPA 9320	470828		
92567366036	BB19023 MW-14	EPA 9320	470828		
92567366037	BB19024 MW-14 DUP	EPA 9320	470828		
92567366038	BB19025 MW-8	EPA 9320	470828		
92567366039	BB19026 MW-9	EPA 9320	470828		
92567366040	BB19027 MW-11	EPA 9320	470828		
92567366041	BB19028 EB-1	EPA 9320	470829		
92567366001	BB18676 PZ-2	Total Radium Calculation	474984		
92567366002	BB18677 MW-6	Total Radium Calculation	474984		
92567366005	BB18678 MW-3	Total Radium Calculation	474984		
92567366006	BB18679 MW-4	Total Radium Calculation	474984		
92567366007	BB18680 MW-4 DUP	Total Radium Calculation	474984		
92567366008	BB18681 FB-1	Total Radium Calculation	474984		
92567366009	BB18682 MW-17	Total Radium Calculation	474984		
92567366010	BB18683 MW-16	Total Radium Calculation	474984		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GADSEDN ASH POND WMWGADAP\_1341  
Pace Project No.: 92567366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92567366011	BB18747 EB-2	Total Radium Calculation	474984		
92567366012	BB18748 PZ-1	Total Radium Calculation	474985		
92567366015	BB18749 MW-5	Total Radium Calculation	474984		
92567366016	BB18750 MW-5 DUP	Total Radium Calculation	474984		
92567366017	BB18751 MW-12	Total Radium Calculation	474984		
92567366018	BB18752 MW-1	Total Radium Calculation	474984		
92567366019	BB18753 MW-7	Total Radium Calculation	474984		
92567366020	BB18754 MW-2VA	Total Radium Calculation	474984		
92567366021	BB18755 MW-21VC	Total Radium Calculation	474985		
92567366022	BB18756 FB-2	Total Radium Calculation	474985		
92567366023	BB19012 MW-22VB	Total Radium Calculation	474986		
92567366026	BB19013 MW-19H	Total Radium Calculation	474985		
92567366027	BB19014 MW-2	Total Radium Calculation	474985		
92567366028	BB19015 FB-3	Total Radium Calculation	474985		
92567366029	BB19016 MW-2VB	Total Radium Calculation	474985		
92567366030	BB19017 MW-18H	Total Radium Calculation	474985		
92567366031	BB19018 PZ-5	Total Radium Calculation	474985		
92567366032	BB19019 PZ-6	Total Radium Calculation	474985		
92567366033	BB19020 MW-4V	Total Radium Calculation	474985		
92567366034	BB19021 MW-20H	Total Radium Calculation	474985		
92567366035	BB19022 MW-10	Total Radium Calculation	474985		
92567366036	BB19023 MW-14	Total Radium Calculation	474985		
92567366037	BB19024 MW-14 DUP	Total Radium Calculation	474985		
92567366038	BB19025 MW-8	Total Radium Calculation	474986		
92567366039	BB19026 MW-9	Total Radium Calculation	474986		
92567366040	BB19027 MW-11	Total Radium Calculation	474986		
92567366041	BB19028 EB-1	Total Radium Calculation	474986		

### REPORT OF LABORATORY ANALYSIS

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Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace NC

Proj

WO#: 92567366



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 5320 6279 3894

Label	<u>DL</u>
LIMS Login	<u>DL</u>

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:	pH paper Lot#			Date and Initials of person examining contents:
	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1000411
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chain of Custody Relinquished:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DL 10/20/21
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Matrix: <u>WT</u>
-Includes date/time/ID	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
All containers have been checked for preservation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DL</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>DL</u> Date: <u>10/20/21</u> Survey Meter SN: <u>1503</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

PH: RES  
Due Date: 11/17/21  
CLIENT: PACE\_92\_HUNC

WO#: 30446362

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: Alabama Power Company Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040 Email To: lbmidki@southernco.com Phone: 205-664-6197 Requested Due Date: 28 days

Section B Required Project Information: Report To: Laura Midkiff Copy To: Brooke Catton & Renee Jernigan Project Name: Plant Gadsden Ash Pond Project Number: WNWGADAP 1341

Section C Invoice Information: Attention: Laura Midkiff Company Name: Alabama Power Co. Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040 Page Profile #: 13805

ITEM #	SAMPLE ID (A-Z, 0-9 / . - ) Sample Ids must be unique	MATRIX Drinking Water Waste Water Surface Water Ground Water Other TS	CODE DW WT P SL OL WPE AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Regulatory Agency	State / Location									
						START	END					Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol							Other								
1	BB18676	PZ-2	GW/G	10/5/2021	11:00					1		X								X	X	X											
2	BB18677	MW-5	GW/G	10/5/2021	12:10					3		X								X	X	X											
3	BB18678	MW-3	GW/G	10/5/2021	13:25					1		X								X	X	X											
4	BB18679	MW-4	GW/G	10/5/2021	14:35					1		X								X	X	X											
5	BB18680	MW-4 DUP	GW/G	10/5/2021	14:35					1		X								X	X	X											
6	BB18681	FB-1	GW/G	10/5/2021	15:30					1		X								X	X	X											
7	BB18682	MW-17	GW/G	10/6/2021	8:45					1		X								X	X	X											
8	BB18683	MW-16	GW/G	10/6/2021	10:10					1		X								X	X	X											
9																																	
10																																	
11																																	
12																																	
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS																							
		Laura Midkiff / APC GTL		10/19/2021	12:45			10/19/21	0930																								

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER:  
 SIGNATURE of SAMPLER:  
 DATE Signed:

PH: RES  
 CLIENT: PACE\_92\_HUNC  
 Due Date: 11/17/21

**W0#: 30446362**

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Alabama Power Company, 744 Highway 87 GSC Bldg #8, Calera, AL 35040  
 Section B Required Project Information: Report To: Laura Midkiff, Copy To: Brooke Caton & Renee Jernigan, Purchase Order #: APC10700668, Plant Gadsden Ash Pond, Project Number: WNW/GADAP 1341  
 Section C Invoice Information: Attention: Laura Midkiff, Company Name: Alabama Power Co., Address: 744 Highway 87 GSC Bldg #8, Pace Quote: CCR, Pace Project Manager: Kevin.Herrin@pacelabs.com, Pace Profile #: 13805

Company: Alabama Power Company	Report To: Laura Midkiff
Address: 744 Highway 87 GSC Bldg #8	Copy To: Brooke Caton & Renee Jernigan
City: Calera, AL 35040	Purchase Order #: APC10700668
Email To: lbmidki@southemco.com	Plant Gadsden Ash Pond
Phone: 205-664-6197	Project Number: WNW/GADAP 1341
Fax: 205-664-6197	Requested Analysis Filtered (Y/N)
Requested Due Date: 28 days	State / Location: AL
Attention: Laura Midkiff	Regulatory Agency
Company Name: Alabama Power Co.	
Address: 744 Highway 87 GSC Bldg #8	
Pace Quote: CCR	
Pace Project Manager: Kevin.Herrin@pacelabs.com	
Pace Profile #: 13805	

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9 / . -)</small> Sample IDs must be unique	MATRIX <small>Drinking Water Water Waste Water Product Source/Slud Oil Wipe Air Other Tissue</small>	CODE <small>DW WT WW P SL WP AR OT TS</small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	TEMP in C	SAMPLE CONDITIONS																	
						START DATE	START TIME			END DATE	END TIME	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3						Methanol	Other	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)									
1	BB18747			EB-2	GW G	10/5/2021	10:20			1	X																													
2	BB18748			PZ-1	GW G	10/5/2021	11:00			3	X																													
3	BB18749			MW-5	GW G	10/5/2021	11:53			1	X																													
4	BB18750			MW-5-DUP	GW G	10/5/2021	11:53			1	X																													
5	BB18751			MW-12	GW G	10/5/2021	12:58			1	X																													
6	BB18752			MW-1	GW G	10/5/2021	14:18			1	X																													
7	BB18753			MW-7	GW G	10/5/2021	15:11			1	X																													
8	BB18754			MW-2VA	GW G	10/6/2021	10:25			1	X																													
9	BB18755			MW-21VC	GW G	10/6/2021	12:46			1	X																													
10	BB18756			FB-2	GW G	10/6/2021	13:15			1	X																													
11																																								
12																																								
ADDITIONAL COMMENTS						RELINQUISHED BY / AFFILIATION						DATE		TIME		ACCEPTED BY / AFFILIATION						DATE		TIME		SAMPLE CONDITIONS														
						Laura Midkiff/ APC GTL						10/13/2021		12:45		<i>[Signature]</i>						10/14/21		09:30																

WO#: 30446362

PM: AES  
 CLIENT: PRCE\_92\_HUNC  
 Due Date: 11/17/21

SAMPLER NAME AND SIGNATURE	DATE Signed:
PRINT Name of SAMPLER:	
SIGNATURE of SAMPLER:	



# 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>	
Company: Alabama Power Company	Report To: Laura Midkiff	Invoice Information:	Attention: Laura Midkiff	Company Name: Alabama Power Co.	Regulatory Agency:
Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040	Copy To: Brooke Calton & Renee Jernigan	Purchase Order #: APC10700668	Address: 744 Highway 87 GSC Bldg #8	Pace Quote: CCR	State / Location: AL
Email To: lbmidkiff@southernco.com	Project Name: Plant Gadsden Ash Pond	Project Name: WMMWGADAP 1341	Pace Project Manager: Kevin.Herring@pacelabs.com	Pace Profile #: 13805	
Phone: 205-664-6197      Fax:	Requested Due Date: 28 days				

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		PRESERVATIVES							ANALYSES TEST				REQUESTED ANALYSIS FILTERED (Y/N)			Residual Chlorine (Y/N)												
				START DATE	END DATE	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D	Y	N														
1	BB19012	MMW-22VB	GW/G	10/11/2021	11:37		3	X	X	X	X	X	X	X	X	X	X	X																
2	BB19013	MMW-19H	GW/G	10/11/2021	12:57		1	X	X	X	X	X	X	X	X	X	X	X																
3	BB19014	MMW-2	GW/G	10/11/2021	14:49		1	X	X	X	X	X	X	X	X	X	X	X																
4	BB19015	FB-3	GW/G	10/11/2021	15:15		1	X	X	X	X	X	X	X	X	X	X	X																
5	BB19016	MMW-2VB	GW/G	10/12/2021	9:28		1	X	X	X	X	X	X	X	X	X	X	X																
6	BB19017	MMW-18H	GW/G	10/12/2021	11:17		1	X	X	X	X	X	X	X	X	X	X	X																
7	BB19018	PZ-5	GW/G	10/12/2021	12:16		1	X	X	X	X	X	X	X	X	X	X	X																
8	BB19019	PZ-6	GW/G	10/12/2021	13:40		1	X	X	X	X	X	X	X	X	X	X	X																
9																																		
10																																		
11																																		
12																																		
ADDITIONAL COMMENTS:				RELINQUISHED BY / AFFILIATION				ACCEPTED BY / AFFILIATION				DATE				TIME				SAMPLE CONDITIONS														
				Laura Midkiff / APC GTL								10/13/2021				12:45				2019/12 0930														

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	DATE Signed:
SIGNATURE OF SAMPLER:	

**WO#: 30446362**  
 Due Date: 11/17/21  
 PH: AES  
 CLIENT: PACE\_92\_HUNC

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Alabama Power Company, 744 Highway 87 GSC Bldg #8, Calera, AL 35040

Section B Required Project Information: Report To: Laura Mickiff, Brooke Catton & Renee Jernigan, APC10700668, Plant Gadsden Ash Pond, WWWGADAP 1341

Section C Invoice Information: Attention: Laura Mickiff, Company Name: Alabama Power Co., Address: 744 Highway 87 GSC Bldg #8, Pace Quote: CCR, Pace Project Manager: Kevin Herring@pacelabs.com, Pace Profile #: 13805

Page : 4 Of 4

Requested Due Date: 28 days

Project Name: Plant Gadsden Ash Pond

Project Number: WWWGADAP 1341

Company Name: Alabama Power Co.

Address: 744 Highway 87 GSC Bldg #8

Pace Quote: CCR

Pace Project Manager: Kevin.Herring@pacelabs.com

Pace Profile #: 13805

Regulatory Agency: \_\_\_\_\_

State/Location: \_\_\_\_\_

Requested Analysis Filtered (Y/N): \_\_\_\_\_


ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9 / . -)</small> Sample IDs must be unique	MATRIX <small>Drinking Water White Waste Water Industrial Other</small>	CODE <small>DW WT WW I S O V A A O T S</small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS											
						DATE	TIME			DATE	TIME	Unpreserved	H2SO4	HNO3	HCl	NaOH					Na2S2O3	Methanol	Other	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D.	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
1	BB19020	MMW-4V	GW	G	MMW-4V	10/11/2021	12:40		1										X	X	X											
2	BB19021	MMW-20H	GW	G	MMW-20H	10/11/2021	13:30		1	X									X	X	X											
3	BB19022	MMW-10	GW	G	MMW-10	10/11/2021	14:40		1	X									X	X	X											
4	BB19023	MMW-14	GW	G	MMW-14	10/12/2021	8:30		1	X									X	X	X											
5	BB19024	MMW-14 DUP	GW	G	MMW-14 DUP	10/12/2021	8:30		1	X									X	X	X											
6	BB19025	MMW-9	GW	G	MMW-9	10/12/2021	10:48		1	X									X	X	X											
7	BB19026	MMW-9	GW	G	MMW-9	10/12/2021	11:55		1	X									X	X	X											
8	BB19027	MMW-11	GW	G	MMW-11	10/12/2021	12:55		1	X									X	X	X											
9	BB19028	EB-1	GW	G	EB-1	10/12/2021	13:30		1	X									X	X	X											
10																																
11																																
12																																

**W0# : 30446362**

PM: AES Due Date: 11/17/21

CLIENT: PACE\_92\_HUNC

RELINQUISHED BY / AFFILIATION: Laura Mickiff / APC GTL DATE: 10/13/2021 TIME: 12:45

ACCEPTED BY / AFFILIATION:  DATE: 10/14/21 TIME: 09:30

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_ DATE Signed: \_\_\_\_\_

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JC2  
Date: 11/4/2021  
Worklist: 63440  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2272895
MB concentration:	0.897
M/B 2 Sigma CSU:	0.395
MB MDC:	0.647
MB Numerical Performance Indicator:	4.45
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:	11/8/2021	LCSD63440	LCSD63440
Spike I.D.:	21-029		
Decay Corrected Spike Concentration (pCi/mL):	37.538		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.817		
Target Conc. (pCi/L, g, F):	4.597		
Uncertainty (Calculated):	0.225		
Result (pCi/L, g, F):	4.495		
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.001		
Numerical Performance Indicator:	-0.19		
Percent Recovery:	97.78%		
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 Duplicate Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?		
Duplicate Numerical Performance Indicator:		
Duplicate 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:  
\*The method blank result is below the reporting limit for this analysis and is acceptable. ✓

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/5/2021	
Sample I.D.:	92567366002	
Sample MS I.D.:	92567366003	
Sample MSD I.D.:	92567366004	
Spike I.D.:	21-029	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	37.961	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.803	
MS Target Conc. (pCi/L, g, F):	9.460	
MSD Aliquot (L, g, F):	0.812	
MSD Target Conc. (pCi/L, g, F):	9.345	
MS Spike Uncertainty (calculated):	0.464	
MSD Spike Uncertainty (calculated):	0.458	
Sample Result:	1.252	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.527	
Sample Matrix Spike Result:	13.581	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.628	
Sample Matrix Spike Duplicate Result:	14.894	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.862	
MS Numerical Performance Indicator:	2.068	
MSD Numerical Performance Indicator:	2.859	
MS Percent Recovery:	130.33%	
MSD Percent Recovery:	145.98%	
MS Status vs Numerical Indicator:	Warning	
MSD Status vs Numerical Indicator:	Warning	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	MSD High****	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92567366002
Sample MS I.D.:	92567366003
Sample MSD I.D.:	92567366004
Sample Matrix Spike Result:	13.581
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.628
Sample Matrix Spike Duplicate Result:	14.894
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.862
Duplicate Numerical Performance Indicator:	-0.662
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	11.33%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Passed NI criteria < 3  
Passes for Non-DW

*Wyllie*

# Quality Control Sample Performance Assessment

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 11/8/2021  
Worklist: 63441  
Matrix: WT



Method Blank Assessment	
MB Sample ID	2272896
MB concentration:	0.309
M/B 2 Sigma CSU:	0.352
MB MDC:	0.742
MB Numerical Performance Indicator:	1.72
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/15/2021
Spike I.D.:	LCSD63441
Decay Corrected Spike Concentration (pCi/mL):	21-029
Volume Used (mL):	37.451
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.820
Uncertainty (Calculated):	4.566
Result (pCi/L, g, F):	0.224
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	4.701
Numerical Performance Indicator:	1.062
Percent Recovery:	0.24
Status vs Numerical Indicator:	102.96%
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	N/A
	135%
	60%

Duplicate Sample Assessment	
Sample I.D.:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
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:

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:		10/5/2021	
Sample I.D.:		92567366012	
Sample MS I.D.:		92567366013	
Sample MSD I.D.:		92567366014	
Spike I.D.:		21-029	
MMS/MSD Decay Corrected Spike Concentration (pCi/mL):		37.961	
Spike Volume Used in MS (mL):		0.20	
Spike Volume Used in MSD (mL):		0.20	
MS Aliquot (L, g, F):		0.609	
MSD Aliquot (L, g, F):		9.390	
MS Target Conc. (pCi/L, g, F):		0.809	
MSD Target Conc. (pCi/L, g, F):		9.384	
MS Spike Uncertainty (calculated):		0.460	
MSD Spike Uncertainty (calculated):		0.460	
Sample Result:		1.992	
Sample Result 2 Sigma CSU (pCi/L, g, F):		0.628	
Sample Matrix Spike Result:		7.936	
Sample Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		1.635	
Sample Matrix Spike Duplicate Result:		8.626	
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		1.744	
MS Numerical Performance Indicator:		-3.730	
MSD Numerical Performance Indicator:		-2.822	
MS Percent Recovery:		63.31%	
MSD Percent Recovery:		70.69%	
MS Status vs Numerical Indicator:		Fail****	
MSD Status vs Numerical Indicator:		Warning	
MS Status vs Recovery:		Pass	
MSD Status vs Recovery:		Pass	
MMS/MSD Upper % Recovery Limits:		135%	
MMS/MSD Lower % Recovery Limits:		60%	

Matrix Spike/Matrix Duplicate Sample Assessment	
Sample I.D.:	92567366012
Sample MS I.D.:	92567366013
Sample MSD I.D.:	92567366014
Matrix Spike Result:	7.936
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.635
Sample Matrix Spike Duplicate Result:	8.626
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.744
Duplicate Numerical Performance Indicator:	-0.566
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	11.03%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

*MS Passed % Recovery criteria*  
*11/11/2021*

\*\*\*\*[All other GC 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.]

# Quality Control Sample Performance Assessment

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: JC2  
Date: 11/18/2021  
Worksheet: 63442  
Matrix: WT



Method Blank Assessment	
MB Sample ID	2272897
MB concentration:	-0.007
MB 2 Sigma CSU:	0.282
MB MDC:	0.665
MB Numerical Performance Indicator:	-0.05
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:	11/17/2021	LCSD63442	LCSD63442
Spike I.D.:	21-029		
Decay Corrected Spike Concentration (pCi/mL):	37.425		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.819		
Target Conc. (pCi/L, g, F):	4.571		
Uncertainty (Calculated):	0.224		
Result (pCi/L, g, F):	5.057		
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.123		
Numerical Performance Indicator:	0.83		
Percent Recovery:	110.62%		
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 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:

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/11/2021		
Sample I.D.:	92567366023		92569905001
Sample MS I.D.:	92567366024		92569905002
Sample MSD I.D.:	92567366025		92569905003
Spike I.D.:	21-029		21-029
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	37.886		37.886
Spike Volume Used in MS (mL):	0.20		0.20
Spike Volume Used in MSD (mL):	0.20		0.20
MS Aliquot (L, g, F):	0.804		0.818
MS Target Conc. (pCi/L, g, F):	9.426		9.265
MSD Aliquot (L, g, F):	0.801		0.814
MSD Target Conc. (pCi/L, g, F):	9.465		9.305
MS Spike Uncertainty (calculated):	0.462		0.454
MSD Spike Uncertainty (calculated):	0.464		0.456
Sample Result:	0.113		0.982
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.360		0.443
Sample Matrix Spike Result:	8.485		10.705
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.737		2.130
Sample Matrix Spike Duplicate Result:	8.752		8.905
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.778		1.832
MS Numerical Performance Indicator:	-1.127		0.404
MSD Numerical Performance Indicator:	-0.865		-1.397
MS Percent Recovery:	88.82%		104.94%
MSD Percent Recovery:	91.27%		85.15%
MS Status vs Numerical Indicator:	Pass		Pass
MSD Status vs Numerical Indicator:	Pass		Pass
MS Status vs Recovery:	Pass		Pass
MSD Status vs Recovery:	Pass		Pass
MS/MSD Upper % Recovery Limits:	135%		135%
MS/MSD Lower % Recovery Limits:	60%		60%

Matrix Spike/Matrix Spike Duplicate Sample Assessment		MS/MSD Upper % Recovery Limits:	MS/MSD Lower % Recovery Limits:
Sample I.D.:	92567366023		
Sample MS I.D.:	92567366024		
Sample MSD I.D.:	92567366025		
Sample Matrix Spike Result:	8.485		
Sample Matrix Spike Duplicate Result:	1.737		
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	8.752		
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.778		
Duplicate Numerical Performance Indicator:	-0.210		
Duplicate Numerical Performance Indicator:	2.72%		
Duplicate RPD:	2.72%		
Duplicate Status vs Numerical Indicator:	Pass		
Duplicate Status vs RPD:	Pass		
% RPD Limit:	36%		

*10/11/2021*

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 11/13/2021  
Worklist: 63366  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2269079
MB concentration:	0.276
M/B Counting Uncertainty:	0.300
MB MDC:	0.633
MB Numerical Performance Indicator:	1.80
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD63366	LCS063366
Count Date:	12/3/2021	12/3/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.032	24.032
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.207	0.207
Target Conc. (pCi/L, g, F):	11.923	11.615
Uncertainty (Calculated):	0.143	0.139
Result (pCi/L, g, F):	14.114	12.397
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	1.284	1.174
Numerical Performance Indicator:	3.32	1.30
Percent Recovery:	118.37%	106.73%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS63366
Duplicate Sample I.D.:	LCS063366
Sample Result (pCi/L, g, F):	14.114
Duplicate Result (pCi/L, g, F):	1.284
Sample Result Counting Uncertainty (pCi/L, g, F):	12.397
Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.174
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.935
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.34%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/5/2021	
Sample I.D.:	92567366012	
Sample MS I.D.:	92567366013	
Sample MSD I.D.:	92567366014	
Spike I.D.:	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.033	
Spike Volume Used in MS (mL):	0.20	
MS Aliquot (L, g, F):	0.306	
MS Target Conc. (pCi/L, g, F):	15.694	
MSD Aliquot (L, g, F):	0.292	
MSD Target Conc. (pCi/L, g, F):	16.471	
MS Spike Uncertainty (calculated):	0.188	
MSD Spike Uncertainty (calculated):	0.198	
Sample Result:	0.076	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.173	
Sample Matrix Spike Result:	16.708	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.130	
Sample Matrix Spike Duplicate Result:	15.694	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.110	
MS Numerical Performance Indicator:	1.587	
MSD Numerical Performance Indicator:	-1.465	
MS Percent Recovery:	105.98%	
MSD Percent Recovery:	94.82%	
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.:	92567366012
Sample MS I.D.:	92567366013
Sample MSD I.D.:	92567366014
Sample Matrix Spike Result:	16.708
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.130
Sample Matrix Spike Duplicate Result:	15.694
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	1.110
Duplicate Numerical Performance Indicator:	1.254
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	11.11%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD 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:

*012/13/21*

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 11/13/2021  
Worklist: 63365  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2269074
MB concentration:	-0.023
M/B Counting Uncertainty:	0.117
MB MDC:	0.365
MB Numerical Performance Indicator:	-0.39
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS63365	LCS/D63365
Count Date:	12/3/2021	12/3/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.032	24.032
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.212	0.205
Target Conc. (pCi/L, g, F):	11.315	11.715
Uncertainty (Calculated):	0.136	0.141
Result (pCi/L, g, F):	11.063	14.724
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.142	1.298
Numerical Performance Indicator:	-0.43	4.52
Percent Recovery:	97.77%	125.69%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Fail High****
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	LCS63365	LCS/D63365
Sample I.D.:	LCS63365	LCS/D63365
Duplicate Sample I.D.:	11.063	11.063
Sample Result (pCi/L, g, F):	1.142	1.142
Sample Duplicate Result (pCi/L, g, F):	14.724	14.724
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.298	1.298
Are sample and/or duplicate results below RL?	NO	NO
Duplicate Numerical Performance Indicator:	-4.151	-4.151
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	24.99%	24.99%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	25%	25%

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

Comments: *LCSD fail high ok, all sample results < RL of 1.0 pCi/L*  
*Apr 13/21*

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/5/2021	
Sample I.D.:	92567366002	
Sample MS I.D.:	92567366003	
Sample MSD I.D.:	92567366004	
Spike I.D.:	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.033	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.260	
MS Target Conc. (pCi/L, g, F):	18.506	
MSD Aliquot (L, g, F):	0.287	
MSD Target Conc. (pCi/L, g, F):	16.727	
MS Spike Uncertainty (calculated):	0.222	
MSD Spike Uncertainty (calculated):	0.201	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.107	
Sample Matrix Spike Result:	0.155	
Matrix Spike Counting Uncertainty (pCi/L, g, F):	18.302	
Sample Matrix Spike Duplicate Result:	1.237	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	17.888	
MS Numerical Performance Indicator:	1.181	
MSD Numerical Performance Indicator:	-0.482	
MS Percent Recovery:	1.709	
MSD Percent Recovery:	106.30%	
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	MS/MSD 1	MS/MSD 2
Sample I.D.:	92567366002	
Sample MS I.D.:	92567366003	
Sample MSD I.D.:	92567366004	
Sample Matrix Spike Result:	18.302	
Sample Matrix Spike Duplicate Result:	1.237	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	17.888	
Duplicate Numerical Performance Indicator:	1.181	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	0.474	
MS/MSD Duplicate Status vs Numerical Indicator:	7.80%	
MS/MSD Duplicate Status vs RPD:	N/A	
% RPD Limit:	25%	

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 11/13/2021  
Worklist: 63367  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2269081
MB concentration:	0.522
MB Counting Uncertainty:	0.337
MB MDC:	0.615
MB Numerical Performance Indicator:	3.04
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
		LCSD63367	LCS63367
Count Date:	12/3/2021		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.032		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.201		
Target Conc. (pCi/L, g, F):	11.954		
Uncertainty (Calculated):	0.143		
Result (pCi/L, g, F):	12.295		
LCSD Counting Uncertainty (pCi/L, g, F):	1.198		
Numerical Performance Indicator:	0.55		
Percent Recovery:	102.85%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/11/2021		
Sample I.D.:	92567366023		
Sample MS I.D.:	92567366024		
Sample MSD I.D.:	92567366025		
Spike I.D.:	19-033		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.033		
Spike Volume Used in MS (mL):	0.20		
Spike Volume Used in MSD (mL):	0.20		
MS Aliquot (L, g, F):	0.273		
MS Target Conc. (pCi/L, g, F):	17.614		
MSD Aliquot (L, g, F):	0.297		
MSD Target Conc. (pCi/L, g, F):	16.202		
MS Spike Uncertainty (calculated):	0.211		
MSD Spike Uncertainty (calculated):	0.194		
Sample Result Counting Uncertainty (pCi/L, g, F):	1.179		
Sample Matrix Spike Result:	0.338		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	16.615		
Sample Matrix Spike Duplicate Result:	1.188		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	16.716		
MS Numerical Performance Indicator:	1.118		
MSD Numerical Performance Indicator:	-3.408		
MS Percent Recovery:	-1.101		
MSD Percent Recovery:	87.64%		
MS Status vs Numerical Indicator:	95.89%		
MSD Status vs Numerical Indicator:	N/A		
MS Status vs Recovery:	N/A		
MSD Status vs Recovery:	Pass		
MS/MSD Upper % Recovery Limits:	125%		
MS/MSD Lower % Recovery Limits:	75%		

Duplicate Sample Assessment	
Sample I.D.:	92567366023
Duplicate Sample I.D.:	92567366024
Sample Result (pCi/L, g, F):	16.615
Duplicate Result (pCi/L, g, F):	1.188
Sample Result Counting Uncertainty (pCi/L, g, F):	16.716
Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.118
Are sample and/or duplicate results below RL?	-0.120
Duplicate Numerical Performance Indicator:	9.00%
Duplicate RPD:	N/A
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92567366023
Sample MS I.D.:	92567366024
Sample MSD I.D.:	92567366025
Sample Matrix Spike Result:	16.615
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.188
Sample Matrix Spike Duplicate Result:	16.716
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.118
Duplicate Numerical Performance Indicator:	-0.120
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	9.00%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD 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:

*M*  
*R/3/21*

*29-3-21*



January 21, 2022

Laura Midkiff  
Alabama Power  
744 Highway 87  
GSC #8  
Calera, AL 35040

RE: Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on October 19, 2021. 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

(Greensburg, PA) - Revision 1 - This report replaces the January, 13, 2022 report. This project was revised on January, 20, 2022 to update 92567366035 results.

(Greensburg, PA) - Revision 2 - This report replaces the January, 20, 2022 report. This project was revised on January, 21, 2022 to correct the revision 1 note. Revision 1 replaces the December, 13, 2022 report.

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

Sincerely,



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

Enclosures

cc: Brooke Caton, Alabama Power  
Renee Jernigan, Alabama Power



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

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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 #: 9526  
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: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92567366001	BB18676 PZ-2	Water	10/05/21 11:00	10/19/21 00:00
92567366002	BB18677 MW-6	Water	10/05/21 12:10	10/19/21 00:00
92567366003	BB18677 MW-6 MS	Water	10/05/21 12:10	10/19/21 00:00
92567366004	BB18677 MW-6 MSD	Water	10/05/21 12:10	10/19/21 00:00
92567366005	BB18678 MW-3	Water	10/05/21 13:25	10/19/21 00:00
92567366006	BB18679 MW-4	Water	10/05/21 14:35	10/19/21 00:00
92567366007	BB18680 MW-4 DUP	Water	10/05/21 14:35	10/19/21 00:00
92567366008	BB18681 FB-1	Water	10/05/21 15:30	10/19/21 00:00
92567366009	BB18682 MW-17	Water	10/06/21 08:45	10/19/21 00:00
92567366010	BB18683 MW-16	Water	10/06/21 10:10	10/19/21 00:00
92567366011	BB18747 EB-2	Water	10/05/21 10:20	10/19/21 00:00
92567366012	BB18748 PZ-1	Water	10/05/21 11:00	10/19/21 00:00
92567366013	BB18748 PZ-1 MS	Water	10/05/21 11:00	10/19/21 00:00
92567366014	BB18748 PZ-1 MSD	Water	10/05/21 11:00	10/19/21 00:00
92567366015	BB18749 MW-5	Water	10/05/21 11:53	10/19/21 00:00
92567366016	BB18750 MW-5 DUP	Water	10/05/21 11:53	10/19/21 00:00
92567366017	BB18751 MW-12	Water	10/05/21 12:58	10/19/21 00:00
92567366018	BB18752 MW-1	Water	10/05/21 14:18	10/19/21 00:00
92567366019	BB18753 MW-7	Water	10/05/21 15:11	10/19/21 00:00
92567366020	BB18754 MW-2VA	Water	10/06/21 10:25	10/19/21 00:00
92567366021	BB18755 MW-21VC	Water	10/06/21 12:46	10/19/21 00:00
92567366022	BB18756 FB-2	Water	10/06/21 13:15	10/19/21 00:00
92567366023	BB19012 MW-22VB	Water	10/11/21 11:37	10/19/21 00:00
92567366024	BB19012 MW-22VB MS	Water	10/11/21 11:37	10/19/21 00:00
92567366025	BB19012 MW-22VB MSD	Water	10/11/21 11:37	10/19/21 00:00
92567366026	BB19013 MW-19H	Water	10/11/21 12:57	10/19/21 00:00
92567366027	BB19014 MW-2	Water	10/11/21 14:49	10/19/21 00:00
92567366028	BB19015 FB-3	Water	10/11/21 15:15	10/19/21 00:00
92567366029	BB19016 MW-2VB	Water	10/12/21 09:28	10/19/21 00:00
92567366030	BB19017 MW-18H	Water	10/12/21 11:17	10/19/21 00:00
92567366031	BB19018 PZ-5	Water	10/12/21 12:16	10/19/21 00:00
92567366032	BB19019 PZ-6	Water	10/12/21 13:40	10/19/21 00:00
92567366033	BB19020 MW-4V	Water	10/11/21 12:40	10/19/21 00:00
92567366034	BB19021 MW-20H	Water	10/11/21 13:30	10/19/21 00:00
92567366035	BB19022 MW-10	Water	10/11/21 14:40	10/19/21 00:00
92567366036	BB19023 MW-14	Water	10/12/21 08:30	10/19/21 00:00
92567366037	BB19024 MW-14 DUP	Water	10/12/21 08:30	10/19/21 00:00

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92567366038	BB19025 MW-8	Water	10/12/21 10:48	10/19/21 00:00
92567366039	BB19026 MW-9	Water	10/12/21 11:55	10/19/21 00:00
92567366040	BB19027 MW-11	Water	10/12/21 12:55	10/19/21 00:00
92567366041	BB19028 EB-1	Water	10/12/21 13:30	10/19/21 00:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366001	BB18676 PZ-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366002	BB18677 MW-6	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366003	BB18677 MW-6 MS	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366004	BB18677 MW-6 MSD	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366005	BB18678 MW-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366006	BB18679 MW-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366007	BB18680 MW-4 DUP	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366008	BB18681 FB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366009	BB18682 MW-17	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366010	BB18683 MW-16	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366011	BB18747 EB-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366012	BB18748 PZ-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366013	BB18748 PZ-1 MS	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366014	BB18748 PZ-1 MSD	EPA 9315	LAL	1	PASI-PA

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366015	BB18749 MW-5	EPA 9320	VAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366016	BB18750 MW-5 DUP	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366017	BB18751 MW-12	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366018	BB18752 MW-1	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366019	BB18753 MW-7	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366020	BB18754 MW-2VA	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366021	BB18755 MW-21VC	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366022	BB18756 FB-2	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366023	BB19012 MW-22VB	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366024	BB19012 MW-22VB MS	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366025	BB19012 MW-22VB MSD	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92567366026	BB19013 MW-19H	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366027	BB19014 MW-2	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366028	BB19015 FB-3	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366029	BB19016 MW-2VB	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366030	BB19017 MW-18H	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366031	BB19018 PZ-5	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366032	BB19019 PZ-6	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366033	BB19020 MW-4V	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366034	BB19021 MW-20H	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366035	BB19022 MW-10	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366036	BB19023 MW-14	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366037	BB19024 MW-14 DUP	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366038	BB19025 MW-8	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92567366039	BB19026 MW-9	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92567366040	BB19027 MW-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92567366041	BB19028 EB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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## PROJECT NARRATIVE

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

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**Date:** January 21, 2022

### **BB19022 MW-10 (Lab ID: 92567366035)**

- Client requested investigation on results for sample 92567366035. Sample was recounted. Detector originally used appears to have been the issue. Recount results have been reported, and original results cancelled.

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## PROJECT NARRATIVE

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

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**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** January 21, 2022

**General Information:**

41 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: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

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**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** January 21, 2022

**General Information:**

41 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: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

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**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** January 21, 2022

**General Information:**

35 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: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18676 PZ-2**      **Lab ID: 92567366001**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>0.184U ± 0.173 (0.315)</b> <b>C:93% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.941 ± 0.426 (0.713)</b> <b>C:82% T:83%</b>	pCi/L	11/08/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.13 ± 0.599 (1.03)</b>	pCi/L	12/03/21 16:58	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18677 MW-6**      **Lab ID: 92567366002**      Collected: 10/05/21 12:10      Received: 10/19/21 00:00      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>0.107U ± 0.155 (0.335)</b> <b>C:93% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.25 ± 0.527 (0.863)</b> <b>C:78% T:81%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.36 ± 0.682 (1.20)</b>	pCi/L	12/03/21 16:58	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

**Sample: BB18677 MW-6 MS**      **Lab ID: 92567366003**      Collected: 10/05/21 12:10      Received: 10/19/21 00:00      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>98.32 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>130.33 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/08/21 14:35	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18677 MW-6 MSD**      **Lab ID: 92567366004**      Collected: 10/05/21 12:10      Received: 10/19/21 00:00      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>106.30 %REC 7.80 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>145.98 %REC 11.33 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/08/21 14:35	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18678 MW-3**      **Lab ID: 92567366005**      Collected: 10/05/21 13:25      Received: 10/19/21 00:00      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>0.231U ± 0.176 (0.310)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.98 ± 0.812 (0.891)</b> <b>C:74% T:80%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>3.21 ± 0.988 (1.20)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

**Sample: BB18679 MW-4**      **Lab ID: 92567366006**      Collected: 10/05/21 14:35      Received: 10/19/21 00:00      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>0.804 ± 0.308 (0.341)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.950 ± 0.474 (0.839)</b> <b>C:74% T:88%</b>	pCi/L	11/08/21 14:35	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.75 ± 0.782 (1.18)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18680 MW-4 DUP**      **Lab ID: 92567366007**      Collected: 10/05/21 14:35      Received: 10/19/21 00:00      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>0.366 ± 0.205 (0.300)</b> <b>C:99% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.943 ± 0.429 (0.705)</b> <b>C:72% T:93%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.31 ± 0.634 (1.01)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18681 FB-1**      **Lab ID: 92567366008**      Collected: 10/05/21 15:30      Received: 10/19/21 00:00      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>-0.0744U ± 0.0619 (0.273)</b> <b>C:99% T:NA</b>	pCi/L	12/03/21 08:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.16 ± 0.489 (0.798)</b> <b>C:75% T:91%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.16 ± 0.551 (1.07)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18682 MW-17**      **Lab ID: 92567366009**      Collected: 10/06/21 08:45      Received: 10/19/21 00:00      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>0.319U ± 0.217 (0.394)</b> <b>C:99% T:NA</b>	pCi/L	12/03/21 08:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.69 ± 0.600 (0.871)</b> <b>C:71% T:83%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.01 ± 0.817 (1.27)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18683 MW-16**      **Lab ID: 92567366010**      Collected: 10/06/21 10:10      Received: 10/19/21 00:00      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>0.193U ± 0.270 (0.597)</b> <b>C:91% T:NA</b>	pCi/L	12/03/21 08:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.962 ± 0.486 (0.852)</b> <b>C:73% T:82%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.16U ± 0.756 (1.45)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18747 EB-2**      **Lab ID: 92567366011**      Collected: 10/05/21 10:20      Received: 10/19/21 00:00      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>-0.145U ± 0.196 (0.564)</b> <b>C:91% T:NA</b>	pCi/L	12/03/21 08:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.87 ± 0.757 (0.795)</b> <b>C:78% T:88%</b>	pCi/L	11/08/21 14:35	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.87 ± 0.953 (1.36)</b>	pCi/L	12/03/21 16:58	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18748 PZ-1**      **Lab ID: 92567366012**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>0.0760U ± 0.174 (0.406)</b> <b>C:92% T:NA</b>	pCi/L	12/03/21 08:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.99 ± 0.628 (0.844)</b> <b>C:71% T:86%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.07 ± 0.802 (1.25)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18748 PZ-1 MS**      **Lab ID: 92567366013**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>105.98 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>63.31 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/15/21 11:01	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18748 PZ-1 MSD**      **Lab ID: 92567366014**      Collected: 10/05/21 11:00      Received: 10/19/21 00:00      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>94.82 %REC 11.11 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>70.69 %REC 11.03 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/15/21 11:01	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18749 MW-5**      **Lab ID: 92567366015**      Collected: 10/05/21 11:53      Received: 10/19/21 00:00      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>0.332U ± 0.225 (0.408)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 14:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.11 ± 0.465 (0.750)</b> <b>C:73% T:94%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.44 ± 0.690 (1.16)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18750 MW-5 DUP**      **Lab ID: 92567366016**      Collected: 10/05/21 11:53      Received: 10/19/21 00:00      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>0.231U ± 0.182 (0.329)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 14:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.28 ± 0.510 (0.787)</b> <b>C:75% T:83%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.51 ± 0.692 (1.12)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

**Sample: BB18751 MW-12**      **Lab ID: 92567366017**      Collected: 10/05/21 12:58      Received: 10/19/21 00:00      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>0.214U ± 0.194 (0.383)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.27 ± 0.493 (0.760)</b> <b>C:77% T:88%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.48 ± 0.687 (1.14)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18752 MW-1**      **Lab ID: 92567366018**      Collected: 10/05/21 14:18      Received: 10/19/21 00:00      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>0.812 ± 0.281 (0.218)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.395U ± 0.408 (0.845)</b> <b>C:75% T:83%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.21 ± 0.689 (1.06)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18753 MW-7**      **Lab ID: 92567366019**      Collected: 10/05/21 15:11      Received: 10/19/21 00:00      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>0.402 ± 0.215 (0.318)</b> <b>C:96% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.869 ± 0.441 (0.783)</b> <b>C:80% T:89%</b>	pCi/L	11/08/21 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.27 ± 0.656 (1.10)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18754 MW-2VA**      **Lab ID: 92567366020**      Collected: 10/06/21 10:25      Received: 10/19/21 00:00      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>0.458 ± 0.242 (0.356)</b> <b>C:89% T:NA</b>	pCi/L	12/03/21 08:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.288U ± 0.313 (0.651)</b> <b>C:85% T:89%</b>	pCi/L	11/08/21 11:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.746U ± 0.555 (1.01)</b>	pCi/L	12/03/21 16:58	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18755 MW-21VC**      **Lab ID: 92567366021**      Collected: 10/06/21 12:46      Received: 10/19/21 00:00      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>0.243U ± 0.261 (0.554)</b> <b>C:96% T:NA</b>	pCi/L	12/03/21 08:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.54 ± 0.558 (0.847)</b> <b>C:74% T:88%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.78 ± 0.819 (1.40)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB18756 FB-2**      **Lab ID: 92567366022**      Collected: 10/06/21 13:15      Received: 10/19/21 00:00      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>0.246U ± 0.221 (0.433)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.412U ± 0.393 (0.806)</b> <b>C:71% T:85%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.658U ± 0.614 (1.24)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19012 MW-22VB**      **Lab ID: 92567366023**      Collected: 10/11/21 11:37      Received: 10/19/21 00:00      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>1.18 ± 0.378 (0.361)</b> <b>C:80% T:NA</b>	pCi/L	12/03/21 08:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.113U ± 0.360 (0.812)</b> <b>C:70% T:85%</b>	pCi/L	11/17/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.29 ± 0.738 (1.17)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19012 MW-22VB MS**      **Lab ID: 92567366024**      Collected: 10/11/21 11:37      Received: 10/19/21 00:00      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>87.64 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>88.82 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/17/21 11:24	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19012 MW-22VB MSD**      **Lab ID: 92567366025**      Collected: 10/11/21 11:37      Received: 10/19/21 00:00      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>95.89 %REC 9.00 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/03/21 08:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>91.27 %REC 2.72 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/17/21 11:24	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19013 MW-19H**      **Lab ID: 92567366026**      Collected: 10/11/21 12:57      Received: 10/19/21 00:00      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>0.202U ± 0.185 (0.364)</b> <b>C:96% T:NA</b>	pCi/L	12/03/21 08:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0132U ± 0.345 (0.813)</b> <b>C:68% T:84%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.202U ± 0.530 (1.18)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19014 MW-2**      **Lab ID: 92567366027**      Collected: 10/11/21 14:49      Received: 10/19/21 00:00      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>0.569 ± 0.264 (0.390)</b> <b>C:101% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.81 ± 0.567 (0.728)</b> <b>C:70% T:89%</b>	pCi/L	11/15/21 11:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.38 ± 0.831 (1.12)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19015 FB-3**      **Lab ID: 92567366028**      Collected: 10/11/21 15:15      Received: 10/19/21 00:00      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>0.109U ± 0.225 (0.520)</b> <b>C:87% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.898 ± 0.440 (0.760)</b> <b>C:69% T:88%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.01U ± 0.665 (1.28)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

**Sample: BB19016 MW-2VB**      **Lab ID: 92567366029**      Collected: 10/12/21 09:28      Received: 10/19/21 00:00      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>0.0902U ± 0.202 (0.471)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.233U ± 0.374 (0.812)</b> <b>C:70% T:82%</b>	pCi/L	11/15/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.323U ± 0.576 (1.28)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19017 MW-18H**      **Lab ID: 92567366030**      Collected: 10/12/21 11:17      Received: 10/19/21 00:00      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>0.0898U ± 0.136 (0.299)</b> <b>C:91% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.293U ± 0.376 (0.800)</b> <b>C:70% T:84%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.383U ± 0.512 (1.10)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19018 PZ-5**      **Lab ID: 92567366031**      Collected: 10/12/21 12:16      Received: 10/19/21 00:00      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>0.114U ± 0.167 (0.368)</b> <b>C:89% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.849 ± 0.420 (0.741)</b> <b>C:72% T:96%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.963U ± 0.587 (1.11)</b>	pCi/L	12/03/21 17:05	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19019 PZ-6**      **Lab ID: 92567366032**      Collected: 10/12/21 13:40      Received: 10/19/21 00:00      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>0.823 ± 0.312 (0.397)</b> <b>C:97% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.743U ± 0.445 (0.832)</b> <b>C:71% T:85%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.57 ± 0.757 (1.23)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19020 MW-4V**      **Lab ID: 92567366033**      Collected: 10/11/21 12:40      Received: 10/19/21 00:00      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>0.410U ± 0.254 (0.425)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.17 ± 0.511 (0.850)</b> <b>C:68% T:85%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.58 ± 0.765 (1.28)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19021 MW-20H**      **Lab ID: 92567366034**      Collected: 10/11/21 13:30      Received: 10/19/21 00:00      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>0.506 ± 0.236 (0.289)</b> <b>C:94% T:NA</b>	pCi/L	12/03/21 08:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.585U ± 0.455 (0.906)</b> <b>C:70% T:82%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.09U ± 0.691 (1.20)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19022 MW-10**      **Lab ID: 92567366035**      Collected: 10/11/21 14:40      Received: 10/19/21 00:00      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>0.330 ± 0.189 (0.269)</b> <b>C:94% T:NA</b>	pCi/L	01/18/22 13:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.448U ± 0.397 (0.810)</b> <b>C:71% T:93%</b>	pCi/L	11/15/21 11:02	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.778U ± 0.586 (1.08)</b>	pCi/L	01/19/22 18:25	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19023 MW-14**      **Lab ID: 92567366036**      Collected: 10/12/21 08:30      Received: 10/19/21 00:00      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>1.14 ± 0.388 (0.450)</b> <b>C:94% T:NA</b>	pCi/L	12/03/21 08:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.468U ± 0.365 (0.724)</b> <b>C:74% T:87%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.61 ± 0.753 (1.17)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19024 MW-14 DUP**      **Lab ID: 92567366037**      Collected: 10/12/21 08:30      Received: 10/19/21 00:00      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>0.526 ± 0.280 (0.415)</b> <b>C:94% T:NA</b>	pCi/L	12/03/21 10:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.08 ± 0.493 (0.837)</b> <b>C:73% T:82%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.61 ± 0.773 (1.25)</b>	pCi/L	12/03/21 17:05	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19025 MW-8**      **Lab ID: 92567366038**      Collected: 10/12/21 10:48      Received: 10/19/21 00:00      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>0.291U ± 0.209 (0.346)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0878U ± 0.347 (0.820)</b> <b>C:76% T:85%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.291U ± 0.556 (1.17)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19026 MW-9**      **Lab ID: 92567366039**      Collected: 10/12/21 11:55      Received: 10/19/21 00:00      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>0.311U ± 0.242 (0.454)</b> <b>C:95% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0569U ± 0.341 (0.797)</b> <b>C:76% T:91%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.311U ± 0.583 (1.25)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19027 MW-11**      **Lab ID: 92567366040**      Collected: 10/12/21 12:55      Received: 10/19/21 00:00      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>0.641 ± 0.322 (0.528)</b> <b>C:102% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.374U ± 0.383 (0.796)</b> <b>C:70% T:89%</b>	pCi/L	11/15/21 11:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.02U ± 0.705 (1.32)</b>	pCi/L	12/03/21 17:11	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

**Sample: BB19028 EB-1**      **Lab ID: 92567366041**      Collected: 10/12/21 13:30      Received: 10/19/21 00:00      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>0.338U ± 0.217 (0.350)</b> <b>C:85% T:NA</b>	pCi/L	12/03/21 08:21	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.0413U ± 0.298 (0.692)</b> <b>C:68% T:85%</b>	pCi/L	11/17/21 11:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.379U ± 0.515 (1.04)</b>	pCi/L	12/03/21 17:11	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

QC Batch: 470012

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366038, 92567366039, 92567366040, 92567366041

METHOD BLANK: 2269081

Matrix: Water

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366038, 92567366039, 92567366040, 92567366041

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.522 ± 0.345 (0.615) C:92% T:NA	pCi/L	12/03/21 08:39	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

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QC Batch:	470011	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366012, 92567366013, 92567366014, 92567366021, 92567366022, 92567366026, 92567366027, 92567366028, 92567366029, 92567366030, 92567366031, 92567366032, 92567366033, 92567366034, 92567366035, 92567366036, 92567366037

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METHOD BLANK:	2269079	Matrix:	Water
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Associated Lab Samples: 92567366012, 92567366013, 92567366014, 92567366021, 92567366022, 92567366026, 92567366027, 92567366028, 92567366029, 92567366030, 92567366031, 92567366032, 92567366033, 92567366034, 92567366035, 92567366036, 92567366037

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.276 ± 0.303 (0.633) C:96% T:NA	pCi/L	12/03/21 08:13	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

QC Batch: 470829

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366041

METHOD BLANK: 2272897

Matrix: Water

Associated Lab Samples: 92567366023, 92567366024, 92567366025, 92567366041

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.00736 ± 0.282 (0.665) C:71% T:86%	pCi/L	11/17/21 14:28	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

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QC Batch:	470009	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92567366001, 92567366002, 92567366003, 92567366004, 92567366005, 92567366006, 92567366007, 92567366008, 92567366009, 92567366010, 92567366011, 92567366015, 92567366016, 92567366017, 92567366018, 92567366019, 92567366020

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METHOD BLANK: 2269074 Matrix: Water

Associated Lab Samples: 92567366001, 92567366002, 92567366003, 92567366004, 92567366005, 92567366006, 92567366007, 92567366008, 92567366009, 92567366010, 92567366011, 92567366015, 92567366016, 92567366017, 92567366018, 92567366019, 92567366020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0230 ± 0.117 (0.365) C:97% T:NA	pCi/L	12/03/21 08:48	

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## QUALIFIERS

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

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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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

### SAMPLE QUALIFIERS

Sample: 92567366035

[1] CLient requested investigation on results for sample 92567366035. Sample was recounted. Detector originally used appears to have been the issue. Recount results have been reported, and original results cancelled.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92567366001	BB18676 PZ-2	EPA 9315	470009		
92567366002	BB18677 MW-6	EPA 9315	470009		
92567366003	BB18677 MW-6 MS	EPA 9315	470009		
92567366004	BB18677 MW-6 MSD	EPA 9315	470009		
92567366005	BB18678 MW-3	EPA 9315	470009		
92567366006	BB18679 MW-4	EPA 9315	470009		
92567366007	BB18680 MW-4 DUP	EPA 9315	470009		
92567366008	BB18681 FB-1	EPA 9315	470009		
92567366009	BB18682 MW-17	EPA 9315	470009		
92567366010	BB18683 MW-16	EPA 9315	470009		
92567366011	BB18747 EB-2	EPA 9315	470009		
92567366012	BB18748 PZ-1	EPA 9315	470011		
92567366013	BB18748 PZ-1 MS	EPA 9315	470011		
92567366014	BB18748 PZ-1 MSD	EPA 9315	470011		
92567366015	BB18749 MW-5	EPA 9315	470009		
92567366016	BB18750 MW-5 DUP	EPA 9315	470009		
92567366017	BB18751 MW-12	EPA 9315	470009		
92567366018	BB18752 MW-1	EPA 9315	470009		
92567366019	BB18753 MW-7	EPA 9315	470009		
92567366020	BB18754 MW-2VA	EPA 9315	470009		
92567366021	BB18755 MW-21VC	EPA 9315	470011		
92567366022	BB18756 FB-2	EPA 9315	470011		
92567366023	BB19012 MW-22VB	EPA 9315	470012		
92567366024	BB19012 MW-22VB MS	EPA 9315	470012		
92567366025	BB19012 MW-22VB MSD	EPA 9315	470012		
92567366026	BB19013 MW-19H	EPA 9315	470011		
92567366027	BB19014 MW-2	EPA 9315	470011		
92567366028	BB19015 FB-3	EPA 9315	470011		
92567366029	BB19016 MW-2VB	EPA 9315	470011		
92567366030	BB19017 MW-18H	EPA 9315	470011		
92567366031	BB19018 PZ-5	EPA 9315	470011		
92567366032	BB19019 PZ-6	EPA 9315	470011		
92567366033	BB19020 MW-4V	EPA 9315	470011		
92567366034	BB19021 MW-20H	EPA 9315	470011		
92567366035	BB19022 MW-10	EPA 9315	470011		
92567366036	BB19023 MW-14	EPA 9315	470011		
92567366037	BB19024 MW-14 DUP	EPA 9315	470011		
92567366038	BB19025 MW-8	EPA 9315	470012		
92567366039	BB19026 MW-9	EPA 9315	470012		
92567366040	BB19027 MW-11	EPA 9315	470012		
92567366041	BB19028 EB-1	EPA 9315	470012		
92567366001	BB18676 PZ-2	EPA 9320	470827		
92567366002	BB18677 MW-6	EPA 9320	470827		
92567366003	BB18677 MW-6 MS	EPA 9320	470827		
92567366004	BB18677 MW-6 MSD	EPA 9320	470827		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report

Pace Project No.: 92567366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92567366005	BB18678 MW-3	EPA 9320	470827		
92567366006	BB18679 MW-4	EPA 9320	470827		
92567366007	BB18680 MW-4 DUP	EPA 9320	470827		
92567366008	BB18681 FB-1	EPA 9320	470827		
92567366009	BB18682 MW-17	EPA 9320	470827		
92567366010	BB18683 MW-16	EPA 9320	470827		
92567366011	BB18747 EB-2	EPA 9320	470827		
92567366012	BB18748 PZ-1	EPA 9320	470828		
92567366013	BB18748 PZ-1 MS	EPA 9320	470828		
92567366014	BB18748 PZ-1 MSD	EPA 9320	470828		
92567366015	BB18749 MW-5	EPA 9320	470827		
92567366016	BB18750 MW-5 DUP	EPA 9320	470827		
92567366017	BB18751 MW-12	EPA 9320	470827		
92567366018	BB18752 MW-1	EPA 9320	470827		
92567366019	BB18753 MW-7	EPA 9320	470827		
92567366020	BB18754 MW-2VA	EPA 9320	470827		
92567366021	BB18755 MW-21VC	EPA 9320	470828		
92567366022	BB18756 FB-2	EPA 9320	470828		
92567366023	BB19012 MW-22VB	EPA 9320	470829		
92567366024	BB19012 MW-22VB MS	EPA 9320	470829		
92567366025	BB19012 MW-22VB MSD	EPA 9320	470829		
92567366026	BB19013 MW-19H	EPA 9320	470828		
92567366027	BB19014 MW-2	EPA 9320	470828		
92567366028	BB19015 FB-3	EPA 9320	470828		
92567366029	BB19016 MW-2VB	EPA 9320	470828		
92567366030	BB19017 MW-18H	EPA 9320	470828		
92567366031	BB19018 PZ-5	EPA 9320	470828		
92567366032	BB19019 PZ-6	EPA 9320	470828		
92567366033	BB19020 MW-4V	EPA 9320	470828		
92567366034	BB19021 MW-20H	EPA 9320	470828		
92567366035	BB19022 MW-10	EPA 9320	470828		
92567366036	BB19023 MW-14	EPA 9320	470828		
92567366037	BB19024 MW-14 DUP	EPA 9320	470828		
92567366038	BB19025 MW-8	EPA 9320	470828		
92567366039	BB19026 MW-9	EPA 9320	470828		
92567366040	BB19027 MW-11	EPA 9320	470828		
92567366041	BB19028 EB-1	EPA 9320	470829		
92567366001	BB18676 PZ-2	Total Radium Calculation	474984		
92567366002	BB18677 MW-6	Total Radium Calculation	474984		
92567366005	BB18678 MW-3	Total Radium Calculation	474984		
92567366006	BB18679 MW-4	Total Radium Calculation	474984		
92567366007	BB18680 MW-4 DUP	Total Radium Calculation	474984		
92567366008	BB18681 FB-1	Total Radium Calculation	474984		
92567366009	BB18682 MW-17	Total Radium Calculation	474984		
92567366010	BB18683 MW-16	Total Radium Calculation	474984		

### REPORT OF LABORATORY ANALYSIS

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

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GADSEDN ASH POND WMWGADAP\_1341-Revised Report  
Pace Project No.: 92567366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92567366011	BB18747 EB-2	Total Radium Calculation	474984		
92567366012	BB18748 PZ-1	Total Radium Calculation	474985		
92567366015	BB18749 MW-5	Total Radium Calculation	474984		
92567366016	BB18750 MW-5 DUP	Total Radium Calculation	474984		
92567366017	BB18751 MW-12	Total Radium Calculation	474984		
92567366018	BB18752 MW-1	Total Radium Calculation	474984		
92567366019	BB18753 MW-7	Total Radium Calculation	474984		
92567366020	BB18754 MW-2VA	Total Radium Calculation	474984		
92567366021	BB18755 MW-21VC	Total Radium Calculation	474985		
92567366022	BB18756 FB-2	Total Radium Calculation	474985		
92567366023	BB19012 MW-22VB	Total Radium Calculation	474986		
92567366026	BB19013 MW-19H	Total Radium Calculation	474985		
92567366027	BB19014 MW-2	Total Radium Calculation	474985		
92567366028	BB19015 FB-3	Total Radium Calculation	474985		
92567366029	BB19016 MW-2VB	Total Radium Calculation	474985		
92567366030	BB19017 MW-18H	Total Radium Calculation	474985		
92567366031	BB19018 PZ-5	Total Radium Calculation	474985		
92567366032	BB19019 PZ-6	Total Radium Calculation	474985		
92567366033	BB19020 MW-4V	Total Radium Calculation	474985		
92567366034	BB19021 MW-20H	Total Radium Calculation	474985		
92567366035	BB19022 MW-10	Total Radium Calculation	480068		
92567366036	BB19023 MW-14	Total Radium Calculation	474985		
92567366037	BB19024 MW-14 DUP	Total Radium Calculation	474985		
92567366038	BB19025 MW-8	Total Radium Calculation	474986		
92567366039	BB19026 MW-9	Total Radium Calculation	474986		
92567366040	BB19027 MW-11	Total Radium Calculation	474986		
92567366041	BB19028 EB-1	Total Radium Calculation	474986		

### REPORT OF LABORATORY ANALYSIS

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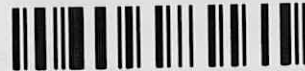
Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace NC

Proj

WO#: 92567366



92567366

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 5320 6279 3894

Label	<u>AE</u>
LIMS Login	<u>AE</u>

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:	pH paper Lot#			Date and Initials of person examining contents: <u>AE 10/20/21</u>
	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC: -Includes date/time/ID Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used: -Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
Organic Samples checked for dechlorination:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
All containers meet method preservation requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>AE</u> Date/time of preservation: <u>10/20/21</u>
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	18.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <u>AE</u> Date: <u>10/20/21</u> Survey Meter SN: <u>1503</u>

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

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

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

PH: RES  
CLIENT: PACE\_92\_HUNC  
Due Date: 11/17/21

WO#: 30446362



# CHAIN-OF-CUSTODY / Analytical Request Document


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

Section A Required Client Information: Company: Alabama Power Company Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040 Email To: lbmickl@southernco.com Phone: 205-664-6197 Requested Due Date: 28 days

Section B Required Project Information: Report To: Laura Mickliff Copy To: Brooke Catton & Renee Jernigan Purchase Order #: APC10700668 Project Name: Plant Gadsden Ash Pond Project Number: WNWGADAP 1341

Section C Invoice Information: Attention: Laura Mickliff Company Name: Alabama Power Co. Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040 PACE Project Manager: Kevin Herring@pacelabs.com Page Profile #: 13805

Page : 1 Of 4

ITEM #	SAMPLE ID (A-Z, 0-9, ., -) Sample IDs must be unique	MATRIX	CODE	COLLECTED		DATE		SAMPLE TEMP AT COLLECTION		PRESERVATIVES							ANALYSIS TEST				Residual Chlorine (Y/N)	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)									
				START	END	TIME	TIME	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	EPA 9315	EPA 9320	Total Radium Sum						Matrix Spike/Matrix Spike D								
1	BB18676	PZ-2	PZ-2	10/5/2021	11:00	1		1	X																									
2	BB18677	MW-5	GW/G	10/5/2021	12:10	3			X																									
3	BB18678	MW-3	GW/G	10/5/2021	13:25	1				X																								
4	BB18679	MW-4	GW/G	10/5/2021	14:35	1				X																								
5	BB18680	MW-4-DUP	GW/G	10/5/2021	14:35	1				X																								
6	BB18681	FB-1	GW/G	10/5/2021	15:30	1				X																								
7	BB18682	MW-17	GW/G	10/6/2021	8:45	1				X																								
8	BB18683	MW-16	GW/G	10/6/2021	10:10	1				X																								
9																																		
10																																		
11																																		
12																																		
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS																				
		Laura Mickliff / APC GTL		10/19/2021		12:45				10/19/21		0930																						

**W0# : 30446362**

PH : RES Due Date: 11/17/21  
CLIENT : PACE\_92\_HUNC

SAMPLER NAME AND SIGNATURE  
PRINT Name of SAMPLER:  
SIGNATURE of SAMPLER:  
DATE Signed:

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Alabama Power Company, 744 Highway 87 GSC Bldg #8, Calera, AL 35040

Section B Required Project Information: Report To: Laura Midkiff, Copy To: Brooke Cation & Renee Jernigan, Purchase Order #: APC10700668, Plant Gadsden Ash Pond, Project Number: WNWGADAP 1341

Section C Invoice Information: Attention: Laura Midkiff, Company Name: Alabama Power Co., Address: 744 Highway 87 GSC Bldg #8, Pace Quote: CCR, Pace Project Manager: Kevin.Herring@pacelabs.com, Pace Profile #: 13805

Requested Due Date: 28 days

Requested Analysis Filtered (Y/N):

State / Location: AL

Regulatory Agency:

Page: 2 Of 4

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9 / , -) Sample IDs must be unique</small>	MATRIX <small>Drinking Water Water Waste Water Process Surface Oil Wine Milk Other Tissue</small>	CODE <small>DW WT WW P SL WP OR TS</small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	TEMP in C	SAMPLE CONDITIONS																	
						START DATE	START TIME			END DATE	END TIME	Unpreserved	H2SO4	HNO3	HCl	NaOH					Na2S2O3	Methanol	Other	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)								
1	BB18747			EB-2	GW G	10/5/2021	10:20			1	X																											
2	BB18748			PZ-1	GW G	10/5/2021	11:00			3	X																											
3	BB18749			MW-5	GW G	10/5/2021	11:53			1	X																											
4	BB18750			MW-5-DUP	GW G	10/5/2021	11:53			1	X																											
5	BB18751			MW-12	GW G	10/5/2021	12:58			1	X																											
6	BB18752			MW-1	GW G	10/5/2021	14:18			1	X																											
7	BB18753			MW-7	GW G	10/5/2021	15:11			1	X																											
8	BB18754			MW-2VA	GW G	10/6/2021	10:25			1	X																											
9	BB18755			MW-21VC	GW G	10/6/2021	12:46			1	X																											
10	BB18756			FB-2	GW G	10/6/2021	13:15			1	X																											
11																																						
12																																						

**W0#: 30446362**

PM: AES  
Due Date: 11/17/21  
CLIENT: PRCE\_92\_HUNC

RELINQUISHED BY / AFFILIATION: Laura Midkiff/ APC GTL DATE: 10/13/2021 TIME: 12:45

ACCEPTED BY / AFFILIATION: *[Signature]* DATE: 10/14/21 TIME: 09:30

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_  
PRINT Name of SAMPLER: \_\_\_\_\_  
SIGNATURE of SAMPLER: \_\_\_\_\_ DATE Signed: \_\_\_\_\_

# CHAIN-OF-CUSTODY / Analytical Request Document

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


Section A Required Client Information: Alabama Power Company  
 Section B Required Project Information: Report To: Laura Midkiff  
 Section C Invoice Information: Attention: Laura Midkiff  
 Page : 3 Of 4

Company: Alabama Power Company  
 Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040  
 Email To: lmidkiff@southemco.com  
 Phone: 205-664-6197 Fax  
 Requested Due Date: 28 days

Copy To: Brooke Calton & Renee Jernigan  
 Purchase Order #: APC10700668  
 Project Name: Plant Gadsden Ash Pond  
 Project Number: WMWVGADAP 1341

Company Name: Alabama Power Co  
 Address: 744 Highway 87 GSC Bldg #8  
 Pace Quote: CCR  
 Pace Project Manager: Kevin.Herring@pacelabs.com  
 Pace Profile #: 13805

Regulatory Agency: State / Location: AL

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / -) Sample IDs must be unique	MATRIX Drinking Water DWP Water WV Waste Water WW Pond P Soils/Slud SL Oil OI Wipe WP Air AR Other OT Tissue TS	CODE DWP WV WW P SL OI WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	PRESERVATIVES								Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS																	
						START	END		UNPRESERVED	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other				EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D.	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)										
						DATE	TIME		DATE	TIME	# OF CONTAINERS																										
1	BB19012	MMW-22VB	GW/G	10/11/2021	11:37																																
2	BB19013	MMW-19H	GW/G	10/11/2021	12:57	1																															
3	BB19014	MMW-2	GW/G	10/11/2021	14:49	1																															
4	BB19015	FB-3	GW/G	10/11/2021	15:15	1																															
5	BB19016	MMW-2VB	GW/G	10/12/2021	9:28	1																															
6	BB19017	MMW-18H	GW/G	10/12/2021	11:17	1																															
7	BB19018	PZ-5	GW/G	10/12/2021	12:16	1																															
8	BB19019	PZ-6	GW/G	10/12/2021	13:40	1																															
9																																					
10																																					
11																																					
12																																					
ADDITIONAL COMMENTS:		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME																												
		Laura Midkiff / APC GTL		10/13/2021	12:45			10/14/21	0930																												

SAMPLER NAME AND SIGNATURE: \_\_\_\_\_  
 PRINT Name of SAMPLER: \_\_\_\_\_  
 SIGNATURE OF SAMPLER: \_\_\_\_\_  
 DATE Signed: \_\_\_\_\_

**MO#: 30446362**  
 Due Date: 11/17/21  
 PM: AES  
 CLIENT: PACE\_92\_HUNC

**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A  
Required Client Information:  
Company: Alabama Power Company  
Address: 744 Highway 87 GSC Bldg #8  
Calera, AL 35040  
Email To: lbmicki@southernco.com  
Phone: 205-684-6197 Fax  
Requested Due Date: 28 days

Section B  
Required Project Information:  
Report To: Laura Mickiff  
Copy To: Brooke Catton & Renee Jernigan  
Purchase Order #: APC10700668  
Project Name: Plant Gadsden Ash Pond  
Project Number: WMW/GADAP 1341

Section C  
Invoice Information:  
Attention: Laura Mickiff  
Company Name: Alabama Power Co.  
Address: 744 Highway 87 GSC Bldg #8  
Pace Quote: CCR  
Pace Project Manager: Kevin.Herring@pacelabs.com  
Pace Profile #: 13805

Regulatory Agency:   
State/Location:   
AL

Page : 4 Of 4

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / . - ) Sample IDs must be unique	MATRIX Drinking Water Waste Water Surface Other Tissue	CODE DW WT SW S O V A OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	EPA 9315	EPA 9320	Total Radium Sum	Matrix Spike/Matrix Spike D.	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS									
						START	END			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol								Other	Y/N	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)				
1	BB19020			MMW-4V	GW G	10/11/2021	12:40		1	X	X	X	X	X	X	X	X	X															
2	BB19021			MMW-20H	GW G	10/11/2021	13:30		1	X	X	X	X	X	X	X	X	X															
3	BB19022			MMW-10	GW G	10/11/2021	14:40		1	X	X	X	X	X	X	X	X	X															
4	BB19023			MMW-14	GW G	10/12/2021	8:30		1	X	X	X	X	X	X	X	X	X															
5	BB19024			MMW-14 DUP	GW G	10/12/2021	8:30		1	X	X	X	X	X	X	X	X	X															
6	BB19025			MMW-8	GW G	10/12/2021	10:48		1	X	X	X	X	X	X	X	X	X															
7	BB19026			MMW-9	GW G	10/12/2021	11:55		1	X	X	X	X	X	X	X	X	X															
8	BB19027			MMW-11	GW G	10/12/2021	12:55		1	X	X	X	X	X	X	X	X	X															
9	BB19028			EB-1	GW G	10/12/2021	13:30		1	X	X	X	X	X	X	X	X	X															
10																																	
11																																	
12																																	
ADDITIONAL COMMENTS						RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION							DATE	TIME	SAMPLE CONDITIONS														
						Laura Mickiff / APC GTL		10/13/2021	12:45	<i>Laura Mickiff</i>							10/14/21	09:30															

**WO# : 30446362**  
PM: AES Due Date: 11/17/21  
CLIENT: PACE\_92\_HUNC

SAMPLER NAME AND SIGNATURE  
PRINT Name of SAMPLER:  
SIGNATURE of SAMPLER:  
DATE Signed:

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JC2  
Date: 11/4/2021  
Worklist: 63440  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2272895
MB concentration:	0.897
M/B 2 Sigma CSU:	0.395
MB MDC:	0.647
MB Numerical Performance Indicator:	4.45
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:	11/8/2021	LCSD63440	LCSD63440
Spike I.D.:	21-029		
Decay Corrected Spike Concentration (pCi/mL):	37.538		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.817		
Target Conc. (pCi/L, g, F):	4.597		
Uncertainty (Calculated):	0.225		
Result (pCi/L, g, F):	4.495		
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.001		
Numerical Performance Indicator:	-0.19		
Percent Recovery:	97.78%		
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 Duplicate Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?		
Duplicate Numerical Performance Indicator:		
Duplicate 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:  
\*The method blank result is below the reporting limit for this analysis and is acceptable.

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/5/2021	
Sample I.D.:	92567366002	
Sample MS I.D.:	92567366003	
Sample MSD I.D.:	92567366004	
Spike I.D.:	21-029	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	37.961	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.803	
MS Target Conc. (pCi/L, g, F):	9.460	
MSD Aliquot (L, g, F):	0.812	
MSD Target Conc. (pCi/L, g, F):	9.345	
MS Spike Uncertainty (calculated):	0.464	
MSD Spike Uncertainty (calculated):	0.458	
Sample Result:	1.252	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.527	
Sample Matrix Spike Result:	13.581	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.628	
Sample Matrix Spike Duplicate Result:	14.894	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.862	
MS Numerical Performance Indicator:	2.068	
MSD Numerical Performance Indicator:	2.859	
MS Percent Recovery:	130.33%	
MSD Percent Recovery:	145.98%	
MS Status vs Numerical Indicator:	Warning	
MSD Status vs Numerical Indicator:	Warning	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	MSD High****	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92567366002
Sample MS I.D.:	92567366003
Sample MSD I.D.:	92567366004
Sample Matrix Spike Result:	13.581
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.628
Sample Matrix Spike Duplicate Result:	14.894
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.862
Duplicate Numerical Performance Indicator:	-0.662
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	11.33%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Passed NI criteria < 3  
for non-DW

*Wyllie*

# Quality Control Sample Performance Assessment

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 11/8/2021  
Worklist: 63441  
Matrix: WT



<b>Method Blank Assessment</b>	
MB Sample ID	2272896
MB concentration:	0.309
M/B 2 Sigma CSU:	0.352
MB MDC:	0.742
MB Numerical Performance Indicator:	1.72
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

<b>Laboratory Control Sample Assessment</b>	
Count Date:	11/15/2021
Spike I.D.:	LCSD63441
Decay Corrected Spike Concentration (pCi/mL):	21-029
Volume Used (mL):	37.451
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.820
Uncertainty (Calculated):	4.566
Result (pCi/L, g, F):	0.224
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	4.701
Numerical Performance Indicator:	1.062
Percent Recovery:	0.24
Status vs Numerical Indicator:	102.96%
Status vs Recovery:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	135%
	60%

<b>Duplicate Sample Assessment</b>	
Sample I.D.:	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
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:	See Below #
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:

<b>Sample Matrix Spike Control Assessment</b>	
Sample Collection Date:	10/5/2021
Sample I.D.:	92567366012
Sample MS I.D.:	92567366013
Sample MSD I.D.:	92567366014
Spike I.D.:	21-029
MMS/MSD Decay Corrected Spike Concentration (pCi/mL):	37.961
Spike Volume Used in MS (mL):	0.20
Spike Volume Used in MSD (mL):	0.20
MS Aliquot (L, g, F):	0.609
MSD Aliquot (L, g, F):	9.390
MS Target Conc. (pCi/L, g, F):	0.809
MSD Target Conc. (pCi/L, g, F):	9.384
MS Spike Uncertainty (calculated):	0.460
MSD Spike Uncertainty (calculated):	0.460
Sample Result:	1.992
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.628
Sample Matrix Spike Result:	7.936
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.635
Sample Matrix Spike Duplicate Result:	8.626
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.744
MS Numerical Performance Indicator:	-3.730
MSD Numerical Performance Indicator:	-2.822
MS Percent Recovery:	63.31%
MSD Percent Recovery:	70.69%
MS Status vs Numerical Indicator:	Fail****
MSD Status vs Numerical Indicator:	Warning
MS Status vs Recovery:	Pass
MSD Status vs Recovery:	Pass
MMS/MSD Upper % Recovery Limits:	135%
MMS/MSD Lower % Recovery Limits:	60%

<b>Matrix Spike/Matrix Duplicate Sample Assessment</b>	
Sample I.D.:	92567366012
Sample MS I.D.:	92567366013
Sample MSD I.D.:	92567366014
Matrix Spike Result:	7.936
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.635
Sample Matrix Spike Duplicate Result:	8.626
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.744
Duplicate Numerical Performance Indicator:	-0.566
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	11.03%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

*MS Passed % Recovery criteria*  
*11/11/2021*

\*\*\*\*LAI other GC 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.

# Quality Control Sample Performance Assessment

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: JC2  
Date: 11/18/2021  
Worksheet: 63442  
Matrix: WT



Method Blank Assessment	
MB Sample ID	2272897
MB concentration:	-0.007
MB 2 Sigma CSU:	0.282
MB MDC:	0.665
MB Numerical Performance Indicator:	-0.05
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
Count Date:	11/17/2021	LCSD63442	LCSD63442
Spike I.D.:	21-029		
Decay Corrected Spike Concentration (pCi/mL):	37.425		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.819		
Target Conc. (pCi/L, g, F):	4.571		
Uncertainty (Calculated):	0.224		
Result (pCi/L, g, F):	5.057		
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.123		
Numerical Performance Indicator:	0.83		
Percent Recovery:	110.62%		
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 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:

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/11/2021		
Sample I.D.:	92567366023		
Sample MS I.D.:	92567366024		
Sample MSD I.D.:	92567366025		
Spike I.D.:	21-029		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	37.886		
Spike Volume Used in MS (mL):	0.20		
Spike Volume Used in MSD (mL):	0.20		
MS Aliquot (L, g, F):	0.804		
MS Target Conc. (pCi/L, g, F):	9.426		
MSD Aliquot (L, g, F):	0.801		
MSD Target Conc. (pCi/L, g, F):	9.465		
MS Spike Uncertainty (calculated):	0.462		
MSD Spike Uncertainty (calculated):	0.464		
Sample Result:	0.113		
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.360		
Sample Matrix Spike Result:	8.485		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.737		
Sample Matrix Spike Duplicate Result:	8.752		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.778		
MS Numerical Performance Indicator:	-1.127		
MSD Numerical Performance Indicator:	-0.865		
MS Percent Recovery:	88.82%		
MSD Percent Recovery:	91.27%		
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		MS/MSD 1	MS/MSD 2
Sample I.D.:	92567366023		
Sample MS I.D.:	92567366024		
Sample MSD I.D.:	92567366025		
Sample Matrix Spike Result:	8.485		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.737		
Sample Matrix Spike Duplicate Result:	8.752		
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.778		
Duplicate Numerical Performance Indicator:	-0.210		
Duplicate Numerical Performance Indicator:	2.72%		
MS/MSD Duplicate Status vs Numerical Indicator:	Pass		
MS/MSD Duplicate Status vs RPD:	Pass		
% RPD Limit:	36%		

*11/18/2021*

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 11/13/2021  
Worklist: 63366  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2269079
MB concentration:	0.276
M/B Counting Uncertainty:	0.300
MB MDC:	0.633
MB Numerical Performance Indicator:	1.80
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD63366	LCSD63366
Count Date:	12/3/2021	12/3/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.032	24.032
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.207	0.207
Target Conc. (pCi/L, g, F):	11.923	11.615
Uncertainty (Calculated):	0.143	0.139
Result (pCi/L, g, F):	14.114	12.397
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	1.284	1.174
Numerical Performance Indicator:	3.32	1.30
Percent Recovery:	118.37%	106.73%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	
Sample I.D.:	LCSD63366
Duplicate Sample I.D.:	LCSD63366
Sample Result (pCi/L, g, F):	14.114
Duplicate Result (pCi/L, g, F):	1.284
Sample Result Counting Uncertainty (pCi/L, g, F):	12.397
Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.174
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.935
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.34%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1		MS/MSD 2	
	Sample Collection Date:	10/5/2021	Sample Collection Date:	10/5/2021
Sample I.D.:	92567366012	Sample I.D.:	92567366012	
Sample MS I.D.:	92567366013	Sample MS I.D.:	92567366013	
Spike I.D.:	19-033	Spike I.D.:	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.033	MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.033	
Spike Volume Used in MS (mL):	0.20	Spike Volume Used in MS (mL):	0.20	
MS Aliquot (L, g, F):	0.306	MS Aliquot (L, g, F):	0.306	
MSD Aliquot (L, g, F):	15.694	MSD Aliquot (L, g, F):	15.694	
MSD Target Conc. (pCi/L, g, F):	0.292	MSD Target Conc. (pCi/L, g, F):	0.292	
MS Spike Uncertainty (calculated):	16.471	MS Spike Uncertainty (calculated):	16.471	
MSD Spike Uncertainty (calculated):	0.188	MSD Spike Uncertainty (calculated):	0.188	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.076	Sample Result Counting Uncertainty (pCi/L, g, F):	0.173	
Sample Matrix Spike Result:	16.708	Sample Matrix Spike Result:	16.708	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.130	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.130	
Sample Matrix Spike Duplicate Result:	15.694	Sample Matrix Spike Duplicate Result:	15.694	
MS Numerical Performance Indicator:	1.110	MS Numerical Performance Indicator:	1.587	
MS Percent Recovery:	-1.465	MS Percent Recovery:	105.98%	
MSD Percent Recovery:	94.82%	MSD Percent Recovery:	94.82%	
MS Status vs Numerical Indicator:	N/A	MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:	N/A	MSD Status vs Numerical Indicator:	N/A	
MS Status vs Recovery:	Pass	MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	125%	MS/MSD Upper % Recovery Limits:	125%	
MS/MSD Lower % Recovery Limits:	75%	MS/MSD Lower % Recovery Limits:	75%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92567366012
Sample MS I.D.:	92567366013
Sample Matrix Spike Result:	16.708
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.130
Sample Matrix Spike Duplicate Result:	15.694
Duplicate Numerical Performance Indicator:	1.110
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	11.11%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD 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:

*012/13/21*



# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 11/13/2021  
Worklist: 63365  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2269074
MB concentration:	-0.023
M/B Counting Uncertainty:	0.117
MB MDC:	0.365
MB Numerical Performance Indicator:	-0.39
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS63365	LCS/D63365
Count Date:	12/3/2021	12/3/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.032	24.032
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.212	0.205
Target Conc. (pCi/L, g, F):	11.315	11.715
Uncertainty (Calculated):	0.136	0.141
Result (pCi/L, g, F):	11.063	14.724
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.142	1.298
Numerical Performance Indicator:	-0.43	4.52
Percent Recovery:	97.77%	125.69%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Fail High****
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS63365
Duplicate Sample I.D.:	LCS/D63365
Sample Result (pCi/L, g, F):	11.063
Sample Duplicate Result (pCi/L, g, F):	1.142
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	14.724
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.298
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-4.151
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	24.99%
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: LCSD fail high ok, all sample results < RL of 1.0 pCi/L

Apr 13/21

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/5/2021	
Sample I.D.:	92567366002	
Sample MS I.D.:	92567366003	
Sample MSD I.D.:	92567366004	
Spike I.D.:	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.033	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.260	
MS Target Conc. (pCi/L, g, F):	18.506	
MSD Aliquot (L, g, F):	0.287	
MSD Target Conc. (pCi/L, g, F):	16.727	
MS Spike Uncertainty (calculated):	0.222	
MSD Spike Uncertainty (calculated):	0.201	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.107	
Sample Matrix Spike Result:	0.155	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	18.302	
Sample Matrix Spike Duplicate Result:	1.237	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	17.888	
MS Numerical Performance Indicator:	1.181	
MSD Numerical Performance Indicator:	-0.482	
MS Percent Recovery:	1.709	
MSD Percent Recovery:	106.30%	
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.:	92567366002
Sample MS I.D.:	92567366003
Sample MSD I.D.:	92567366004
Sample Matrix Spike Result:	18.302
Sample Matrix Spike Duplicate Result:	1.237
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	17.888
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.181
Duplicate Numerical Performance Indicator:	0.474
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	7.80%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: LAL  
Date: 11/13/2021  
Worklist: 63367  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2269081
MB concentration:	0.522
MB Counting Uncertainty:	0.337
MB MDC:	0.615
MB Numerical Performance Indicator:	3.04
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	N
		LCSD63367	LCS63367
Count Date:	12/3/2021		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.032		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.201		
Target Conc. (pCi/L, g, F):	11.954		
Uncertainty (Calculated):	0.143		
Result (pCi/L, g, F):	12.295		
LCSD Counting Uncertainty (pCi/L, g, F):	1.198		
Numerical Performance Indicator:	0.55		
Percent Recovery:	102.85%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass		
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/11/2021		
Sample I.D.:	92567366023		
Sample MS I.D.:	92567366024		
Sample MSD I.D.:	92567366025		
Spike I.D.:	19-033		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.033		
Spike Volume Used in MS (mL):	0.20		
Spike Volume Used in MSD (mL):	0.20		
MS Aliquot (L, g, F):	0.273		
MS Target Conc. (pCi/L, g, F):	17.614		
MSD Aliquot (L, g, F):	0.297		
MSD Target Conc. (pCi/L, g, F):	16.202		
MS Spike Uncertainty (calculated):	0.211		
MSD Spike Uncertainty (calculated):	0.194		
Sample Result Counting Uncertainty (pCi/L, g, F):	1.179		
Sample Matrix Spike Result:	0.338		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.188		
Sample Matrix Spike Duplicate Result:	16.716		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.118		
MS Numerical Performance Indicator:	-3.408		
MSD Numerical Performance Indicator:	-1.101		
MS Percent Recovery:	87.64%		
MSD Percent Recovery:	95.89%		
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%		

Duplicate Sample Assessment	
Sample I.D.:	92567366023
Duplicate Sample I.D.:	92567366024
Sample Result (pCi/L, g, F):	16.615
Duplicate Result (pCi/L, g, F):	1.188
Sample Result Counting Uncertainty (pCi/L, g, F):	16.716
Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.118
Are sample and/or duplicate results below RL?	-0.120
Duplicate Numerical Performance Indicator:	9.00%
Duplicate RPDP:	N/A
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92567366023
Sample MS I.D.:	92567366024
Sample MSD I.D.:	92567366025
Sample Matrix Spike Result:	16.615
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.188
Sample Matrix Spike Duplicate Result:	16.716
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.118
Duplicate Numerical Performance Indicator:	-0.120
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	9.00%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD 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:

*M*  
*11/13/21*

*12-3-21*



**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-3	10/5/2021 13:06	Conductivity	625.28	uS/cm
APCO-GSD-AP-MW-3	10/5/2021 13:06	DO	0.09	mg/L
APCO-GSD-AP-MW-3	10/5/2021 13:06	Depth to Water Detail	13.2	ft
APCO-GSD-AP-MW-3	10/5/2021 13:06	Oxidation Reduction Potention	106	mv
APCO-GSD-AP-MW-3	10/5/2021 13:06	pH	5.79	SU
APCO-GSD-AP-MW-3	10/5/2021 13:06	Temperature	21.3	C
APCO-GSD-AP-MW-3	10/5/2021 13:06	Turbidity	0.83	NTU
APCO-GSD-AP-MW-3	10/5/2021 13:11	Conductivity	624.32	uS/cm
APCO-GSD-AP-MW-3	10/5/2021 13:11	DO	0.08	mg/L
APCO-GSD-AP-MW-3	10/5/2021 13:11	Depth to Water Detail	13.2	ft
APCO-GSD-AP-MW-3	10/5/2021 13:11	Oxidation Reduction Potention	103.83	mv
APCO-GSD-AP-MW-3	10/5/2021 13:11	pH	5.81	SU
APCO-GSD-AP-MW-3	10/5/2021 13:11	Temperature	21.26	C
APCO-GSD-AP-MW-3	10/5/2021 13:11	Turbidity	0.42	NTU
APCO-GSD-AP-MW-3	10/5/2021 13:16	Conductivity	622.8	uS/cm
APCO-GSD-AP-MW-3	10/5/2021 13:16	DO	0.07	mg/L
APCO-GSD-AP-MW-3	10/5/2021 13:16	Depth to Water Detail	13.2	ft
APCO-GSD-AP-MW-3	10/5/2021 13:16	Oxidation Reduction Potention	102.03	mv
APCO-GSD-AP-MW-3	10/5/2021 13:16	pH	5.82	SU
APCO-GSD-AP-MW-3	10/5/2021 13:16	Temperature	21.27	C
APCO-GSD-AP-MW-3	10/5/2021 13:16	Turbidity	0.68	NTU
APCO-GSD-AP-MW-3	10/5/2021 13:21	Conductivity	622.14	uS/cm
APCO-GSD-AP-MW-3	10/5/2021 13:21	DO	0.07	mg/L
APCO-GSD-AP-MW-3	10/5/2021 13:21	Depth to Water Detail	13.2	ft
APCO-GSD-AP-MW-3	10/5/2021 13:21	Oxidation Reduction Potention	103.16	mv
APCO-GSD-AP-MW-3	10/5/2021 13:21	pH	5.76	SU
APCO-GSD-AP-MW-3	10/5/2021 13:21	Temperature	21.28	C
APCO-GSD-AP-MW-3	10/5/2021 13:21	Turbidity	0.41	NTU

**Alabama Power Company  
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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-4	10/5/2021 14:04	Conductivity	435.02	uS/cm
APCO-GSD-AP-MW-4	10/5/2021 14:04	DO	0.81	mg/L
APCO-GSD-AP-MW-4	10/5/2021 14:04	Depth to Water Detail	7.02	ft
APCO-GSD-AP-MW-4	10/5/2021 14:04	Oxidation Reduction Potention	-47.11	mv
APCO-GSD-AP-MW-4	10/5/2021 14:04	pH	6.53	SU
APCO-GSD-AP-MW-4	10/5/2021 14:04	Temperature	20.75	C
APCO-GSD-AP-MW-4	10/5/2021 14:04	Turbidity	9.21	NTU
APCO-GSD-AP-MW-4	10/5/2021 14:09	Conductivity	436.22	uS/cm
APCO-GSD-AP-MW-4	10/5/2021 14:09	DO	0.68	mg/L
APCO-GSD-AP-MW-4	10/5/2021 14:09	Depth to Water Detail	7.05	ft
APCO-GSD-AP-MW-4	10/5/2021 14:09	Oxidation Reduction Potention	-55.98	mv
APCO-GSD-AP-MW-4	10/5/2021 14:09	pH	6.58	SU
APCO-GSD-AP-MW-4	10/5/2021 14:09	Temperature	20.74	C
APCO-GSD-AP-MW-4	10/5/2021 14:09	Turbidity	5.82	NTU
APCO-GSD-AP-MW-4	10/5/2021 14:14	Conductivity	435.27	uS/cm
APCO-GSD-AP-MW-4	10/5/2021 14:14	DO	0.1	mg/L
APCO-GSD-AP-MW-4	10/5/2021 14:14	Depth to Water Detail	7.06	ft
APCO-GSD-AP-MW-4	10/5/2021 14:14	Oxidation Reduction Potention	-61.76	mv
APCO-GSD-AP-MW-4	10/5/2021 14:14	pH	6.61	SU
APCO-GSD-AP-MW-4	10/5/2021 14:14	Temperature	20.91	C
APCO-GSD-AP-MW-4	10/5/2021 14:14	Turbidity	3.54	NTU
APCO-GSD-AP-MW-4	10/5/2021 14:19	Conductivity	398.32	uS/cm
APCO-GSD-AP-MW-4	10/5/2021 14:19	DO	1.53	mg/L
APCO-GSD-AP-MW-4	10/5/2021 14:19	Depth to Water Detail	7.06	ft
APCO-GSD-AP-MW-4	10/5/2021 14:19	Oxidation Reduction Potention	-65.31	mv
APCO-GSD-AP-MW-4	10/5/2021 14:19	pH	6.62	SU
APCO-GSD-AP-MW-4	10/5/2021 14:19	Temperature	20.98	C
APCO-GSD-AP-MW-4	10/5/2021 14:19	Turbidity	2.21	NTU
APCO-GSD-AP-MW-4	10/5/2021 14:24	Conductivity	432.79	uS/cm
APCO-GSD-AP-MW-4	10/5/2021 14:24	DO	0.38	mg/L
APCO-GSD-AP-MW-4	10/5/2021 14:24	Depth to Water Detail	7.06	ft
APCO-GSD-AP-MW-4	10/5/2021 14:24	Oxidation Reduction Potention	-68.5	mv
APCO-GSD-AP-MW-4	10/5/2021 14:24	pH	6.62	SU
APCO-GSD-AP-MW-4	10/5/2021 14:24	Temperature	20.95	C
APCO-GSD-AP-MW-4	10/5/2021 14:24	Turbidity	2.32	NTU
APCO-GSD-AP-MW-4	10/5/2021 14:29	Conductivity	431.74	uS/cm
APCO-GSD-AP-MW-4	10/5/2021 14:29	DO	0.37	mg/L
APCO-GSD-AP-MW-4	10/5/2021 14:29	Depth to Water Detail	7.06	ft
APCO-GSD-AP-MW-4	10/5/2021 14:29	Oxidation Reduction Potention	-68.02	mv
APCO-GSD-AP-MW-4	10/5/2021 14:29	pH	6.56	SU
APCO-GSD-AP-MW-4	10/5/2021 14:29	Temperature	20.82	C
APCO-GSD-AP-MW-4	10/5/2021 14:29	Turbidity	1.69	NTU
APCO-GSD-AP-MW-4	10/5/2021 14:34	Conductivity	431.22	uS/cm
APCO-GSD-AP-MW-4	10/5/2021 14:34	DO	0.11	mg/L
APCO-GSD-AP-MW-4	10/5/2021 14:34	Depth to Water Detail	7.06	ft
APCO-GSD-AP-MW-4	10/5/2021 14:34	Oxidation Reduction Potention	-70.59	mv
APCO-GSD-AP-MW-4	10/5/2021 14:34	pH	6.58	SU
APCO-GSD-AP-MW-4	10/5/2021 14:34	Temperature	20.73	C
APCO-GSD-AP-MW-4	10/5/2021 14:34	Turbidity	2.08	NTU

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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-6	10/5/2021 11:50	Conductivity	166.94	uS/cm
APCO-GSD-AP-MW-6	10/5/2021 11:50	DO	0.13	mg/L
APCO-GSD-AP-MW-6	10/5/2021 11:50	Depth to Water Detail	5.16	ft
APCO-GSD-AP-MW-6	10/5/2021 11:50	Oxidation Reduction Potention	101.57	mv
APCO-GSD-AP-MW-6	10/5/2021 11:50	pH	5.74	SU
APCO-GSD-AP-MW-6	10/5/2021 11:50	Temperature	20.14	C
APCO-GSD-AP-MW-6	10/5/2021 11:50	Turbidity	1.28	NTU
APCO-GSD-AP-MW-6	10/5/2021 11:55	Conductivity	167.39	uS/cm
APCO-GSD-AP-MW-6	10/5/2021 11:55	DO	0.12	mg/L
APCO-GSD-AP-MW-6	10/5/2021 11:55	Depth to Water Detail	5.16	ft
APCO-GSD-AP-MW-6	10/5/2021 11:55	Oxidation Reduction Potention	102.37	mv
APCO-GSD-AP-MW-6	10/5/2021 11:55	pH	5.66	SU
APCO-GSD-AP-MW-6	10/5/2021 11:55	Temperature	20.04	C
APCO-GSD-AP-MW-6	10/5/2021 11:55	Turbidity	1.24	NTU
APCO-GSD-AP-MW-6	10/5/2021 12:00	Conductivity	167	uS/cm
APCO-GSD-AP-MW-6	10/5/2021 12:00	DO	0.11	mg/L
APCO-GSD-AP-MW-6	10/5/2021 12:00	Depth to Water Detail	5.16	ft
APCO-GSD-AP-MW-6	10/5/2021 12:00	Oxidation Reduction Potention	101.7	mv
APCO-GSD-AP-MW-6	10/5/2021 12:00	pH	5.64	SU
APCO-GSD-AP-MW-6	10/5/2021 12:00	Temperature	20.04	C
APCO-GSD-AP-MW-6	10/5/2021 12:00	Turbidity	0.65	NTU
APCO-GSD-AP-MW-6	10/5/2021 12:05	Conductivity	166.61	uS/cm
APCO-GSD-AP-MW-6	10/5/2021 12:05	DO	0.11	mg/L
APCO-GSD-AP-MW-6	10/5/2021 12:05	Depth to Water Detail	5.16	ft
APCO-GSD-AP-MW-6	10/5/2021 12:05	Oxidation Reduction Potention	94.86	mv
APCO-GSD-AP-MW-6	10/5/2021 12:05	pH	5.74	SU
APCO-GSD-AP-MW-6	10/5/2021 12:05	Temperature	20.04	C
APCO-GSD-AP-MW-6	10/5/2021 12:05	Turbidity	0.56	NTU

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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-16	10/6/2021 9:53	Conductivity	289.46	uS/cm
APCO-GSD-AP-MW-16	10/6/2021 9:53	DO	4.05	mg/L
APCO-GSD-AP-MW-16	10/6/2021 9:53	Depth to Water Detail	26.02	ft
APCO-GSD-AP-MW-16	10/6/2021 9:53	Oxidation Reduction Potention	169.41	mv
APCO-GSD-AP-MW-16	10/6/2021 9:53	pH	4.14	SU
APCO-GSD-AP-MW-16	10/6/2021 9:53	Temperature	19.68	C
APCO-GSD-AP-MW-16	10/6/2021 9:53	Turbidity	9.08	NTU
APCO-GSD-AP-MW-16	10/6/2021 9:58	Conductivity	281.31	uS/cm
APCO-GSD-AP-MW-16	10/6/2021 9:58	DO	4.07	mg/L
APCO-GSD-AP-MW-16	10/6/2021 9:58	Depth to Water Detail	26.02	ft
APCO-GSD-AP-MW-16	10/6/2021 9:58	Oxidation Reduction Potention	167.94	mv
APCO-GSD-AP-MW-16	10/6/2021 9:58	pH	4.13	SU
APCO-GSD-AP-MW-16	10/6/2021 9:58	Temperature	19.7	C
APCO-GSD-AP-MW-16	10/6/2021 9:58	Turbidity	4.54	NTU
APCO-GSD-AP-MW-16	10/6/2021 10:03	Conductivity	275.83	uS/cm
APCO-GSD-AP-MW-16	10/6/2021 10:03	DO	4.11	mg/L
APCO-GSD-AP-MW-16	10/6/2021 10:03	Depth to Water Detail	26.02	ft
APCO-GSD-AP-MW-16	10/6/2021 10:03	Oxidation Reduction Potention	166.43	mv
APCO-GSD-AP-MW-16	10/6/2021 10:03	pH	4.14	SU
APCO-GSD-AP-MW-16	10/6/2021 10:03	Temperature	19.58	C
APCO-GSD-AP-MW-16	10/6/2021 10:03	Turbidity	3.63	NTU
APCO-GSD-AP-MW-16	10/6/2021 10:08	Conductivity	272.73	uS/cm
APCO-GSD-AP-MW-16	10/6/2021 10:08	DO	4.12	mg/L
APCO-GSD-AP-MW-16	10/6/2021 10:08	Depth to Water Detail	26.02	ft
APCO-GSD-AP-MW-16	10/6/2021 10:08	Oxidation Reduction Potention	164.32	mv
APCO-GSD-AP-MW-16	10/6/2021 10:08	pH	4.16	SU
APCO-GSD-AP-MW-16	10/6/2021 10:08	Temperature	19.55	C
APCO-GSD-AP-MW-16	10/6/2021 10:08	Turbidity	3.19	NTU

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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-17	10/6/2021 8:17	Conductivity	322.05	uS/cm
APCO-GSD-AP-MW-17	10/6/2021 8:17	DO	0.82	mg/L
APCO-GSD-AP-MW-17	10/6/2021 8:17	Depth to Water Detail	20.98	ft
APCO-GSD-AP-MW-17	10/6/2021 8:17	Oxidation Reduction Potention	103.34	mv
APCO-GSD-AP-MW-17	10/6/2021 8:17	pH	7.9	SU
APCO-GSD-AP-MW-17	10/6/2021 8:17	Temperature	20.52	C
APCO-GSD-AP-MW-17	10/6/2021 8:17	Turbidity	21.8	NTU
APCO-GSD-AP-MW-17	10/6/2021 8:22	Conductivity	320.08	uS/cm
APCO-GSD-AP-MW-17	10/6/2021 8:22	DO	0.72	mg/L
APCO-GSD-AP-MW-17	10/6/2021 8:22	Depth to Water Detail	21.52	ft
APCO-GSD-AP-MW-17	10/6/2021 8:22	Oxidation Reduction Potention	101.1	mv
APCO-GSD-AP-MW-17	10/6/2021 8:22	pH	7.85	SU
APCO-GSD-AP-MW-17	10/6/2021 8:22	Temperature	20.51	C
APCO-GSD-AP-MW-17	10/6/2021 8:22	Turbidity	17.2	NTU
APCO-GSD-AP-MW-17	10/6/2021 8:27	Conductivity	319.35	uS/cm
APCO-GSD-AP-MW-17	10/6/2021 8:27	DO	0.66	mg/L
APCO-GSD-AP-MW-17	10/6/2021 8:27	Depth to Water Detail	21.96	ft
APCO-GSD-AP-MW-17	10/6/2021 8:27	Oxidation Reduction Potention	93.71	mv
APCO-GSD-AP-MW-17	10/6/2021 8:27	pH	7.89	SU
APCO-GSD-AP-MW-17	10/6/2021 8:27	Temperature	20.49	C
APCO-GSD-AP-MW-17	10/6/2021 8:27	Turbidity	13.5	NTU
APCO-GSD-AP-MW-17	10/6/2021 8:32	Conductivity	318.52	uS/cm
APCO-GSD-AP-MW-17	10/6/2021 8:32	DO	0.66	mg/L
APCO-GSD-AP-MW-17	10/6/2021 8:32	Depth to Water Detail	22.03	ft
APCO-GSD-AP-MW-17	10/6/2021 8:32	Oxidation Reduction Potention	88.51	mv
APCO-GSD-AP-MW-17	10/6/2021 8:32	pH	7.9	SU
APCO-GSD-AP-MW-17	10/6/2021 8:32	Temperature	20.48	C
APCO-GSD-AP-MW-17	10/6/2021 8:32	Turbidity	12	NTU
APCO-GSD-AP-MW-17	10/6/2021 8:37	Conductivity	318.41	uS/cm
APCO-GSD-AP-MW-17	10/6/2021 8:37	DO	0.65	mg/L
APCO-GSD-AP-MW-17	10/6/2021 8:37	Depth to Water Detail	22.14	ft
APCO-GSD-AP-MW-17	10/6/2021 8:37	Oxidation Reduction Potention	82.63	mv
APCO-GSD-AP-MW-17	10/6/2021 8:37	pH	7.91	SU
APCO-GSD-AP-MW-17	10/6/2021 8:37	Temperature	20.48	C
APCO-GSD-AP-MW-17	10/6/2021 8:37	Turbidity	10.31	NTU
APCO-GSD-AP-MW-17	10/6/2021 8:42	Conductivity	317.65	uS/cm
APCO-GSD-AP-MW-17	10/6/2021 8:42	DO	0.64	mg/L
APCO-GSD-AP-MW-17	10/6/2021 8:42	Depth to Water Detail	22.27	ft
APCO-GSD-AP-MW-17	10/6/2021 8:42	Oxidation Reduction Potention	79.35	mv
APCO-GSD-AP-MW-17	10/6/2021 8:42	pH	7.92	SU
APCO-GSD-AP-MW-17	10/6/2021 8:42	Temperature	20.5	C
APCO-GSD-AP-MW-17	10/6/2021 8:42	Turbidity	8.25	NTU



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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-PZ-2	10/5/2021 10:20	Conductivity	88.61	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:20	DO	0.6	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:20	Depth to Water Detail	8.96	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:20	Oxidation Reduction Potention	110.45	mv
APCO-GSD-AP-PZ-2	10/5/2021 10:20	pH	5.24	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:20	Temperature	21.08	C
APCO-GSD-AP-PZ-2	10/5/2021 10:20	Turbidity	7.4	NTU
APCO-GSD-AP-PZ-2	10/5/2021 10:25	Conductivity	89.81	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:25	DO	0.53	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:25	Depth to Water Detail	9.03	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:25	Oxidation Reduction Potention	114.73	mv
APCO-GSD-AP-PZ-2	10/5/2021 10:25	pH	5.27	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:25	Temperature	21.04	C
APCO-GSD-AP-PZ-2	10/5/2021 10:25	Turbidity	5.79	NTU
APCO-GSD-AP-PZ-2	10/5/2021 10:30	Conductivity	90.87	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:30	DO	0.49	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:30	Depth to Water Detail	9.11	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:30	Oxidation Reduction Potention	123.59	mv
APCO-GSD-AP-PZ-2	10/5/2021 10:30	pH	5.13	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:30	Temperature	21	C
APCO-GSD-AP-PZ-2	10/5/2021 10:30	Turbidity	6.91	NTU
APCO-GSD-AP-PZ-2	10/5/2021 10:35	Conductivity	98.58	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:35	DO	0.48	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:35	Depth to Water Detail	9.11	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:35	Oxidation Reduction Potention	124.04	mv
APCO-GSD-AP-PZ-2	10/5/2021 10:35	pH	5.17	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:35	Temperature	20.97	C
APCO-GSD-AP-PZ-2	10/5/2021 10:35	Turbidity	7.15	NTU
APCO-GSD-AP-PZ-2	10/5/2021 10:40	Conductivity	140.99	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:40	DO	0.49	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:40	Depth to Water Detail	9.11	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:40	Oxidation Reduction Potention	112.61	mv
APCO-GSD-AP-PZ-2	10/5/2021 10:40	pH	5.5	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:40	Temperature	21.02	C
APCO-GSD-AP-PZ-2	10/5/2021 10:40	Turbidity	6.98	NTU
APCO-GSD-AP-PZ-2	10/5/2021 10:45	Conductivity	161.33	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:45	DO	0.49	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:45	Depth to Water Detail	9.11	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:45	Oxidation Reduction Potention	107.55	mv
APCO-GSD-AP-PZ-2	10/5/2021 10:45	pH	5.66	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:45	Temperature	21.05	C
APCO-GSD-AP-PZ-2	10/5/2021 10:45	Turbidity	6.3	NTU
APCO-GSD-AP-PZ-2	10/5/2021 10:50	Conductivity	165.64	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:50	DO	0.53	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:50	Depth to Water Detail	9.11	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:50	Oxidation Reduction Potention	105.05	mv
APCO-GSD-AP-PZ-2	10/5/2021 10:50	pH	5.7	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:50	Temperature	21.08	C
APCO-GSD-AP-PZ-2	10/5/2021 10:50	Turbidity	4.96	NTU
APCO-GSD-AP-PZ-2	10/5/2021 10:55	Conductivity	165.56	uS/cm
APCO-GSD-AP-PZ-2	10/5/2021 10:55	DO	0.53	mg/L
APCO-GSD-AP-PZ-2	10/5/2021 10:55	Depth to Water Detail	9.11	ft
APCO-GSD-AP-PZ-2	10/5/2021 10:55	Oxidation Reduction Potention	104.67	mv

**Alabama Power Company  
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<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-PZ-2	10/5/2021 10:55	pH	5.72	SU
APCO-GSD-AP-PZ-2	10/5/2021 10:55	Temperature	21.06	C
APCO-GSD-AP-PZ-2	10/5/2021 10:55	Turbidity	4.86	NTU

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<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-1	10/5/2021 14:00	Conductivity	1210.63	uS/cm
APCO-GSD-AP-MW-1	10/5/2021 14:00	DO	0.23	mg/L
APCO-GSD-AP-MW-1	10/5/2021 14:00	Depth to Water Detail	12.66	ft
APCO-GSD-AP-MW-1	10/5/2021 14:00	Oxidation Reduction Potention	110.69	mv
APCO-GSD-AP-MW-1	10/5/2021 14:00	pH	5.75	SU
APCO-GSD-AP-MW-1	10/5/2021 14:00	Temperature	18.55	C
APCO-GSD-AP-MW-1	10/5/2021 14:00	Turbidity	4.89	NTU
APCO-GSD-AP-MW-1	10/5/2021 14:05	Conductivity	1205.99	uS/cm
APCO-GSD-AP-MW-1	10/5/2021 14:05	DO	0.19	mg/L
APCO-GSD-AP-MW-1	10/5/2021 14:05	Depth to Water Detail	12.66	ft
APCO-GSD-AP-MW-1	10/5/2021 14:05	Oxidation Reduction Potention	108.83	mv
APCO-GSD-AP-MW-1	10/5/2021 14:05	pH	5.76	SU
APCO-GSD-AP-MW-1	10/5/2021 14:05	Temperature	18.57	C
APCO-GSD-AP-MW-1	10/5/2021 14:05	Turbidity	3.06	NTU
APCO-GSD-AP-MW-1	10/5/2021 14:10	Conductivity	1202.77	uS/cm
APCO-GSD-AP-MW-1	10/5/2021 14:10	DO	0.18	mg/L
APCO-GSD-AP-MW-1	10/5/2021 14:10	Depth to Water Detail	12.66	ft
APCO-GSD-AP-MW-1	10/5/2021 14:10	Oxidation Reduction Potention	106.88	mv
APCO-GSD-AP-MW-1	10/5/2021 14:10	pH	5.72	SU
APCO-GSD-AP-MW-1	10/5/2021 14:10	Temperature	18.62	C
APCO-GSD-AP-MW-1	10/5/2021 14:10	Turbidity	2.3	NTU
APCO-GSD-AP-MW-1	10/5/2021 14:15	Conductivity	1200.42	uS/cm
APCO-GSD-AP-MW-1	10/5/2021 14:15	DO	0.16	mg/L
APCO-GSD-AP-MW-1	10/5/2021 14:15	Depth to Water Detail	12.66	ft
APCO-GSD-AP-MW-1	10/5/2021 14:15	Oxidation Reduction Potention	104.55	mv
APCO-GSD-AP-MW-1	10/5/2021 14:15	pH	5.79	SU
APCO-GSD-AP-MW-1	10/5/2021 14:15	Temperature	18.8	C
APCO-GSD-AP-MW-1	10/5/2021 14:15	Turbidity	2.76	NTU

**Alabama Power Company  
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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-2VA	10/6/2021 8:57	Conductivity	522.29	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 8:57	DO	0.29	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 8:57	Depth to Water Detail	16.07	ft
APCO-GSD-AP-MW-2VA	10/6/2021 8:57	Oxidation Reduction Potention	-150.49	mv
APCO-GSD-AP-MW-2VA	10/6/2021 8:57	pH	8.08	SU
APCO-GSD-AP-MW-2VA	10/6/2021 8:57	Temperature	19.49	C
APCO-GSD-AP-MW-2VA	10/6/2021 8:57	Turbidity	1.12	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:02	Conductivity	523.66	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:02	DO	0.26	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:02	Depth to Water Detail	18.24	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:02	Oxidation Reduction Potention	-156.33	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:02	pH	8.14	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:02	Temperature	19.47	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:02	Turbidity	1.04	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:07	Conductivity	522.44	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:07	DO	0.25	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:07	Depth to Water Detail	20.33	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:07	Oxidation Reduction Potention	-159.72	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:07	pH	8.18	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:07	Temperature	19.5	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:07	Turbidity	0.92	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:12	Conductivity	524.13	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:12	DO	0.66	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:12	Depth to Water Detail	20.78	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:12	Oxidation Reduction Potention	-152.59	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:12	pH	8.21	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:12	Temperature	20.91	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:12	Turbidity	0.84	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:17	Conductivity	522.7	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:17	DO	0.8	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:17	Depth to Water Detail	21.04	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:17	Oxidation Reduction Potention	-149.55	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:17	pH	8.23	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:17	Temperature	20.96	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:17	Turbidity	1.23	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:22	Conductivity	520.95	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:22	DO	0.83	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:22	Depth to Water Detail	21.23	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:22	Oxidation Reduction Potention	-150.64	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:22	pH	8.26	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:22	Temperature	21.1	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:22	Turbidity	1.18	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:27	Conductivity	518.65	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:27	DO	0.82	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:27	Depth to Water Detail	21.64	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:27	Oxidation Reduction Potention	-152.34	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:27	pH	8.34	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:27	Temperature	21.55	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:27	Turbidity	0.98	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:32	Conductivity	515.35	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:32	DO	0.83	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:32	Depth to Water Detail	21.81	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:32	Oxidation Reduction Potention	-153.68	mv

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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-2VA	10/6/2021 9:32	pH	8.36	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:32	Temperature	21.73	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:32	Turbidity	0.62	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:37	Conductivity	510.02	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:37	DO	0.84	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:37	Depth to Water Detail	22.08	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:37	Oxidation Reduction Potention	-153.65	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:37	pH	8.35	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:37	Temperature	21.62	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:37	Turbidity	0.61	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:42	Conductivity	503.68	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:42	DO	0.84	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:42	Depth to Water Detail	22.33	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:42	Oxidation Reduction Potention	-154.25	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:42	pH	8.35	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:42	Temperature	21.61	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:42	Turbidity	0.69	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:47	Conductivity	500.82	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:47	DO	0.81	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:47	Depth to Water Detail	22.58	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:47	Oxidation Reduction Potention	-155.72	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:47	pH	8.36	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:47	Temperature	21.64	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:47	Turbidity	0.63	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:52	Conductivity	496.76	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:52	DO	0.8	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:52	Depth to Water Detail	22.81	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:52	Oxidation Reduction Potention	-156.95	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:52	pH	8.38	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:52	Temperature	22.34	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:52	Turbidity	0.74	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 9:57	Conductivity	494.74	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 9:57	DO	0.81	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 9:57	Depth to Water Detail	23.04	ft
APCO-GSD-AP-MW-2VA	10/6/2021 9:57	Oxidation Reduction Potention	-157.45	mv
APCO-GSD-AP-MW-2VA	10/6/2021 9:57	pH	8.4	SU
APCO-GSD-AP-MW-2VA	10/6/2021 9:57	Temperature	22.71	C
APCO-GSD-AP-MW-2VA	10/6/2021 9:57	Turbidity	0.71	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 10:02	Conductivity	490.45	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 10:02	DO	0.81	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 10:02	Depth to Water Detail	23.22	ft
APCO-GSD-AP-MW-2VA	10/6/2021 10:02	Oxidation Reduction Potention	-156.68	mv
APCO-GSD-AP-MW-2VA	10/6/2021 10:02	pH	8.37	SU
APCO-GSD-AP-MW-2VA	10/6/2021 10:02	Temperature	22.74	C
APCO-GSD-AP-MW-2VA	10/6/2021 10:02	Turbidity	0.61	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 10:07	Conductivity	485.36	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 10:07	DO	0.82	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 10:07	Depth to Water Detail	23.4	ft
APCO-GSD-AP-MW-2VA	10/6/2021 10:07	Oxidation Reduction Potention	-157.6	mv
APCO-GSD-AP-MW-2VA	10/6/2021 10:07	pH	8.37	SU
APCO-GSD-AP-MW-2VA	10/6/2021 10:07	Temperature	21.81	C
APCO-GSD-AP-MW-2VA	10/6/2021 10:07	Turbidity	0.64	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 10:12	Conductivity	482.23	uS/cm

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<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-2VA	10/6/2021 10:12	DO	0.82	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 10:12	Depth to Water Detail	23.58	ft
APCO-GSD-AP-MW-2VA	10/6/2021 10:12	Oxidation Reduction Potention	-157.78	mv
APCO-GSD-AP-MW-2VA	10/6/2021 10:12	pH	8.43	SU
APCO-GSD-AP-MW-2VA	10/6/2021 10:12	Temperature	22.71	C
APCO-GSD-AP-MW-2VA	10/6/2021 10:12	Turbidity	0.52	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 10:17	Conductivity	476.49	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 10:17	DO	0.82	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 10:17	Depth to Water Detail	23.72	ft
APCO-GSD-AP-MW-2VA	10/6/2021 10:17	Oxidation Reduction Potention	-159.56	mv
APCO-GSD-AP-MW-2VA	10/6/2021 10:17	pH	8.4	SU
APCO-GSD-AP-MW-2VA	10/6/2021 10:17	Temperature	22.6	C
APCO-GSD-AP-MW-2VA	10/6/2021 10:17	Turbidity	0.56	NTU
APCO-GSD-AP-MW-2VA	10/6/2021 10:22	Conductivity	470.65	uS/cm
APCO-GSD-AP-MW-2VA	10/6/2021 10:22	DO	0.82	mg/L
APCO-GSD-AP-MW-2VA	10/6/2021 10:22	Depth to Water Detail	23.86	ft
APCO-GSD-AP-MW-2VA	10/6/2021 10:22	Oxidation Reduction Potention	-157.17	mv
APCO-GSD-AP-MW-2VA	10/6/2021 10:22	pH	8.36	SU
APCO-GSD-AP-MW-2VA	10/6/2021 10:22	Temperature	22.4	C
APCO-GSD-AP-MW-2VA	10/6/2021 10:22	Turbidity	0.62	NTU

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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-5	10/5/2021 11:35	Conductivity	274.31	uS/cm
APCO-GSD-AP-MW-5	10/5/2021 11:35	DO	0.36	mg/L
APCO-GSD-AP-MW-5	10/5/2021 11:35	Depth to Water Detail	5.28	ft
APCO-GSD-AP-MW-5	10/5/2021 11:35	Oxidation Reduction Potention	45	mv
APCO-GSD-AP-MW-5	10/5/2021 11:35	pH	6.34	SU
APCO-GSD-AP-MW-5	10/5/2021 11:35	Temperature	20.93	C
APCO-GSD-AP-MW-5	10/5/2021 11:35	Turbidity	5.52	NTU
APCO-GSD-AP-MW-5	10/5/2021 11:40	Conductivity	266.49	uS/cm
APCO-GSD-AP-MW-5	10/5/2021 11:40	DO	0.3	mg/L
APCO-GSD-AP-MW-5	10/5/2021 11:40	Depth to Water Detail	5.28	ft
APCO-GSD-AP-MW-5	10/5/2021 11:40	Oxidation Reduction Potention	64.8	mv
APCO-GSD-AP-MW-5	10/5/2021 11:40	pH	6.29	SU
APCO-GSD-AP-MW-5	10/5/2021 11:40	Temperature	21.02	C
APCO-GSD-AP-MW-5	10/5/2021 11:40	Turbidity	3.38	NTU
APCO-GSD-AP-MW-5	10/5/2021 11:45	Conductivity	266.24	uS/cm
APCO-GSD-AP-MW-5	10/5/2021 11:45	DO	0.24	mg/L
APCO-GSD-AP-MW-5	10/5/2021 11:45	Depth to Water Detail	5.28	ft
APCO-GSD-AP-MW-5	10/5/2021 11:45	Oxidation Reduction Potention	68.78	mv
APCO-GSD-AP-MW-5	10/5/2021 11:45	pH	6.27	SU
APCO-GSD-AP-MW-5	10/5/2021 11:45	Temperature	21.07	C
APCO-GSD-AP-MW-5	10/5/2021 11:45	Turbidity	2.93	NTU
APCO-GSD-AP-MW-5	10/5/2021 11:50	Conductivity	267.75	uS/cm
APCO-GSD-AP-MW-5	10/5/2021 11:50	DO	0.22	mg/L
APCO-GSD-AP-MW-5	10/5/2021 11:50	Depth to Water Detail	5.28	ft
APCO-GSD-AP-MW-5	10/5/2021 11:50	Oxidation Reduction Potention	69.13	mv
APCO-GSD-AP-MW-5	10/5/2021 11:50	pH	6.24	SU
APCO-GSD-AP-MW-5	10/5/2021 11:50	Temperature	21.08	C
APCO-GSD-AP-MW-5	10/5/2021 11:50	Turbidity	2.81	NTU

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<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-7	10/5/2021 14:53	Conductivity	174.57	uS/cm
APCO-GSD-AP-MW-7	10/5/2021 14:53	DO	0.3	mg/L
APCO-GSD-AP-MW-7	10/5/2021 14:53	Depth to Water Detail	11.66	ft
APCO-GSD-AP-MW-7	10/5/2021 14:53	Oxidation Reduction Potention	113.13	mv
APCO-GSD-AP-MW-7	10/5/2021 14:53	pH	6.02	SU
APCO-GSD-AP-MW-7	10/5/2021 14:53	Temperature	19.15	C
APCO-GSD-AP-MW-7	10/5/2021 14:53	Turbidity	1.33	NTU
APCO-GSD-AP-MW-7	10/5/2021 14:58	Conductivity	168.43	uS/cm
APCO-GSD-AP-MW-7	10/5/2021 14:58	DO	0.26	mg/L
APCO-GSD-AP-MW-7	10/5/2021 14:58	Depth to Water Detail	11.66	ft
APCO-GSD-AP-MW-7	10/5/2021 14:58	Oxidation Reduction Potention	119.06	mv
APCO-GSD-AP-MW-7	10/5/2021 14:58	pH	6.02	SU
APCO-GSD-AP-MW-7	10/5/2021 14:58	Temperature	19.15	C
APCO-GSD-AP-MW-7	10/5/2021 14:58	Turbidity	1.09	NTU
APCO-GSD-AP-MW-7	10/5/2021 15:03	Conductivity	164.36	uS/cm
APCO-GSD-AP-MW-7	10/5/2021 15:03	DO	0.24	mg/L
APCO-GSD-AP-MW-7	10/5/2021 15:03	Depth to Water Detail	11.66	ft
APCO-GSD-AP-MW-7	10/5/2021 15:03	Oxidation Reduction Potention	120.15	mv
APCO-GSD-AP-MW-7	10/5/2021 15:03	pH	6.02	SU
APCO-GSD-AP-MW-7	10/5/2021 15:03	Temperature	19.08	C
APCO-GSD-AP-MW-7	10/5/2021 15:03	Turbidity	1.05	NTU
APCO-GSD-AP-MW-7	10/5/2021 15:08	Conductivity	162.09	uS/cm
APCO-GSD-AP-MW-7	10/5/2021 15:08	DO	0.22	mg/L
APCO-GSD-AP-MW-7	10/5/2021 15:08	Depth to Water Detail	11.66	ft
APCO-GSD-AP-MW-7	10/5/2021 15:08	Oxidation Reduction Potention	120.03	mv
APCO-GSD-AP-MW-7	10/5/2021 15:08	pH	6.06	SU
APCO-GSD-AP-MW-7	10/5/2021 15:08	Temperature	19.14	C
APCO-GSD-AP-MW-7	10/5/2021 15:08	Turbidity	0.99	NTU



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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-12	10/5/2021 12:35	Conductivity	211.47	uS/cm
APCO-GSD-AP-MW-12	10/5/2021 12:35	DO	0.25	mg/L
APCO-GSD-AP-MW-12	10/5/2021 12:35	Depth to Water Detail	10.88	ft
APCO-GSD-AP-MW-12	10/5/2021 12:35	Oxidation Reduction Potention	150.09	mv
APCO-GSD-AP-MW-12	10/5/2021 12:35	pH	5.19	SU
APCO-GSD-AP-MW-12	10/5/2021 12:35	Temperature	18.63	C
APCO-GSD-AP-MW-12	10/5/2021 12:35	Turbidity	0.65	NTU
APCO-GSD-AP-MW-12	10/5/2021 12:40	Conductivity	482.94	uS/cm
APCO-GSD-AP-MW-12	10/5/2021 12:40	DO	0.18	mg/L
APCO-GSD-AP-MW-12	10/5/2021 12:40	Depth to Water Detail	10.88	ft
APCO-GSD-AP-MW-12	10/5/2021 12:40	Oxidation Reduction Potention	154.38	mv
APCO-GSD-AP-MW-12	10/5/2021 12:40	pH	5.19	SU
APCO-GSD-AP-MW-12	10/5/2021 12:40	Temperature	18.48	C
APCO-GSD-AP-MW-12	10/5/2021 12:40	Turbidity	0.55	NTU
APCO-GSD-AP-MW-12	10/5/2021 12:45	Conductivity	508.62	uS/cm
APCO-GSD-AP-MW-12	10/5/2021 12:45	DO	0.16	mg/L
APCO-GSD-AP-MW-12	10/5/2021 12:45	Depth to Water Detail	10.88	ft
APCO-GSD-AP-MW-12	10/5/2021 12:45	Oxidation Reduction Potention	163.63	mv
APCO-GSD-AP-MW-12	10/5/2021 12:45	pH	5.15	SU
APCO-GSD-AP-MW-12	10/5/2021 12:45	Temperature	18.46	C
APCO-GSD-AP-MW-12	10/5/2021 12:45	Turbidity	0.47	NTU
APCO-GSD-AP-MW-12	10/5/2021 12:50	Conductivity	509.13	uS/cm
APCO-GSD-AP-MW-12	10/5/2021 12:50	DO	0.15	mg/L
APCO-GSD-AP-MW-12	10/5/2021 12:50	Depth to Water Detail	10.88	ft
APCO-GSD-AP-MW-12	10/5/2021 12:50	Oxidation Reduction Potention	165.65	mv
APCO-GSD-AP-MW-12	10/5/2021 12:50	pH	5.16	SU
APCO-GSD-AP-MW-12	10/5/2021 12:50	Temperature	18.45	C
APCO-GSD-AP-MW-12	10/5/2021 12:50	Turbidity	0.41	NTU
APCO-GSD-AP-MW-12	10/5/2021 12:55	Conductivity	510.48	uS/cm
APCO-GSD-AP-MW-12	10/5/2021 12:55	DO	0.14	mg/L
APCO-GSD-AP-MW-12	10/5/2021 12:55	Depth to Water Detail	10.88	ft
APCO-GSD-AP-MW-12	10/5/2021 12:55	Oxidation Reduction Potention	164.29	mv
APCO-GSD-AP-MW-12	10/5/2021 12:55	pH	5.19	SU
APCO-GSD-AP-MW-12	10/5/2021 12:55	Temperature	18.44	C
APCO-GSD-AP-MW-12	10/5/2021 12:55	Turbidity	0.39	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-21VC	10/6/2021 11:23	Conductivity	1572.76	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:23	DO	0.21	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:23	Depth to Water Detail	10.61	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:23	Oxidation Reduction Potention	-98.88	mv
APCO-GSD-AP-MW-21VC	10/6/2021 11:23	pH	8.19	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:23	Temperature	19.06	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:23	Turbidity	31	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 11:28	Conductivity	1559.46	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:28	DO	0.16	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:28	Depth to Water Detail	12.36	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:28	Oxidation Reduction Potention	-126.52	mv
APCO-GSD-AP-MW-21VC	10/6/2021 11:28	pH	8.3	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:28	Temperature	18.83	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:28	Turbidity	23.9	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 11:33	Conductivity	1558.24	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:33	DO	0.15	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:33	Depth to Water Detail	13.38	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:33	Oxidation Reduction Potention	-138.54	mv
APCO-GSD-AP-MW-21VC	10/6/2021 11:33	pH	8.32	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:33	Temperature	18.69	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:33	Turbidity	19.6	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 11:38	Conductivity	1517.66	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:38	DO	0.13	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:38	Depth to Water Detail	14.13	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:38	Oxidation Reduction Potention	-143.93	mv
APCO-GSD-AP-MW-21VC	10/6/2021 11:38	pH	8.3	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:38	Temperature	18.72	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:38	Turbidity	15.9	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 11:43	Conductivity	1465.41	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:43	DO	0.13	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:43	Depth to Water Detail	14.96	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:43	Oxidation Reduction Potention	-147.29	mv
APCO-GSD-AP-MW-21VC	10/6/2021 11:43	pH	8.3	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:43	Temperature	18.71	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:43	Turbidity	14.6	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 11:48	Conductivity	1535.45	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:48	DO	0.12	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:48	Depth to Water Detail	15.62	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:48	Oxidation Reduction Potention	-150.41	mv
APCO-GSD-AP-MW-21VC	10/6/2021 11:48	pH	8.4	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:48	Temperature	18.66	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:48	Turbidity	13.2	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 11:53	Conductivity	1516.55	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:53	DO	0.12	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:53	Depth to Water Detail	16.3	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:53	Oxidation Reduction Potention	-151.84	mv
APCO-GSD-AP-MW-21VC	10/6/2021 11:53	pH	8.42	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:53	Temperature	18.66	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:53	Turbidity	12.4	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 11:58	Conductivity	1415.78	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 11:58	DO	0.16	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 11:58	Depth to Water Detail	16.13	ft
APCO-GSD-AP-MW-21VC	10/6/2021 11:58	Oxidation Reduction Potention	-151.97	mv

**Alabama Power Company  
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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-21VC	10/6/2021 11:58	pH	8.46	SU
APCO-GSD-AP-MW-21VC	10/6/2021 11:58	Temperature	19.21	C
APCO-GSD-AP-MW-21VC	10/6/2021 11:58	Turbidity	15.9	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:03	Conductivity	1479.28	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:03	DO	0.18	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:03	Depth to Water Detail	16	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:03	Oxidation Reduction Potention	-152.75	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:03	pH	8.47	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:03	Temperature	19.2	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:03	Turbidity	13.3	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:08	Conductivity	1427.23	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:08	DO	0.17	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:08	Depth to Water Detail	15.94	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:08	Oxidation Reduction Potention	-153.23	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:08	pH	8.45	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:08	Temperature	19.08	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:08	Turbidity	11.7	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:13	Conductivity	1455.36	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:13	DO	0.18	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:13	Depth to Water Detail	15.92	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:13	Oxidation Reduction Potention	-153.38	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:13	pH	8.5	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:13	Temperature	19.14	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:13	Turbidity	11.6	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:18	Conductivity	1404.59	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:18	DO	0.17	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:18	Depth to Water Detail	15.96	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:18	Oxidation Reduction Potention	-153.8	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:18	pH	8.46	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:18	Temperature	19.08	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:18	Turbidity	11.2	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:23	Conductivity	1367.86	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:23	DO	0.17	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:23	Depth to Water Detail	16.1	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:23	Oxidation Reduction Potention	-154.33	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:23	pH	8.49	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:23	Temperature	19.08	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:23	Turbidity	11.1	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:28	Conductivity	1338.86	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:28	DO	0.17	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:28	Depth to Water Detail	16.23	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:28	Oxidation Reduction Potention	-154.63	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:28	pH	8.46	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:28	Temperature	19.09	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:28	Turbidity	10.32	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:33	Conductivity	1491.09	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:33	DO	0.16	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:33	Depth to Water Detail	16.31	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:33	Oxidation Reduction Potention	-154.94	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:33	pH	8.51	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:33	Temperature	19.16	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:33	Turbidity	10.85	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:38	Conductivity	1429.16	uS/cm

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<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-21VC	10/6/2021 12:38	DO	0.18	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:38	Depth to Water Detail	16.39	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:38	Oxidation Reduction Potention	-155.01	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:38	pH	8.52	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:38	Temperature	19.07	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:38	Turbidity	10.08	NTU
APCO-GSD-AP-MW-21VC	10/6/2021 12:43	Conductivity	1478.62	uS/cm
APCO-GSD-AP-MW-21VC	10/6/2021 12:43	DO	0.16	mg/L
APCO-GSD-AP-MW-21VC	10/6/2021 12:43	Depth to Water Detail	16.43	ft
APCO-GSD-AP-MW-21VC	10/6/2021 12:43	Oxidation Reduction Potention	-155.17	mv
APCO-GSD-AP-MW-21VC	10/6/2021 12:43	pH	8.53	SU
APCO-GSD-AP-MW-21VC	10/6/2021 12:43	Temperature	19.22	C
APCO-GSD-AP-MW-21VC	10/6/2021 12:43	Turbidity	9.3	NTU

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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-PZ-1	10/5/2021 10:32	Conductivity	82.64	uS/cm
APCO-GSD-AP-PZ-1	10/5/2021 10:32	DO	0.85	mg/L
APCO-GSD-AP-PZ-1	10/5/2021 10:32	Depth to Water Detail	8.73	ft
APCO-GSD-AP-PZ-1	10/5/2021 10:32	Oxidation Reduction Potention	103.3	mv
APCO-GSD-AP-PZ-1	10/5/2021 10:32	pH	5.8	SU
APCO-GSD-AP-PZ-1	10/5/2021 10:32	Temperature	19.84	C
APCO-GSD-AP-PZ-1	10/5/2021 10:32	Turbidity	1.31	NTU
APCO-GSD-AP-PZ-1	10/5/2021 10:37	Conductivity	119.42	uS/cm
APCO-GSD-AP-PZ-1	10/5/2021 10:37	DO	0.72	mg/L
APCO-GSD-AP-PZ-1	10/5/2021 10:37	Depth to Water Detail	8.73	ft
APCO-GSD-AP-PZ-1	10/5/2021 10:37	Oxidation Reduction Potention	109.07	mv
APCO-GSD-AP-PZ-1	10/5/2021 10:37	pH	6.04	SU
APCO-GSD-AP-PZ-1	10/5/2021 10:37	Temperature	19.93	C
APCO-GSD-AP-PZ-1	10/5/2021 10:37	Turbidity	1.38	NTU
APCO-GSD-AP-PZ-1	10/5/2021 10:42	Conductivity	157.59	uS/cm
APCO-GSD-AP-PZ-1	10/5/2021 10:42	DO	0.64	mg/L
APCO-GSD-AP-PZ-1	10/5/2021 10:42	Depth to Water Detail	8.73	ft
APCO-GSD-AP-PZ-1	10/5/2021 10:42	Oxidation Reduction Potention	110.19	mv
APCO-GSD-AP-PZ-1	10/5/2021 10:42	pH	6.23	SU
APCO-GSD-AP-PZ-1	10/5/2021 10:42	Temperature	19.86	C
APCO-GSD-AP-PZ-1	10/5/2021 10:42	Turbidity	1.16	NTU
APCO-GSD-AP-PZ-1	10/5/2021 10:47	Conductivity	167.58	uS/cm
APCO-GSD-AP-PZ-1	10/5/2021 10:47	DO	0.63	mg/L
APCO-GSD-AP-PZ-1	10/5/2021 10:47	Depth to Water Detail	8.73	ft
APCO-GSD-AP-PZ-1	10/5/2021 10:47	Oxidation Reduction Potention	105.94	mv
APCO-GSD-AP-PZ-1	10/5/2021 10:47	pH	6.36	SU
APCO-GSD-AP-PZ-1	10/5/2021 10:47	Temperature	19.8	C
APCO-GSD-AP-PZ-1	10/5/2021 10:47	Turbidity	1.04	NTU
APCO-GSD-AP-PZ-1	10/5/2021 10:52	Conductivity	171.58	uS/cm
APCO-GSD-AP-PZ-1	10/5/2021 10:52	DO	0.64	mg/L
APCO-GSD-AP-PZ-1	10/5/2021 10:52	Depth to Water Detail	8.73	ft
APCO-GSD-AP-PZ-1	10/5/2021 10:52	Oxidation Reduction Potention	106.16	mv
APCO-GSD-AP-PZ-1	10/5/2021 10:52	pH	6.41	SU
APCO-GSD-AP-PZ-1	10/5/2021 10:52	Temperature	19.8	C
APCO-GSD-AP-PZ-1	10/5/2021 10:52	Turbidity	0.9	NTU
APCO-GSD-AP-PZ-1	10/5/2021 10:57	Conductivity	168.13	uS/cm
APCO-GSD-AP-PZ-1	10/5/2021 10:57	DO	0.68	mg/L
APCO-GSD-AP-PZ-1	10/5/2021 10:57	Depth to Water Detail	8.73	ft
APCO-GSD-AP-PZ-1	10/5/2021 10:57	Oxidation Reduction Potention	101.9	mv
APCO-GSD-AP-PZ-1	10/5/2021 10:57	pH	6.46	SU
APCO-GSD-AP-PZ-1	10/5/2021 10:57	Temperature	19.85	C
APCO-GSD-AP-PZ-1	10/5/2021 10:57	Turbidity	0.96	NTU

**Alabama Power Company  
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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-4V	10/11/2021 11:54	Conductivity	445.8	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 11:54	DO	0.17	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 11:54	Depth to Water Detail	11.93	ft
APCO-GSD-AP-MW-4V	10/11/2021 11:54	Oxidation Reduction Potention	70.71	mv
APCO-GSD-AP-MW-4V	10/11/2021 11:54	pH	7.74	SU
APCO-GSD-AP-MW-4V	10/11/2021 11:54	Temperature	20.13	C
APCO-GSD-AP-MW-4V	10/11/2021 11:54	Turbidity	2.11	NTU
APCO-GSD-AP-MW-4V	10/11/2021 11:59	Conductivity	445.51	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 11:59	DO	0.16	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 11:59	Depth to Water Detail	13.56	ft
APCO-GSD-AP-MW-4V	10/11/2021 11:59	Oxidation Reduction Potention	46.49	mv
APCO-GSD-AP-MW-4V	10/11/2021 11:59	pH	7.78	SU
APCO-GSD-AP-MW-4V	10/11/2021 11:59	Temperature	19.87	C
APCO-GSD-AP-MW-4V	10/11/2021 11:59	Turbidity	2.24	NTU
APCO-GSD-AP-MW-4V	10/11/2021 12:04	Conductivity	444.34	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 12:04	DO	0.16	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 12:04	Depth to Water Detail	16.02	ft
APCO-GSD-AP-MW-4V	10/11/2021 12:04	Oxidation Reduction Potention	27.57	mv
APCO-GSD-AP-MW-4V	10/11/2021 12:04	pH	7.78	SU
APCO-GSD-AP-MW-4V	10/11/2021 12:04	Temperature	19.99	C
APCO-GSD-AP-MW-4V	10/11/2021 12:04	Turbidity	1.4	NTU
APCO-GSD-AP-MW-4V	10/11/2021 12:09	Conductivity	444.2	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 12:09	DO	0.16	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 12:09	Depth to Water Detail	17.04	ft
APCO-GSD-AP-MW-4V	10/11/2021 12:09	Oxidation Reduction Potention	9.39	mv
APCO-GSD-AP-MW-4V	10/11/2021 12:09	pH	7.79	SU
APCO-GSD-AP-MW-4V	10/11/2021 12:09	Temperature	19.64	C
APCO-GSD-AP-MW-4V	10/11/2021 12:09	Turbidity	1.15	NTU
APCO-GSD-AP-MW-4V	10/11/2021 12:14	Conductivity	442.7	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 12:14	DO	0.16	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 12:14	Depth to Water Detail	17.84	ft
APCO-GSD-AP-MW-4V	10/11/2021 12:14	Oxidation Reduction Potention	-7.48	mv
APCO-GSD-AP-MW-4V	10/11/2021 12:14	pH	7.82	SU
APCO-GSD-AP-MW-4V	10/11/2021 12:14	Temperature	19.56	C
APCO-GSD-AP-MW-4V	10/11/2021 12:14	Turbidity	1.37	NTU
APCO-GSD-AP-MW-4V	10/11/2021 12:19	Conductivity	442.5	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 12:19	DO	0.16	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 12:19	Depth to Water Detail	18.71	ft
APCO-GSD-AP-MW-4V	10/11/2021 12:19	Oxidation Reduction Potention	-21.33	mv
APCO-GSD-AP-MW-4V	10/11/2021 12:19	pH	7.84	SU
APCO-GSD-AP-MW-4V	10/11/2021 12:19	Temperature	19.67	C
APCO-GSD-AP-MW-4V	10/11/2021 12:19	Turbidity	1.03	NTU
APCO-GSD-AP-MW-4V	10/11/2021 12:24	Conductivity	441.58	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 12:24	DO	0.16	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 12:24	Depth to Water Detail	19.21	ft
APCO-GSD-AP-MW-4V	10/11/2021 12:24	Oxidation Reduction Potention	-33.56	mv
APCO-GSD-AP-MW-4V	10/11/2021 12:24	pH	7.86	SU
APCO-GSD-AP-MW-4V	10/11/2021 12:24	Temperature	19.78	C
APCO-GSD-AP-MW-4V	10/11/2021 12:24	Turbidity	1.17	NTU
APCO-GSD-AP-MW-4V	10/11/2021 12:29	Conductivity	440.21	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 12:29	DO	0.17	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 12:29	Depth to Water Detail	19.39	ft
APCO-GSD-AP-MW-4V	10/11/2021 12:29	Oxidation Reduction Potention	-43.97	mv

**Alabama Power Company  
Plant Gadsden Ash Pond**

<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-4V	10/11/2021 12:29	pH	7.87	SU
APCO-GSD-AP-MW-4V	10/11/2021 12:29	Temperature	19.56	C
APCO-GSD-AP-MW-4V	10/11/2021 12:29	Turbidity	1.3	NTU
APCO-GSD-AP-MW-4V	10/11/2021 12:34	Conductivity	439.07	uS/cm
APCO-GSD-AP-MW-4V	10/11/2021 12:34	DO	0.17	mg/L
APCO-GSD-AP-MW-4V	10/11/2021 12:34	Depth to Water Detail	19.45	ft
APCO-GSD-AP-MW-4V	10/11/2021 12:34	Oxidation Reduction Potention	-49.91	mv
APCO-GSD-AP-MW-4V	10/11/2021 12:34	pH	7.82	SU
APCO-GSD-AP-MW-4V	10/11/2021 12:34	Temperature	19.61	C
APCO-GSD-AP-MW-4V	10/11/2021 12:34	Turbidity	1.17	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-20H	10/11/2021 13:10	Conductivity	683.36	uS/cm
APCO-GSD-AP-MW-20H	10/11/2021 13:10	DO	0.26	mg/L
APCO-GSD-AP-MW-20H	10/11/2021 13:10	Depth to Water Detail	3.15	ft
APCO-GSD-AP-MW-20H	10/11/2021 13:10	Oxidation Reduction Potention	4.13	mv
APCO-GSD-AP-MW-20H	10/11/2021 13:10	pH	6.27	SU
APCO-GSD-AP-MW-20H	10/11/2021 13:10	Temperature	19.58	C
APCO-GSD-AP-MW-20H	10/11/2021 13:10	Turbidity	47.5	NTU
APCO-GSD-AP-MW-20H	10/11/2021 13:15	Conductivity	677.32	uS/cm
APCO-GSD-AP-MW-20H	10/11/2021 13:15	DO	0.23	mg/L
APCO-GSD-AP-MW-20H	10/11/2021 13:15	Depth to Water Detail	3.15	ft
APCO-GSD-AP-MW-20H	10/11/2021 13:15	Oxidation Reduction Potention	8.12	mv
APCO-GSD-AP-MW-20H	10/11/2021 13:15	pH	6.29	SU
APCO-GSD-AP-MW-20H	10/11/2021 13:15	Temperature	19.61	C
APCO-GSD-AP-MW-20H	10/11/2021 13:15	Turbidity	16.7	NTU
APCO-GSD-AP-MW-20H	10/11/2021 13:20	Conductivity	674.28	uS/cm
APCO-GSD-AP-MW-20H	10/11/2021 13:20	DO	0.23	mg/L
APCO-GSD-AP-MW-20H	10/11/2021 13:20	Depth to Water Detail	3.15	ft
APCO-GSD-AP-MW-20H	10/11/2021 13:20	Oxidation Reduction Potention	9.18	mv
APCO-GSD-AP-MW-20H	10/11/2021 13:20	pH	6.32	SU
APCO-GSD-AP-MW-20H	10/11/2021 13:20	Temperature	19.7	C
APCO-GSD-AP-MW-20H	10/11/2021 13:20	Turbidity	13.3	NTU
APCO-GSD-AP-MW-20H	10/11/2021 13:25	Conductivity	672.64	uS/cm
APCO-GSD-AP-MW-20H	10/11/2021 13:25	DO	0.23	mg/L
APCO-GSD-AP-MW-20H	10/11/2021 13:25	Depth to Water Detail	3.15	ft
APCO-GSD-AP-MW-20H	10/11/2021 13:25	Oxidation Reduction Potention	8.59	mv
APCO-GSD-AP-MW-20H	10/11/2021 13:25	pH	6.36	SU
APCO-GSD-AP-MW-20H	10/11/2021 13:25	Temperature	19.78	C
APCO-GSD-AP-MW-20H	10/11/2021 13:25	Turbidity	8.97	NTU



**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-10	10/11/2021 14:12	Conductivity	372.52	uS/cm
APCO-GSD-AP-MW-10	10/11/2021 14:12	DO	1.02	mg/L
APCO-GSD-AP-MW-10	10/11/2021 14:12	Depth to Water Detail	21.83	ft
APCO-GSD-AP-MW-10	10/11/2021 14:12	Oxidation Reduction Potention	-30.94	mv
APCO-GSD-AP-MW-10	10/11/2021 14:12	pH	6.57	SU
APCO-GSD-AP-MW-10	10/11/2021 14:12	Temperature	20.02	C
APCO-GSD-AP-MW-10	10/11/2021 14:12	Turbidity	12.58	NTU
APCO-GSD-AP-MW-10	10/11/2021 14:17	Conductivity	372.53	uS/cm
APCO-GSD-AP-MW-10	10/11/2021 14:17	DO	0.87	mg/L
APCO-GSD-AP-MW-10	10/11/2021 14:17	Depth to Water Detail	21.89	ft
APCO-GSD-AP-MW-10	10/11/2021 14:17	Oxidation Reduction Potention	-40.47	mv
APCO-GSD-AP-MW-10	10/11/2021 14:17	pH	6.62	SU
APCO-GSD-AP-MW-10	10/11/2021 14:17	Temperature	20.28	C
APCO-GSD-AP-MW-10	10/11/2021 14:17	Turbidity	7.74	NTU
APCO-GSD-AP-MW-10	10/11/2021 14:22	Conductivity	371.68	uS/cm
APCO-GSD-AP-MW-10	10/11/2021 14:22	DO	0.75	mg/L
APCO-GSD-AP-MW-10	10/11/2021 14:22	Depth to Water Detail	22.94	ft
APCO-GSD-AP-MW-10	10/11/2021 14:22	Oxidation Reduction Potention	-46.9	mv
APCO-GSD-AP-MW-10	10/11/2021 14:22	pH	6.67	SU
APCO-GSD-AP-MW-10	10/11/2021 14:22	Temperature	20.16	C
APCO-GSD-AP-MW-10	10/11/2021 14:22	Turbidity	5.31	NTU
APCO-GSD-AP-MW-10	10/11/2021 14:27	Conductivity	371.31	uS/cm
APCO-GSD-AP-MW-10	10/11/2021 14:27	DO	0.63	mg/L
APCO-GSD-AP-MW-10	10/11/2021 14:27	Depth to Water Detail	22.98	ft
APCO-GSD-AP-MW-10	10/11/2021 14:27	Oxidation Reduction Potention	-51.41	mv
APCO-GSD-AP-MW-10	10/11/2021 14:27	pH	6.7	SU
APCO-GSD-AP-MW-10	10/11/2021 14:27	Temperature	20.07	C
APCO-GSD-AP-MW-10	10/11/2021 14:27	Turbidity	3.82	NTU
APCO-GSD-AP-MW-10	10/11/2021 14:32	Conductivity	371.22	uS/cm
APCO-GSD-AP-MW-10	10/11/2021 14:32	DO	0.52	mg/L
APCO-GSD-AP-MW-10	10/11/2021 14:32	Depth to Water Detail	22.98	ft
APCO-GSD-AP-MW-10	10/11/2021 14:32	Oxidation Reduction Potention	-54.5	mv
APCO-GSD-AP-MW-10	10/11/2021 14:32	pH	6.72	SU
APCO-GSD-AP-MW-10	10/11/2021 14:32	Temperature	20.1	C
APCO-GSD-AP-MW-10	10/11/2021 14:32	Turbidity	2.96	NTU
APCO-GSD-AP-MW-10	10/11/2021 14:37	Conductivity	371.08	uS/cm
APCO-GSD-AP-MW-10	10/11/2021 14:37	DO	0.43	mg/L
APCO-GSD-AP-MW-10	10/11/2021 14:37	Depth to Water Detail	22.98	ft
APCO-GSD-AP-MW-10	10/11/2021 14:37	Oxidation Reduction Potention	-56.1	mv
APCO-GSD-AP-MW-10	10/11/2021 14:37	pH	6.72	SU
APCO-GSD-AP-MW-10	10/11/2021 14:37	Temperature	20.11	C
APCO-GSD-AP-MW-10	10/11/2021 14:37	Turbidity	2.95	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-14	10/12/2021 8:13	Conductivity	275.89	uS/cm
APCO-GSD-AP-MW-14	10/12/2021 8:13	DO	4.58	mg/L
APCO-GSD-AP-MW-14	10/12/2021 8:13	Depth to Water Detail	22.06	ft
APCO-GSD-AP-MW-14	10/12/2021 8:13	Oxidation Reduction Potention	170.76	mv
APCO-GSD-AP-MW-14	10/12/2021 8:13	pH	4.01	SU
APCO-GSD-AP-MW-14	10/12/2021 8:13	Temperature	19.16	C
APCO-GSD-AP-MW-14	10/12/2021 8:13	Turbidity	8.86	NTU
APCO-GSD-AP-MW-14	10/12/2021 8:18	Conductivity	277.26	uS/cm
APCO-GSD-AP-MW-14	10/12/2021 8:18	DO	4.54	mg/L
APCO-GSD-AP-MW-14	10/12/2021 8:18	Depth to Water Detail	22.09	ft
APCO-GSD-AP-MW-14	10/12/2021 8:18	Oxidation Reduction Potention	169.7	mv
APCO-GSD-AP-MW-14	10/12/2021 8:18	pH	4.02	SU
APCO-GSD-AP-MW-14	10/12/2021 8:18	Temperature	19.14	C
APCO-GSD-AP-MW-14	10/12/2021 8:18	Turbidity	5.18	NTU
APCO-GSD-AP-MW-14	10/12/2021 8:23	Conductivity	277.35	uS/cm
APCO-GSD-AP-MW-14	10/12/2021 8:23	DO	4.56	mg/L
APCO-GSD-AP-MW-14	10/12/2021 8:23	Depth to Water Detail	22.09	ft
APCO-GSD-AP-MW-14	10/12/2021 8:23	Oxidation Reduction Potention	169	mv
APCO-GSD-AP-MW-14	10/12/2021 8:23	pH	4.03	SU
APCO-GSD-AP-MW-14	10/12/2021 8:23	Temperature	19.11	C
APCO-GSD-AP-MW-14	10/12/2021 8:23	Turbidity	5.04	NTU
APCO-GSD-AP-MW-14	10/12/2021 8:28	Conductivity	276.99	uS/cm
APCO-GSD-AP-MW-14	10/12/2021 8:28	DO	4.54	mg/L
APCO-GSD-AP-MW-14	10/12/2021 8:28	Depth to Water Detail	22.09	ft
APCO-GSD-AP-MW-14	10/12/2021 8:28	Oxidation Reduction Potention	167.2	mv
APCO-GSD-AP-MW-14	10/12/2021 8:28	pH	4.04	SU
APCO-GSD-AP-MW-14	10/12/2021 8:28	Temperature	19.12	C
APCO-GSD-AP-MW-14	10/12/2021 8:28	Turbidity	2.99	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-8	10/12/2021 10:20	Conductivity	392.31	uS/cm
APCO-GSD-AP-MW-8	10/12/2021 10:20	DO	0.49	mg/L
APCO-GSD-AP-MW-8	10/12/2021 10:20	Depth to Water Detail	11.82	ft
APCO-GSD-AP-MW-8	10/12/2021 10:20	Oxidation Reduction Potention	79.72	mv
APCO-GSD-AP-MW-8	10/12/2021 10:20	pH	6.47	SU
APCO-GSD-AP-MW-8	10/12/2021 10:20	Temperature	18.45	C
APCO-GSD-AP-MW-8	10/12/2021 10:20	Turbidity	14.1	NTU
APCO-GSD-AP-MW-8	10/12/2021 10:25	Conductivity	398.41	uS/cm
APCO-GSD-AP-MW-8	10/12/2021 10:25	DO	0.4	mg/L
APCO-GSD-AP-MW-8	10/12/2021 10:25	Depth to Water Detail	11.82	ft
APCO-GSD-AP-MW-8	10/12/2021 10:25	Oxidation Reduction Potention	71.01	mv
APCO-GSD-AP-MW-8	10/12/2021 10:25	pH	6.51	SU
APCO-GSD-AP-MW-8	10/12/2021 10:25	Temperature	18.44	C
APCO-GSD-AP-MW-8	10/12/2021 10:25	Turbidity	11.5	NTU
APCO-GSD-AP-MW-8	10/12/2021 10:30	Conductivity	411.62	uS/cm
APCO-GSD-AP-MW-8	10/12/2021 10:30	DO	0.36	mg/L
APCO-GSD-AP-MW-8	10/12/2021 10:30	Depth to Water Detail	11.82	ft
APCO-GSD-AP-MW-8	10/12/2021 10:30	Oxidation Reduction Potention	63.92	mv
APCO-GSD-AP-MW-8	10/12/2021 10:30	pH	6.55	SU
APCO-GSD-AP-MW-8	10/12/2021 10:30	Temperature	18.45	C
APCO-GSD-AP-MW-8	10/12/2021 10:30	Turbidity	11.75	NTU
APCO-GSD-AP-MW-8	10/12/2021 10:35	Conductivity	421.59	uS/cm
APCO-GSD-AP-MW-8	10/12/2021 10:35	DO	0.32	mg/L
APCO-GSD-AP-MW-8	10/12/2021 10:35	Depth to Water Detail	11.82	ft
APCO-GSD-AP-MW-8	10/12/2021 10:35	Oxidation Reduction Potention	62.27	mv
APCO-GSD-AP-MW-8	10/12/2021 10:35	pH	6.52	SU
APCO-GSD-AP-MW-8	10/12/2021 10:35	Temperature	18.41	C
APCO-GSD-AP-MW-8	10/12/2021 10:35	Turbidity	9.11	NTU
APCO-GSD-AP-MW-8	10/12/2021 10:40	Conductivity	432.5	uS/cm
APCO-GSD-AP-MW-8	10/12/2021 10:40	DO	0.29	mg/L
APCO-GSD-AP-MW-8	10/12/2021 10:40	Depth to Water Detail	11.82	ft
APCO-GSD-AP-MW-8	10/12/2021 10:40	Oxidation Reduction Potention	55.66	mv
APCO-GSD-AP-MW-8	10/12/2021 10:40	pH	6.57	SU
APCO-GSD-AP-MW-8	10/12/2021 10:40	Temperature	18.4	C
APCO-GSD-AP-MW-8	10/12/2021 10:40	Turbidity	7.28	NTU
APCO-GSD-AP-MW-8	10/12/2021 10:45	Conductivity	441.79	uS/cm
APCO-GSD-AP-MW-8	10/12/2021 10:45	DO	0.28	mg/L
APCO-GSD-AP-MW-8	10/12/2021 10:45	Depth to Water Detail	11.82	ft
APCO-GSD-AP-MW-8	10/12/2021 10:45	Oxidation Reduction Potention	50.05	mv
APCO-GSD-AP-MW-8	10/12/2021 10:45	pH	6.61	SU
APCO-GSD-AP-MW-8	10/12/2021 10:45	Temperature	18.42	C
APCO-GSD-AP-MW-8	10/12/2021 10:45	Turbidity	5.89	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-9	10/12/2021 11:21	Conductivity	232.51	uS/cm
APCO-GSD-AP-MW-9	10/12/2021 11:21	DO	0.27	mg/L
APCO-GSD-AP-MW-9	10/12/2021 11:21	Depth to Water Detail	12.98	ft
APCO-GSD-AP-MW-9	10/12/2021 11:21	Oxidation Reduction Potention	63.3	mv
APCO-GSD-AP-MW-9	10/12/2021 11:21	pH	6.48	SU
APCO-GSD-AP-MW-9	10/12/2021 11:21	Temperature	18.96	C
APCO-GSD-AP-MW-9	10/12/2021 11:21	Turbidity	11.21	NTU
APCO-GSD-AP-MW-9	10/12/2021 11:26	Conductivity	249.84	uS/cm
APCO-GSD-AP-MW-9	10/12/2021 11:26	DO	0.24	mg/L
APCO-GSD-AP-MW-9	10/12/2021 11:26	Depth to Water Detail	12.98	ft
APCO-GSD-AP-MW-9	10/12/2021 11:26	Oxidation Reduction Potention	60.95	mv
APCO-GSD-AP-MW-9	10/12/2021 11:26	pH	6.57	SU
APCO-GSD-AP-MW-9	10/12/2021 11:26	Temperature	18.98	C
APCO-GSD-AP-MW-9	10/12/2021 11:26	Turbidity	4.77	NTU
APCO-GSD-AP-MW-9	10/12/2021 11:31	Conductivity	276.62	uS/cm
APCO-GSD-AP-MW-9	10/12/2021 11:31	DO	0.23	mg/L
APCO-GSD-AP-MW-9	10/12/2021 11:31	Depth to Water Detail	12.98	ft
APCO-GSD-AP-MW-9	10/12/2021 11:31	Oxidation Reduction Potention	62.83	mv
APCO-GSD-AP-MW-9	10/12/2021 11:31	pH	6.61	SU
APCO-GSD-AP-MW-9	10/12/2021 11:31	Temperature	18.97	C
APCO-GSD-AP-MW-9	10/12/2021 11:31	Turbidity	3.45	NTU
APCO-GSD-AP-MW-9	10/12/2021 11:36	Conductivity	292	uS/cm
APCO-GSD-AP-MW-9	10/12/2021 11:36	DO	0.22	mg/L
APCO-GSD-AP-MW-9	10/12/2021 11:36	Depth to Water Detail	12.98	ft
APCO-GSD-AP-MW-9	10/12/2021 11:36	Oxidation Reduction Potention	58.08	mv
APCO-GSD-AP-MW-9	10/12/2021 11:36	pH	6.73	SU
APCO-GSD-AP-MW-9	10/12/2021 11:36	Temperature	18.91	C
APCO-GSD-AP-MW-9	10/12/2021 11:36	Turbidity	2.17	NTU
APCO-GSD-AP-MW-9	10/12/2021 11:41	Conductivity	301.3	uS/cm
APCO-GSD-AP-MW-9	10/12/2021 11:41	DO	0.23	mg/L
APCO-GSD-AP-MW-9	10/12/2021 11:41	Depth to Water Detail	12.98	ft
APCO-GSD-AP-MW-9	10/12/2021 11:41	Oxidation Reduction Potention	53.68	mv
APCO-GSD-AP-MW-9	10/12/2021 11:41	pH	6.81	SU
APCO-GSD-AP-MW-9	10/12/2021 11:41	Temperature	18.95	C
APCO-GSD-AP-MW-9	10/12/2021 11:41	Turbidity	1.77	NTU
APCO-GSD-AP-MW-9	10/12/2021 11:46	Conductivity	307.64	uS/cm
APCO-GSD-AP-MW-9	10/12/2021 11:46	DO	0.22	mg/L
APCO-GSD-AP-MW-9	10/12/2021 11:46	Depth to Water Detail	12.98	ft
APCO-GSD-AP-MW-9	10/12/2021 11:46	Oxidation Reduction Potention	51.26	mv
APCO-GSD-AP-MW-9	10/12/2021 11:46	pH	6.86	SU
APCO-GSD-AP-MW-9	10/12/2021 11:46	Temperature	18.96	C
APCO-GSD-AP-MW-9	10/12/2021 11:46	Turbidity	1.93	NTU
APCO-GSD-AP-MW-9	10/12/2021 11:51	Conductivity	313.11	uS/cm
APCO-GSD-AP-MW-9	10/12/2021 11:51	DO	0.21	mg/L
APCO-GSD-AP-MW-9	10/12/2021 11:51	Depth to Water Detail	12.98	ft
APCO-GSD-AP-MW-9	10/12/2021 11:51	Oxidation Reduction Potention	49.19	mv
APCO-GSD-AP-MW-9	10/12/2021 11:51	pH	6.9	SU
APCO-GSD-AP-MW-9	10/12/2021 11:51	Temperature	18.97	C
APCO-GSD-AP-MW-9	10/12/2021 11:51	Turbidity	2.25	NTU

**Alabama Power Company  
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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-11	10/12/2021 12:37	Conductivity	583.42	uS/cm
APCO-GSD-AP-MW-11	10/12/2021 12:37	DO	0.34	mg/L
APCO-GSD-AP-MW-11	10/12/2021 12:37	Depth to Water Detail	9.74	ft
APCO-GSD-AP-MW-11	10/12/2021 12:37	Oxidation Reduction Potention	45	mv
APCO-GSD-AP-MW-11	10/12/2021 12:37	pH	6.58	SU
APCO-GSD-AP-MW-11	10/12/2021 12:37	Temperature	19.99	C
APCO-GSD-AP-MW-11	10/12/2021 12:37	Turbidity	14.2	NTU
APCO-GSD-AP-MW-11	10/12/2021 12:42	Conductivity	576.48	uS/cm
APCO-GSD-AP-MW-11	10/12/2021 12:42	DO	0.29	mg/L
APCO-GSD-AP-MW-11	10/12/2021 12:42	Depth to Water Detail	9.79	ft
APCO-GSD-AP-MW-11	10/12/2021 12:42	Oxidation Reduction Potention	32.88	mv
APCO-GSD-AP-MW-11	10/12/2021 12:42	pH	6.65	SU
APCO-GSD-AP-MW-11	10/12/2021 12:42	Temperature	19.98	C
APCO-GSD-AP-MW-11	10/12/2021 12:42	Turbidity	10.99	NTU
APCO-GSD-AP-MW-11	10/12/2021 12:47	Conductivity	577.63	uS/cm
APCO-GSD-AP-MW-11	10/12/2021 12:47	DO	0.24	mg/L
APCO-GSD-AP-MW-11	10/12/2021 12:47	Depth to Water Detail	9.79	ft
APCO-GSD-AP-MW-11	10/12/2021 12:47	Oxidation Reduction Potention	24.77	mv
APCO-GSD-AP-MW-11	10/12/2021 12:47	pH	6.65	SU
APCO-GSD-AP-MW-11	10/12/2021 12:47	Temperature	19.97	C
APCO-GSD-AP-MW-11	10/12/2021 12:47	Turbidity	7.04	NTU
APCO-GSD-AP-MW-11	10/12/2021 12:52	Conductivity	577.54	uS/cm
APCO-GSD-AP-MW-11	10/12/2021 12:52	DO	0.21	mg/L
APCO-GSD-AP-MW-11	10/12/2021 12:52	Depth to Water Detail	9.79	ft
APCO-GSD-AP-MW-11	10/12/2021 12:52	Oxidation Reduction Potention	18.62	mv
APCO-GSD-AP-MW-11	10/12/2021 12:52	pH	6.66	SU
APCO-GSD-AP-MW-11	10/12/2021 12:52	Temperature	19.95	C
APCO-GSD-AP-MW-11	10/12/2021 12:52	Turbidity	7.01	NTU

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Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-2	10/11/2021 13:46	Conductivity	506.85	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 13:46	DO	0.21	mg/L
APCO-GSD-AP-MW-2	10/11/2021 13:46	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 13:46	Oxidation Reduction Potention	-40.48	mv
APCO-GSD-AP-MW-2	10/11/2021 13:46	pH	6.56	SU
APCO-GSD-AP-MW-2	10/11/2021 13:46	Temperature	21.23	C
APCO-GSD-AP-MW-2	10/11/2021 13:46	Turbidity	92.7	NTU
APCO-GSD-AP-MW-2	10/11/2021 13:51	Conductivity	516.15	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 13:51	DO	0.18	mg/L
APCO-GSD-AP-MW-2	10/11/2021 13:51	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 13:51	Oxidation Reduction Potention	-39.98	mv
APCO-GSD-AP-MW-2	10/11/2021 13:51	pH	6.56	SU
APCO-GSD-AP-MW-2	10/11/2021 13:51	Temperature	21.2	C
APCO-GSD-AP-MW-2	10/11/2021 13:51	Turbidity	63.9	NTU
APCO-GSD-AP-MW-2	10/11/2021 13:56	Conductivity	527.86	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 13:56	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 13:56	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 13:56	Oxidation Reduction Potention	-40.02	mv
APCO-GSD-AP-MW-2	10/11/2021 13:56	pH	6.54	SU
APCO-GSD-AP-MW-2	10/11/2021 13:56	Temperature	21.19	C
APCO-GSD-AP-MW-2	10/11/2021 13:56	Turbidity	99	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:01	Conductivity	531.05	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:01	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:01	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:01	Oxidation Reduction Potention	-40.01	mv
APCO-GSD-AP-MW-2	10/11/2021 14:01	pH	6.54	SU
APCO-GSD-AP-MW-2	10/11/2021 14:01	Temperature	21.37	C
APCO-GSD-AP-MW-2	10/11/2021 14:01	Turbidity	83.2	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:06	Conductivity	531.16	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:06	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:06	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:06	Oxidation Reduction Potention	-41.18	mv
APCO-GSD-AP-MW-2	10/11/2021 14:06	pH	6.41	SU
APCO-GSD-AP-MW-2	10/11/2021 14:06	Temperature	20.96	C
APCO-GSD-AP-MW-2	10/11/2021 14:06	Turbidity	52	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:11	Conductivity	528.59	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:11	DO	0.15	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:11	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:11	Oxidation Reduction Potention	-42.41	mv
APCO-GSD-AP-MW-2	10/11/2021 14:11	pH	6.47	SU
APCO-GSD-AP-MW-2	10/11/2021 14:11	Temperature	21.11	C
APCO-GSD-AP-MW-2	10/11/2021 14:11	Turbidity	36.5	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:16	Conductivity	529.93	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:16	DO	0.15	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:16	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:16	Oxidation Reduction Potention	-43.23	mv
APCO-GSD-AP-MW-2	10/11/2021 14:16	pH	6.51	SU
APCO-GSD-AP-MW-2	10/11/2021 14:16	Temperature	21.18	C
APCO-GSD-AP-MW-2	10/11/2021 14:16	Turbidity	31.2	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:21	Conductivity	528.9	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:21	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:21	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:21	Oxidation Reduction Potention	-43.9	mv

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-2	10/11/2021 14:21	pH	6.49	SU
APCO-GSD-AP-MW-2	10/11/2021 14:21	Temperature	21.15	C
APCO-GSD-AP-MW-2	10/11/2021 14:21	Turbidity	23.7	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:26	Conductivity	527.88	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:26	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:26	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:26	Oxidation Reduction Potention	-44.53	mv
APCO-GSD-AP-MW-2	10/11/2021 14:26	pH	6.52	SU
APCO-GSD-AP-MW-2	10/11/2021 14:26	Temperature	21.11	C
APCO-GSD-AP-MW-2	10/11/2021 14:26	Turbidity	14.5	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:31	Conductivity	526.89	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:31	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:31	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:31	Oxidation Reduction Potention	-44.99	mv
APCO-GSD-AP-MW-2	10/11/2021 14:31	pH	6.63	SU
APCO-GSD-AP-MW-2	10/11/2021 14:31	Temperature	21.05	C
APCO-GSD-AP-MW-2	10/11/2021 14:31	Turbidity	12.49	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:36	Conductivity	525.47	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:36	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:36	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:36	Oxidation Reduction Potention	-45.69	mv
APCO-GSD-AP-MW-2	10/11/2021 14:36	pH	6.56	SU
APCO-GSD-AP-MW-2	10/11/2021 14:36	Temperature	21.26	C
APCO-GSD-AP-MW-2	10/11/2021 14:36	Turbidity	10.34	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:41	Conductivity	526.78	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:41	DO	0.16	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:41	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:41	Oxidation Reduction Potention	-45.95	mv
APCO-GSD-AP-MW-2	10/11/2021 14:41	pH	6.6	SU
APCO-GSD-AP-MW-2	10/11/2021 14:41	Temperature	21.25	C
APCO-GSD-AP-MW-2	10/11/2021 14:41	Turbidity	8.58	NTU
APCO-GSD-AP-MW-2	10/11/2021 14:46	Conductivity	524.27	uS/cm
APCO-GSD-AP-MW-2	10/11/2021 14:46	DO	0.17	mg/L
APCO-GSD-AP-MW-2	10/11/2021 14:46	Depth to Water Detail	12.57	ft
APCO-GSD-AP-MW-2	10/11/2021 14:46	Oxidation Reduction Potention	-46.1	mv
APCO-GSD-AP-MW-2	10/11/2021 14:46	pH	6.59	SU
APCO-GSD-AP-MW-2	10/11/2021 14:46	Temperature	21.2	C
APCO-GSD-AP-MW-2	10/11/2021 14:46	Turbidity	6.7	NTU

**Alabama Power Company  
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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-2VB	10/12/2021 8:15	Conductivity	1155.14	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:15	DO	0.15	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:15	Depth to Water Detail	13.5	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:15	Oxidation Reduction Potention	-185.58	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:15	pH	8.24	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:15	Temperature	19.02	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:15	Turbidity	12.5	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:20	Conductivity	1132.78	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:20	DO	0.12	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:20	Depth to Water Detail	15.88	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:20	Oxidation Reduction Potention	-192.35	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:20	pH	8.28	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:20	Temperature	19	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:20	Turbidity	13.35	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:25	Conductivity	1124.18	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:25	DO	0.16	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:25	Depth to Water Detail	18.76	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:25	Oxidation Reduction Potention	-193.29	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:25	pH	8.29	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:25	Temperature	18.99	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:25	Turbidity	12.7	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:30	Conductivity	1119.02	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:30	DO	0.19	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:30	Depth to Water Detail	20.92	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:30	Oxidation Reduction Potention	-194.97	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:30	pH	8.32	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:30	Temperature	18.97	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:30	Turbidity	10.96	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:35	Conductivity	1098.7	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:35	DO	0.22	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:35	Depth to Water Detail	23.7	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:35	Oxidation Reduction Potention	-196.6	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:35	pH	8.33	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:35	Temperature	18.88	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:35	Turbidity	8.39	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:40	Conductivity	1070.89	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:40	DO	0.24	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:40	Depth to Water Detail	26.13	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:40	Oxidation Reduction Potention	-197.01	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:40	pH	8.37	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:40	Temperature	18.79	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:40	Turbidity	5.33	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:45	Conductivity	1055.88	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:45	DO	0.25	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:45	Depth to Water Detail	28.3	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:45	Oxidation Reduction Potention	-197.85	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:45	pH	8.37	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:45	Temperature	18.74	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:45	Turbidity	5.77	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:50	Conductivity	1042.84	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:50	DO	0.27	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:50	Depth to Water Detail	30.75	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:50	Oxidation Reduction Potention	-198.47	mv



**Alabama Power Company  
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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-2VB	10/12/2021 8:50	pH	8.4	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:50	Temperature	18.69	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:50	Turbidity	5.44	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 8:55	Conductivity	1025.1	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 8:55	DO	0.28	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 8:55	Depth to Water Detail	32.58	ft
APCO-GSD-AP-MW-2VB	10/12/2021 8:55	Oxidation Reduction Potention	-198.86	mv
APCO-GSD-AP-MW-2VB	10/12/2021 8:55	pH	8.43	SU
APCO-GSD-AP-MW-2VB	10/12/2021 8:55	Temperature	18.69	C
APCO-GSD-AP-MW-2VB	10/12/2021 8:55	Turbidity	5.38	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 9:00	Conductivity	963.46	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 9:00	DO	0.27	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 9:00	Depth to Water Detail	34.7	ft
APCO-GSD-AP-MW-2VB	10/12/2021 9:00	Oxidation Reduction Potention	-196.8	mv
APCO-GSD-AP-MW-2VB	10/12/2021 9:00	pH	8.44	SU
APCO-GSD-AP-MW-2VB	10/12/2021 9:00	Temperature	18.58	C
APCO-GSD-AP-MW-2VB	10/12/2021 9:00	Turbidity	4.85	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 9:05	Conductivity	936.54	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 9:05	DO	0.28	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 9:05	Depth to Water Detail	36.89	ft
APCO-GSD-AP-MW-2VB	10/12/2021 9:05	Oxidation Reduction Potention	-194.29	mv
APCO-GSD-AP-MW-2VB	10/12/2021 9:05	pH	8.44	SU
APCO-GSD-AP-MW-2VB	10/12/2021 9:05	Temperature	18.58	C
APCO-GSD-AP-MW-2VB	10/12/2021 9:05	Turbidity	4.71	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 9:10	Conductivity	925.16	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 9:10	DO	0.27	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 9:10	Depth to Water Detail	38.82	ft
APCO-GSD-AP-MW-2VB	10/12/2021 9:10	Oxidation Reduction Potention	-192.84	mv
APCO-GSD-AP-MW-2VB	10/12/2021 9:10	pH	8.46	SU
APCO-GSD-AP-MW-2VB	10/12/2021 9:10	Temperature	18.59	C
APCO-GSD-AP-MW-2VB	10/12/2021 9:10	Turbidity	4.38	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 9:15	Conductivity	924.51	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 9:15	DO	0.54	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 9:15	Depth to Water Detail	38.91	ft
APCO-GSD-AP-MW-2VB	10/12/2021 9:15	Oxidation Reduction Potention	-185.9	mv
APCO-GSD-AP-MW-2VB	10/12/2021 9:15	pH	8.51	SU
APCO-GSD-AP-MW-2VB	10/12/2021 9:15	Temperature	19.59	C
APCO-GSD-AP-MW-2VB	10/12/2021 9:15	Turbidity	4.4	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 9:20	Conductivity	927.15	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 9:20	DO	0.59	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 9:20	Depth to Water Detail	38.94	ft
APCO-GSD-AP-MW-2VB	10/12/2021 9:20	Oxidation Reduction Potention	-186.2	mv
APCO-GSD-AP-MW-2VB	10/12/2021 9:20	pH	8.5	SU
APCO-GSD-AP-MW-2VB	10/12/2021 9:20	Temperature	19.73	C
APCO-GSD-AP-MW-2VB	10/12/2021 9:20	Turbidity	5.57	NTU
APCO-GSD-AP-MW-2VB	10/12/2021 9:25	Conductivity	901.38	uS/cm
APCO-GSD-AP-MW-2VB	10/12/2021 9:25	DO	0.37	mg/L
APCO-GSD-AP-MW-2VB	10/12/2021 9:25	Depth to Water Detail	38.95	ft
APCO-GSD-AP-MW-2VB	10/12/2021 9:25	Oxidation Reduction Potention	-195.47	mv
APCO-GSD-AP-MW-2VB	10/12/2021 9:25	pH	8.62	SU
APCO-GSD-AP-MW-2VB	10/12/2021 9:25	Temperature	19.31	C
APCO-GSD-AP-MW-2VB	10/12/2021 9:25	Turbidity	4.01	NTU

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WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-18H	10/12/2021 10:29	Conductivity	49.03	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 10:29	DO	8.02	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 10:29	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 10:29	Oxidation Reduction Potention	133.6	mv
APCO-GSD-AP-MW-18H	10/12/2021 10:29	pH	4.89	SU
APCO-GSD-AP-MW-18H	10/12/2021 10:29	Temperature	17.6	C
APCO-GSD-AP-MW-18H	10/12/2021 10:29	Turbidity	3.9	NTU
APCO-GSD-AP-MW-18H	10/12/2021 10:34	Conductivity	51.32	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 10:34	DO	7.92	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 10:34	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 10:34	Oxidation Reduction Potention	152.44	mv
APCO-GSD-AP-MW-18H	10/12/2021 10:34	pH	4.77	SU
APCO-GSD-AP-MW-18H	10/12/2021 10:34	Temperature	17.56	C
APCO-GSD-AP-MW-18H	10/12/2021 10:34	Turbidity	2.13	NTU
APCO-GSD-AP-MW-18H	10/12/2021 10:39	Conductivity	70.8	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 10:39	DO	7.78	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 10:39	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 10:39	Oxidation Reduction Potention	156.21	mv
APCO-GSD-AP-MW-18H	10/12/2021 10:39	pH	4.79	SU
APCO-GSD-AP-MW-18H	10/12/2021 10:39	Temperature	17.5	C
APCO-GSD-AP-MW-18H	10/12/2021 10:39	Turbidity	2.59	NTU
APCO-GSD-AP-MW-18H	10/12/2021 10:44	Conductivity	87.15	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 10:44	DO	7.62	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 10:44	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 10:44	Oxidation Reduction Potention	159.31	mv
APCO-GSD-AP-MW-18H	10/12/2021 10:44	pH	4.93	SU
APCO-GSD-AP-MW-18H	10/12/2021 10:44	Temperature	17.54	C
APCO-GSD-AP-MW-18H	10/12/2021 10:44	Turbidity	1.45	NTU
APCO-GSD-AP-MW-18H	10/12/2021 10:49	Conductivity	96.07	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 10:49	DO	7.51	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 10:49	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 10:49	Oxidation Reduction Potention	159.72	mv
APCO-GSD-AP-MW-18H	10/12/2021 10:49	pH	4.99	SU
APCO-GSD-AP-MW-18H	10/12/2021 10:49	Temperature	17.54	C
APCO-GSD-AP-MW-18H	10/12/2021 10:49	Turbidity	1.52	NTU
APCO-GSD-AP-MW-18H	10/12/2021 10:54	Conductivity	104.04	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 10:54	DO	7.39	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 10:54	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 10:54	Oxidation Reduction Potention	161.52	mv
APCO-GSD-AP-MW-18H	10/12/2021 10:54	pH	5	SU
APCO-GSD-AP-MW-18H	10/12/2021 10:54	Temperature	17.55	C
APCO-GSD-AP-MW-18H	10/12/2021 10:54	Turbidity	1.22	NTU
APCO-GSD-AP-MW-18H	10/12/2021 10:59	Conductivity	106.42	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 10:59	DO	7.31	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 10:59	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 10:59	Oxidation Reduction Potention	162.34	mv
APCO-GSD-AP-MW-18H	10/12/2021 10:59	pH	5.05	SU
APCO-GSD-AP-MW-18H	10/12/2021 10:59	Temperature	17.56	C
APCO-GSD-AP-MW-18H	10/12/2021 10:59	Turbidity	1.69	NTU
APCO-GSD-AP-MW-18H	10/12/2021 11:04	Conductivity	113.24	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 11:04	DO	7.33	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 11:04	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 11:04	Oxidation Reduction Potention	161.49	mv

**Alabama Power Company  
Plant Gadsden Ash Pond**

<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-18H	10/12/2021 11:04	pH	5.08	SU
APCO-GSD-AP-MW-18H	10/12/2021 11:04	Temperature	17.52	C
APCO-GSD-AP-MW-18H	10/12/2021 11:04	Turbidity	1.61	NTU
APCO-GSD-AP-MW-18H	10/12/2021 11:09	Conductivity	112.89	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 11:09	DO	7.3	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 11:09	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 11:09	Oxidation Reduction Potention	160.22	mv
APCO-GSD-AP-MW-18H	10/12/2021 11:09	pH	5.14	SU
APCO-GSD-AP-MW-18H	10/12/2021 11:09	Temperature	17.53	C
APCO-GSD-AP-MW-18H	10/12/2021 11:09	Turbidity	1.6	NTU
APCO-GSD-AP-MW-18H	10/12/2021 11:14	Conductivity	115.05	uS/cm
APCO-GSD-AP-MW-18H	10/12/2021 11:14	DO	7.35	mg/L
APCO-GSD-AP-MW-18H	10/12/2021 11:14	Depth to Water Detail	10.51	ft
APCO-GSD-AP-MW-18H	10/12/2021 11:14	Oxidation Reduction Potention	162.28	mv
APCO-GSD-AP-MW-18H	10/12/2021 11:14	pH	5.12	SU
APCO-GSD-AP-MW-18H	10/12/2021 11:14	Temperature	17.56	C
APCO-GSD-AP-MW-18H	10/12/2021 11:14	Turbidity	1.54	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-19H	10/11/2021 12:39	Conductivity	338.14	uS/cm
APCO-GSD-AP-MW-19H	10/11/2021 12:39	DO	0.45	mg/L
APCO-GSD-AP-MW-19H	10/11/2021 12:39	Depth to Water Detail	4.23	ft
APCO-GSD-AP-MW-19H	10/11/2021 12:39	Oxidation Reduction Potention	-4.52	mv
APCO-GSD-AP-MW-19H	10/11/2021 12:39	pH	6.39	SU
APCO-GSD-AP-MW-19H	10/11/2021 12:39	Temperature	25.7	C
APCO-GSD-AP-MW-19H	10/11/2021 12:39	Turbidity	15.4	NTU
APCO-GSD-AP-MW-19H	10/11/2021 12:44	Conductivity	328.36	uS/cm
APCO-GSD-AP-MW-19H	10/11/2021 12:44	DO	0.3	mg/L
APCO-GSD-AP-MW-19H	10/11/2021 12:44	Depth to Water Detail	4.23	ft
APCO-GSD-AP-MW-19H	10/11/2021 12:44	Oxidation Reduction Potention	8.93	mv
APCO-GSD-AP-MW-19H	10/11/2021 12:44	pH	6.22	SU
APCO-GSD-AP-MW-19H	10/11/2021 12:44	Temperature	22.96	C
APCO-GSD-AP-MW-19H	10/11/2021 12:44	Turbidity	9.85	NTU
APCO-GSD-AP-MW-19H	10/11/2021 12:49	Conductivity	321.32	uS/cm
APCO-GSD-AP-MW-19H	10/11/2021 12:49	DO	0.28	mg/L
APCO-GSD-AP-MW-19H	10/11/2021 12:49	Depth to Water Detail	4.23	ft
APCO-GSD-AP-MW-19H	10/11/2021 12:49	Oxidation Reduction Potention	16.93	mv
APCO-GSD-AP-MW-19H	10/11/2021 12:49	pH	6.11	SU
APCO-GSD-AP-MW-19H	10/11/2021 12:49	Temperature	24.12	C
APCO-GSD-AP-MW-19H	10/11/2021 12:49	Turbidity	6.98	NTU
APCO-GSD-AP-MW-19H	10/11/2021 12:54	Conductivity	315.23	uS/cm
APCO-GSD-AP-MW-19H	10/11/2021 12:54	DO	0.27	mg/L
APCO-GSD-AP-MW-19H	10/11/2021 12:54	Depth to Water Detail	4.23	ft
APCO-GSD-AP-MW-19H	10/11/2021 12:54	Oxidation Reduction Potention	22	mv
APCO-GSD-AP-MW-19H	10/11/2021 12:54	pH	6.08	SU
APCO-GSD-AP-MW-19H	10/11/2021 12:54	Temperature	24.19	C
APCO-GSD-AP-MW-19H	10/11/2021 12:54	Turbidity	7.48	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-MW-22VB	10/11/2021 11:09	Conductivity	359.33	uS/cm
APCO-GSD-AP-MW-22VB	10/11/2021 11:09	DO	0.19	mg/L
APCO-GSD-AP-MW-22VB	10/11/2021 11:09	Depth to Water Detail	6.08	ft
APCO-GSD-AP-MW-22VB	10/11/2021 11:09	Oxidation Reduction Potention	-137.27	mv
APCO-GSD-AP-MW-22VB	10/11/2021 11:09	pH	7.87	SU
APCO-GSD-AP-MW-22VB	10/11/2021 11:09	Temperature	18.37	C
APCO-GSD-AP-MW-22VB	10/11/2021 11:09	Turbidity	10.5	NTU
APCO-GSD-AP-MW-22VB	10/11/2021 11:14	Conductivity	366.81	uS/cm
APCO-GSD-AP-MW-22VB	10/11/2021 11:14	DO	0.14	mg/L
APCO-GSD-AP-MW-22VB	10/11/2021 11:14	Depth to Water Detail	6.56	ft
APCO-GSD-AP-MW-22VB	10/11/2021 11:14	Oxidation Reduction Potention	-159.55	mv
APCO-GSD-AP-MW-22VB	10/11/2021 11:14	pH	8.01	SU
APCO-GSD-AP-MW-22VB	10/11/2021 11:14	Temperature	18.2	C
APCO-GSD-AP-MW-22VB	10/11/2021 11:14	Turbidity	9.89	NTU
APCO-GSD-AP-MW-22VB	10/11/2021 11:19	Conductivity	370.37	uS/cm
APCO-GSD-AP-MW-22VB	10/11/2021 11:19	DO	0.12	mg/L
APCO-GSD-AP-MW-22VB	10/11/2021 11:19	Depth to Water Detail	6.84	ft
APCO-GSD-AP-MW-22VB	10/11/2021 11:19	Oxidation Reduction Potention	-167.37	mv
APCO-GSD-AP-MW-22VB	10/11/2021 11:19	pH	8.11	SU
APCO-GSD-AP-MW-22VB	10/11/2021 11:19	Temperature	18.14	C
APCO-GSD-AP-MW-22VB	10/11/2021 11:19	Turbidity	4.65	NTU
APCO-GSD-AP-MW-22VB	10/11/2021 11:24	Conductivity	371.8	uS/cm
APCO-GSD-AP-MW-22VB	10/11/2021 11:24	DO	0.11	mg/L
APCO-GSD-AP-MW-22VB	10/11/2021 11:24	Depth to Water Detail	7.08	ft
APCO-GSD-AP-MW-22VB	10/11/2021 11:24	Oxidation Reduction Potention	-174.3	mv
APCO-GSD-AP-MW-22VB	10/11/2021 11:24	pH	8.06	SU
APCO-GSD-AP-MW-22VB	10/11/2021 11:24	Temperature	18.21	C
APCO-GSD-AP-MW-22VB	10/11/2021 11:24	Turbidity	3.69	NTU
APCO-GSD-AP-MW-22VB	10/11/2021 11:29	Conductivity	371.5	uS/cm
APCO-GSD-AP-MW-22VB	10/11/2021 11:29	DO	0.1	mg/L
APCO-GSD-AP-MW-22VB	10/11/2021 11:29	Depth to Water Detail	7.18	ft
APCO-GSD-AP-MW-22VB	10/11/2021 11:29	Oxidation Reduction Potention	-170.32	mv
APCO-GSD-AP-MW-22VB	10/11/2021 11:29	pH	8.12	SU
APCO-GSD-AP-MW-22VB	10/11/2021 11:29	Temperature	18.03	C
APCO-GSD-AP-MW-22VB	10/11/2021 11:29	Turbidity	3.09	NTU
APCO-GSD-AP-MW-22VB	10/11/2021 11:34	Conductivity	370.58	uS/cm
APCO-GSD-AP-MW-22VB	10/11/2021 11:34	DO	0.1	mg/L
APCO-GSD-AP-MW-22VB	10/11/2021 11:34	Depth to Water Detail	7.3	ft
APCO-GSD-AP-MW-22VB	10/11/2021 11:34	Oxidation Reduction Potention	-164.26	mv
APCO-GSD-AP-MW-22VB	10/11/2021 11:34	pH	8.13	SU
APCO-GSD-AP-MW-22VB	10/11/2021 11:34	Temperature	18.07	C
APCO-GSD-AP-MW-22VB	10/11/2021 11:34	Turbidity	2.76	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-PZ-5	10/12/2021 11:58	Conductivity	41.42	uS/cm
APCO-GSD-AP-PZ-5	10/12/2021 11:58	DO	3.74	mg/L
APCO-GSD-AP-PZ-5	10/12/2021 11:58	Depth to Water Detail	11.33	ft
APCO-GSD-AP-PZ-5	10/12/2021 11:58	Oxidation Reduction Potention	149.05	mv
APCO-GSD-AP-PZ-5	10/12/2021 11:58	pH	5.29	SU
APCO-GSD-AP-PZ-5	10/12/2021 11:58	Temperature	17.9	C
APCO-GSD-AP-PZ-5	10/12/2021 11:58	Turbidity	5.2	NTU
APCO-GSD-AP-PZ-5	10/12/2021 12:03	Conductivity	41.47	uS/cm
APCO-GSD-AP-PZ-5	10/12/2021 12:03	DO	3.84	mg/L
APCO-GSD-AP-PZ-5	10/12/2021 12:03	Depth to Water Detail	11.33	ft
APCO-GSD-AP-PZ-5	10/12/2021 12:03	Oxidation Reduction Potention	148.34	mv
APCO-GSD-AP-PZ-5	10/12/2021 12:03	pH	5.3	SU
APCO-GSD-AP-PZ-5	10/12/2021 12:03	Temperature	18.01	C
APCO-GSD-AP-PZ-5	10/12/2021 12:03	Turbidity	2.38	NTU
APCO-GSD-AP-PZ-5	10/12/2021 12:08	Conductivity	41.47	uS/cm
APCO-GSD-AP-PZ-5	10/12/2021 12:08	DO	3.87	mg/L
APCO-GSD-AP-PZ-5	10/12/2021 12:08	Depth to Water Detail	11.33	ft
APCO-GSD-AP-PZ-5	10/12/2021 12:08	Oxidation Reduction Potention	145.75	mv
APCO-GSD-AP-PZ-5	10/12/2021 12:08	pH	5.33	SU
APCO-GSD-AP-PZ-5	10/12/2021 12:08	Temperature	17.86	C
APCO-GSD-AP-PZ-5	10/12/2021 12:08	Turbidity	2.13	NTU
APCO-GSD-AP-PZ-5	10/12/2021 12:13	Conductivity	41.42	uS/cm
APCO-GSD-AP-PZ-5	10/12/2021 12:13	DO	3.89	mg/L
APCO-GSD-AP-PZ-5	10/12/2021 12:13	Depth to Water Detail	11.33	ft
APCO-GSD-AP-PZ-5	10/12/2021 12:13	Oxidation Reduction Potention	143.52	mv
APCO-GSD-AP-PZ-5	10/12/2021 12:13	pH	5.33	SU
APCO-GSD-AP-PZ-5	10/12/2021 12:13	Temperature	17.84	C
APCO-GSD-AP-PZ-5	10/12/2021 12:13	Turbidity	2.08	NTU

**Alabama Power Company  
Plant Gadsden Ash Pond**

WELL ID	TIME OF READING	DESCRIPTION	VALUE	UNIT
APCO-GSD-AP-PZ-6	10/12/2021 13:02	Conductivity	42.65	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:02	DO	4.74	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:02	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:02	Oxidation Reduction Potention	146.9	mv
APCO-GSD-AP-PZ-6	10/12/2021 13:02	pH	5.43	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:02	Temperature	19.58	C
APCO-GSD-AP-PZ-6	10/12/2021 13:02	Turbidity	79.9	NTU
APCO-GSD-AP-PZ-6	10/12/2021 13:07	Conductivity	42.74	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:07	DO	4.78	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:07	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:07	Oxidation Reduction Potention	142.01	mv
APCO-GSD-AP-PZ-6	10/12/2021 13:07	pH	5.48	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:07	Temperature	19.64	C
APCO-GSD-AP-PZ-6	10/12/2021 13:07	Turbidity	46.2	NTU
APCO-GSD-AP-PZ-6	10/12/2021 13:12	Conductivity	43.11	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:12	DO	4.78	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:12	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:12	Oxidation Reduction Potention	137.58	mv
APCO-GSD-AP-PZ-6	10/12/2021 13:12	pH	5.56	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:12	Temperature	19.62	C
APCO-GSD-AP-PZ-6	10/12/2021 13:12	Turbidity	23	NTU
APCO-GSD-AP-PZ-6	10/12/2021 13:17	Conductivity	43.05	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:17	DO	4.9	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:17	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:17	Oxidation Reduction Potention	147.16	mv
APCO-GSD-AP-PZ-6	10/12/2021 13:17	pH	5.39	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:17	Temperature	19.6	C
APCO-GSD-AP-PZ-6	10/12/2021 13:17	Turbidity	16.5	NTU
APCO-GSD-AP-PZ-6	10/12/2021 13:22	Conductivity	42.9	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:22	DO	4.96	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:22	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:22	Oxidation Reduction Potention	139.56	mv
APCO-GSD-AP-PZ-6	10/12/2021 13:22	pH	5.51	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:22	Temperature	19.48	C
APCO-GSD-AP-PZ-6	10/12/2021 13:22	Turbidity	11.2	NTU
APCO-GSD-AP-PZ-6	10/12/2021 13:27	Conductivity	42.91	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:27	DO	5.01	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:27	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:27	Oxidation Reduction Potention	137.04	mv
APCO-GSD-AP-PZ-6	10/12/2021 13:27	pH	5.57	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:27	Temperature	19.48	C
APCO-GSD-AP-PZ-6	10/12/2021 13:27	Turbidity	10.12	NTU
APCO-GSD-AP-PZ-6	10/12/2021 13:32	Conductivity	42.94	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:32	DO	5.03	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:32	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:32	Oxidation Reduction Potention	135.52	mv
APCO-GSD-AP-PZ-6	10/12/2021 13:32	pH	5.59	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:32	Temperature	19.52	C
APCO-GSD-AP-PZ-6	10/12/2021 13:32	Turbidity	7.63	NTU
APCO-GSD-AP-PZ-6	10/12/2021 13:37	Conductivity	42.98	uS/cm
APCO-GSD-AP-PZ-6	10/12/2021 13:37	DO	5.04	mg/L
APCO-GSD-AP-PZ-6	10/12/2021 13:37	Depth to Water Detail	6.62	ft
APCO-GSD-AP-PZ-6	10/12/2021 13:37	Oxidation Reduction Potention	145.69	mv

**Alabama Power Company  
Plant Gadsden Ash Pond**

<b>WELL ID</b>	<b>TIME OF READING</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-PZ-6	10/12/2021 13:37	pH	5.41	SU
APCO-GSD-AP-PZ-6	10/12/2021 13:37	Temperature	19.58	C
APCO-GSD-AP-PZ-6	10/12/2021 13:37	Turbidity	6.06	NTU



# Appendix E



**Appendix E. Horizontal Groundwater Flow Velocity Calculations  
Plant Gadsden Ash Storage Pond**

2021 1st Semi-Annual Monitoring Event								
Date	PZ-6 h <sub>1</sub> (ft)	MW-10 h <sub>2</sub> (ft)	Distance Δl (ft)	Hydraulic Gradient Δh/Δl (ft/ft)	Hydraulic Conductivity K	Effective Porosity n	Calculated Groundwater Flow Velocity (ft/d)	Calculated Groundwater Flow Velocity (ft/yr)
10/4/2021	513.18	509.19	1455.00	0.00274	12.33	0.20	0.169	61.7

Notes:

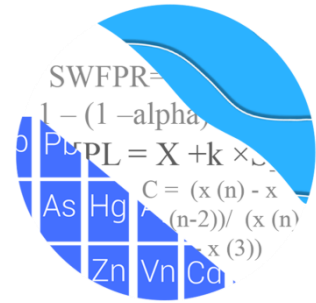
- ft=feet
- ft/d = feet/day
- ft/ft = feet per foot
- ft/yr = feet per year

# Appendix F

## GROUNDWATER STATS CONSULTING

January 14, 2022

Southern Company Services  
Attn: Mr. Greg Dyer  
3535 Colonnade Parkway  
Birmingham, AL 35243



Re: Plant Gadsden Ash Pond  
Background Update & 1<sup>st</sup> 2021 Semi-Annual Analysis – October 2021

Dear Mr. Dyer,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the background update and statistical analysis of groundwater data for the October 2021 1<sup>st</sup> 2021 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 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 been sampled at least 4 times, 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 Andrew Collins, Project Manager 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.

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): 43
- # Constituents: 7
- # Downgradient wells: 15

Note that previous analyses utilized a 1-of-3 resample plan for parameters that use intrawell statistical methods; however, during this analysis, power curves 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 in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.

- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the 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.

### **Background Update – Conducted in 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, in this analysis, 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 (Figure E). 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 at this time.

### **Evaluation of Appendix III Parameters – October 2021**

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.

#### 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 F). The October 2021 sample at each well was compared to its respective intrawell prediction limit. Values in background which have been flagged as 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).

Interwell prediction limits combined with a 1-of-2 verification strategy were constructed for boron, calcium, chloride, sulfate, and TDS (Figure G).

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. The following exceedances were noted for the intrawell and interwell prediction limits:

#### Intrawell

- Fluoride: GSD-AP-MW-5, GSD-AP-MW-10, and GSD-AP-MW-11
- pH: GSD-AP-MW-12

#### 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-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 and GSD-AP-MW-3
- 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 (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. Statistically significant trends were identified for the following well/constituent pairs:

Increasing:

- Boron: GSD-AP-MW-3
- Calcium: GSD-AP-MW-11
- Fluoride: 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) and GSD-AP-MW-3
- pH: GSD-AP-MW-16 (upgradient),
- TDS: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3

### **Evaluation of Appendix IV Parameters – October 2021**

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 this 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 I). 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.

## 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 J) 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 2021 for each of the Appendix IV parameters (Figure K). 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. 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,

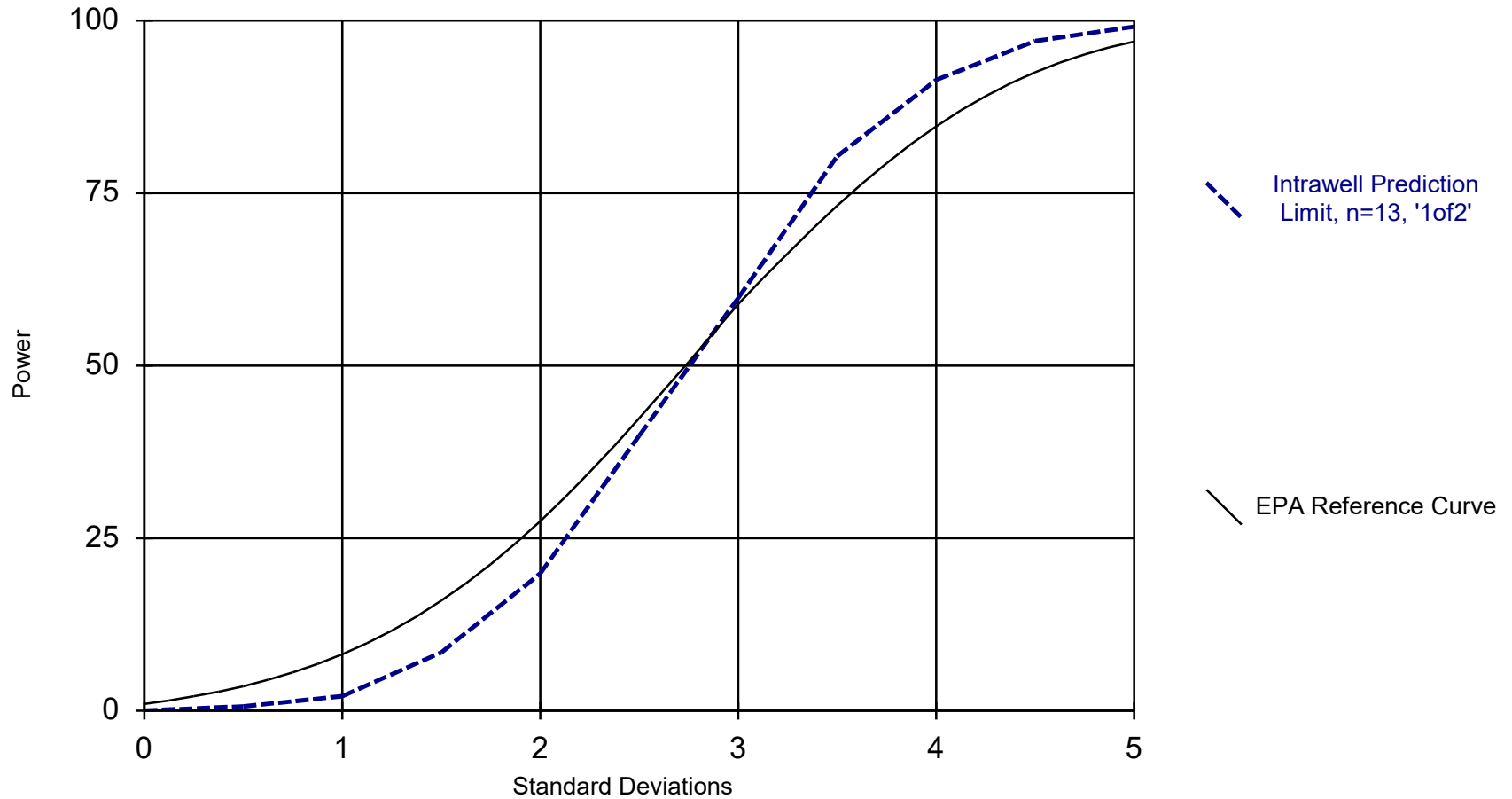


Abdul Diane  
Groundwater Analyst



Andrew T. Collins  
Project Manager

### Intrawell Power Curve

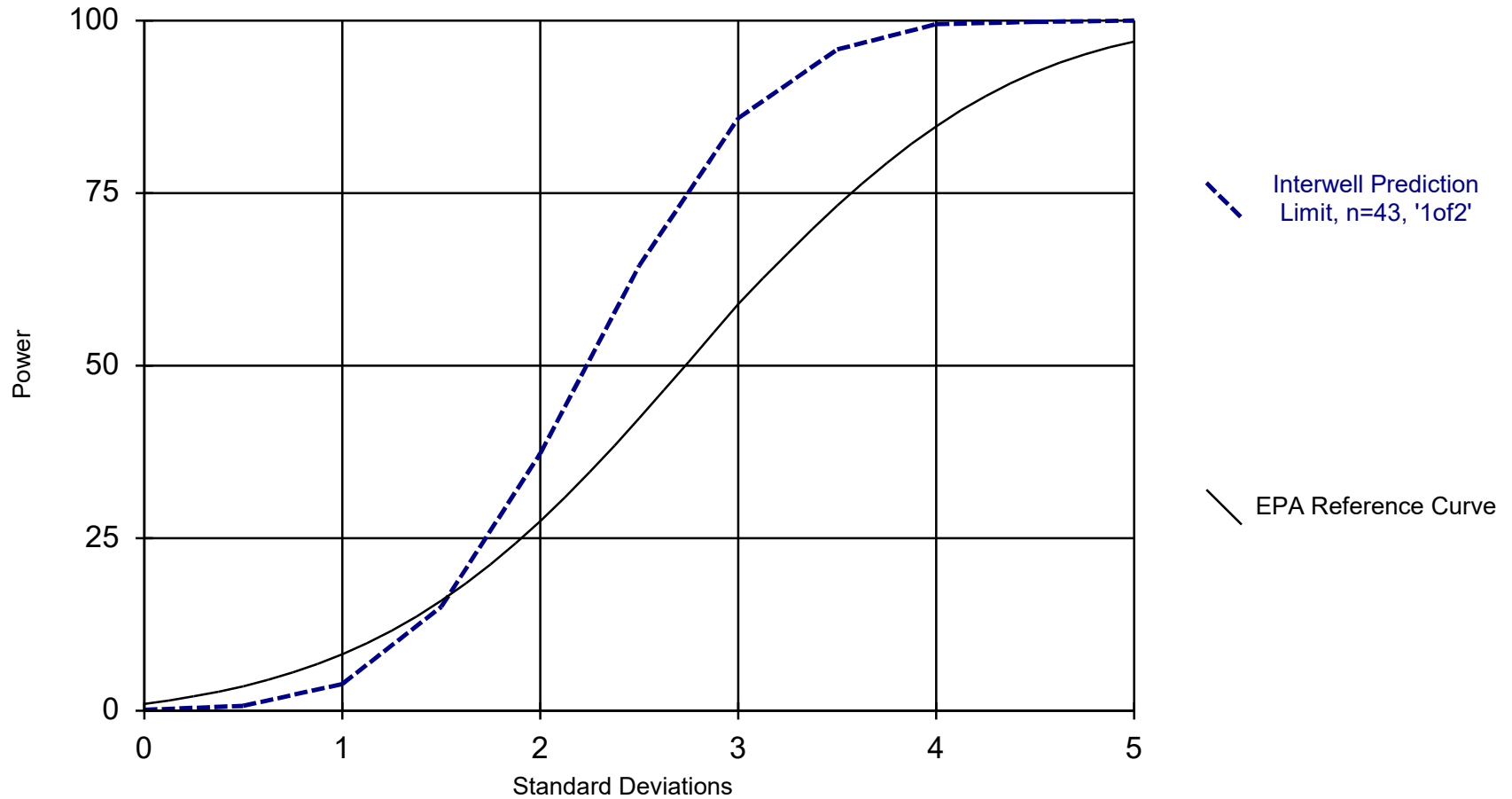


Kappa = 2.711, based on 15 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/13/2022 3:29 PM View: UTL

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Interwell Power Curve



Kappa = 2.163, based on 15 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/13/2022 8:24 PM View: UTL

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



# 100% Non-Detects

Analysis Run 1/11/2022 3:47 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-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

## Arsenic (mg/L)

GSD-AP-MW-12, GSD-AP-MW-6, GSD-AP-PZ-1, GSD-AP-PZ-6

## 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-PZ-2

## 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-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-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

## Molybdenum (mg/L)

GSD-AP-MW-1, 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

# Appendix III Welch's t-test/Mann-Whitney - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 7/16/2021, 2:09 PM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Fluoride (mg/L)	GSD-AP-MW-1	2.958	Yes	Mann-W
pH (pH)	GSD-AP-MW-1	-2.858	Yes	Mann-W
pH (pH)	GSD-AP-MW-11	-2.642	Yes	Mann-W
pH (pH)	GSD-AP-MW-3	-2.639	Yes	Mann-W
pH (pH)	GSD-AP-MW-7	-2.855	Yes	Mann-W
pH (pH)	GSD-AP-MW-8	-3.001	Yes	Mann-W
pH (pH)	GSD-AP-PZ-5	-2.708	Yes	Mann-W

# Appendix III Welch's t-test/Mann-Whitney - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 7/16/2021, 2:09 PM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>2.958</b>	<b>Yes</b>	<b>Mann-W</b>
Fluoride (mg/L)	GSD-AP-MW-10	1.248	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-11	2.317	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-12	0.6325	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-2.005	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	-1.313	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-1.84	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-2	0.07329	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-3	0.3267	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-4	0.0737	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-5	0.6633	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-6	2.495	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-7	0.2217	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-8	-1.982	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-9	1.702	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-1	-1.709	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-5	2.386	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-6	2.451	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-1</b>	<b>-2.858</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-10	0.6615	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-11</b>	<b>-2.642</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-12	-0.3665	No	Mann-W
pH (pH)	GSD-AP-MW-14 (bg)	-2.436	No	Mann-W
pH (pH)	GSD-AP-MW-16 (bg)	-2.052	No	Mann-W
pH (pH)	GSD-AP-MW-17 (bg)	-1.391	No	Mann-W
pH (pH)	GSD-AP-MW-2	-1.466	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-3</b>	<b>-2.639</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-4	0.5872	No	Mann-W
pH (pH)	GSD-AP-MW-5	-0.8894	No	Mann-W
pH (pH)	GSD-AP-MW-6	-2.126	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-7</b>	<b>-2.855</b>	<b>Yes</b>	<b>Mann-W</b>
<b>pH (pH)</b>	<b>GSD-AP-MW-8</b>	<b>-3.001</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-9	-2.014	No	Mann-W
pH (pH)	GSD-AP-PZ-1	-2.569	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-PZ-5</b>	<b>-2.708</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-PZ-6	-1.69	No	Mann-W

# Appendix III - Upgradient Well Trend Tests - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 2:29 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.412	-67	-48	Yes	14	0	n/a	n/a	0.01	NP

# Appendix III - Upgradient Well Trend Tests - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 2:29 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	48	No	14	100	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0.02049	44	53	No	15	60	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.001687	-35	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-1.044	-16	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-0.5887	-13	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.622	25	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	0.02255	13	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-7	-53	No	15	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.412</b>	<b>-67</b>	<b>-48</b>	<b>Yes</b>	<b>14</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-14 (bg)	-4.795	-10	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	29.67	42	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-1.162	-42	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-11	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	26.27	37	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.097	-18	-48	No	14	0	n/a	n/a	0.01	NP

# Appendix III - Intrawell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 2:23 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-10	0.1381	n/a	10/11/2021	0.201	Yes	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	10/12/2021	0.134	Yes	13	0.0646	0.01756	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-5	0.08126	n/a	10/5/2021	0.122	Yes	13	0.05878	0.008293	0	None	No	0.0005016	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-12	5.692	5.209	10/5/2021	5.19	Yes	13	5.451	0.08911	0	None	No	0.0002508	Param Intra 1 of 2

# Appendix III - Intrawell Prediction Limits - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/13/2022, 2:23 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	10/5/2021	0.0601J	No	13	0.06075	0.02003	38.46	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-10</b>	<b>0.1381</b>	<b>n/a</b>	<b>10/11/2021</b>	<b>0.201</b>	<b>Yes</b>	<b>13</b>	<b>0.08731</b>	<b>0.01872</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	GSD-AP-MW-11	0.1122	n/a	10/12/2021	0.134	Yes	13	0.0646	0.01756	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-12	0.1	n/a	10/5/2021	0.1ND	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	10/12/2021	0.1ND	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	0.16	n/a	10/6/2021	0.1ND	No	14	n/a	n/a	50	n/a	n/a	0.008612	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-17	0.2376	n/a	10/6/2021	0.175	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	10/11/2021	0.283	No	13	0.2362	0.04323	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-3	0.1327	n/a	10/5/2021	0.1ND	No	14	0.07516	0.0217	28.57	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-4	0.2837	n/a	10/5/2021	0.214	No	13	0.2314	0.01931	0	None	No	0.0005016	Param Intra 1 of 2
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>0.08126</b>	<b>n/a</b>	<b>10/5/2021</b>	<b>0.122</b>	<b>Yes</b>	<b>13</b>	<b>0.05878</b>	<b>0.008293</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	GSD-AP-MW-6	0.08914	n/a	10/5/2021	0.1ND	No	13	0.05192	0.01373	38.46	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-7	0.109	n/a	10/5/2021	0.0933J	No	13	0.0755	0.01236	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-8	0.149	n/a	10/12/2021	0.123	No	13	0.09544	0.01975	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-9	0.1665	n/a	10/12/2021	0.147	No	13	0.01415	0.005005	7.692	None	x^2	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-1	0.1606	n/a	10/5/2021	0.1ND	No	13	0.1071	0.01975	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-5	0.1	n/a	10/12/2021	0.1ND	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	0.1	n/a	10/12/2021	0.1ND	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	10/5/2021	5.79	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	10/11/2021	6.72	No	13	2060	147.3	0	None	x^4	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-11	7.012	6.206	10/12/2021	6.66	No	13	6.609	0.1486	0	None	No	0.0002508	Param Intra 1 of 2
<b>pH (pH)</b>	<b>GSD-AP-MW-12</b>	<b>5.692</b>	<b>5.209</b>	<b>10/5/2021</b>	<b>5.19</b>	<b>Yes</b>	<b>13</b>	<b>5.451</b>	<b>0.08911</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-14	4.1	3.25	10/12/2021	4.04	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	10/6/2021	4.16	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	10/6/2021	7.92	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	10/11/2021	6.59	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	10/5/2021	5.76	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	10/5/2021	6.58	No	13	6.665	0.1229	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-5	6.352	5.982	10/5/2021	6.24	No	13	6.167	0.06836	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-6	6.703	5.385	10/5/2021	5.74	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	10/5/2021	6.06	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	10/12/2021	6.61	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	10/12/2021	6.9	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	10/5/2021	6.46	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	10/12/2021	5.33	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	10/12/2021	5.41	No	13	5.523	0.06473	0	None	No	0.0002508	Param Intra 1 of 2

# Appendix III - Prediction Limit Exceedances Trend Test - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 3:06 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	-0.06242	-61	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.08037	-64	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-3	0.05252	59	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.056	-68	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.069	-67	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-18.36	-55	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.022	52	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-14.19	-52	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-11.11	-67	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.412	-67	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.7197	-92	-53	Yes	15	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-11	0.01846	57	48	Yes	14	21.43	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.5008	-70	-48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-81.47	-68	-48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	22.44	49	48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-63.87	-63	-48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-43.33	-73	-53	Yes	15	0	n/a	n/a	0.01	NP



# Appendix III - Prediction Limit Exceedances Trend Test - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/13/2022, 3:06 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>-0.06242</b>	<b>-61</b>	<b>-48</b>	<b>Yes</b>	<b>14</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-11	0.01128	44	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	48	No	14	100	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0.02049	44	53	No	15	60	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.001687	-35	-48	No	14	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-0.08037</b>	<b>-64</b>	<b>-48</b>	<b>Yes</b>	<b>14</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-3</b>	<b>0.05252</b>	<b>59</b>	<b>53</b>	<b>Yes</b>	<b>15</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-4</b>	<b>-0.056</b>	<b>-68</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-0.069</b>	<b>-67</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-18.36</b>	<b>-55</b>	<b>-48</b>	<b>Yes</b>	<b>14</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	0.3552	11	48	No	14	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>4.022</b>	<b>52</b>	<b>48</b>	<b>Yes</b>	<b>14</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	2.155	15	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-1.044	-16	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-0.5887	-13	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.622	25	48	No	14	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-14.19</b>	<b>-52</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-11.11</b>	<b>-67</b>	<b>-53</b>	<b>Yes</b>	<b>15</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-5	-2.198	-33	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-8	-0.8321	-11	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-9	0.7715	11	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-1	-0.02609	-6	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-10	0.02804	3	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-11	-0.05489	-6	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-12	0.06337	13	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	0.02255	13	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-7	-53	No	15	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.412</b>	<b>-67</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-0.7197</b>	<b>-92</b>	<b>-53</b>	<b>Yes</b>	<b>15</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	0.183	23	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.3869	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-6	-0.2376	-40	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.5316	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-8	0.1905	26	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-9	0.2026	27	48	No	14	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-10	0.01072	41	48	No	14	0	n/a	n/a	0.01	NP
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>0.01846</b>	<b>57</b>	<b>48</b>	<b>Yes</b>	<b>14</b>	<b>21.43</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-0.04431	-47	-48	No	14	50	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	0	-33	-53	No	15	53.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-0.009217	-44	-48	No	14	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-5	0.004584	33	48	No	14	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-12	-0.04154	-18	-48	No	14	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-14 (bg)	-0.01834	-18	-48	No	14	0	n/a	n/a	0.01	NP
<b>pH (pH)</b>	<b>GSD-AP-MW-16 (bg)</b>	<b>-0.5008</b>	<b>-70</b>	<b>-48</b>	<b>Yes</b>	<b>14</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)	-0.09143	-10	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-1	-1.272	-2	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-4.795	-10	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	29.67	42	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-1.162	-42	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-3	0.8391	4	53	No	15	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-81.47</b>	<b>-68</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>22.44</b>	<b>49</b>	<b>48</b>	<b>Yes</b>	<b>14</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	0	0	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-11	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	26.27	37	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.097	-18	-48	No	14	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-63.87</b>	<b>-63</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-43.33</b>	<b>-73</b>	<b>-53</b>	<b>Yes</b>	<b>15</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.

# Appendix IV - Confidence Intervals - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/11/2022, 3:53 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-2	0.8867	0.4825	0.01	Yes	8	0.1907	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01443	0.01112	0.01	Yes	8	0.001561	0	No	0.01	Param.

# Appendix IV - Confidence Intervals - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/11/2022, 3:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	GSD-AP-PZ-5	0.00114	0.00102	0.006	No	8	0.00004243	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	GSD-AP-PZ-6	0.00181	0.00102	0.006	No	8	0.0002793	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-1	0.004635	0.003167	0.01	No	8	0.0006925	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-10	0.004268	0.002367	0.01	No	8	0.0008972	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-11	0.002875	0.002467	0.01	No	8	0.0001991	0	x^2	0.01	Param.
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>0.8867</b>	<b>0.4825</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.1907</b>	<b>0</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-3	0.00021	0.0002	0.01	No	8	0.000003536	75	No	0.004	NP (NDs)
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>0.01443</b>	<b>0.01112</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.001561</b>	<b>0</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-5	0.0002	0.0000817	0.01	No	8	0.00004545	75	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-7	0.0002	0.00007	0.01	No	8	0.00004596	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-8	0.003237	0.002685	0.01	No	8	0.0002603	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-9	0.00118	0.0002	0.01	No	8	0.0004166	50	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-2	0.0002	0.0000826	0.01	No	4	0.00006571	50	No	0.0625	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-5	0.0002	0.0000808	0.01	No	8	0.00004214	87.5	No	0.004	NP (NDs)
Barium (mg/L)	GSD-AP-MW-1	0.04302	0.03178	2	No	8	0.005302	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-10	0.3583	0.272	2	No	8	0.0407	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-11	0.331	0.165	2	No	8	0.07117	0	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-MW-12	0.05203	0.03202	2	No	8	0.009438	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-2	0.07826	0.04999	2	No	8	0.01334	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-3	0.0545	0.0344	2	No	8	0.00667	0	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-MW-4	0.208	0.1663	2	No	8	0.01968	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-5	0.2509	0.2179	2	No	8	0.01556	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-6	0.07455	0.0586	2	No	8	0.007523	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-7	0.08968	0.06367	2	No	8	0.01227	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-8	0.2499	0.1821	2	No	8	0.03199	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-9	0.1978	0.1452	2	No	8	0.02484	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-1	0.09461	0.05414	2	No	8	0.01909	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-2	0.1828	0.006264	2	No	4	0.03889	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-5	0.126	0.0494	2	No	8	0.03219	0	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-PZ-6	0.0311	0.02888	2	No	8	0.001049	0	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-1	0.0002	0.0001	0.005	No	8	0.00004583	75	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-12	0.00069	0.0004022	0.005	No	8	0.0001357	0	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-2	0.0002	0.0000688	0.005	No	8	0.00004639	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-3	0.000438	0.0002	0.005	No	8	0.00009918	62.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-7	0.0002	0.000097	0.005	No	8	0.00003642	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-8	0.0002	0.0000832	0.005	No	8	0.0000413	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-PZ-5	0.0002	0.00008	0.005	No	8	0.00004243	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-1	0.00102	0.00023	0.1	No	8	0.0003342	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-10	0.00102	0.00028	0.1	No	8	0.0003269	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-11	0.00102	0.00027	0.1	No	8	0.0002981	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-12	0.00102	0.00034	0.1	No	8	0.0002947	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-2	0.00102	0.00047	0.1	No	8	0.0002523	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-3	0.00285	0.00023	0.1	No	8	0.0008008	62.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-4	0.00102	0.000323	0.1	No	8	0.0002464	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-5	0.00102	0.00028	0.1	No	8	0.000317	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-6	0.00102	0.00025	0.1	No	8	0.0003369	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-7	0.00102	0.00025	0.1	No	8	0.000323	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-8	0.00102	0.0003	0.1	No	8	0.0002546	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-9	0.00102	0.00031	0.1	No	8	0.0003042	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-1	0.00102	0.00035	0.1	No	8	0.0002899	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-2	0.001027	0.00008704	0.1	No	4	0.0003163	50	No	0.01	Param.
Chromium (mg/L)	GSD-AP-PZ-5	0.00102	0.00034	0.1	No	8	0.0002748	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-6	0.00102	0.00031	0.1	No	8	0.0002832	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-1	0.02458	0.0164	0.056	No	8	0.003859	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-10	0.00089	0.000203	0.056	No	8	0.0002416	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-11	0.00756	0.000203	0.056	No	8	0.003052	50	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-12	0.005722	0.003605	0.056	No	8	0.0009986	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-2	0.04018	0.02285	0.056	No	8	0.008175	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-3	0.02557	0.01775	0.056	No	8	0.003689	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-4	0.0277	0.0231	0.056	No	8	0.002167	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-5	0.00233	0.000203	0.056	No	8	0.0007658	12.5	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-6	0.00104	0.000203	0.056	No	8	0.0003829	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-7	0.00102	0.00018	0.056	No	8	0.0002901	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-8	0.003677	0.001444	0.056	No	8	0.001466	25	x^2	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-9	0.00113	0.000203	0.056	No	8	0.0004069	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-1	0.00044	0.000203	0.056	No	8	0.00008379	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-2	0.008085	0.00006002	0.056	No	4	0.001767	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-5	0.00227	0.00008	0.056	No	8	0.0009513	50	No	0.004	NP (normality)

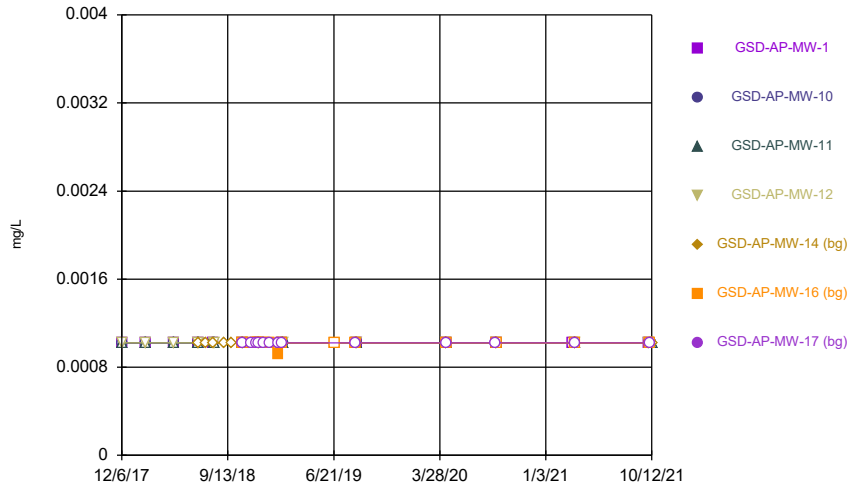
# Appendix IV - Confidence Intervals - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/11/2022, 3:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	GSD-AP-PZ-6	0.000203	0.000108	0.056	No	8	0.00003756	75	No	0.004	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-1	0.9405	0.3485	5	No	8	0.2792	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-10	2.742	0.0046	5	No	8	2.17	0	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-11	1.318	0.7526	5	No	8	0.2668	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-12	1.226	0.1273	5	No	8	0.5182	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-2	1.54	0.2978	5	No	8	0.6692	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-3	1.65	0.1921	5	No	8	0.9789	0	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-4	1.285	0.1217	5	No	8	0.5489	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-5	1.235	0.3811	5	No	8	0.4027	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-6	1.36	-0.086	5	No	8	0.4386	0	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-7	0.9326	0.07467	5	No	8	0.4047	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-8	0.7288	0.2854	5	No	8	0.2092	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-9	1.146	0.1025	5	No	8	0.4922	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-1	2.07	-0.129	5	No	8	0.678	0	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-2	1.673	-0.496	5	No	4	0.4778	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-5	0.7655	0.172	5	No	8	0.28	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-6	1.116	0.003433	5	No	8	0.4985	0	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-1	0.1	0.04	4	No	8	0.026	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-10	0.1425	0.07281	4	No	8	0.04055	0	ln(x)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-11	0.1109	0.06956	4	No	8	0.01912	37.5	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-12	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-2	0.2781	0.1802	4	No	8	0.04616	0	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-3	0.1	0.0592	4	No	8	0.01915	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-4	0.2536	0.2094	4	No	8	0.02083	0	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-5	0.0889	0.04612	4	No	8	0.02389	0	ln(x)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-6	0.1	0.0581	4	No	8	0.0153	75	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-7	0.08844	0.06404	4	No	8	0.01568	37.5	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-8	0.1098	0.06858	4	No	8	0.01946	12.5	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-9	0.148	0.08501	4	No	8	0.03587	12.5	x^2	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-1	0.1038	0.07601	4	No	8	0.0133	25	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-5	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-PZ-6	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-MW-2	0.0002	0.00009	0.015	No	8	0.00003889	87.5	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-2	0.0002	0.00012	0.015	No	4	0.00003873	50	No	0.0625	NP (normality)
Lead (mg/L)	GSD-AP-PZ-5	0.0002	0.00013	0.015	No	8	0.00002475	87.5	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-6	0.0002	0.0000835	0.015	No	8	0.00004652	75	No	0.004	NP (NDs)
Lithium (mg/L)	GSD-AP-MW-2	0.06589	0.02824	0.04	No	8	0.01776	0	No	0.01	Param.
Mercury (mg/L)	GSD-AP-MW-10	0.0005	0.000302	0.002	No	8	0.00007	87.5	No	0.004	NP (NDs)
Mercury (mg/L)	GSD-AP-MW-7	0.0005	0.00034	0.002	No	8	0.00005657	87.5	No	0.004	NP (NDs)
Mercury (mg/L)	GSD-AP-MW-8	0.0005	0.000284	0.002	No	8	0.00007637	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-10	0.00045	0.000203	0.1	No	8	0.00008728	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-11	0.000203	0.000124	0.1	No	8	0.00003133	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-2	0.02559	0.01494	0.1	No	8	0.005024	0	No	0.01	Param.
Molybdenum (mg/L)	GSD-AP-MW-4	0.00118	0.000203	0.1	No	8	0.0004365	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-5	0.000203	0.00015	0.1	No	8	0.00001874	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-7	0.000203	0.0001	0.1	No	8	0.00003642	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-8	0.000357	0.000203	0.1	No	8	0.0000635	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-9	0.00027	0.00018	0.1	No	8	0.00002612	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-1	0.000203	0.00007	0.1	No	8	0.00005544	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-2	0.00028	0.000203	0.1	No	4	0.0000385	75	No	0.0625	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-1	0.0002	0.000112	0.002	No	8	0.00003111	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-2	0.0003549	0.0002241	0.002	No	8	0.00006169	12.5	No	0.01	Param.
Thallium (mg/L)	GSD-AP-MW-3	0.0002	0.000121	0.002	No	8	0.00003257	75	No	0.004	NP (NDs)

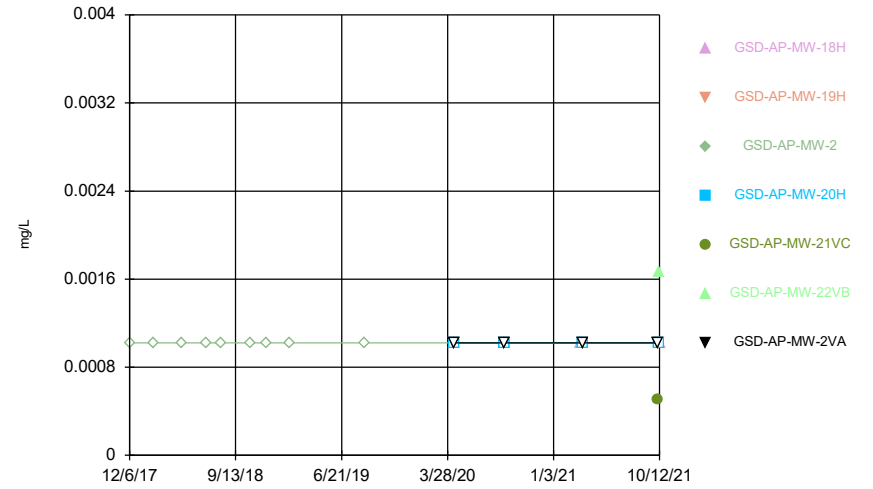
FIGURE A.

### Time Series



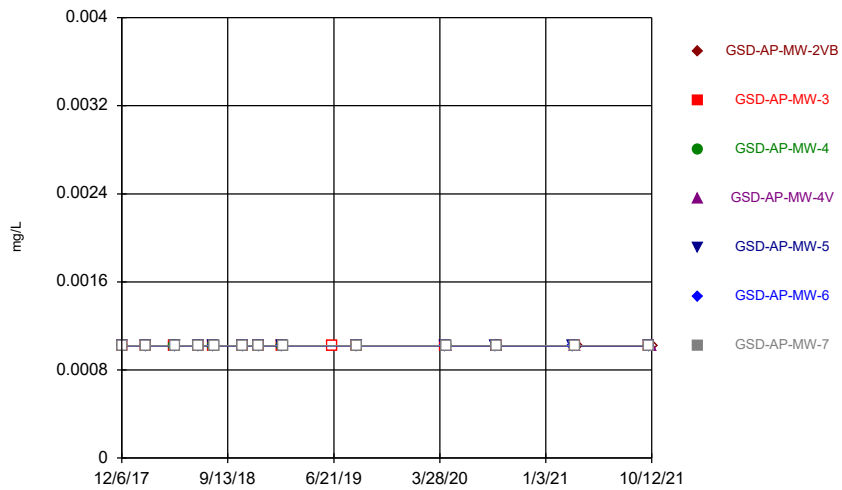
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



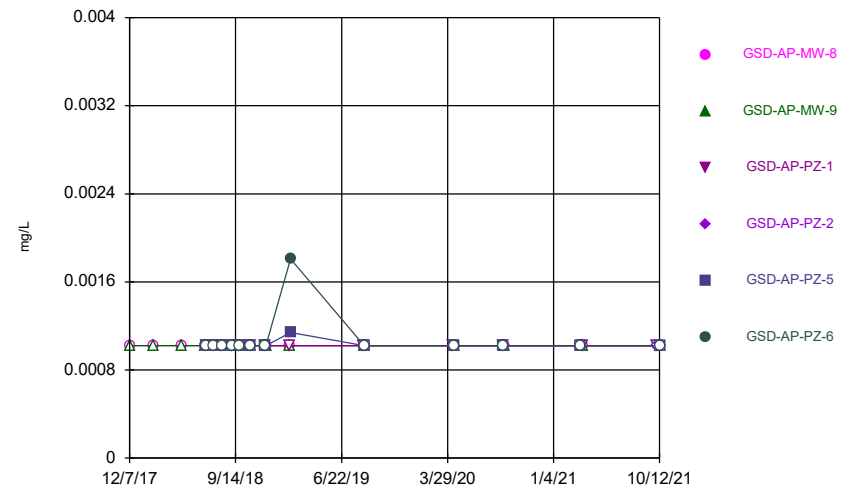
Constituent: Antimony Analysis Run 1/13/2022 1:45 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



Constituent: Antimony Analysis Run 1/13/2022 1:45 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

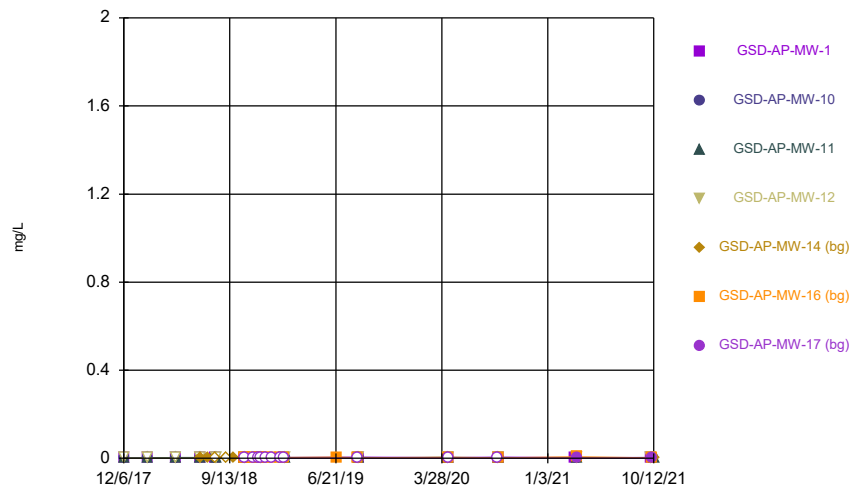
### Time Series



Constituent: Antimony Analysis Run 1/13/2022 1:45 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

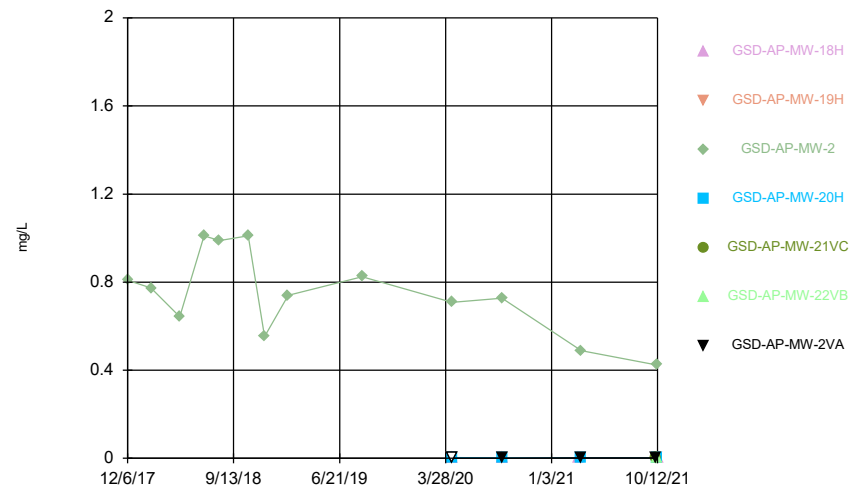


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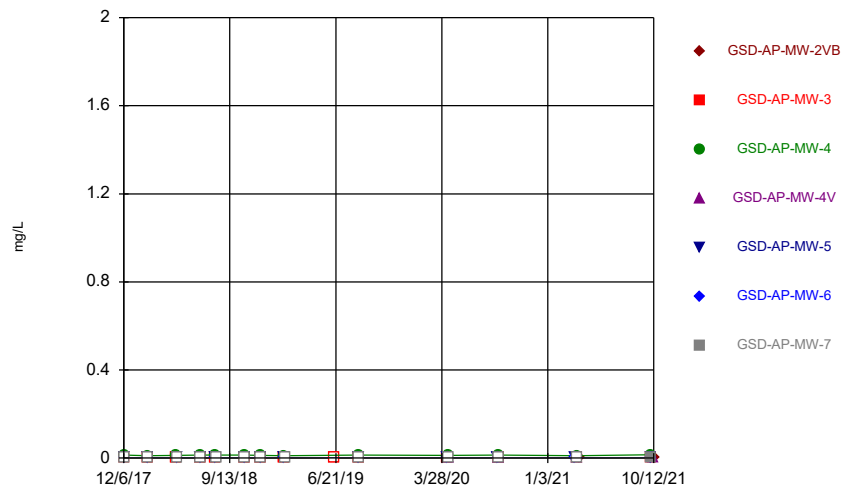
Constituent: Arsenic Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



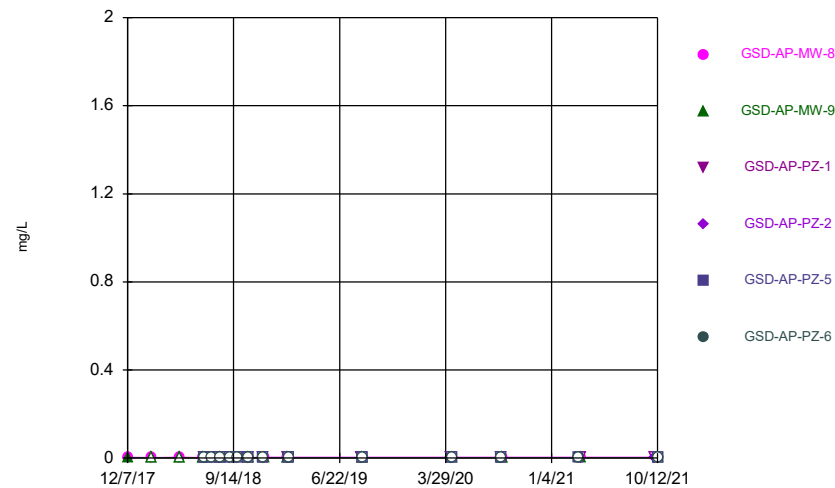
Constituent: Arsenic Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



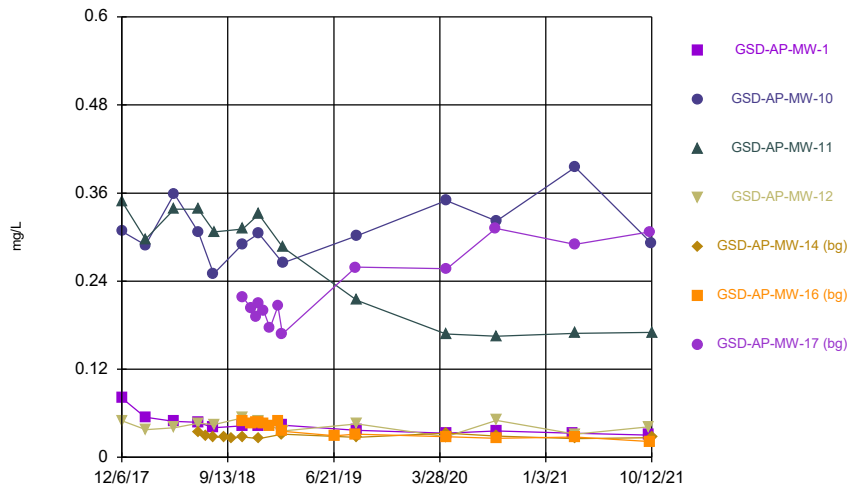
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



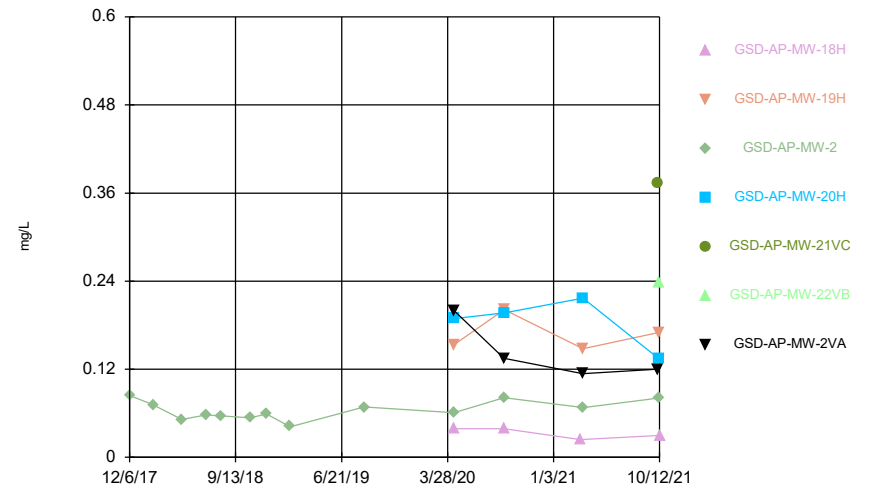
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



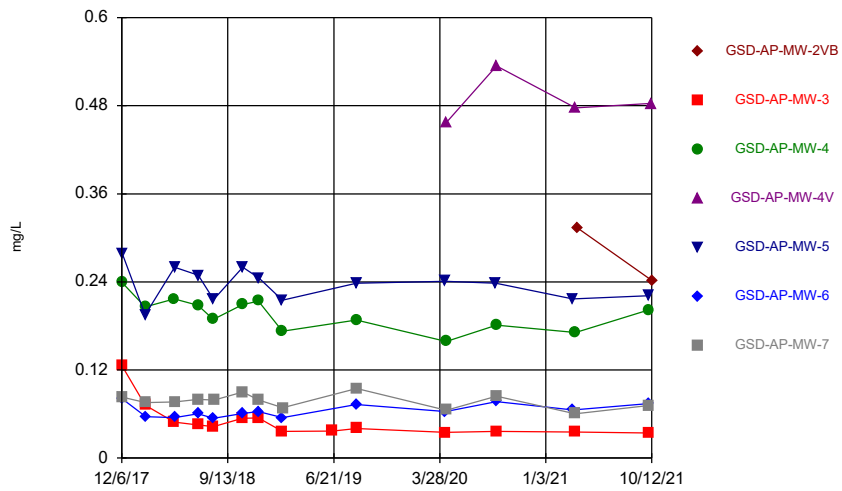
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



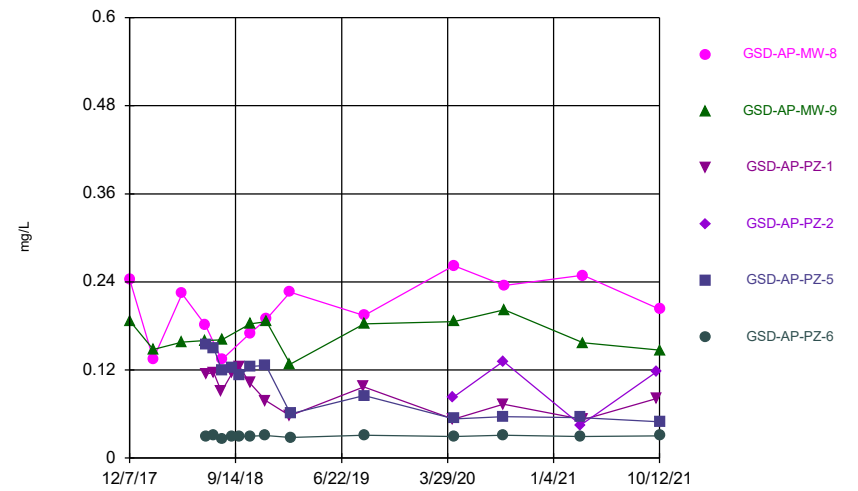
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



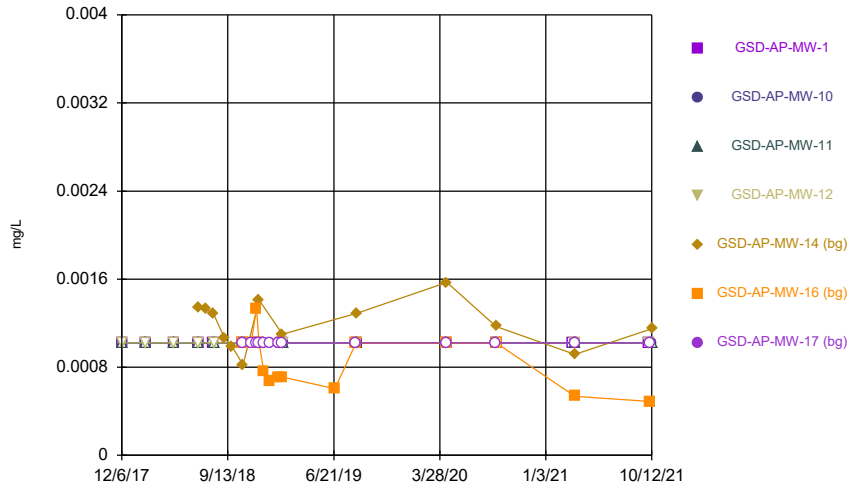
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



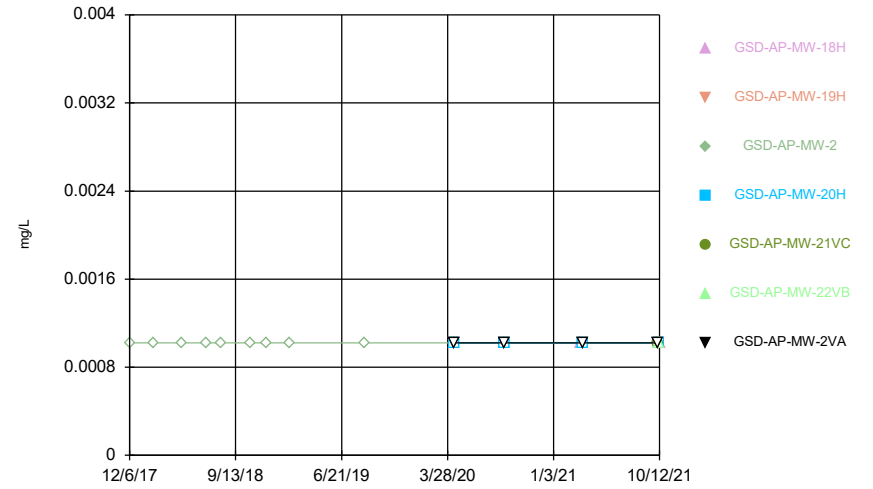
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



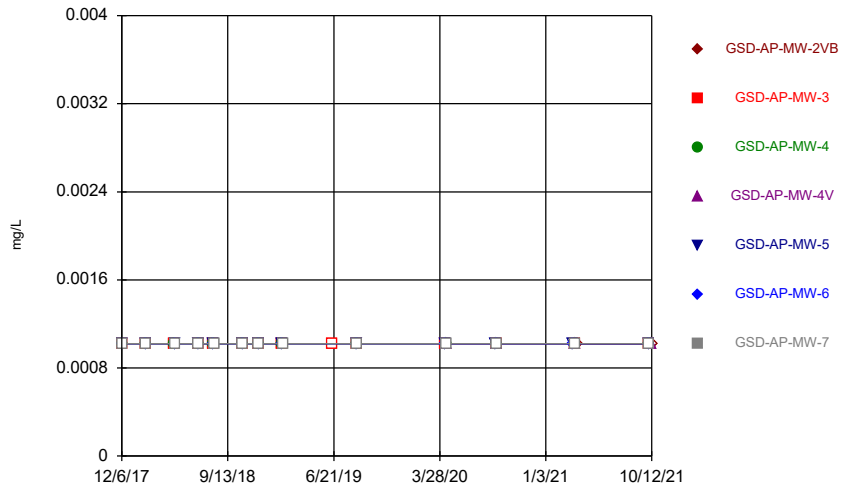
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



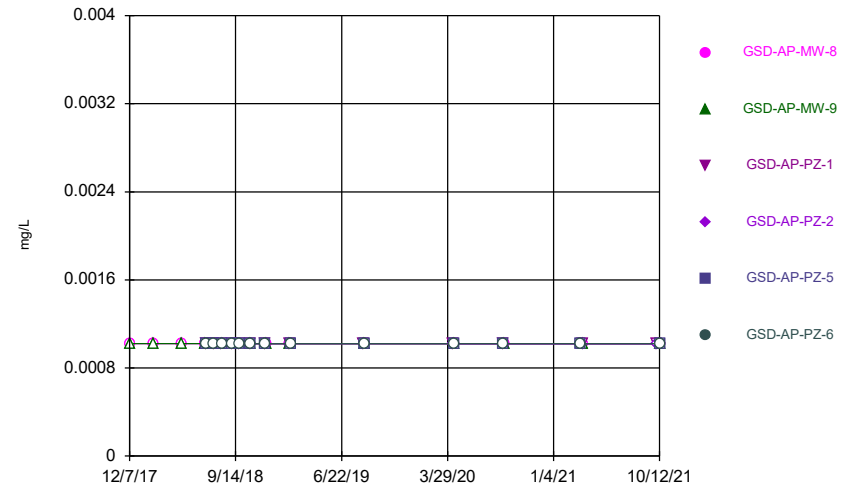
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



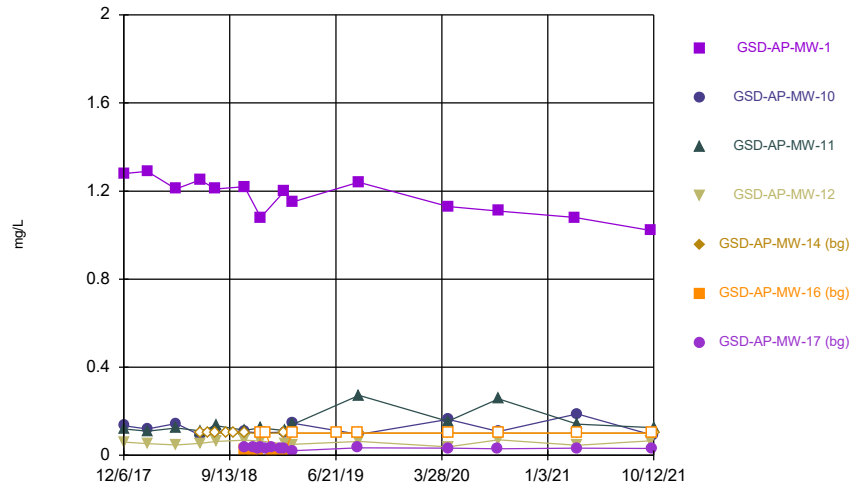
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



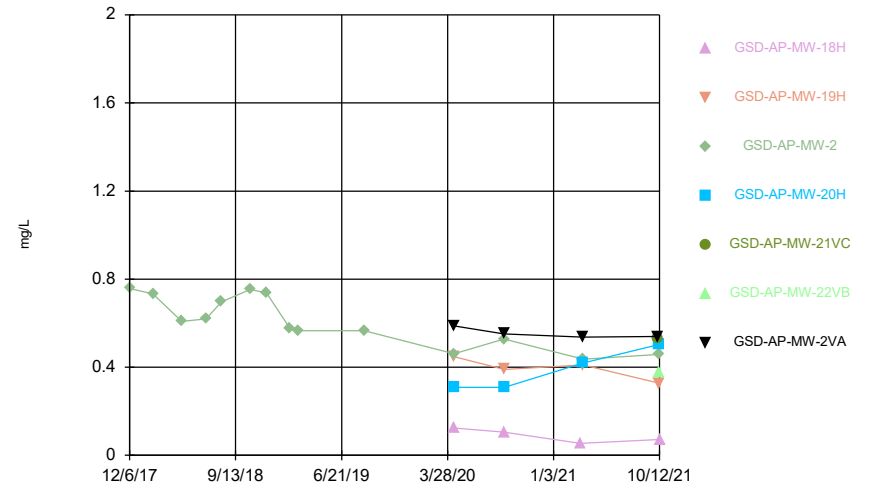
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



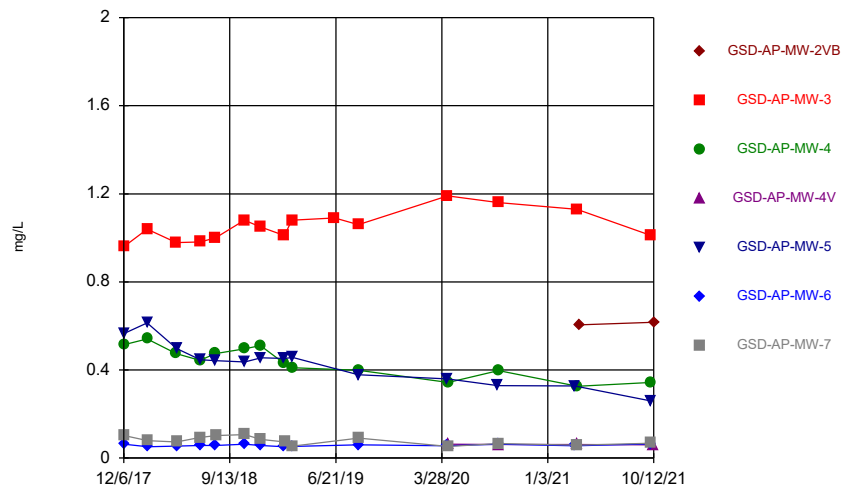
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



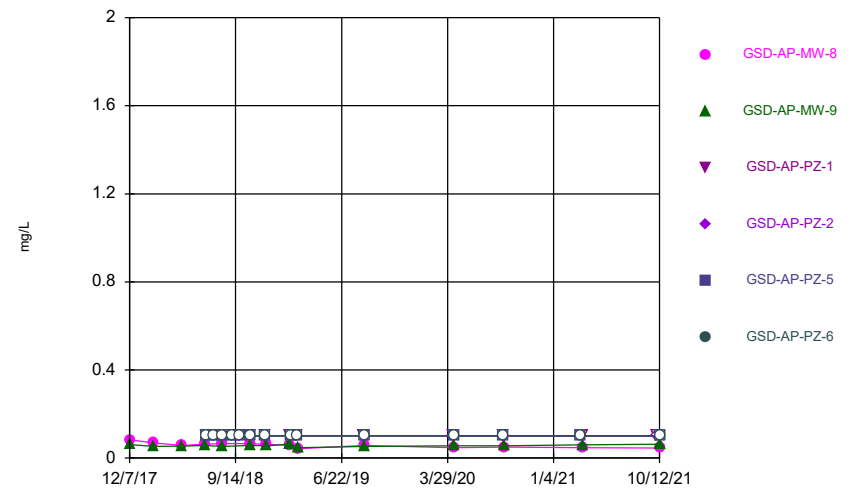
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



Constituent: Boron Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

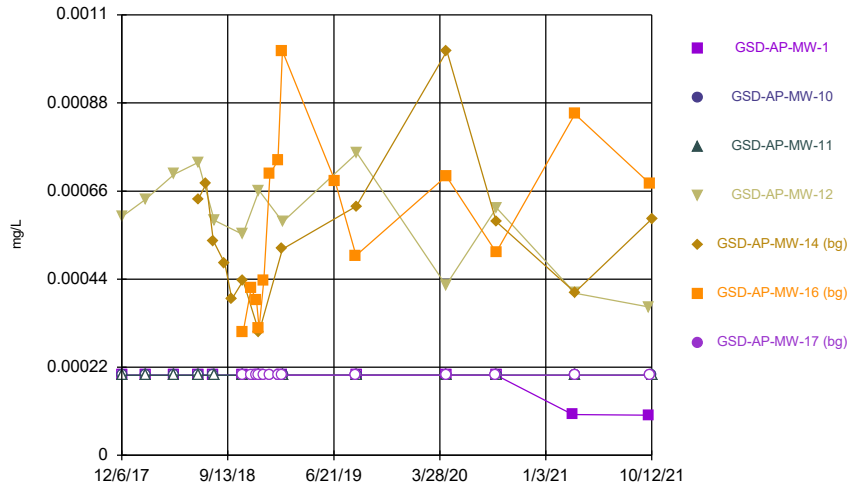
### Time Series



Constituent: Boron Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

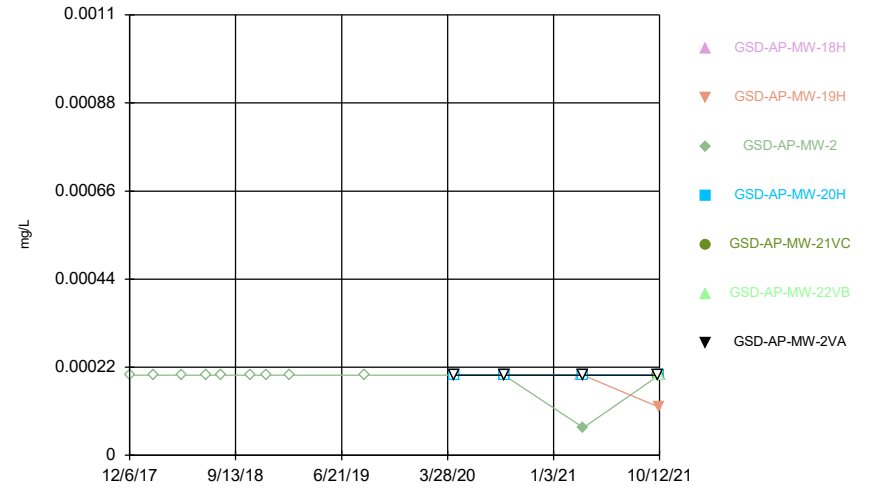
Sanitas™ v.9.6.32 . UG  
Hollow symbols indicate censored values.

### Time Series



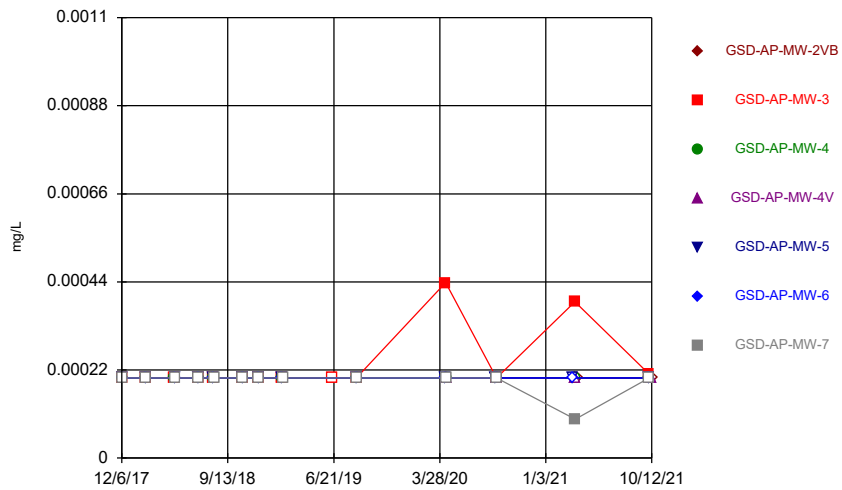
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### Time Series



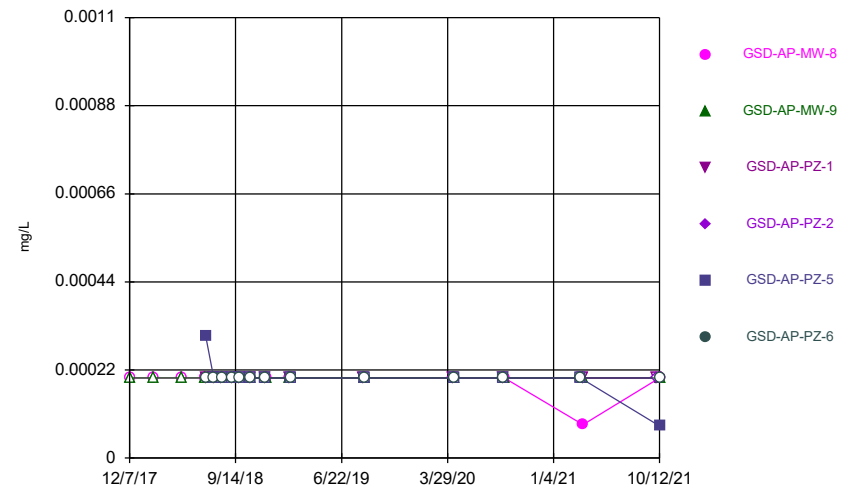
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### Time Series

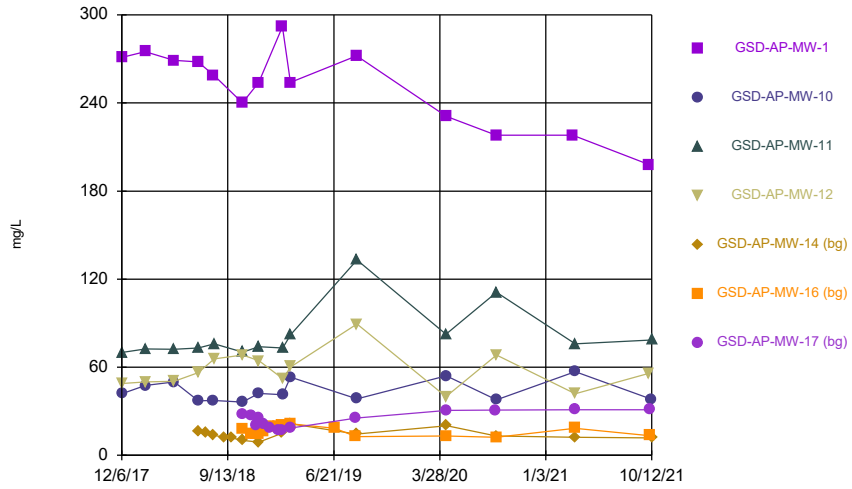


Sanitas™ v.9.6.32 . UG  
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### Time Series

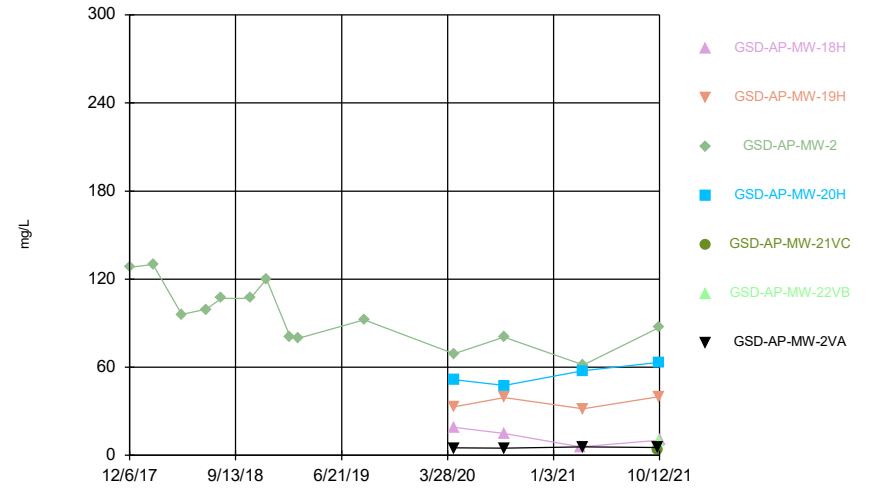


Time Series



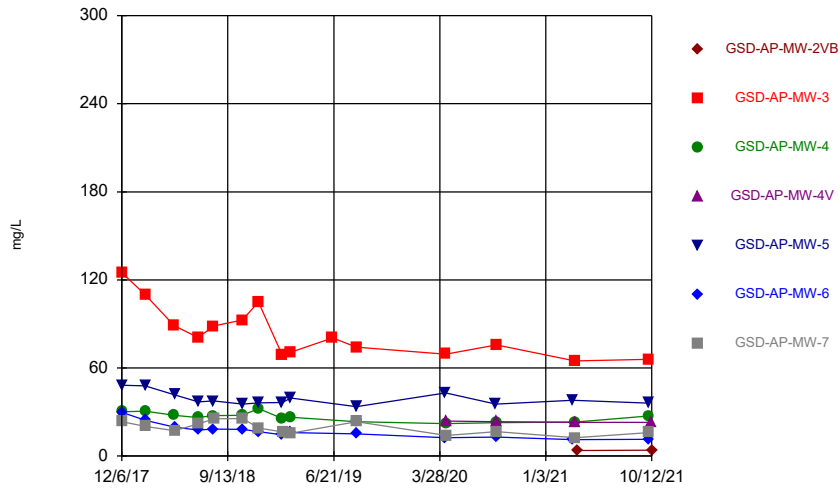
Constituent: Calcium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



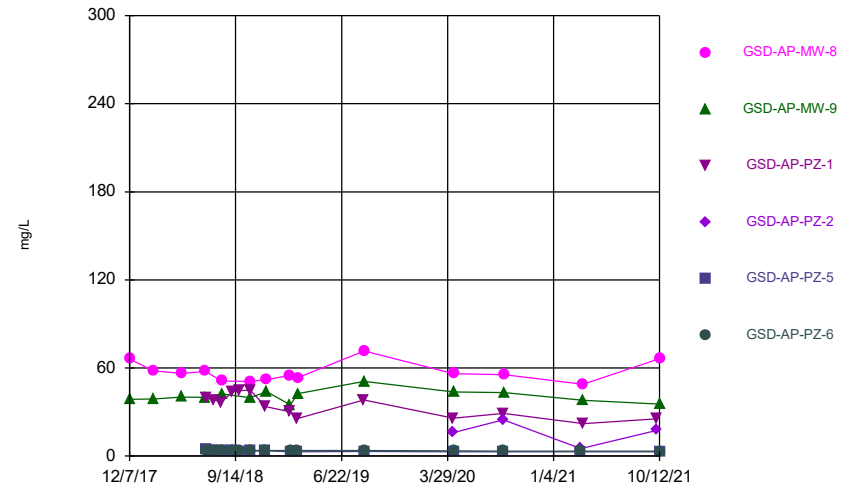
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



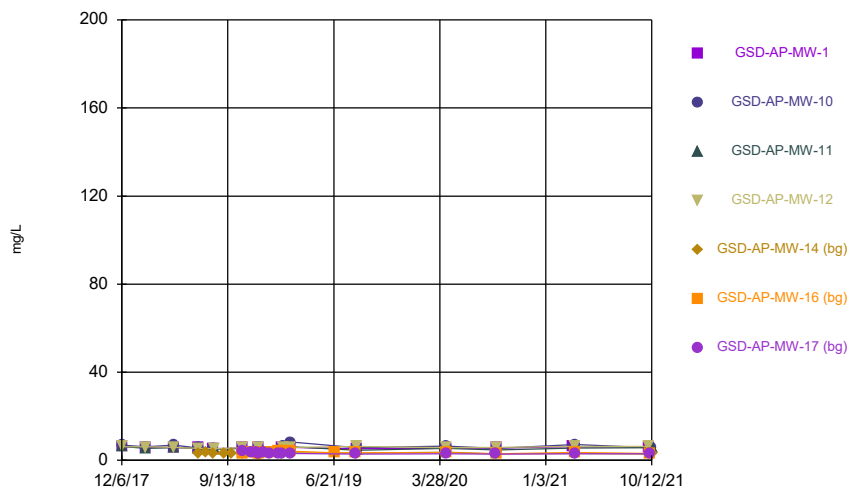
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



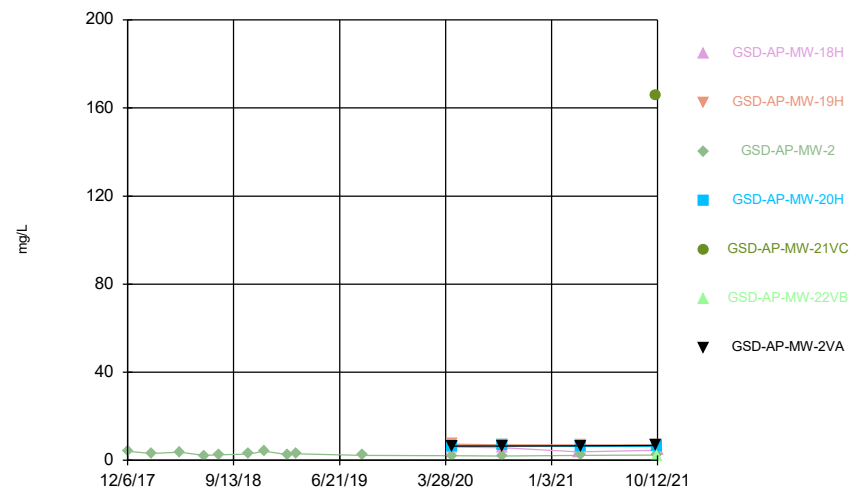
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



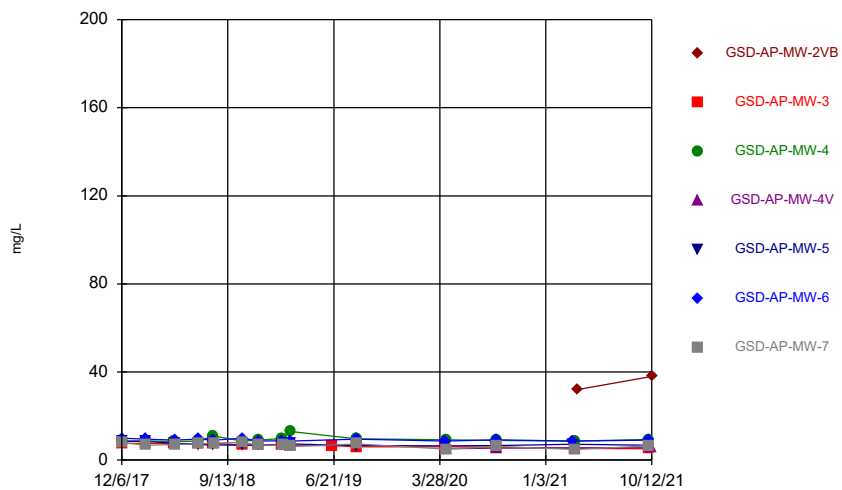
Constituent: Chloride Analysis Run 1/13/2022 1:46 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



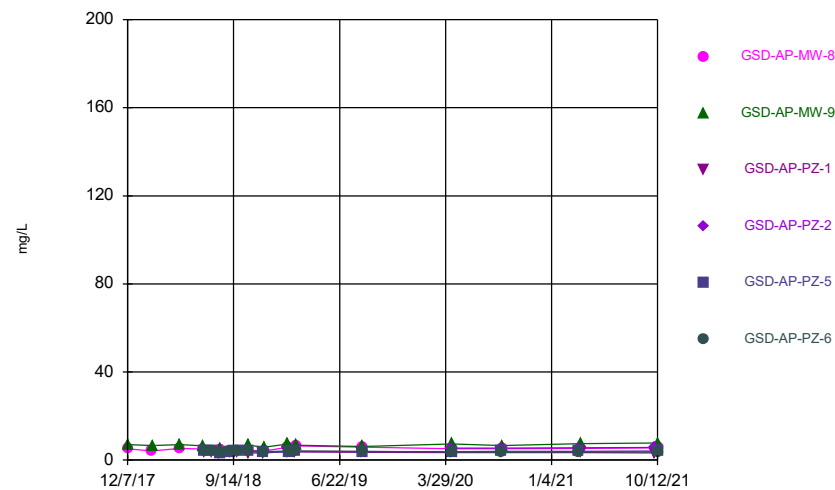
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



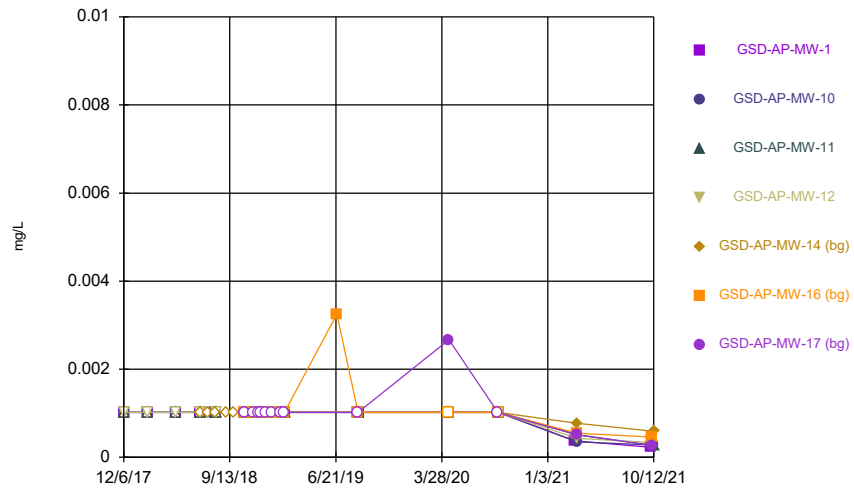
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



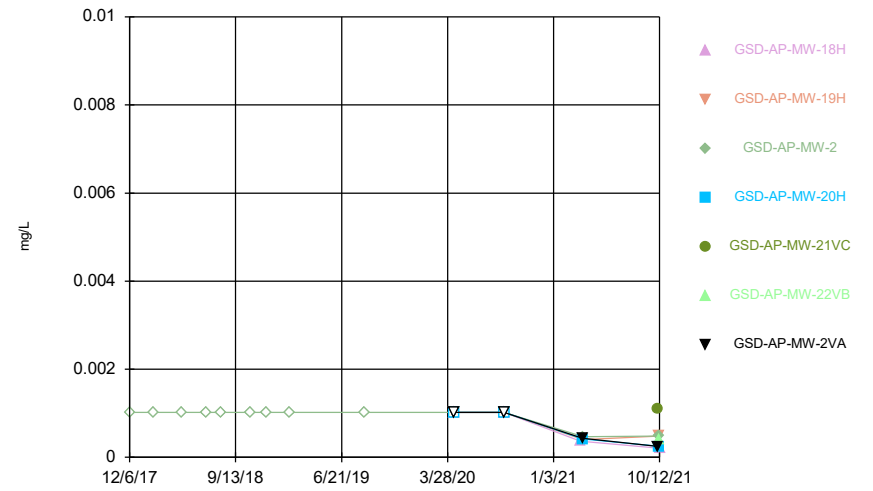
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



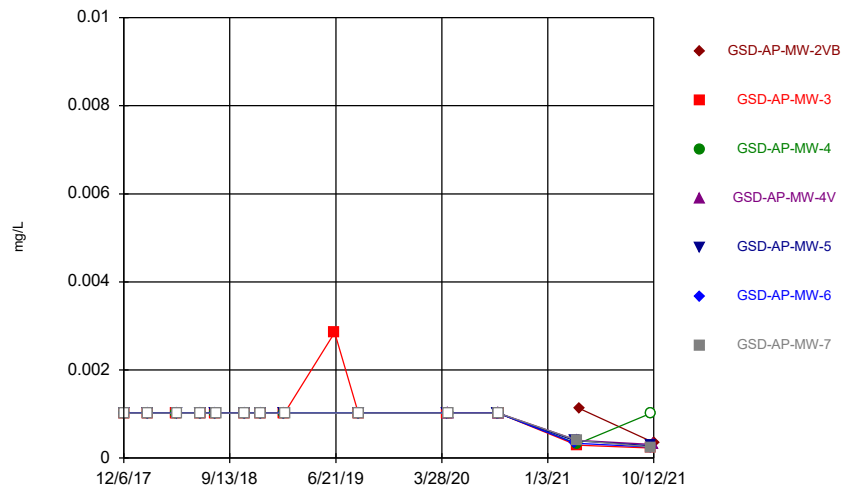
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



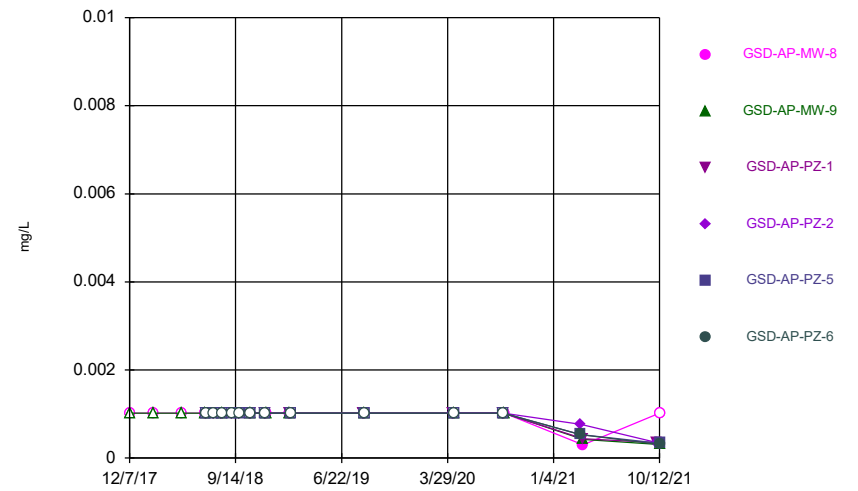
Constituent: Chromium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: Chromium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

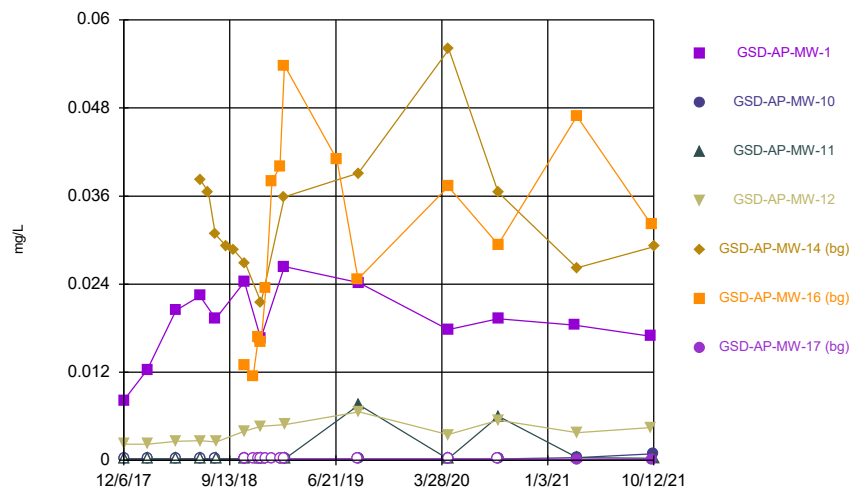
Time Series



Constituent: Chromium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

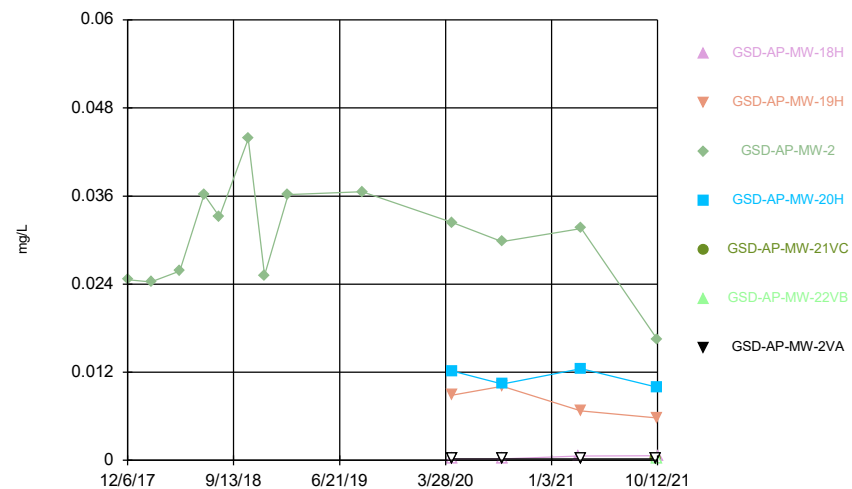


### Time Series



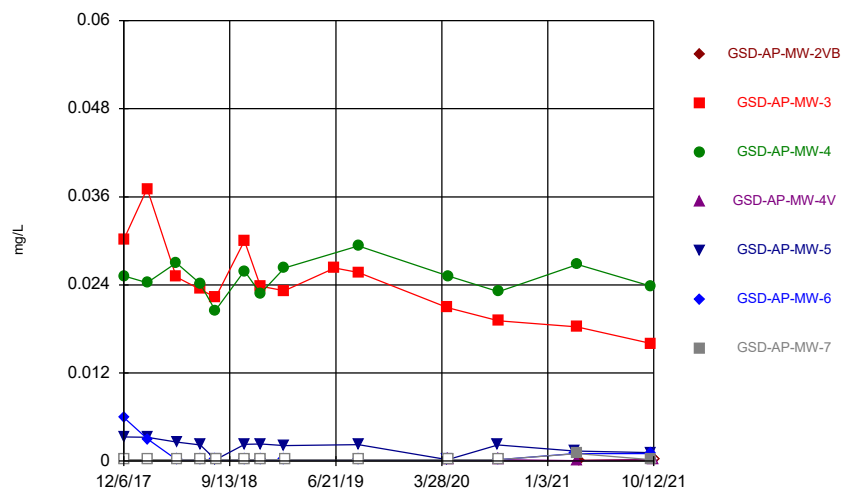
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



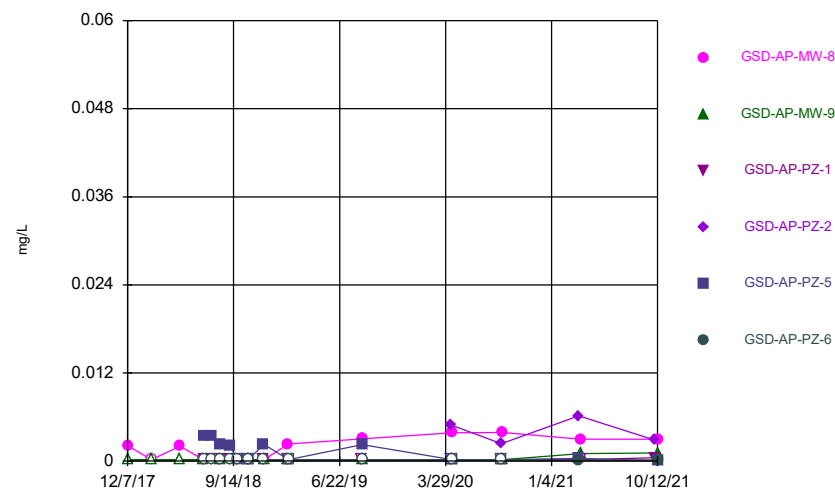
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



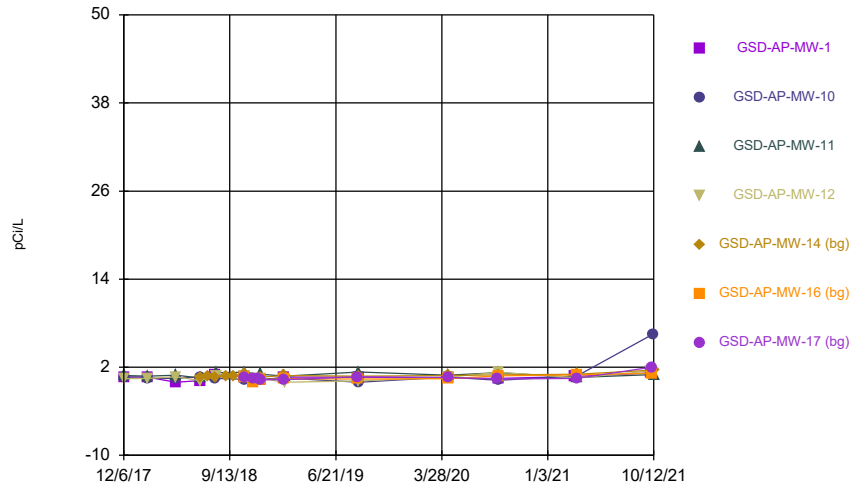
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



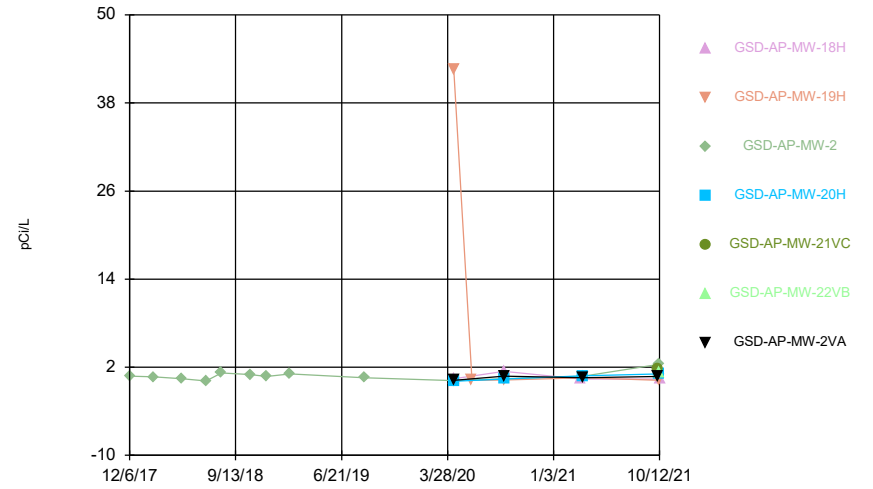
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



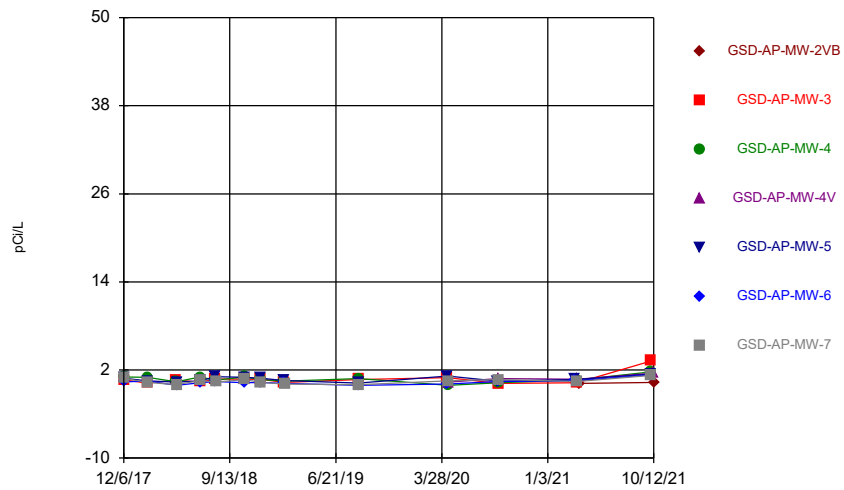
Constituent: Combined Radium 226 + 228 Analysis Run 1/13/2022 1:46 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



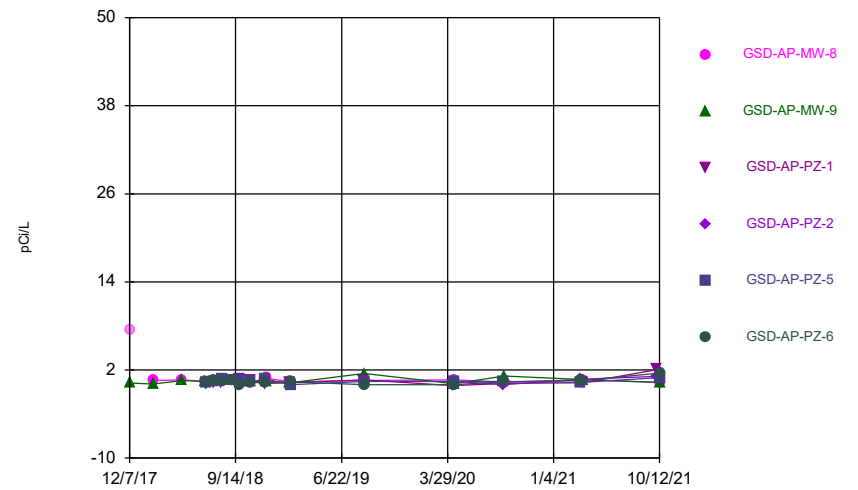
Constituent: Combined Radium 226 + 228 Analysis Run 1/13/2022 1:46 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



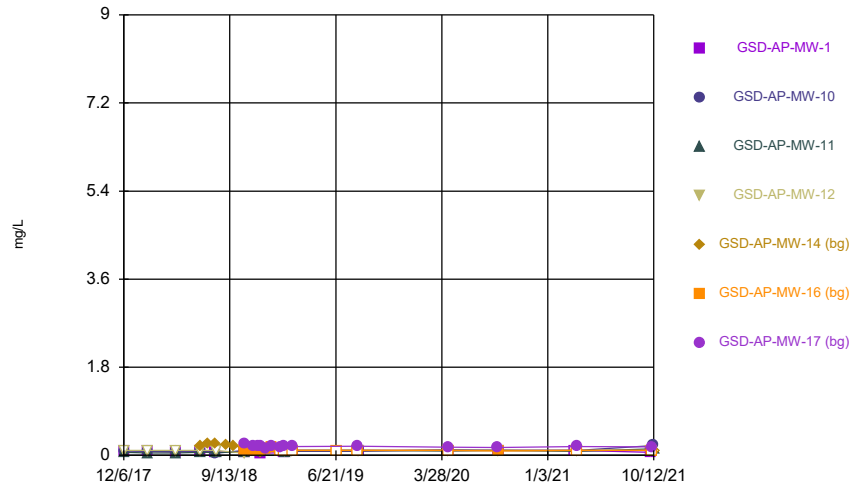
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### Time Series



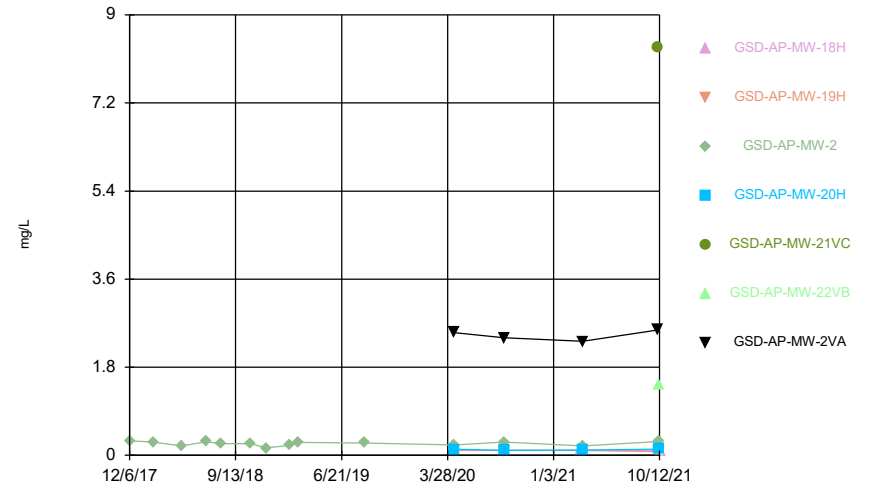
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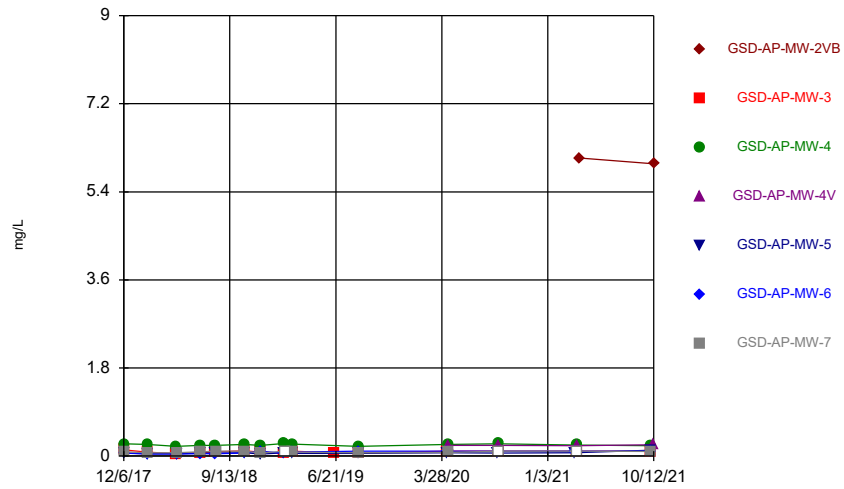
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### Time Series



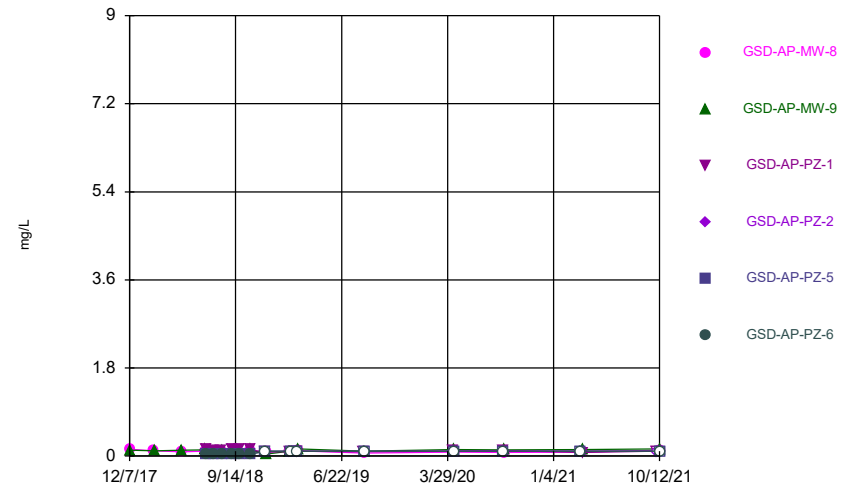
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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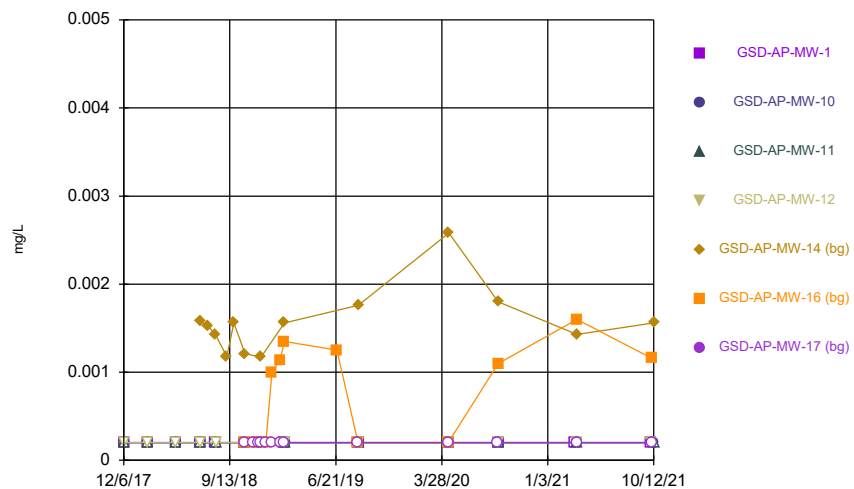
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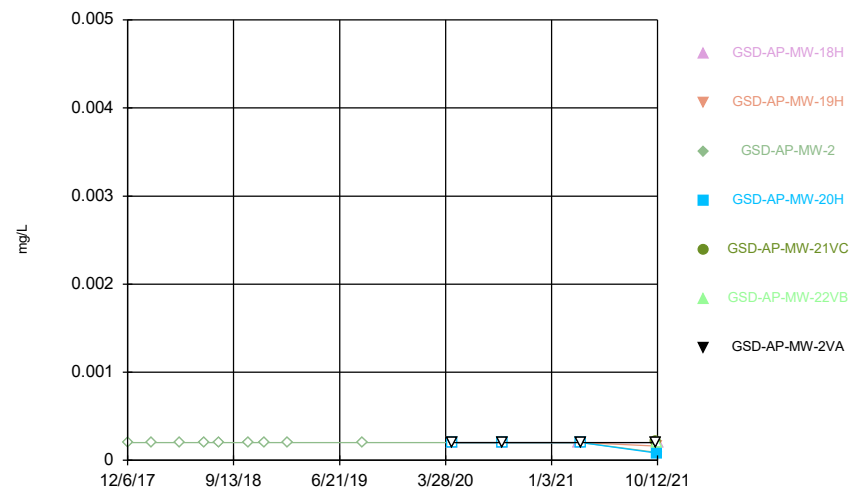
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



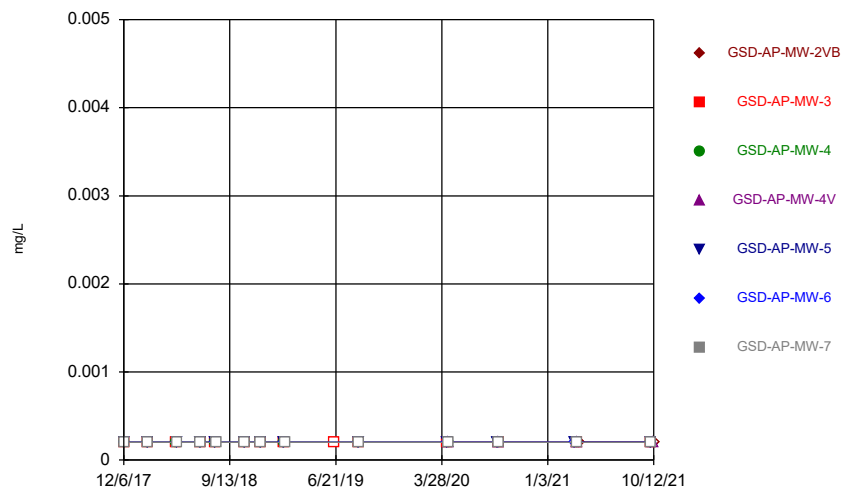
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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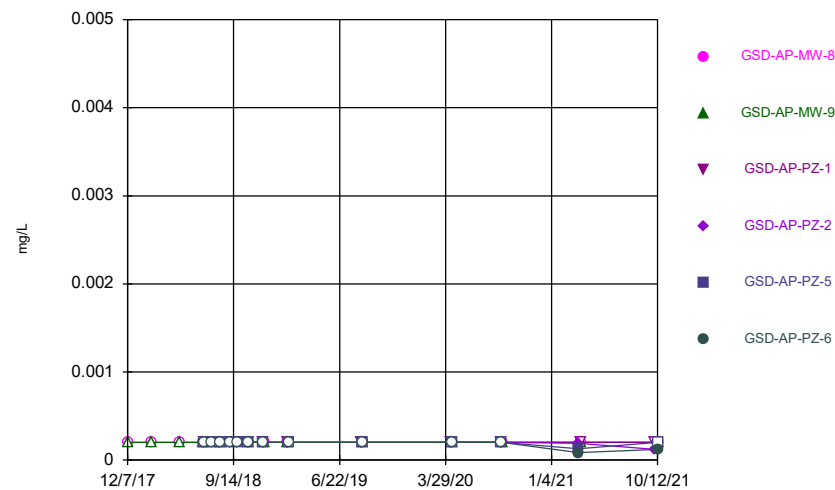
Constituent: Lead Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



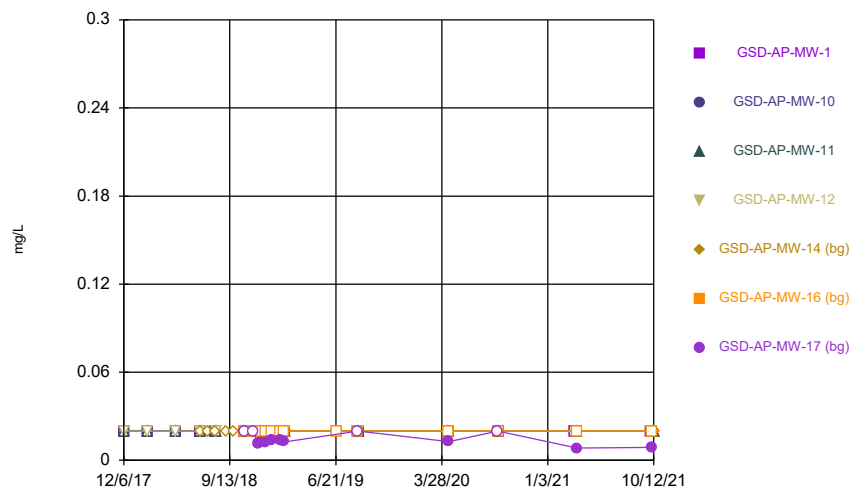
Constituent: Lead Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series

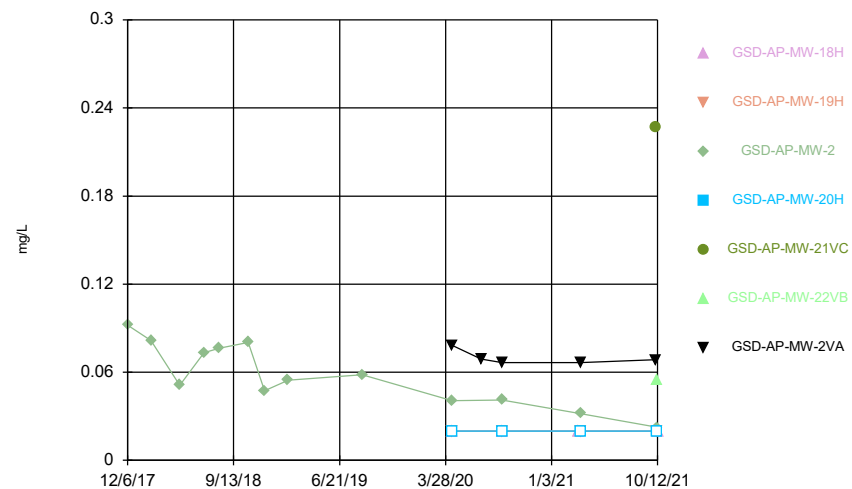


Constituent: Lead Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

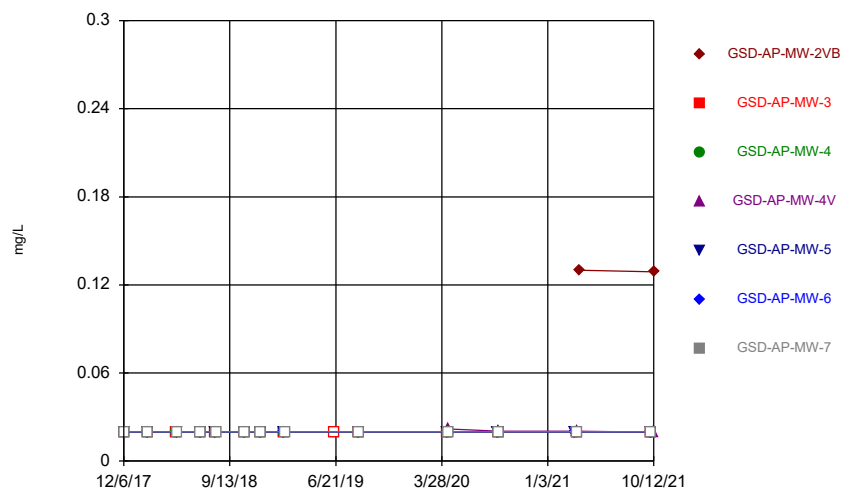
Time Series



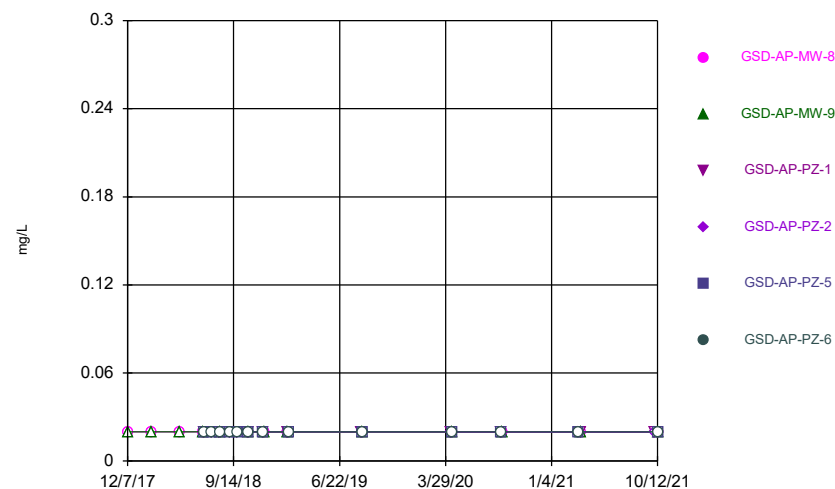
Time Series



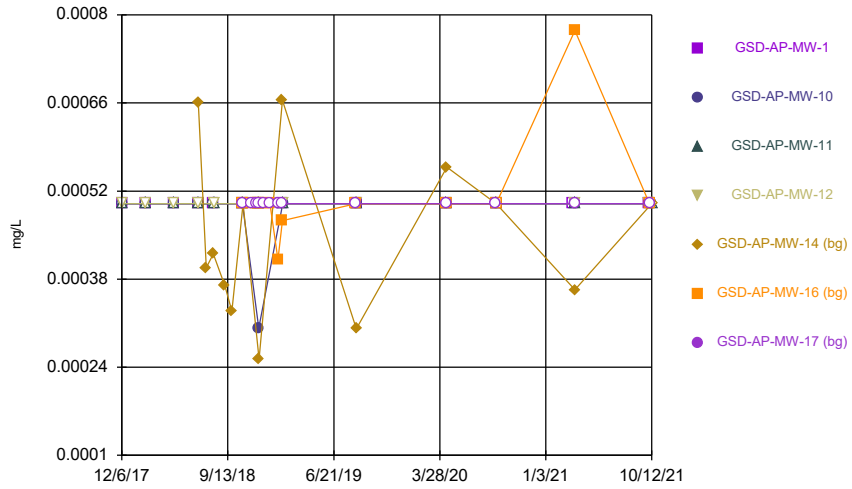
Time Series



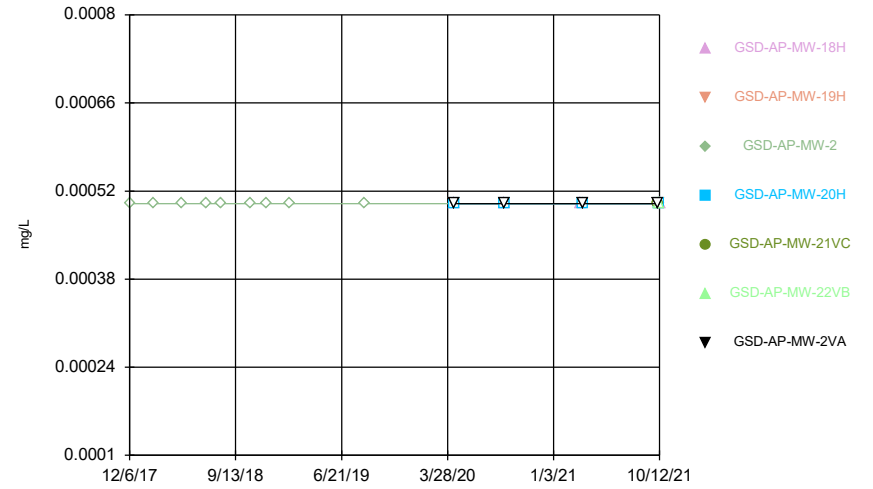
Time Series



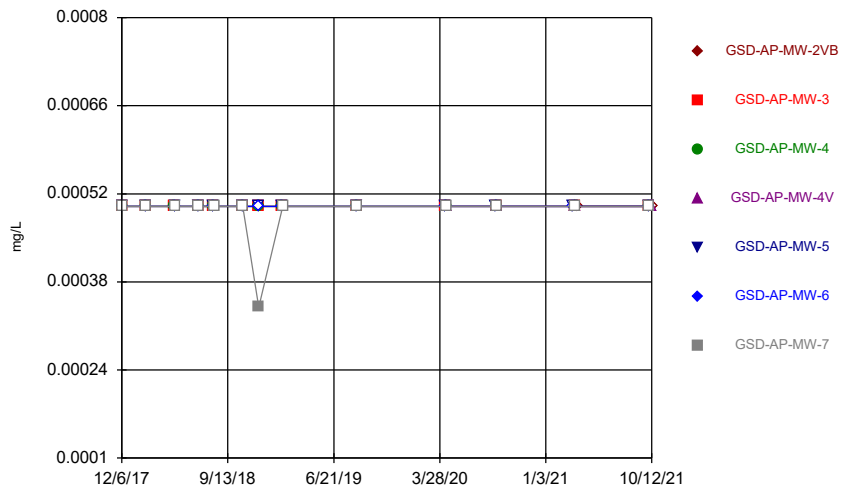
Time Series



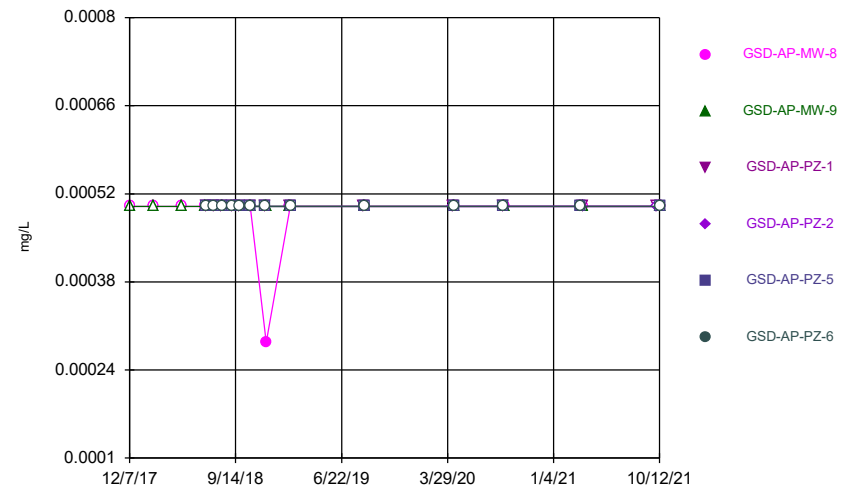
Time Series



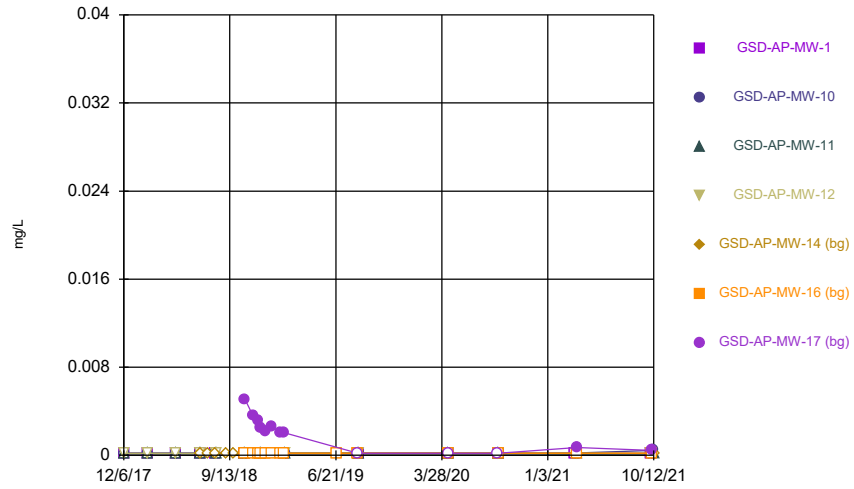
Time Series



Time Series

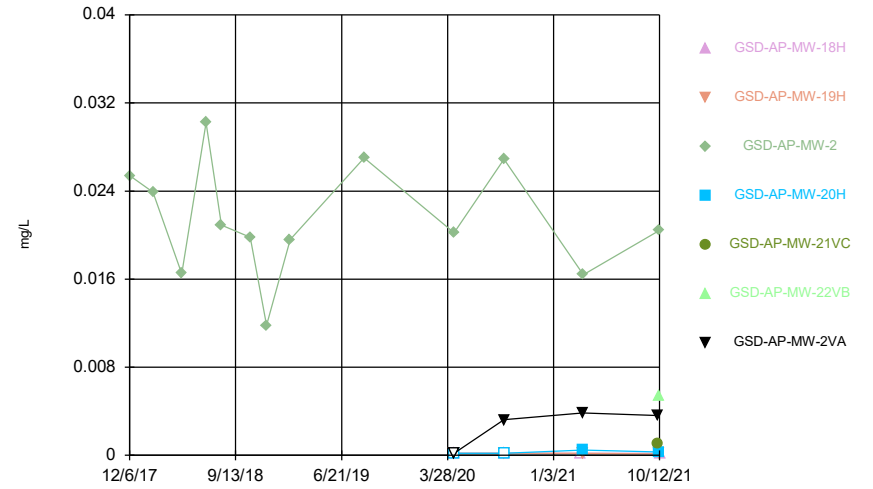


### Time Series



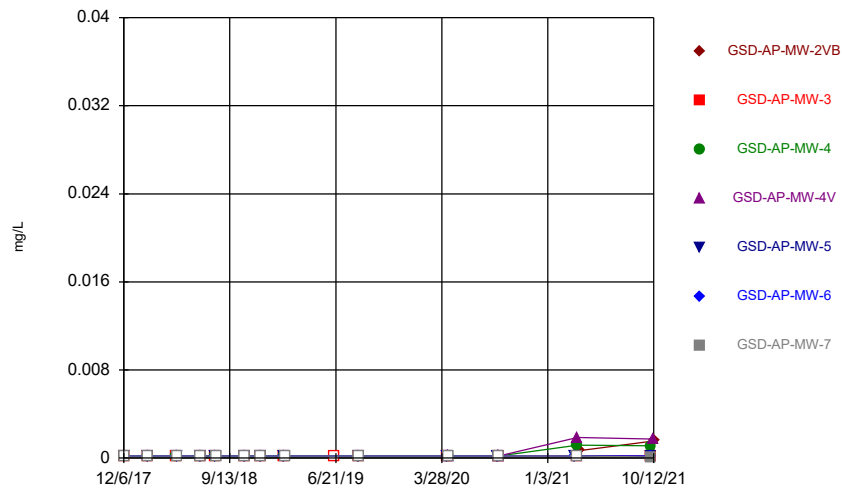
Constituent: Molybdenum Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



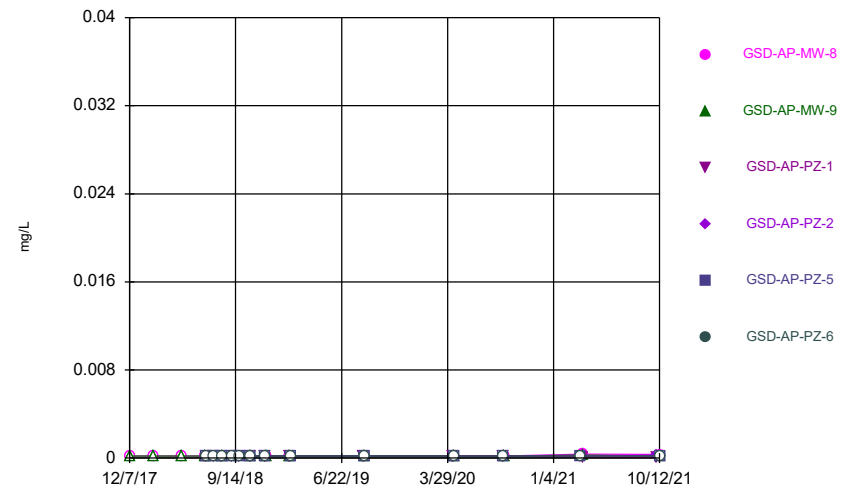
Constituent: Molybdenum Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



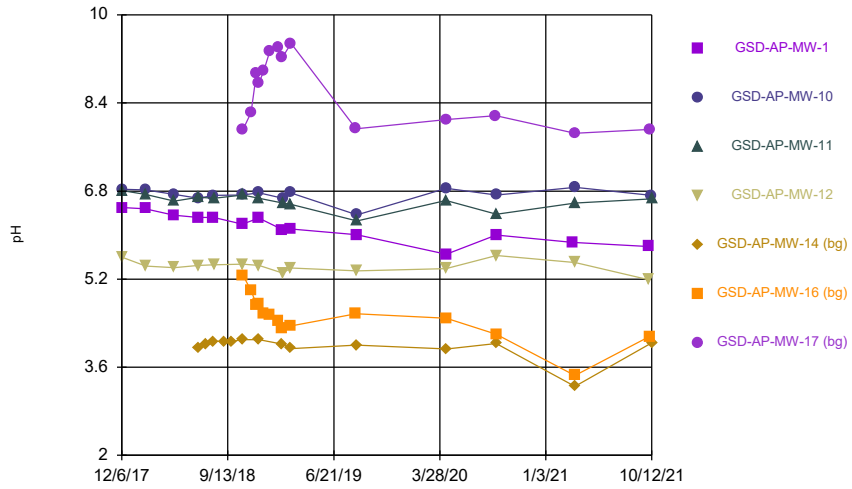
Constituent: Molybdenum Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



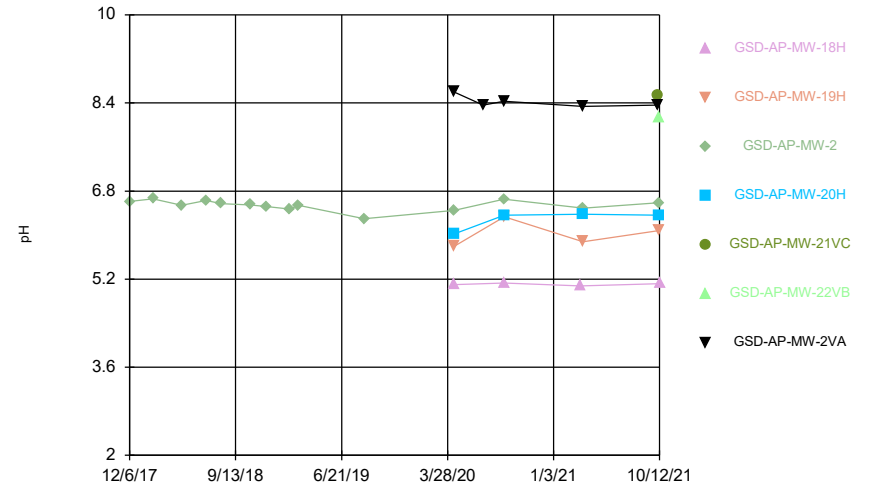
Constituent: Molybdenum Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



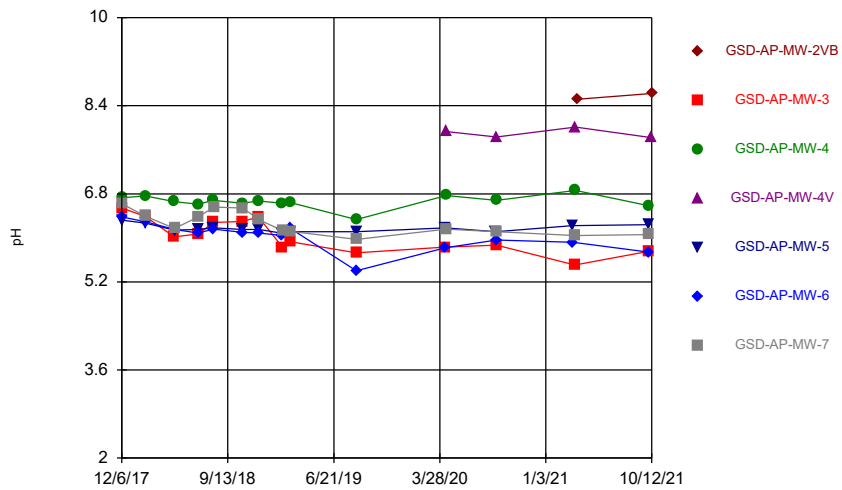
Constituent: pH Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



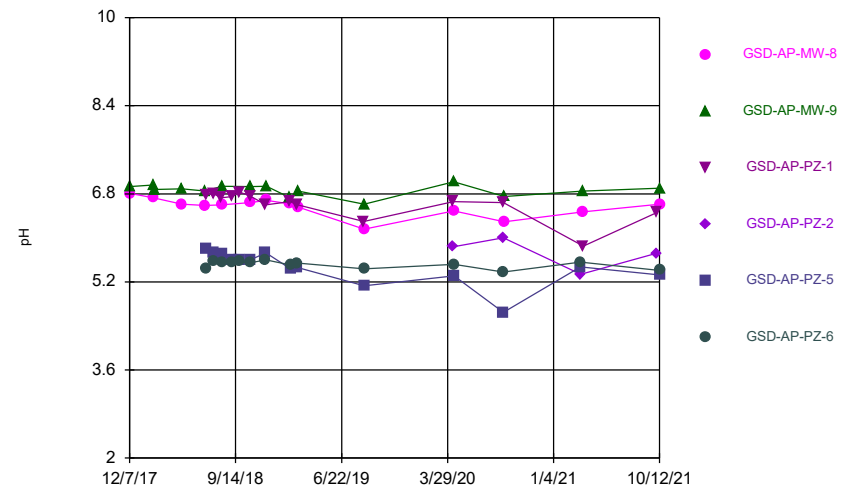
Constituent: pH Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: pH Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

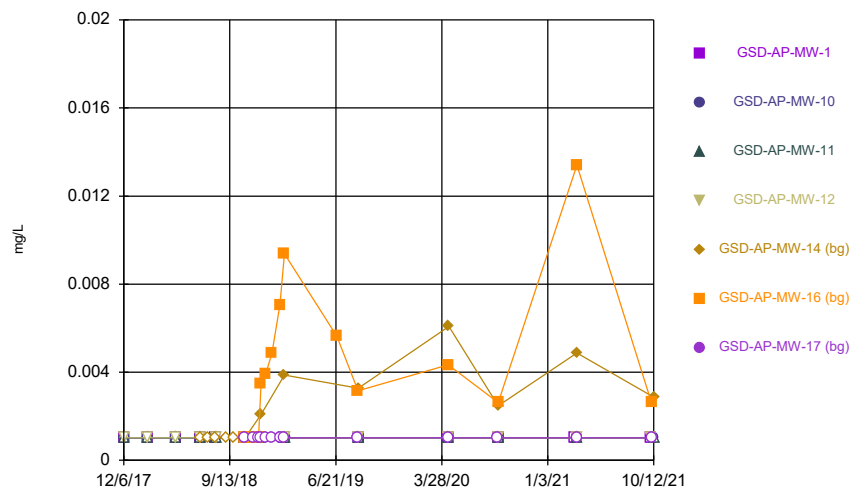
Time Series



Constituent: pH Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

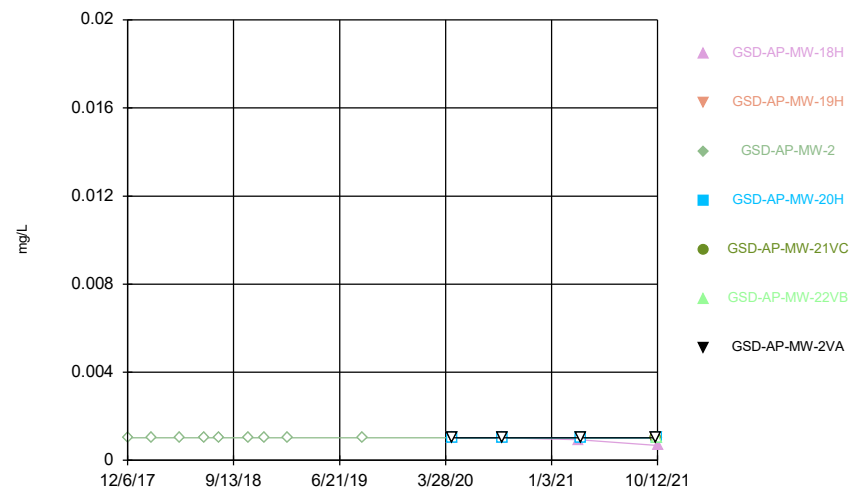


### Time Series



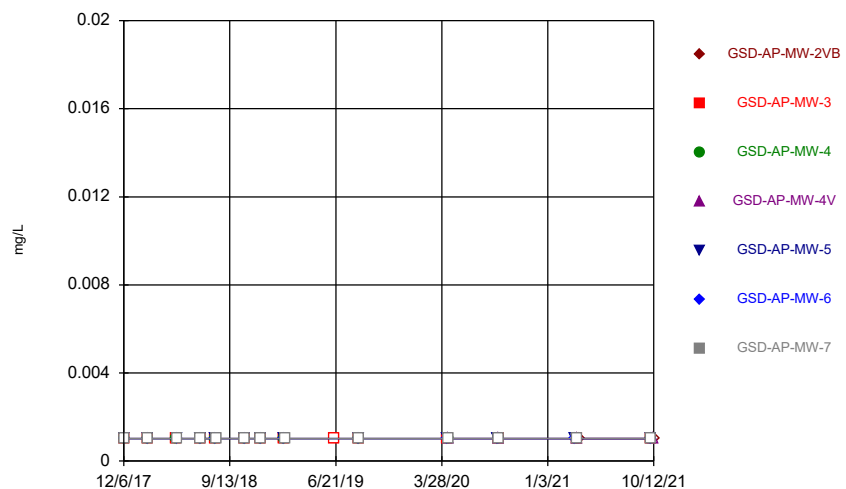
Constituent: Selenium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



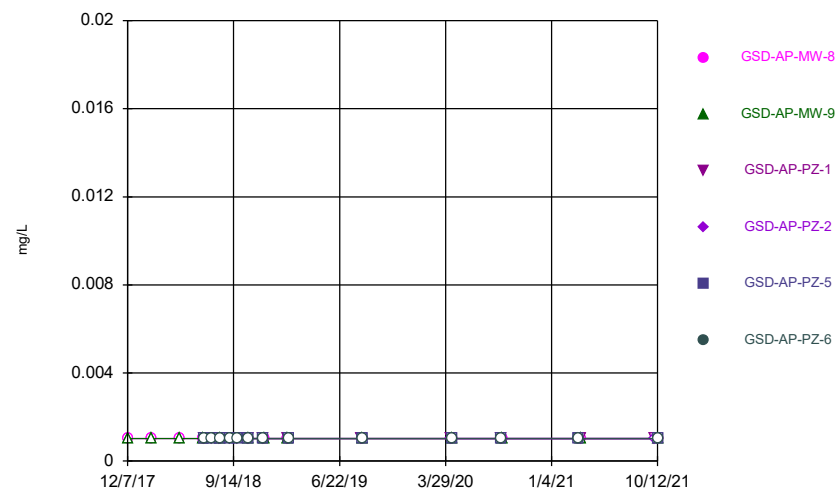
Constituent: Selenium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



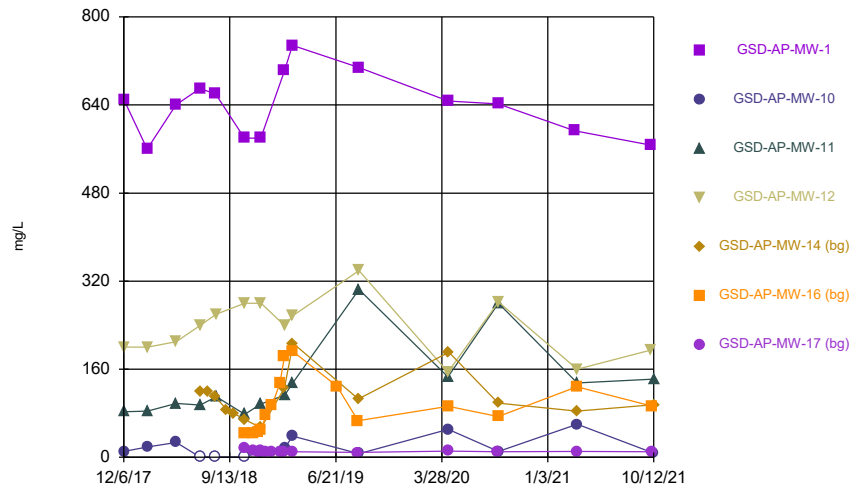
Constituent: Selenium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



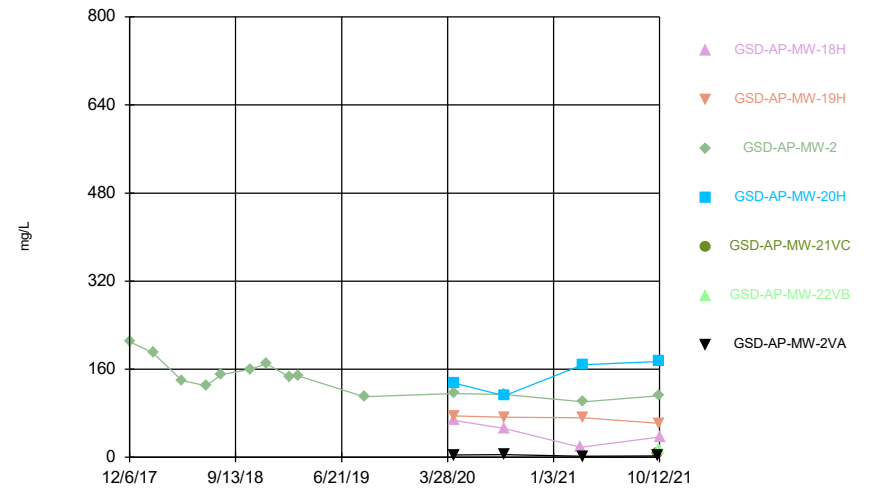
Constituent: Selenium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



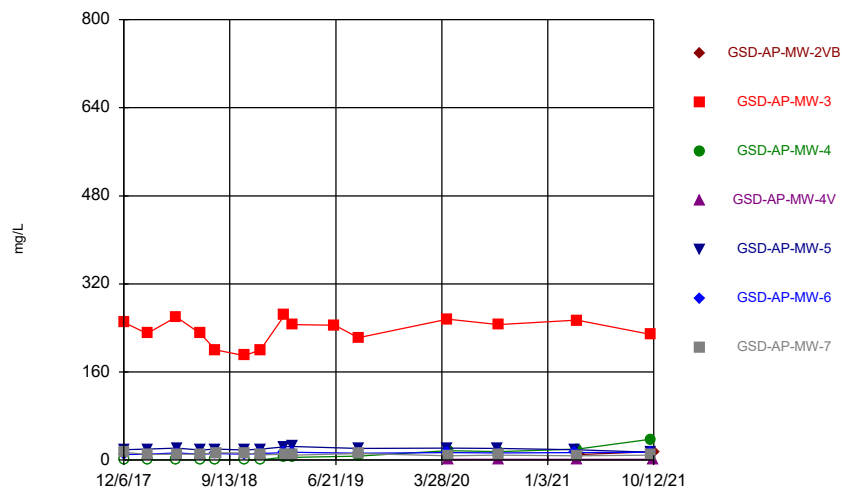
Constituent: Sulfate Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



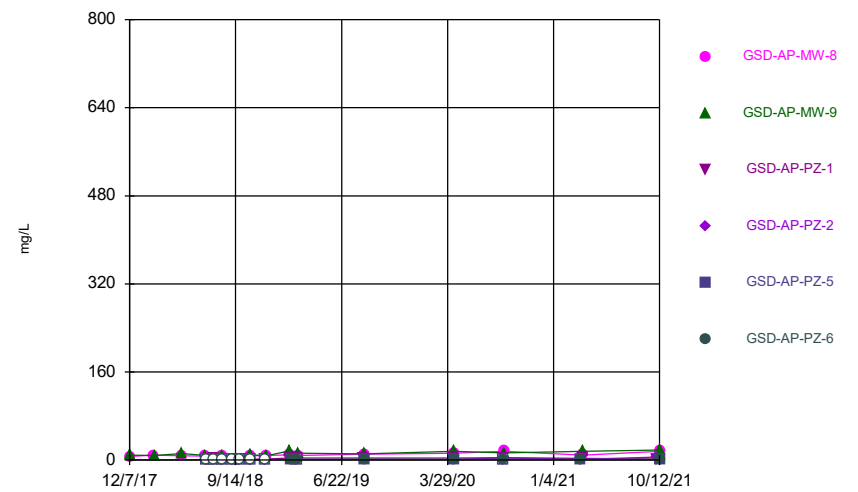
Constituent: Sulfate Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



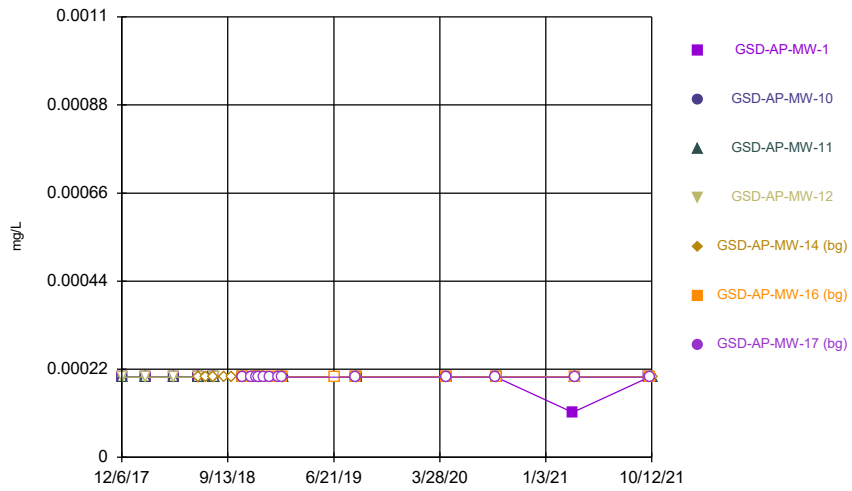
Constituent: Sulfate Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Time Series



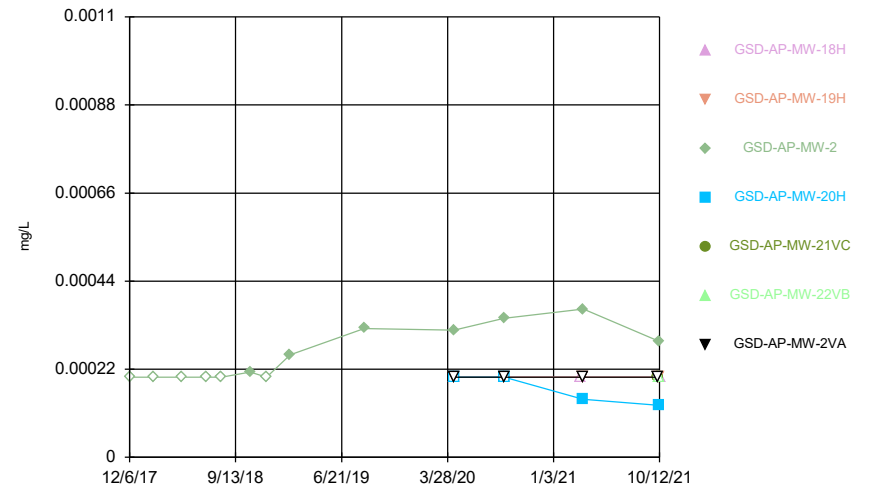
Constituent: Sulfate Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



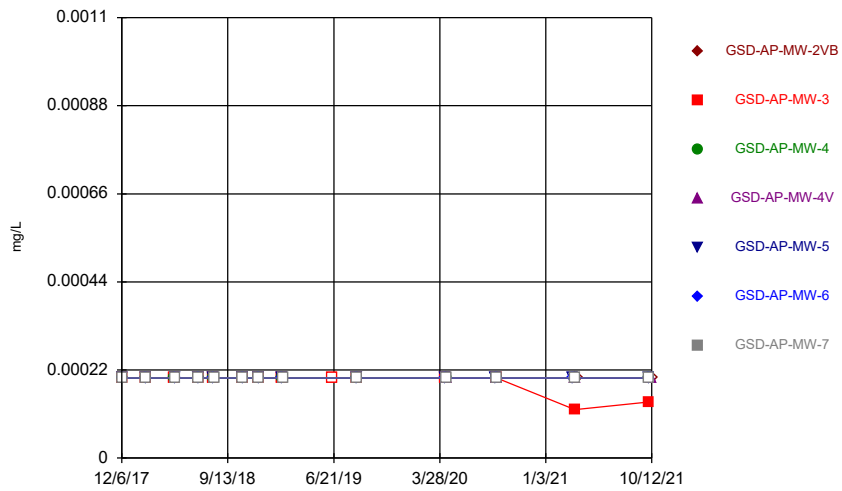
Constituent: Thallium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



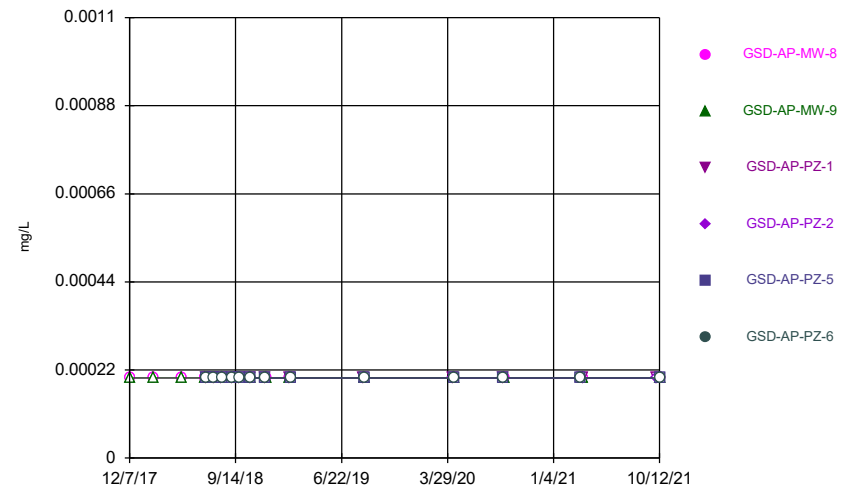
Constituent: Thallium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



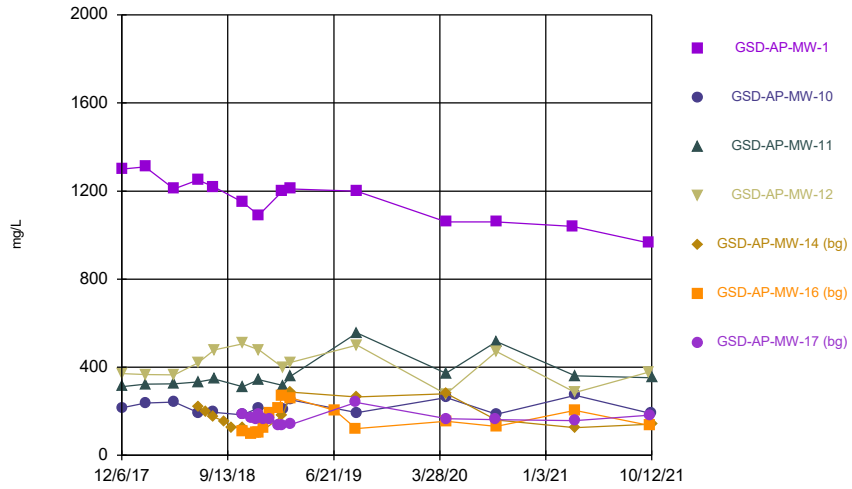
Constituent: Thallium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



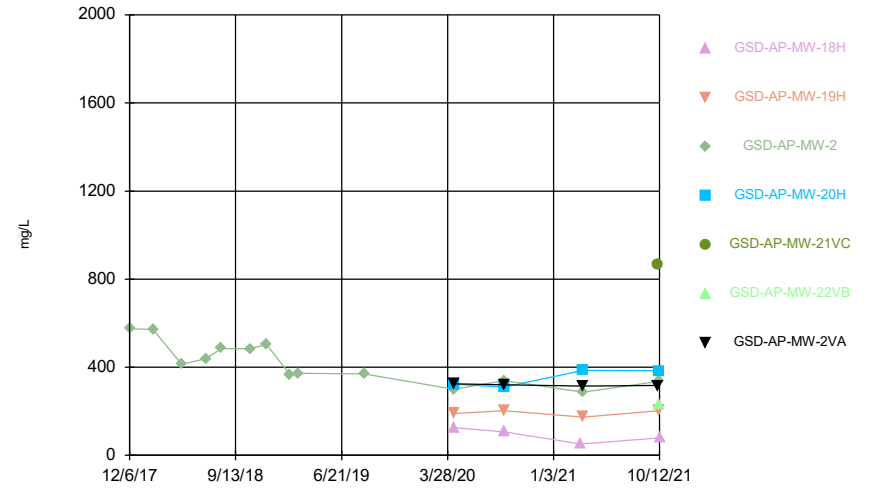
Constituent: Thallium Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



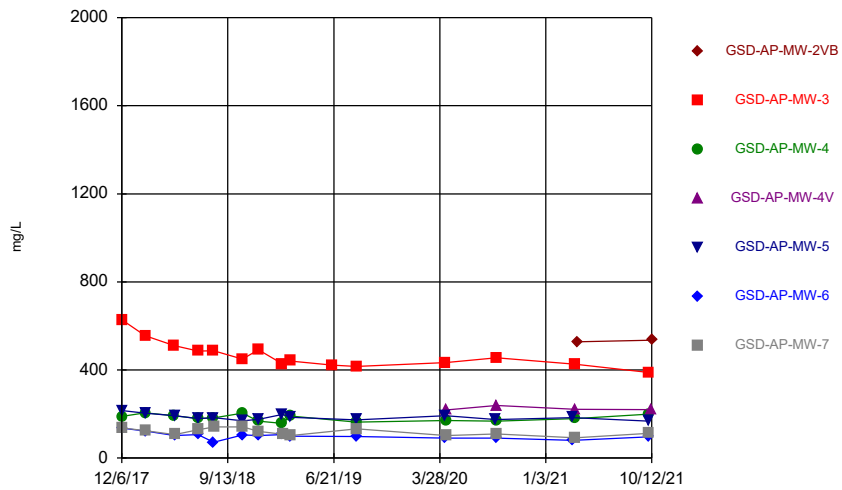
Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



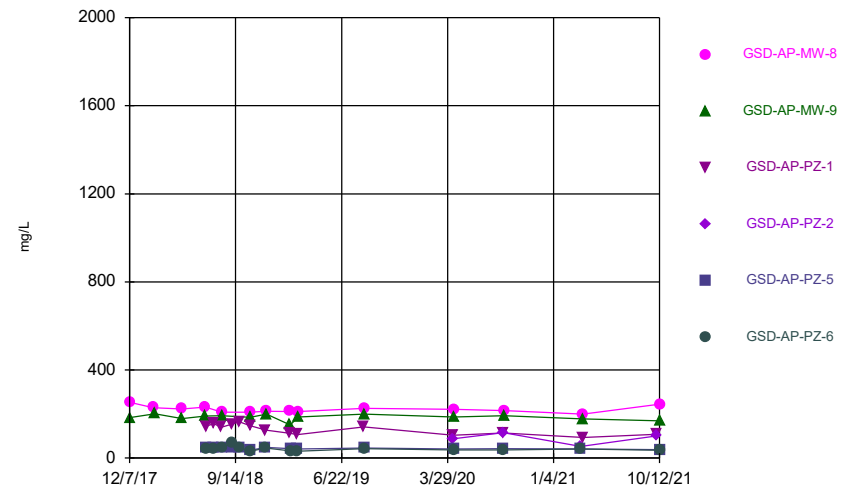
Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:46 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/13/2022 1:49 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	<0.00102	<0.00102	<0.00102	<0.00102			
2/6/2018	<0.00102						
2/7/2018		<0.00102	<0.00102				
2/8/2018				<0.00102			
4/23/2018	<0.00102						
4/24/2018		<0.00102	<0.00102	<0.00102			
6/26/2018	<0.00102						
6/27/2018		<0.00102	<0.00102	<0.00102	<0.00102		
7/18/2018					<0.00102		
8/6/2018					<0.00102		
8/7/2018	<0.00102	<0.00102					
8/8/2018			<0.00102	<0.00102			
9/5/2018					<0.00102		
9/24/2018					<0.00102		
10/22/2018	<0.00102	<0.00102					
10/23/2018			<0.00102	<0.00102			
10/24/2018					<0.00102	<0.00102	<0.00102
11/14/2018						<0.00102	<0.00102
11/28/2018						<0.00102	<0.00102
12/4/2018	<0.00102	<0.00102	<0.00102				
12/5/2018				<0.00102	<0.00102	<0.00102	<0.00102
12/18/2018						<0.00102	<0.00102
1/3/2019						<0.00102	<0.00102
1/24/2019						0.000922 (J)	<0.00102
2/5/2019	<0.00102				<0.00102	<0.00102	<0.00102
2/6/2019		<0.00102	<0.00102	<0.00102			
6/24/2019						<0.00102	
8/19/2019						<0.00102	<0.00102
8/20/2019					<0.00102		
8/21/2019	<0.00102						
8/22/2019		<0.00102	<0.00102	<0.00102			
4/14/2020			<0.00102	<0.00102			
4/15/2020	<0.00102	<0.00102				<0.00102	
4/16/2020					<0.00102		<0.00102
8/24/2020							<0.00102
8/25/2020	<0.00102				<0.00102	<0.00102	
8/26/2020		<0.00102	<0.00102	<0.00102			
3/16/2021	<0.00102						
3/22/2021					<0.00102	<0.00102	<0.00102
3/23/2021		<0.00102	<0.00102	<0.00102			
10/5/2021	<0.00102			<0.00102			
10/6/2021						<0.00102	<0.00102
10/11/2021		<0.00102					
10/12/2021			<0.00102		<0.00102		

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.00102				
2/6/2018			<0.00102				
4/23/2018			<0.00102				
6/27/2018			<0.00102				
8/7/2018			<0.00102				
10/22/2018			<0.00102				
12/4/2018			<0.00102				
2/5/2019			<0.00102				
8/20/2019			<0.00102				
4/14/2020		<0.00102		<0.00102			
4/15/2020	<0.00102		<0.00102				<0.00102
8/25/2020	<0.00102		<0.00102				<0.00102
8/26/2020		<0.00102		<0.00102			
3/16/2021	<0.00102						
3/22/2021							<0.00102
3/23/2021		<0.00102		<0.00102			
3/24/2021			<0.00102				
10/6/2021					0.00051 (J)		<0.00102
10/11/2021		<0.00102	<0.00102	<0.00102		0.00167	
10/12/2021	<0.00102						

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.00102					
12/7/2017			<0.00102		<0.00102	<0.00102	<0.00102
2/6/2018		<0.00102	<0.00102		<0.00102		
2/8/2018						<0.00102	<0.00102
4/24/2018		<0.00102	<0.00102				
4/25/2018					<0.00102	<0.00102	<0.00102
6/26/2018			<0.00102			<0.00102	<0.00102
6/27/2018		<0.00102			<0.00102		
8/6/2018			<0.00102				
8/7/2018		<0.00102			<0.00102	<0.00102	
8/8/2018							<0.00102
10/22/2018		<0.00102	<0.00102				
10/23/2018					<0.00102	<0.00102	<0.00102
12/3/2018		<0.00102	<0.00102			<0.00102	
12/4/2018							<0.00102
12/5/2018					<0.00102		
2/5/2019		<0.00102	<0.00102		<0.00102	<0.00102	
2/6/2019							<0.00102
6/18/2019		<0.00102					
8/20/2019		<0.00102	<0.00102		<0.00102	<0.00102	
8/21/2019							<0.00102
4/13/2020		<0.00102			<0.00102	<0.00102	
4/15/2020			<0.00102	<0.00102			<0.00102
8/24/2020					<0.00102		
8/26/2020		<0.00102	<0.00102	<0.00102		<0.00102	<0.00102
3/16/2021					<0.00102		
3/17/2021						<0.00102	
3/22/2021		<0.00102					
3/23/2021							<0.00102
3/24/2021			<0.00102	<0.00102			
3/30/2021	<0.00102						
10/5/2021		<0.00102	<0.00102		<0.00102	<0.00102	<0.00102
10/11/2021				<0.00102			
10/12/2021	<0.00102						

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.00102	<0.00102				
2/8/2018	<0.00102	<0.00102				
4/25/2018	<0.00102	<0.00102				
6/26/2018	<0.00102	<0.00102				
6/27/2018			<0.00102		<0.00102	<0.00102
7/18/2018			<0.00102		<0.00102	<0.00102
8/7/2018			<0.00102			
8/8/2018	<0.00102	<0.00102			<0.00102	<0.00102
9/5/2018			<0.00102		<0.00102	<0.00102
9/24/2018			<0.00102		<0.00102	<0.00102
10/22/2018			<0.00102			
10/23/2018	<0.00102	<0.00102			<0.00102	<0.00102
12/3/2018			<0.00102		<0.00102	<0.00102
12/4/2018	<0.00102					
12/5/2018		<0.00102				
2/5/2019			<0.00102			
2/6/2019	<0.00102	<0.00102				
2/7/2019					0.00114 (J)	0.00181 (J)
8/20/2019			<0.00102			
8/21/2019	<0.00102	<0.00102			<0.00102	<0.00102
4/13/2020			<0.00102	<0.00102		
4/14/2020	<0.00102	<0.00102				
4/15/2020					<0.00102	<0.00102
8/24/2020			<0.00102	<0.00102	<0.00102	<0.00102
8/26/2020	<0.00102	<0.00102				
3/16/2021					<0.00102	<0.00102
3/17/2021				<0.00102		
3/23/2021	<0.00102	<0.00102				
3/24/2021			<0.00102			
10/5/2021			<0.00102	<0.00102		
10/12/2021	<0.00102	<0.00102			<0.00102	<0.00102



# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/13/2022 1:49 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					<0.0002		
8/7/2018	0.00336 (J)	0.00365 (J)					
8/8/2018			0.00265 (J)	<0.0002			
9/5/2018					<0.0002		
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					<0.0002	<0.0002	<0.0002
11/14/2018						<0.0002	<0.0002
11/28/2018						0.00124 (J)	<0.0002
12/4/2018	0.00471 (J)	0.00332 (J)	0.00271 (J)				
12/5/2018				<0.0002	<0.0002	0.00113 (J)	<0.0002
12/18/2018						0.00113 (J)	<0.0002
1/3/2019						0.00175 (J)	<0.0002
1/24/2019						0.00257 (J)	<0.0002
2/5/2019	0.00365 (J)				0.00119 (J)	0.00355 (J)	<0.0002
2/6/2019		0.00333 (J)	0.00272 (J)	<0.0002			
6/24/2019						0.00474 (J)	
8/19/2019						0.00228 (J)	<0.0002
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)		<0.0002
8/24/2020							<0.0002
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		

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			0.809				
2/6/2018			0.774				
4/23/2018			0.643				
6/27/2018			1.01				
8/7/2018			0.988				
10/22/2018			1.01				
12/4/2018			0.553				
2/5/2019			0.74				
8/20/2019			0.825				
4/14/2020		<0.0002		0.00287 (J)			
4/15/2020	<0.0002		0.709				<0.0002
8/25/2020	<0.0002		0.727				0.00135 (J)
8/26/2020		<0.0002		0.00186 (J)			
3/16/2021	0.000136 (J)						
3/22/2021							0.00145
3/23/2021		0.000512		0.00226			
3/24/2021			0.489				
10/6/2021					0.00162		0.00139
10/11/2021		0.00085	0.424	0.00191		0.00408	
10/12/2021	0.00019 (J)						

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		0.00101 (J)					
12/7/2017			0.0132		<0.0002	<0.0002	<0.0002
2/6/2018		<0.0002	0.0105		<0.0002		
2/8/2018						<0.0002	<0.0002
4/24/2018		<0.0002	0.0124				
4/25/2018					<0.0002	<0.0002	<0.0002
6/26/2018			0.0132			<0.0002	<0.0002
6/27/2018		<0.0002			<0.0002		
8/6/2018			0.013				
8/7/2018		<0.0002			<0.0002	<0.0002	
8/8/2018							<0.0002
10/22/2018		<0.0002	0.0144				
10/23/2018					<0.0002	<0.0002	<0.0002
12/3/2018		<0.0002	0.0119			<0.0002	
12/4/2018							<0.0002
12/5/2018					<0.0002		
2/5/2019		<0.0002	0.0107		<0.0002	<0.0002	
2/6/2019							<0.0002
6/18/2019		<0.0002					
8/20/2019		<0.0002	0.0141		<0.0002	<0.0002	
8/21/2019							<0.0002
4/13/2020		<0.0002			<0.0002	<0.0002	
4/15/2020			0.0121	<0.0002			<0.0002
8/24/2020					<0.0002		
8/26/2020		<0.0002	0.0133	<0.0002		<0.0002	<0.0002
3/16/2021					8.17E-05 (J)		
3/17/2021						<0.0002	
3/22/2021		0.0002 (J)					
3/23/2021							<0.0002
3/24/2021			0.011	0.00034			
3/30/2021	0.000278						
10/5/2021		0.00021	0.0147		0.00013 (J)	<0.0002	7E-05 (J)
10/11/2021				0.00037			
10/12/2021	0.00043						

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	0.00313 (J)	0.00112 (J)				
2/8/2018	0.00247 (J)	<0.0002				
4/25/2018	0.00291 (J)	<0.0002				
6/26/2018	0.00265 (J)	<0.0002				
6/27/2018			<0.0002		<0.0002	<0.0002
7/18/2018			<0.0002		<0.0002	<0.0002
8/7/2018			<0.0002			
8/8/2018	0.00203 (J)	<0.0002			<0.0002	<0.0002
9/5/2018			<0.0002		<0.0002	<0.0002
9/24/2018			<0.0002		<0.0002	<0.0002
10/22/2018			<0.0002			
10/23/2018	0.00246 (J)	<0.0002			<0.0002	<0.0002
12/3/2018			<0.0002		<0.0002	<0.0002
12/4/2018	0.00328 (J)					
12/5/2018		0.00111 (J)				
2/5/2019			<0.0002			
2/6/2019	0.00325 (J)	<0.0002				
2/7/2019					<0.0002	<0.0002
8/20/2019			<0.0002			
8/21/2019	0.00302 (J)	<0.0002			<0.0002	<0.0002
4/13/2020			<0.0002	<0.0002		
4/14/2020	0.00295 (J)	0.00118 (J)				
4/15/2020					<0.0002	<0.0002
8/24/2020			<0.0002	<0.0002	<0.0002	<0.0002
8/26/2020	0.00304 (J)	<0.0002				
3/16/2021					8.08E-05 (J)	<0.0002
3/17/2021				8.26E-05 (J)		
3/23/2021	0.00282	0.00063				
3/24/2021			<0.0002			
10/5/2021			<0.0002	9E-05 (J)		
10/12/2021	0.00287	0.00064			<0.0002	<0.0002

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			0.0842				
2/6/2018			0.0716				
4/23/2018			0.0518				
6/27/2018			0.0578				
8/7/2018			0.0566				
10/22/2018			0.0536				
12/4/2018			0.0589				
2/5/2019			0.0418				
8/20/2019			0.0685				
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			
3/16/2021	0.0243						
3/22/2021							0.114
3/23/2021		0.148		0.217			
3/24/2021			0.0676				
10/6/2021					0.374		0.12
10/11/2021		0.17	0.0807	0.134		0.238	
10/12/2021	0.0298						

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		0.126					
12/7/2017			0.239		0.279	0.0809	0.083
2/6/2018		0.0721	0.206		0.195		
2/8/2018						0.0566	0.0756
4/24/2018		0.0492	0.217				
4/25/2018					0.26	0.0553	0.0764
6/26/2018			0.208			0.0604	0.0799
6/27/2018		0.0453			0.249		
8/6/2018			0.189				
8/7/2018		0.0431			0.216	0.0542	
8/8/2018							0.0791
10/22/2018		0.0541	0.209				
10/23/2018					0.26	0.0608	0.0898
12/3/2018		0.0545	0.214			0.0633	
12/4/2018							0.0789
12/5/2018					0.245		
2/5/2019		0.0363	0.173		0.215	0.0551	
2/6/2019							0.0685
6/18/2019		0.0369					
8/20/2019		0.0405	0.188		0.238	0.0731	
8/21/2019							0.0946
4/13/2020		0.0349			0.241	0.0635	
4/15/2020			0.159	0.457			0.0653
8/24/2020					0.238		
8/26/2020		0.0363	0.181	0.534		0.0771	0.0845
3/16/2021					0.217		
3/17/2021						0.0656	
3/22/2021		0.0354					
3/23/2021							0.0602
3/24/2021			0.171	0.477			
3/30/2021	0.313						
10/5/2021		0.0344	0.202		0.221	0.0741	0.0716
10/11/2021				0.483			
10/12/2021	0.242						

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	0.244	0.187				
2/8/2018	0.135	0.148				
4/25/2018	0.224	0.158				
6/26/2018	0.181	0.16				
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	0.134	0.161			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	0.17	0.183			0.125	0.0298
12/3/2018			0.0784		0.126	0.0307
12/4/2018	0.189					
12/5/2018		0.186				
2/5/2019			0.0578			
2/6/2019	0.226	0.128				
2/7/2019					0.0602	0.028
8/20/2019			0.097			
8/21/2019	0.194	0.183			0.085	0.0312
4/13/2020			0.0529	0.0832		
4/14/2020	0.262	0.186				
4/15/2020					0.0535	0.0296
8/24/2020			0.0733	0.132	0.0565	0.031
8/26/2020	0.235	0.202				
3/16/2021					0.0553	0.0293
3/17/2021				0.045		
3/23/2021	0.249	0.157				
3/24/2021			0.0525			
10/5/2021			0.0811	0.118		
10/12/2021	0.203	0.147			0.0494	0.0303



# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/13/2022 1:49 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	<0.00102	<0.00102	<0.00102	<0.00102			
2/6/2018	<0.00102						
2/7/2018		<0.00102	<0.00102				
2/8/2018				<0.00102			
4/23/2018	<0.00102						
4/24/2018		<0.00102	<0.00102	<0.00102			
6/26/2018	<0.00102						
6/27/2018		<0.00102	<0.00102	<0.00102	0.00134 (J)		
7/18/2018					0.00133 (J)		
8/6/2018					0.00129 (J)		
8/7/2018	<0.00102	<0.00102					
8/8/2018			<0.00102	<0.00102			
9/5/2018					0.00106 (J)		
9/24/2018					0.000991 (J)		
10/22/2018	<0.00102	<0.00102					
10/23/2018			<0.00102	<0.00102			
10/24/2018					0.00082 (J)	<0.00102	<0.00102
11/14/2018						<0.00102	<0.00102
11/28/2018						0.00133 (J)	<0.00102
12/4/2018	<0.00102	<0.00102	<0.00102				
12/5/2018				<0.00102	0.00141 (J)	<0.00102	<0.00102
12/18/2018						0.000761 (J)	<0.00102
1/3/2019						0.000677 (J)	<0.00102
1/24/2019						0.000703 (J)	<0.00102
2/5/2019	<0.00102				0.0011 (J)	0.000711 (J)	<0.00102
2/6/2019		<0.00102	<0.00102	<0.00102			
6/24/2019						0.000605 (J)	
8/19/2019						<0.00102	<0.00102
8/20/2019					0.00129 (J)		
8/21/2019	<0.00102						
8/22/2019		<0.00102	<0.00102	<0.00102			
4/14/2020			<0.00102	<0.00102			
4/15/2020	<0.00102	<0.00102				<0.00102	
4/16/2020					0.00157 (J)		<0.00102
8/24/2020							<0.00102
8/25/2020	<0.00102				0.00117 (J)	<0.00102	
8/26/2020		<0.00102	<0.00102	<0.00102			
3/16/2021	<0.00102						
3/22/2021					0.000918 (J)	0.000537 (J)	<0.00102
3/23/2021		<0.00102	<0.00102	<0.00102			
10/5/2021	<0.00102			<0.00102			
10/6/2021						0.00049 (J)	<0.00102
10/11/2021		<0.00102					
10/12/2021			<0.00102		0.00115		

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.00102				
2/6/2018			<0.00102				
4/23/2018			<0.00102				
6/27/2018			<0.00102				
8/7/2018			<0.00102				
10/22/2018			<0.00102				
12/4/2018			<0.00102				
2/5/2019			<0.00102				
8/20/2019			<0.00102				
4/14/2020		<0.00102		<0.00102			
4/15/2020	<0.00102		<0.00102				<0.00102
8/25/2020	<0.00102		<0.00102				<0.00102
8/26/2020		<0.00102		<0.00102			
3/16/2021	<0.00102						
3/22/2021							<0.00102
3/23/2021		<0.00102		<0.00102			
3/24/2021			<0.00102				
10/6/2021					<0.00102		<0.00102
10/11/2021		<0.00102	<0.00102	<0.00102		<0.00102	
10/12/2021	<0.00102						

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.00102					
12/7/2017			<0.00102		<0.00102	<0.00102	<0.00102
2/6/2018		<0.00102	<0.00102		<0.00102		
2/8/2018						<0.00102	<0.00102
4/24/2018		<0.00102	<0.00102				
4/25/2018					<0.00102	<0.00102	<0.00102
6/26/2018			<0.00102			<0.00102	<0.00102
6/27/2018		<0.00102			<0.00102		
8/6/2018			<0.00102				
8/7/2018		<0.00102			<0.00102	<0.00102	
8/8/2018							<0.00102
10/22/2018		<0.00102	<0.00102				
10/23/2018					<0.00102	<0.00102	<0.00102
12/3/2018		<0.00102	<0.00102			<0.00102	
12/4/2018							<0.00102
12/5/2018					<0.00102		
2/5/2019		<0.00102	<0.00102		<0.00102	<0.00102	
2/6/2019							<0.00102
6/18/2019		<0.00102					
8/20/2019		<0.00102	<0.00102		<0.00102	<0.00102	
8/21/2019							<0.00102
4/13/2020		<0.00102			<0.00102	<0.00102	
4/15/2020			<0.00102	<0.00102			<0.00102
8/24/2020					<0.00102		
8/26/2020		<0.00102	<0.00102	<0.00102		<0.00102	<0.00102
3/16/2021					<0.00102		
3/17/2021						<0.00102	
3/22/2021		<0.00102					
3/23/2021							<0.00102
3/24/2021			<0.00102	<0.00102			
3/30/2021	<0.00102						
10/5/2021		<0.00102	<0.00102		<0.00102	<0.00102	<0.00102
10/11/2021				<0.00102			
10/12/2021	<0.00102						

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.00102	<0.00102				
2/8/2018	<0.00102	<0.00102				
4/25/2018	<0.00102	<0.00102				
6/26/2018	<0.00102	<0.00102				
6/27/2018			<0.00102		<0.00102	<0.00102
7/18/2018			<0.00102		<0.00102	<0.00102
8/7/2018			<0.00102			
8/8/2018	<0.00102	<0.00102			<0.00102	<0.00102
9/5/2018			<0.00102		<0.00102	<0.00102
9/24/2018			<0.00102		<0.00102	<0.00102
10/22/2018			<0.00102			
10/23/2018	<0.00102	<0.00102			<0.00102	<0.00102
12/3/2018			<0.00102		<0.00102	<0.00102
12/4/2018	<0.00102					
12/5/2018		<0.00102				
2/5/2019			<0.00102			
2/6/2019	<0.00102	<0.00102				
2/7/2019					<0.00102	<0.00102
8/20/2019			<0.00102			
8/21/2019	<0.00102	<0.00102			<0.00102	<0.00102
4/13/2020			<0.00102	<0.00102		
4/14/2020	<0.00102	<0.00102				
4/15/2020					<0.00102	<0.00102
8/24/2020			<0.00102	<0.00102	<0.00102	<0.00102
8/26/2020	<0.00102	<0.00102				
3/16/2021					<0.00102	<0.00102
3/17/2021				<0.00102		
3/23/2021	<0.00102	<0.00102				
3/24/2021			<0.00102			
10/5/2021			<0.00102	<0.00102		
10/12/2021	<0.00102	<0.00102			<0.00102	<0.00102

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			0.758				
2/6/2018			0.733				
4/23/2018			0.608				
6/27/2018			0.619				
8/7/2018			0.697				
10/22/2018			0.754				
12/4/2018			0.737				
2/5/2019			0.575				
2/26/2019			0.566				
8/20/2019			0.566				
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			
3/16/2021	0.0545 (J)						
3/22/2021							0.537
3/23/2021		0.41		0.419			
3/24/2021			0.437				
10/6/2021					0.532		0.54
10/11/2021		0.328	0.459	0.504		0.378	
10/12/2021	0.0717 (J)						

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		0.959					
12/7/2017			0.515		0.566	0.063 (J)	0.102
2/6/2018		1.04	0.541		0.614		
2/8/2018						0.0508 (J)	0.0787 (J)
4/24/2018		0.979	0.475				
4/25/2018					0.498	0.0548 (J)	0.0734 (J)
6/26/2018			0.444			0.0571 (J)	0.094 (J)
6/27/2018		0.982			0.446		
8/6/2018			0.474				
8/7/2018		1			0.442	0.0571 (J)	
8/8/2018							0.103
10/22/2018		1.08	0.496				
10/23/2018					0.436	0.0636 (J)	0.106
12/3/2018		1.05	0.51			0.0568 (J)	
12/4/2018							0.085 (J)
12/5/2018					0.456		
2/5/2019		1.01	0.43		0.453	0.0509 (J)	
2/6/2019							0.0733 (J)
2/25/2019		1.08					
2/26/2019			0.411			0.0527 (J)	
2/27/2019					0.457		0.0548 (J)
6/18/2019		1.09					
8/20/2019		1.06	0.399		0.378	0.0608 (J)	
8/21/2019							0.091 (J)
4/13/2020		1.19			0.359	0.0561 (J)	
4/15/2020			0.344	0.0634 (J)			0.0534 (J)
8/24/2020					0.329		
8/26/2020		1.16	0.398	0.0611 (J)		0.0633 (J)	0.0665 (J)
3/16/2021					0.328		
3/17/2021						0.0563 (J)	
3/22/2021		1.13					
3/23/2021							0.0587 (J)
3/24/2021			0.326	0.0618 (J)			
3/30/2021	0.605						
10/5/2021		1.01	0.344		0.26	0.0649 (J)	0.0673 (J)
10/11/2021				0.0596 (J)			
10/12/2021	0.617						

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	0.0828 (J)	0.0614 (J)				
2/8/2018	0.0691 (J)	0.0531 (J)				
4/25/2018	0.0571 (J)	0.0551 (J)				
6/26/2018	0.0634 (J)	0.0568 (J)				
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	0.0659 (J)	0.0524 (J)			<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	0.0666 (J)	0.0576 (J)			<0.1015	<0.1015
12/3/2018			<0.1015		<0.1015	<0.1015
12/4/2018	0.0617 (J)					
12/5/2018		0.0561 (J)				
2/5/2019			<0.1015			
2/6/2019	0.0586 (J)	0.0627 (J)				
2/7/2019					<0.1015	<0.1015
2/25/2019			<0.1015		<0.1015	<0.1015
2/27/2019	0.0428 (J)	0.0474 (J)				
8/20/2019			<0.1015			
8/21/2019	0.0569 (J)	0.0524 (J)			<0.1015	<0.1015
4/13/2020			<0.1015	<0.1015		
4/14/2020	0.0474 (J)	0.0562 (J)				
4/15/2020					<0.1015	<0.1015
8/24/2020			<0.1015	<0.1015	<0.1015	<0.1015
8/26/2020	0.0501 (J)	0.0565 (J)				
3/16/2021					<0.1015	<0.1015
3/17/2021				<0.1015		
3/23/2021	0.0476 (J)	0.0609 (J)				
3/24/2021			<0.1015			
10/5/2021			<0.1015	<0.1015		
10/12/2021	0.0462 (J)	0.0632 (J)			<0.1015	<0.1015



# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/13/2022 1:49 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	<0.0002	<0.0002	0.000596 (J)			
2/6/2018	<0.0002						
2/7/2018		<0.0002	<0.0002				
2/8/2018				0.00064 (J)			
4/23/2018	<0.0002						
4/24/2018		<0.0002	<0.0002	0.000702 (J)			
6/26/2018	<0.0002						
6/27/2018		<0.0002	<0.0002	0.000732 (J)	0.00064 (J)		
7/18/2018					0.000679 (J)		
8/6/2018					0.000536 (J)		
8/7/2018	<0.0002	<0.0002					
8/8/2018			<0.0002	0.000587 (J)			
9/5/2018					0.000479 (J)		
9/24/2018					0.00039 (J)		
10/22/2018	<0.0002	<0.0002					
10/23/2018			<0.0002	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	<0.0002	<0.0002	<0.0002				
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	<0.0002				0.000515 (J)	0.00101	<0.0002
2/6/2019		<0.0002	<0.0002	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	<0.0002						
8/22/2019		<0.0002	<0.0002	0.000755 (J)			
4/14/2020			<0.0002	0.000425 (J)			
4/15/2020	<0.0002	<0.0002				0.000697 (J)	
4/16/2020					0.00101		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.0002				0.000584 (J)	0.000507 (J)	
8/26/2020		<0.0002	<0.0002	0.000618 (J)			
3/16/2021	0.000102 (J)						
3/22/2021					0.000407	0.000852	<0.0002
3/23/2021		<0.0002	<0.0002	0.000405			
10/5/2021	0.0001 (J)			0.00037			
10/6/2021						0.00068	<0.0002
10/11/2021		<0.0002					
10/12/2021			<0.0002		0.00059		

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.0002				
2/6/2018			<0.0002				
4/23/2018			<0.0002				
6/27/2018			<0.0002				
8/7/2018			<0.0002				
10/22/2018			<0.0002				
12/4/2018			<0.0002				
2/5/2019			<0.0002				
8/20/2019			<0.0002				
4/14/2020		<0.0002		<0.0002			
4/15/2020	<0.0002		<0.0002				<0.0002
8/25/2020	<0.0002		<0.0002				<0.0002
8/26/2020		<0.0002		<0.0002			
3/16/2021	<0.0002						
3/22/2021							<0.0002
3/23/2021		<0.0002		<0.0002			
3/24/2021			6.88E-05 (J)				
10/6/2021					<0.0002		<0.0002
10/11/2021		0.00012 (J)	<0.0002	<0.0002		<0.0002	
10/12/2021	<0.0002						

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.0002					
12/7/2017			<0.0002		<0.0002	<0.0002	<0.0002
2/6/2018		<0.0002	<0.0002		<0.0002		
2/8/2018						<0.0002	<0.0002
4/24/2018		<0.0002	<0.0002				
4/25/2018					<0.0002	<0.0002	<0.0002
6/26/2018			<0.0002			<0.0002	<0.0002
6/27/2018		<0.0002			<0.0002		
8/6/2018			<0.0002				
8/7/2018		<0.0002			<0.0002	<0.0002	
8/8/2018							<0.0002
10/22/2018		<0.0002	<0.0002				
10/23/2018					<0.0002	<0.0002	<0.0002
12/3/2018		<0.0002	<0.0002			<0.0002	
12/4/2018							<0.0002
12/5/2018					<0.0002		
2/5/2019		<0.0002	<0.0002		<0.0002	<0.0002	
2/6/2019							<0.0002
6/18/2019		<0.0002					
8/20/2019		<0.0002	<0.0002		<0.0002	<0.0002	
8/21/2019							<0.0002
4/13/2020		0.000438 (J)			<0.0002	<0.0002	
4/15/2020			<0.0002	<0.0002			<0.0002
8/24/2020					<0.0002		
8/26/2020		<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
3/16/2021					<0.0002		
3/17/2021						<0.0002	
3/22/2021		0.00039					
3/23/2021							9.7E-05 (J)
3/24/2021			<0.0002	<0.0002			
3/30/2021	<0.0002						
10/5/2021		0.00021	<0.0002		<0.0002	<0.0002	<0.0002
10/11/2021				<0.0002			
10/12/2021	<0.0002						

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.0002	<0.0002				
2/8/2018	<0.0002	<0.0002				
4/25/2018	<0.0002	<0.0002				
6/26/2018	<0.0002	<0.0002				
6/27/2018			<0.0002		0.000304 (J)	<0.0002
7/18/2018			<0.0002		<0.0002	<0.0002
8/7/2018			<0.0002			
8/8/2018	<0.0002	<0.0002			<0.0002	<0.0002
9/5/2018			<0.0002		<0.0002	<0.0002
9/24/2018			<0.0002		<0.0002	<0.0002
10/22/2018			<0.0002			
10/23/2018	<0.0002	<0.0002			<0.0002	<0.0002
12/3/2018			<0.0002		<0.0002	<0.0002
12/4/2018	<0.0002					
12/5/2018		<0.0002				
2/5/2019			<0.0002			
2/6/2019	<0.0002	<0.0002				
2/7/2019					<0.0002	<0.0002
8/20/2019			<0.0002			
8/21/2019	<0.0002	<0.0002			<0.0002	<0.0002
4/13/2020			<0.0002	<0.0002		
4/14/2020	<0.0002	<0.0002				
4/15/2020					<0.0002	<0.0002
8/24/2020			<0.0002	<0.0002	<0.0002	<0.0002
8/26/2020	<0.0002	<0.0002				
3/16/2021					<0.0002	<0.0002
3/17/2021				<0.0002		
3/23/2021	8.32E-05 (J)	<0.0002				
3/24/2021			<0.0002			
10/5/2021			<0.0002	<0.0002		
10/12/2021	<0.0002	<0.0002			8E-05 (J)	<0.0002

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			128				
2/6/2018			130				
4/23/2018			95.9				
6/27/2018			99.4				
8/7/2018			107				
10/22/2018			107				
12/4/2018			120				
2/5/2019			80.6				
2/26/2019			79.6				
8/20/2019			92.3				
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			
3/16/2021	5.77						
3/22/2021							5.71
3/23/2021		31.7		57.6			
3/24/2021			61.5				
10/6/2021					3.46		5.38
10/11/2021		40	87.1	63.4		9.35	
10/12/2021	10.3						

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		125					
12/7/2017			30.1		48.2	29.8	23.4
2/6/2018		110	30.6		47.8		
2/8/2018						24.3	20.1
4/24/2018		88.8	27.8				
4/25/2018					41.8	19.8	17.4
6/26/2018			26.2			17.8	21.8
6/27/2018		80.8			36.9		
8/6/2018			27.5				
8/7/2018		88.5			37.6	18.3	
8/8/2018							25.4
10/22/2018		92.7	27.7				
10/23/2018					35.3	18.1	25.6
12/3/2018		105	32.3			16.6	
12/4/2018							19
12/5/2018					36.3		
2/5/2019		68.6	25.5		36.6	14.5	
2/6/2019							16.4
2/25/2019		70.6					
2/26/2019			26.4			16	
2/27/2019					39.6		15.6
6/18/2019		80.5					
8/20/2019		74.1	23.5		33.7	15.1	
8/21/2019							23.5
4/13/2020		69.5			43	12.5	
4/15/2020			22	23.9			14
8/24/2020					35.5		
8/26/2020		75.7	22.8	23.5		12.9	16.7
3/16/2021					38.1		
3/17/2021						11.3	
3/22/2021		64.9					
3/23/2021							12.5
3/24/2021			23.1	22.9			
3/30/2021	3.71						
10/5/2021		65.9	27.4		36	11.4	15.9
10/11/2021				23			
10/12/2021	3.96						

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	66.1	38.7				
2/8/2018	58	38.8				
4/25/2018	56.3	40.3				
6/26/2018	57.7	39.9				
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	51.2	42.3			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	50.9	39.8			3.37	3.79
12/3/2018			33.7		3.67	3.79
12/4/2018	51.9					
12/5/2018		43.8				
2/5/2019			30.1			
2/6/2019	55	34.9				
2/7/2019					2.89	3.75
2/25/2019			25.6		2.95	3.81
2/27/2019	53.4	42.5				
8/20/2019			38.3			
8/21/2019	71.5	50.9			3.04	3.71
4/13/2020			25.9	16.1		
4/14/2020	56.2	43.6				
4/15/2020					2.93	3.56
8/24/2020			29	24.8	2.94	3.45
8/26/2020	55.5	43.2				
3/16/2021					2.9	3.44
3/17/2021				5.21		
3/23/2021	48.9	38.1				
3/24/2021			22.2			
10/5/2021			25.4	17.6		
10/12/2021	66.3	35.4			2.94	3.29



# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			4.1				
2/6/2018			3.1				
4/23/2018			3.7				
6/27/2018			2.2				
8/7/2018			2.6				
10/22/2018			2.8				
12/4/2018			4.1				
2/5/2019			2.56				
2/26/2019			3.03				
8/20/2019			2.24				
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			
3/16/2021	3.85						
3/22/2021							6.65
3/23/2021		7.11		6.33			
3/24/2021			2.29				
10/6/2021					166		6.82
10/11/2021		7.04	2.43	6.37		1.72	
10/12/2021	4.59						

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		7.6					
12/7/2017			8.5		8.7	10	7.9
2/6/2018		7.6	8.8		8.5		
2/8/2018						9.5	6.7
4/24/2018		7.5	8.4				
4/25/2018					7.6	9.1	7
6/26/2018			8.7			9.5	7.4
6/27/2018		7.3			7.1		
8/6/2018			11				
8/7/2018		7.6			6.9	9	
8/8/2018							7.7
10/22/2018		6.9	8.6				
10/23/2018					6.7	9.9	8
12/3/2018		6.8	9.1			8.7	
12/4/2018							6.7
12/5/2018					6.7		
2/5/2019		6.95	9.81		7.24	8.73	
2/6/2019							6.84
2/25/2019		6.55					
2/26/2019			13			8.66	
2/27/2019					7.38		6.21
6/18/2019		6.62					
8/20/2019		6.07	9.62		6.53	9.55	
8/21/2019							7.35
4/13/2020		5.95			6.48	8.6	
4/15/2020			9.27	5.16			4.99
8/24/2020					6.64		
8/26/2020		5.89	8.96	5.37		9.21	6.19
3/16/2021					7.14		
3/17/2021						8.59	
3/22/2021		5.26					
3/23/2021							4.87
3/24/2021			8.61	5.55			
3/30/2021	32						
10/5/2021		5.09	9.3		6.78	9.09	6.43
10/11/2021				5.65			
10/12/2021	38						

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	5.2	7				
2/8/2018	4.1					
2/12/2018		6.6				
4/25/2018	5.3	7.1				
6/26/2018	5	6.4				
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	4.8	5.5			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	6.7			4	4.1
12/3/2018			3.2		3.6	3.8
12/4/2018	4.2					
12/5/2018		5.9				
2/5/2019			3.78			
2/6/2019	5.84	7.26				
2/7/2019					3.72	4.15
2/25/2019			3.66		3.95	4.2
2/27/2019	6.52	6.77				
8/20/2019			3.52			
8/21/2019	5.89	6.16			3.85	4
4/13/2020			3.36	5.42		
4/14/2020	5.21	7.27				
4/15/2020					3.83	3.71
8/24/2020			3.35	5.46	3.96	3.59
8/26/2020	5.16	6.57				
3/16/2021					3.98	3.66
3/17/2021				5.53		
3/23/2021	5.3	7.42				
3/24/2021			3.45			
10/5/2021			3.23	5.79		
10/12/2021	5.6	7.78			4.07	3.68

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/13/2022 1:49 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	<0.00102	<0.00102	<0.00102	<0.00102			
2/6/2018	<0.00102						
2/7/2018		<0.00102	<0.00102				
2/8/2018				<0.00102			
4/23/2018	<0.00102						
4/24/2018		<0.00102	<0.00102	<0.00102			
6/26/2018	<0.00102						
6/27/2018		<0.00102	<0.00102	<0.00102	<0.00102		
7/18/2018					<0.00102		
8/6/2018					<0.00102		
8/7/2018	<0.00102	<0.00102					
8/8/2018			<0.00102	<0.00102			
9/5/2018					<0.00102		
9/24/2018					<0.00102		
10/22/2018	<0.00102	<0.00102					
10/23/2018			<0.00102	<0.00102			
10/24/2018					<0.00102	<0.00102	<0.00102
11/14/2018						<0.00102	<0.00102
11/28/2018						<0.00102	<0.00102
12/4/2018	<0.00102	<0.00102	<0.00102				
12/5/2018				<0.00102	<0.00102	<0.00102	<0.00102
12/18/2018						<0.00102	<0.00102
1/3/2019						<0.00102	<0.00102
1/24/2019						<0.00102	<0.00102
2/5/2019	<0.00102				<0.00102	<0.00102	<0.00102
2/6/2019		<0.00102	<0.00102	<0.00102			
6/24/2019						0.00325 (J)	
8/19/2019						<0.00102	<0.00102
8/20/2019					<0.00102		
8/21/2019	<0.00102						
8/22/2019		<0.00102	<0.00102	<0.00102			
4/14/2020			<0.00102	<0.00102			
4/15/2020	<0.00102	<0.00102				<0.00102	
4/16/2020					<0.00102		0.00267 (J)
8/24/2020							<0.00102
8/25/2020	<0.00102				<0.00102	<0.00102	
8/26/2020		<0.00102	<0.00102	<0.00102			
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)		

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.00102				
2/6/2018			<0.00102				
4/23/2018			<0.00102				
6/27/2018			<0.00102				
8/7/2018			<0.00102				
10/22/2018			<0.00102				
12/4/2018			<0.00102				
2/5/2019			<0.00102				
8/20/2019			<0.00102				
4/14/2020		<0.00102		<0.00102			
4/15/2020	<0.00102		<0.00102				<0.00102
8/25/2020	<0.00102		<0.00102				<0.00102
8/26/2020		<0.00102		<0.00102			
3/16/2021	0.000363 (J)						
3/22/2021							0.000433 (J)
3/23/2021		0.000404 (J)		0.000417 (J)			
3/24/2021			0.00047 (J)				
10/6/2021					0.00111		0.00025 (J)
10/11/2021		0.00048 (J)	0.00048 (J)	0.00025 (J)		0.00041 (J)	
10/12/2021	0.00021 (J)						

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.00102					
12/7/2017			<0.00102		<0.00102	<0.00102	<0.00102
2/6/2018		<0.00102	<0.00102		<0.00102		
2/8/2018						<0.00102	<0.00102
4/24/2018		<0.00102	<0.00102				
4/25/2018					<0.00102	<0.00102	<0.00102
6/26/2018			<0.00102			<0.00102	<0.00102
6/27/2018		<0.00102			<0.00102		
8/6/2018			<0.00102				
8/7/2018		<0.00102			<0.00102	<0.00102	
8/8/2018							<0.00102
10/22/2018		<0.00102	<0.00102				
10/23/2018					<0.00102	<0.00102	<0.00102
12/3/2018		<0.00102	<0.00102			<0.00102	
12/4/2018							<0.00102
12/5/2018					<0.00102		
2/5/2019		<0.00102	<0.00102		<0.00102	<0.00102	
2/6/2019							<0.00102
6/18/2019		0.00285 (J)					
8/20/2019		<0.00102	<0.00102		<0.00102	<0.00102	
8/21/2019							<0.00102
4/13/2020		<0.00102			<0.00102	<0.00102	
4/15/2020			<0.00102	<0.00102			<0.00102
8/24/2020					<0.00102		
8/26/2020		<0.00102	<0.00102	<0.00102		<0.00102	<0.00102
3/16/2021					0.000397 (J)		
3/17/2021						0.000338 (J)	
3/22/2021		0.000293 (J)					
3/23/2021							0.000406 (J)
3/24/2021			0.000323 (J)	0.000402 (J)			
3/30/2021	0.00112						
10/5/2021		0.00023 (J)	<0.00102		0.00028 (J)	0.00025 (J)	0.00025 (J)
10/11/2021				0.00031 (J)			
10/12/2021	0.00035 (J)						

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.00102	<0.00102				
2/8/2018	<0.00102	<0.00102				
4/25/2018	<0.00102	<0.00102				
6/26/2018	<0.00102	<0.00102				
6/27/2018			<0.00102		<0.00102	<0.00102
7/18/2018			<0.00102		<0.00102	<0.00102
8/7/2018			<0.00102			
8/8/2018	<0.00102	<0.00102			<0.00102	<0.00102
9/5/2018			<0.00102		<0.00102	<0.00102
9/24/2018			<0.00102		<0.00102	<0.00102
10/22/2018			<0.00102			
10/23/2018	<0.00102	<0.00102			<0.00102	<0.00102
12/3/2018			<0.00102		<0.00102	<0.00102
12/4/2018	<0.00102					
12/5/2018		<0.00102				
2/5/2019			<0.00102			
2/6/2019	<0.00102	<0.00102				
2/7/2019					<0.00102	<0.00102
8/20/2019			<0.00102			
8/21/2019	<0.00102	<0.00102			<0.00102	<0.00102
4/13/2020			<0.00102	<0.00102		
4/14/2020	<0.00102	<0.00102				
4/15/2020					<0.00102	<0.00102
8/24/2020			<0.00102	<0.00102	<0.00102	<0.00102
8/26/2020	<0.00102	<0.00102				
3/16/2021					0.000534 (J)	0.000534 (J)
3/17/2021				0.000764 (J)		
3/23/2021	0.0003 (J)	0.000422 (J)				
3/24/2021			0.000442 (J)			
10/5/2021			0.00035 (J)	0.00035 (J)		
10/12/2021	<0.00102	0.00031 (J)			0.00034 (J)	0.00031 (J)



# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/13/2022 1:49 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)	<0.0002	<0.0002	0.00221 (J)			
2/6/2018	0.0123						
2/7/2018		<0.0002	<0.0002				
2/8/2018				0.00221 (J)			
4/23/2018	0.0204						
4/24/2018		<0.0002	<0.0002	0.00257 (J)			
6/26/2018	0.0224						
6/27/2018		<0.0002	<0.0002	0.00266 (J)	0.0382		
7/18/2018					0.0366		
8/6/2018					0.0308		
8/7/2018	0.0193	<0.0002					
8/8/2018			<0.0002	0.00251 (J)			
9/5/2018					0.0291		
9/24/2018					0.0286		
10/22/2018	0.0243	<0.0002					
10/23/2018			<0.0002	0.00399 (J)			
10/24/2018					0.0269	0.0129	<0.0002
11/14/2018						0.0114	<0.0002
11/28/2018						0.0168	<0.0002
12/4/2018	0.0166	<0.0002	<0.0002				
12/5/2018				0.00466 (J)	0.0215	0.0161	<0.0002
12/18/2018						0.0234	<0.0002
1/3/2019						0.038	<0.0002
1/24/2019						0.04	<0.0002
2/5/2019	0.0264				0.0359	0.0538	<0.0002
2/6/2019		<0.0002	<0.0002	0.00485 (J)			
6/24/2019						0.041	
8/19/2019						0.0247	<0.0002
8/20/2019					0.0391		
8/21/2019	0.0242						
8/22/2019		<0.0002	0.00756	0.00658			
4/14/2020			<0.0002	0.0035 (J)			
4/15/2020	0.0178	<0.0002				0.0373	
4/16/2020					0.056		<0.0002
8/24/2020							<0.0002
8/25/2020	0.0193				0.0365	0.0294	
8/26/2020		<0.0002	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		

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			0.0246				
2/6/2018			0.0243				
4/23/2018			0.0258				
6/27/2018			0.0362				
8/7/2018			0.0332				
10/22/2018			0.0438				
12/4/2018			0.0252				
2/5/2019			0.0362				
8/20/2019			0.0366				
4/14/2020		0.00886		0.0122			
4/15/2020	<0.0002		0.0324				<0.0002
8/25/2020	<0.0002		0.0298				<0.0002
8/26/2020		0.0101		0.0104			
3/16/2021	0.000577						
3/22/2021							<0.0002
3/23/2021		0.00674		0.0125			
3/24/2021			0.0316				
10/6/2021					0.00021		<0.0002
10/11/2021		0.00579	0.0165	0.00995		<0.0002	
10/12/2021	0.00062						

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		0.0302					
12/7/2017			0.0252		0.00331 (J)	0.00592 (J)	<0.0002
2/6/2018		0.0371	0.0243		0.00323 (J)		
2/8/2018						0.00297 (J)	<0.0002
4/24/2018		0.0251	0.027				
4/25/2018					0.00258 (J)	<0.0002	<0.0002
6/26/2018			0.0242			<0.0002	<0.0002
6/27/2018		0.0234			0.00218 (J)		
8/6/2018			0.0205				
8/7/2018		0.0223			<0.0002	<0.0002	
8/8/2018							<0.0002
10/22/2018		0.03	0.0259				
10/23/2018					0.0023 (J)	<0.0002	<0.0002
12/3/2018		0.0238	0.0228			<0.0002	
12/4/2018							<0.0002
12/5/2018					0.00233 (J)		
2/5/2019		0.0232	0.0263		0.0021 (J)	<0.0002	
2/6/2019							<0.0002
6/18/2019		0.0263					
8/20/2019		0.0257	0.0293		0.00223 (J)	<0.0002	
8/21/2019							<0.0002
4/13/2020		0.0209			<0.0002	<0.0002	
4/15/2020			0.0252	<0.0002			<0.0002
8/24/2020					0.00222 (J)		
8/26/2020		0.0191	0.0231	<0.0002		<0.0002	<0.0002
3/16/2021					0.00136		
3/17/2021						0.00102	
3/22/2021		0.0183					
3/23/2021							0.00102
3/24/2021			0.0268	8.16E-05 (J)			
3/30/2021	0.000116 (J)						
10/5/2021		0.016	0.0238		0.00116	0.00104	0.00018 (J)
10/11/2021				<0.0002			
10/12/2021	<0.0002						

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	0.00212 (J)	<0.0002				
2/8/2018	<0.0002	<0.0002				
4/25/2018	0.00204 (J)	<0.0002				
6/26/2018	<0.0002	<0.0002				
6/27/2018			<0.0002		0.00341 (J)	<0.0002
7/18/2018			<0.0002		0.00341 (J)	<0.0002
8/7/2018			<0.0002			
8/8/2018	<0.0002	<0.0002			0.00221 (J)	<0.0002
9/5/2018			<0.0002		0.00202 (J)	<0.0002
9/24/2018			<0.0002		<0.0002	<0.0002
10/22/2018			<0.0002			
10/23/2018	<0.0002	<0.0002			<0.0002	<0.0002
12/3/2018			<0.0002		0.00227 (J)	<0.0002
12/4/2018	<0.0002					
12/5/2018		<0.0002				
2/5/2019			<0.0002			
2/6/2019	0.00232 (J)	<0.0002				
2/7/2019					<0.0002	<0.0002
8/20/2019			<0.0002			
8/21/2019	0.00303 (J)	<0.0002			0.00225 (J)	<0.0002
4/13/2020			<0.0002	0.00489 (J)		
4/14/2020	0.00385 (J)	<0.0002				
4/15/2020					<0.0002	<0.0002
8/24/2020			<0.0002	0.00237 (J)	<0.0002	<0.0002
8/26/2020	0.00388 (J)	<0.0002				
3/16/2021					0.000384	0.000108 (J)
3/17/2021				0.00616		
3/23/2021	0.003	0.00103				
3/24/2021			<0.0002			
10/5/2021			0.00044	0.00287		
10/12/2021	0.00298	0.00113			8E-05 (J)	0.00014 (J)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			0.772				
2/6/2018			0.679				
4/23/2018			0.447 (U)				
6/27/2018			0.117 (U)				
8/7/2018			1.22				
10/22/2018			0.996				
12/4/2018			0.739				
2/5/2019			1.09				
8/20/2019			0.553 (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)			
3/16/2021	0.405 (U)						
3/22/2021							0.58 (U)
3/23/2021		0.562 (U)		0.847 (U)			
3/24/2021			0.769 (U)				
10/6/2021					1.78		0.746 (U)
10/11/2021		0.202 (U)	2.38	1.09 (U)		1.29	
10/12/2021	0.383 (U)						

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		0.643					
12/7/2017			1.04		0.885	0.394 (U)	0.895
2/6/2018		0.209 (U)	0.989		0.524		
2/8/2018						0.489	0.322 (U)
4/24/2018		0.596	0.405 (U)				
4/25/2018					0.341 (U)	-0.0902 (U)	0.0097 (U)
6/26/2018			1.03			0.245 (U)	0.587
6/27/2018		0.363 (U)			0.546		
8/6/2018			0.622				
8/7/2018		0.788			1.09	0.439 (U)	
8/8/2018							0.364 (U)
10/22/2018		0.749	1.06				
10/23/2018					1.01	0.243 (U)	0.703
12/3/2018		0.749	0.697			0.304 (U)	
12/4/2018							0.325 (U)
12/5/2018					0.876		
2/5/2019		0.299 (U)	0.467 (U)		0.551 (U)	0.196 (U)	
2/6/2019							0.0774 (U)
8/20/2019		0.709 (U)	0.814		0.206 (U)	-0.086 (U)	
8/21/2019							-0.0134 (U)
4/13/2020		0.942 (U)			1.19	0.0901 (U)	
4/15/2020			-0.0841 (U)	0.329 (U)			0.526 (U)
8/24/2020					0.482 (U)		
8/26/2020		0.177 (U)	0.26 (U)	0.839		0.416 (U)	0.691 (U)
3/16/2021					0.709 (U)		
3/17/2021						0.539 (U)	
3/22/2021		0.263 (U)					
3/23/2021							0.45 (U)
3/24/2021			0.664 (U)	0.725 (U)			
3/30/2021	0.185 (U)						
10/5/2021		3.21	1.75		1.44	1.36	1.27
10/11/2021				1.58			
10/12/2021	0.323 (U)						

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	7.45 (o)	0.226 (U)				
2/8/2018	0.549	0.071 (U)				
4/25/2018	0.65	0.569				
6/26/2018	0.436 (U)	0.43 (U)				
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	0.486 (U)	0.656			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	0.319 (U)	0.395 (U)			0.383 (U)	0.352 (U)
12/3/2018			0.188 (U)		0.736	0.238 (U)
12/4/2018	0.875					
12/5/2018		0.52 (U)				
2/5/2019			0.274 (U)			
2/6/2019	0.378 (U)	0.244 (U)				
2/7/2019					0.0202 (U)	0.395 (U)
8/20/2019			0.663			
8/21/2019	0.552 (U)	1.53 (U)			0.442 (U)	-0.00256 (U)
4/13/2020			-0.129 (U)	0.472 (U)		
4/14/2020	0.641 (U)	0.119 (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)
8/26/2020	0.339 (U)	1.18				
3/16/2021					0.32 (U)	0.589 (U)
3/17/2021				0.756 (U)		
3/23/2021	0.662 (U)	0.694 (U)				
3/24/2021			0.245 (U)			
10/5/2021			2.07	1.13		
10/12/2021	0.291 (U)	0.311 (U)			0.963 (U)	1.57



# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 1:49 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					<0.1		
4/23/2018	0.07 (J)						
4/24/2018		0.08 (J)	0.05 (J)		<0.1		
6/26/2018	0.08 (J)						
6/27/2018		0.09 (J)	0.06 (J)		<0.1	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)		<0.1		
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)	<0.1				
12/5/2018				<0.1	0.07 (J)	0.11	0.19
12/18/2018						0.14	0.15
1/3/2019						0.16	0.19
1/24/2019						<0.1	0.168
2/5/2019	0.0525 (J)				<0.1	<0.1	0.192
2/6/2019		0.107	0.0678 (J)	<0.1			
2/26/2019	<0.1	0.0813 (J)					
2/27/2019			0.0985 (J)	<0.1			
2/28/2019					<0.1	<0.1	0.182
6/24/2019						<0.1 (D)	
8/19/2019						<0.1	0.187
8/20/2019					<0.1		
8/21/2019	<0.1						
8/22/2019		0.084 (J)	<0.1	<0.1			
4/14/2020			0.0878 (J)	<0.1			
4/15/2020	<0.1	0.112				<0.1	
4/16/2020					<0.1		0.166
8/24/2020							0.163
8/25/2020	<0.1				<0.1	0.0863 (J)	
8/26/2020		0.0997 (J)	<0.1	<0.1			
3/16/2021	<0.1						
3/22/2021					<0.1	<0.1	0.18
3/23/2021		0.101	0.0819 (J)	<0.1			
10/5/2021	0.0601 (J)			<0.1			
10/6/2021						<0.1	0.175
10/11/2021		0.201					
10/12/2021			0.134		<0.1		

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
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				
4/14/2020		<0.1		0.125			
4/15/2020	<0.1		0.21				2.51
8/25/2020	<0.1		0.273				2.4
8/26/2020		<0.1		0.103			
3/16/2021	<0.1						
3/22/2021							2.33
3/23/2021		<0.1		0.108			
3/24/2021			0.194				
10/6/2021					8.34		2.56
10/11/2021		0.0779 (J)	0.283	0.127		1.43	
10/12/2021	<0.1						

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		0.13					
12/7/2017			0.25		0.06 (J)	0.06 (J)	0.09 (J)
2/6/2018		0.08 (J)	0.24		0.05 (J)		
2/8/2018						0.04 (J)	0.07 (J)
4/24/2018		0.05 (J)	0.2				
4/25/2018					0.05 (J)	0.04 (J)	0.07 (J)
6/26/2018			0.22			0.05 (J)	0.09 (J)
6/27/2018		0.07 (J)			0.06 (J)		
8/6/2018			0.22				
8/7/2018		0.09 (J)			0.06 (J)	0.05 (J)	
8/8/2018							0.1
10/22/2018		0.11	0.24				
10/23/2018					0.07 (J)	0.06 (J)	0.1
12/3/2018		0.08 (J)	0.22			<0.1	
12/4/2018							0.06 (J)
12/5/2018					0.04 (J)		
2/5/2019		0.064 (J)	0.259		0.0651 (J)	0.0581 (J)	
2/6/2019							<0.1
2/25/2019		<0.1					
2/26/2019			0.246			0.0816 (J)	
2/27/2019					0.0578 (J)		0.0824 (J)
6/18/2019		0.0664 (J)					
8/20/2019		0.0592 (J)	0.197		0.0567 (J)	<0.1	
8/21/2019							0.068 (J)
4/13/2020		<0.1			0.0688 (J)	<0.1	
4/15/2020			0.238	0.218			0.0775 (J)
8/24/2020					0.0607 (J)		
8/26/2020		<0.1	0.251	0.217		<0.1	<0.1
3/16/2021					0.065 (J)		
3/17/2021						<0.1	
3/22/2021		<0.1					
3/23/2021							<0.1
3/24/2021			0.227	0.212			
3/30/2021	6.09						
10/5/2021		<0.1	0.214		0.122	<0.1	0.0933 (J)
10/11/2021				0.23			
10/12/2021	5.97						

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	0.14	0.12				
2/8/2018	0.11					
2/12/2018		0.11				
4/25/2018	0.09 (J)	0.12				
6/26/2018	0.1	0.13				
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	0.1	0.12			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	0.11	0.13			0.04 (J)	0.04 (J)
12/3/2018			0.08 (J)		<0.1	<0.1
12/4/2018	0.08 (J)					
12/5/2018		0.04 (J)				
2/5/2019			0.0934 (J)			
2/6/2019	<0.1	<0.1				
2/7/2019					<0.1	<0.1
2/25/2019			<0.1		<0.1	<0.1
2/27/2019	0.108	0.147				
8/20/2019			0.0889 (J)			
8/21/2019	0.0648 (J)	0.0984 (J)			<0.1	<0.1
4/13/2020			0.103	<0.1		
4/14/2020	0.0845 (J)	0.133				
4/15/2020					<0.1	<0.1
8/24/2020			0.114	<0.1	<0.1	<0.1
8/26/2020	0.0732 (J)	0.13				
3/16/2021					<0.1	<0.1
3/17/2021				<0.1		
3/23/2021	0.0802 (J)	0.132				
3/24/2021			0.0725 (J)			
10/5/2021			<0.1	<0.1		
10/12/2021	0.123	0.147			<0.1	<0.1

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/13/2022 1:49 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	<0.0002	<0.0002	<0.0002			
2/6/2018	<0.0002						
2/7/2018		<0.0002	<0.0002				
2/8/2018				<0.0002			
4/23/2018	<0.0002						
4/24/2018		<0.0002	<0.0002	<0.0002			
6/26/2018	<0.0002						
6/27/2018		<0.0002	<0.0002	<0.0002	0.00158 (J)		
7/18/2018					0.00152 (J)		
8/6/2018					0.00143 (J)		
8/7/2018	<0.0002	<0.0002					
8/8/2018			<0.0002	<0.0002			
9/5/2018					0.00118 (J)		
9/24/2018					0.00156 (J)		
10/22/2018	<0.0002	<0.0002					
10/23/2018			<0.0002	<0.0002			
10/24/2018					0.00121 (J)	<0.0002	<0.0002
11/14/2018						<0.0002	<0.0002
11/28/2018						<0.0002	<0.0002
12/4/2018	<0.0002	<0.0002	<0.0002				
12/5/2018				<0.0002	0.00117 (J)	<0.0002	<0.0002
12/18/2018						<0.0002	<0.0002
1/3/2019						0.001 (J)	<0.0002
1/24/2019						0.00114 (J)	<0.0002
2/5/2019	<0.0002				0.00156 (J)	0.00135 (J)	<0.0002
2/6/2019		<0.0002	<0.0002	<0.0002			
6/24/2019						0.00125 (J)	
8/19/2019						<0.0002	<0.0002
8/20/2019					0.00176 (J)		
8/21/2019	<0.0002						
8/22/2019		<0.0002	<0.0002	<0.0002			
4/14/2020			<0.0002	<0.0002			
4/15/2020	<0.0002	<0.0002				<0.0002	
4/16/2020					0.00258 (J)		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.0002				0.0018 (J)	0.0011 (J)	
8/26/2020		<0.0002	<0.0002	<0.0002			
3/16/2021	<0.0002						
3/22/2021					0.00143	0.0016	<0.0002
3/23/2021		<0.0002	<0.0002	<0.0002			
10/5/2021	<0.0002			<0.0002			
10/6/2021						0.00116	<0.0002
10/11/2021		<0.0002					
10/12/2021			<0.0002		0.00156		

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.0002				
2/6/2018			<0.0002				
4/23/2018			<0.0002				
6/27/2018			<0.0002				
8/7/2018			<0.0002				
10/22/2018			<0.0002				
12/4/2018			<0.0002				
2/5/2019			<0.0002				
8/20/2019			<0.0002				
4/14/2020		<0.0002		<0.0002			
4/15/2020	<0.0002		<0.0002				<0.0002
8/25/2020	<0.0002		<0.0002				<0.0002
8/26/2020		<0.0002		<0.0002			
3/16/2021	<0.0002						
3/22/2021							<0.0002
3/23/2021		0.000201 (J)		<0.0002			
3/24/2021			<0.0002				
10/6/2021					0.00022		<0.0002
10/11/2021		0.00016 (J)	9E-05 (J)	8E-05 (J)		<0.0002	
10/12/2021	<0.0002						

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.0002					
12/7/2017			<0.0002		<0.0002	<0.0002	<0.0002
2/6/2018		<0.0002	<0.0002		<0.0002		
2/8/2018						<0.0002	<0.0002
4/24/2018		<0.0002	<0.0002				
4/25/2018					<0.0002	<0.0002	<0.0002
6/26/2018			<0.0002			<0.0002	<0.0002
6/27/2018		<0.0002			<0.0002		
8/6/2018			<0.0002				
8/7/2018		<0.0002			<0.0002	<0.0002	
8/8/2018							<0.0002
10/22/2018		<0.0002	<0.0002				
10/23/2018					<0.0002	<0.0002	<0.0002
12/3/2018		<0.0002	<0.0002			<0.0002	
12/4/2018							<0.0002
12/5/2018					<0.0002		
2/5/2019		<0.0002	<0.0002		<0.0002	<0.0002	
2/6/2019							<0.0002
6/18/2019		<0.0002					
8/20/2019		<0.0002	<0.0002		<0.0002	<0.0002	
8/21/2019							<0.0002
4/13/2020		<0.0002			<0.0002	<0.0002	
4/15/2020			<0.0002	<0.0002			<0.0002
8/24/2020					<0.0002		
8/26/2020		<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
3/16/2021					<0.0002		
3/17/2021						<0.0002	
3/22/2021		<0.0002					
3/23/2021							<0.0002
3/24/2021			<0.0002	<0.0002			
3/30/2021	<0.0002						
10/5/2021		<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
10/11/2021				<0.0002			
10/12/2021	<0.0002						

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.0002	<0.0002				
2/8/2018	<0.0002	<0.0002				
4/25/2018	<0.0002	<0.0002				
6/26/2018	<0.0002	<0.0002				
6/27/2018			<0.0002		<0.0002	<0.0002
7/18/2018			<0.0002		<0.0002	<0.0002
8/7/2018			<0.0002			
8/8/2018	<0.0002	<0.0002			<0.0002	<0.0002
9/5/2018			<0.0002		<0.0002	<0.0002
9/24/2018			<0.0002		<0.0002	<0.0002
10/22/2018			<0.0002			
10/23/2018	<0.0002	<0.0002			<0.0002	<0.0002
12/3/2018			<0.0002		<0.0002	<0.0002
12/4/2018	<0.0002					
12/5/2018		<0.0002				
2/5/2019			<0.0002			
2/6/2019	<0.0002	<0.0002				
2/7/2019					<0.0002	<0.0002
8/20/2019			<0.0002			
8/21/2019	<0.0002	<0.0002			<0.0002	<0.0002
4/13/2020			<0.0002	<0.0002		
4/14/2020	<0.0002	<0.0002				
4/15/2020					<0.0002	<0.0002
8/24/2020			<0.0002	<0.0002	<0.0002	<0.0002
8/26/2020	<0.0002	<0.0002				
3/16/2021					0.00013 (J)	8.35E-05 (J)
3/17/2021				0.000191 (J)		
3/23/2021	<0.0002	<0.0002				
3/24/2021			<0.0002			
10/5/2021			<0.0002	0.00012 (J)		
10/12/2021	<0.0002	<0.0002			<0.0002	0.00012 (J)



# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			0.092				
2/6/2018			0.0817				
4/23/2018			0.051				
6/27/2018			0.0734				
8/7/2018			0.0764				
10/22/2018			0.0804				
12/4/2018			0.0474				
2/5/2019			0.0545				
8/20/2019			0.0583				
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			
3/16/2021	<0.02						
3/22/2021							0.0666
3/23/2021		<0.02		<0.02			
3/24/2021			0.0318				
10/6/2021					0.227		0.0685
10/11/2021		<0.02	0.0225	<0.02		0.0544	
10/12/2021	<0.02						

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.02					
12/7/2017			<0.02		<0.02	<0.02	<0.02
2/6/2018		<0.02	<0.02		<0.02		
2/8/2018						<0.02	<0.02
4/24/2018		<0.02	<0.02				
4/25/2018					<0.02	<0.02	<0.02
6/26/2018			<0.02			<0.02	<0.02
6/27/2018		<0.02			<0.02		
8/6/2018			<0.02				
8/7/2018		<0.02			<0.02	<0.02	
8/8/2018							<0.02
10/22/2018		<0.02	<0.02				
10/23/2018					<0.02	<0.02	<0.02
12/3/2018		<0.02	<0.02			<0.02	
12/4/2018							<0.02
12/5/2018					<0.02		
2/5/2019		<0.02	<0.02		<0.02	<0.02	
2/6/2019							<0.02
6/18/2019		<0.02					
8/20/2019		<0.02	<0.02		<0.02	<0.02	
8/21/2019							<0.02
4/13/2020		<0.02			<0.02	<0.02	
4/15/2020			<0.02	0.0219			<0.02
8/24/2020					<0.02		
8/26/2020		<0.02	<0.02	0.0203		<0.02	<0.02
3/16/2021					<0.02		
3/17/2021						<0.02	
3/22/2021		<0.02					
3/23/2021							<0.02
3/24/2021			<0.02	0.0203			
3/30/2021	0.13						
10/5/2021		<0.02	<0.02		<0.02	<0.02	<0.02
10/11/2021				0.0198 (J)			
10/12/2021	0.129						

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.02	<0.02				
2/8/2018	<0.02	<0.02				
4/25/2018	<0.02	<0.02				
6/26/2018	<0.02	<0.02				
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			<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			<0.02	<0.02
12/3/2018			<0.02		<0.02	<0.02
12/4/2018	<0.02					
12/5/2018		<0.02				
2/5/2019			<0.02			
2/6/2019	<0.02	<0.02				
2/7/2019					<0.02	<0.02
8/20/2019			<0.02			
8/21/2019	<0.02	<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	<0.02
8/24/2020			<0.02	<0.02	<0.02	<0.02
8/26/2020	<0.02	<0.02				
3/16/2021					<0.02	<0.02
3/17/2021				<0.02		
3/23/2021	<0.02	<0.02				
3/24/2021			<0.02			
10/5/2021			<0.02	<0.02		
10/12/2021	<0.02	<0.02			<0.02	<0.02

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.0005				
2/6/2018			<0.0005				
4/23/2018			<0.0005				
6/27/2018			<0.0005				
8/7/2018			<0.0005				
10/22/2018			<0.0005				
12/4/2018			<0.0005				
2/5/2019			<0.0005				
8/20/2019			<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			
3/16/2021	<0.0005						
3/22/2021							<0.0005
3/23/2021		<0.0005		<0.0005			
3/24/2021			<0.0005				
10/6/2021					<0.0005		<0.0005
10/11/2021		<0.0005	<0.0005	<0.0005		<0.0005	
10/12/2021	<0.0005						

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.0005					
12/7/2017			<0.0005		<0.0005	<0.0005	<0.0005
2/6/2018		<0.0005	<0.0005		<0.0005		
2/8/2018						<0.0005	<0.0005
4/24/2018		<0.0005	<0.0005				
4/25/2018					<0.0005	<0.0005	<0.0005
6/26/2018			<0.0005			<0.0005	<0.0005
6/27/2018		<0.0005			<0.0005		
8/6/2018			<0.0005				
8/7/2018		<0.0005			<0.0005	<0.0005	
8/8/2018							<0.0005
10/22/2018		<0.0005	<0.0005				
10/23/2018					<0.0005	<0.0005	<0.0005
12/3/2018		<0.0005	<0.0005			<0.0005	
12/4/2018							0.00034 (J)
12/5/2018					<0.0005		
2/5/2019		<0.0005	<0.0005		<0.0005	<0.0005	
2/6/2019							<0.0005
8/20/2019		<0.0005	<0.0005		<0.0005	<0.0005	
8/21/2019							<0.0005
4/13/2020		<0.0005			<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
3/16/2021					<0.0005		
3/17/2021						<0.0005	
3/22/2021		<0.0005					
3/23/2021							<0.0005
3/24/2021			<0.0005	<0.0005			
3/30/2021	<0.0005						
10/5/2021		<0.0005	<0.0005		<0.0005	<0.0005	<0.0005
10/11/2021				<0.0005			
10/12/2021	<0.0005						

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.0005	<0.0005				
2/8/2018	<0.0005	<0.0005				
4/25/2018	<0.0005	<0.0005				
6/26/2018	<0.0005	<0.0005				
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			<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			<0.0005	<0.0005
12/3/2018			<0.0005		<0.0005	<0.0005
12/4/2018	0.000284 (J)					
12/5/2018		<0.0005				
2/5/2019			<0.0005			
2/6/2019	<0.0005	<0.0005				
2/7/2019					<0.0005	<0.0005
8/20/2019			<0.0005			
8/21/2019	<0.0005	<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
8/24/2020			<0.0005	<0.0005	<0.0005	<0.0005
8/26/2020	<0.0005	<0.0005				
3/16/2021					<0.0005	<0.0005
3/17/2021				<0.0005		
3/23/2021	<0.0005	<0.0005				
3/24/2021			<0.0005			
10/5/2021			<0.0005	<0.0005		
10/12/2021	<0.0005	<0.0005			<0.0005	<0.0005



# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/13/2022 1:49 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	<0.0002	<0.0002	<0.0002			
2/6/2018	<0.0002						
2/7/2018		<0.0002	<0.0002				
2/8/2018				<0.0002			
4/23/2018	<0.0002						
4/24/2018		<0.0002	<0.0002	<0.0002			
6/26/2018	<0.0002						
6/27/2018		<0.0002	<0.0002	<0.0002	<0.0002		
7/18/2018					<0.0002		
8/6/2018					<0.0002		
8/7/2018	<0.0002	<0.0002					
8/8/2018			<0.0002	<0.0002			
9/5/2018					<0.0002		
9/24/2018					<0.0002		
10/22/2018	<0.0002	<0.0002					
10/23/2018			<0.0002	<0.0002			
10/24/2018					<0.0002	<0.0002	0.00507 (J)
11/14/2018						<0.0002	0.00358 (J)
11/28/2018						<0.0002	0.00322 (J)
12/4/2018	<0.0002	<0.0002	<0.0002				
12/5/2018				<0.0002	<0.0002	<0.0002	0.00256 (J)
12/18/2018						<0.0002	0.00215 (J)
1/3/2019						<0.0002	0.00257 (J)
1/24/2019						<0.0002	0.00211 (J)
2/5/2019	<0.0002				<0.0002	<0.0002	0.00205 (J)
2/6/2019		<0.0002	<0.0002	<0.0002			
6/24/2019						<0.0002	
8/19/2019						<0.0002	<0.0002
8/20/2019					<0.0002		
8/21/2019	<0.0002						
8/22/2019		<0.0002	<0.0002	<0.0002			
4/14/2020			<0.0002	<0.0002			
4/15/2020	<0.0002	<0.0002				<0.0002	
4/16/2020					<0.0002		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.0002				<0.0002	<0.0002	
8/26/2020		<0.0002	<0.0002	<0.0002			
3/16/2021	<0.0002						
3/22/2021					<0.0002	<0.0002	0.000723
3/23/2021		0.000204	0.000124 (J)	<0.0002			
10/5/2021	<0.0002			<0.0002			
10/6/2021						<0.0002	0.00045
10/11/2021		0.00045					
10/12/2021			0.00015 (J)	<0.0002			

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			0.0254				
2/6/2018			0.0239				
4/23/2018			0.0165				
6/27/2018			0.0302				
8/7/2018			0.0209				
10/22/2018			0.0198				
12/4/2018			0.0118				
2/5/2019			0.0196				
8/20/2019			0.027				
4/14/2020		<0.0002		<0.0002			
4/15/2020	<0.0002		0.0202				<0.0002
8/25/2020	<0.0002		0.0269				0.00323 (J)
8/26/2020		<0.0002		<0.0002			
3/16/2021	<0.0002						
3/22/2021							0.00386
3/23/2021		<0.0002		0.000481			
3/24/2021			0.0164				
10/6/2021					0.00107		0.00363
10/11/2021		0.00012 (J)	0.0204	0.00031		0.00538	
10/12/2021	<0.0002						

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.0002					
12/7/2017			<0.0002		<0.0002	<0.0002	<0.0002
2/6/2018		<0.0002	<0.0002		<0.0002		
2/8/2018						<0.0002	<0.0002
4/24/2018		<0.0002	<0.0002				
4/25/2018					<0.0002	<0.0002	<0.0002
6/26/2018			<0.0002			<0.0002	<0.0002
6/27/2018		<0.0002			<0.0002		
8/6/2018			<0.0002				
8/7/2018		<0.0002			<0.0002	<0.0002	
8/8/2018							<0.0002
10/22/2018		<0.0002	<0.0002				
10/23/2018					<0.0002	<0.0002	<0.0002
12/3/2018		<0.0002	<0.0002			<0.0002	
12/4/2018							<0.0002
12/5/2018					<0.0002		
2/5/2019		<0.0002	<0.0002		<0.0002	<0.0002	
2/6/2019							<0.0002
6/18/2019		<0.0002					
8/20/2019		<0.0002	<0.0002		<0.0002	<0.0002	
8/21/2019							<0.0002
4/13/2020		<0.0002			<0.0002	<0.0002	
4/15/2020			<0.0002	<0.0002			<0.0002
8/24/2020					<0.0002		
8/26/2020		<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
3/16/2021					<0.0002		
3/17/2021						<0.0002	
3/22/2021		<0.0002					
3/23/2021							<0.0002
3/24/2021			0.00118	0.00188			
3/30/2021	0.000673						
10/5/2021		<0.0002	0.00111		0.00015 (J)	<0.0002	0.0001 (J)
10/11/2021				0.00173			
10/12/2021	0.00156						

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.0002	<0.0002				
2/8/2018	<0.0002	<0.0002				
4/25/2018	<0.0002	<0.0002				
6/26/2018	<0.0002	<0.0002				
6/27/2018			<0.0002		<0.0002	<0.0002
7/18/2018			<0.0002		<0.0002	<0.0002
8/7/2018			<0.0002			
8/8/2018	<0.0002	<0.0002			<0.0002	<0.0002
9/5/2018			<0.0002		<0.0002	<0.0002
9/24/2018			<0.0002		<0.0002	<0.0002
10/22/2018			<0.0002			
10/23/2018	<0.0002	<0.0002			<0.0002	<0.0002
12/3/2018			<0.0002		<0.0002	<0.0002
12/4/2018	<0.0002					
12/5/2018		<0.0002				
2/5/2019			<0.0002			
2/6/2019	<0.0002	<0.0002				
2/7/2019					<0.0002	<0.0002
8/20/2019			<0.0002			
8/21/2019	<0.0002	<0.0002			<0.0002	<0.0002
4/13/2020			<0.0002	<0.0002		
4/14/2020	<0.0002	<0.0002				
4/15/2020					<0.0002	<0.0002
8/24/2020			<0.0002	<0.0002	<0.0002	<0.0002
8/26/2020	<0.0002	<0.0002				
3/16/2021					<0.0002	<0.0002
3/17/2021				<0.0002		
3/23/2021	0.000357	0.00027				
3/24/2021			9.88E-05 (J)			
10/5/2021			7E-05 (J)	0.00028		
10/12/2021	0.00032	0.00018 (J)			<0.0002	<0.0002

# Time Series

Constituent: pH (pH) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: pH (pH) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
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				
4/14/2020		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			
3/16/2021	5.08						
3/22/2021							8.34
3/23/2021		5.88		6.38			
3/24/2021			6.49				
10/6/2021					8.53		8.36
10/11/2021		6.08	6.59	6.36		8.13	
10/12/2021	5.12						

# Time Series

Constituent: pH (pH) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		6.54					
12/7/2017			6.73		6.32	6.38	6.62
2/6/2018		6.39	6.76		6.27		
2/8/2018						6.29	6.39
4/24/2018		6.02	6.66				
4/25/2018					6.14	6.15	6.17
6/26/2018			6.61			6.09	6.38
6/27/2018		6.07			6.15		
8/6/2018			6.68				
8/7/2018		6.28			6.18	6.16	
8/8/2018							6.56
10/22/2018		6.3	6.63				
10/23/2018					6.15	6.1	6.54
12/3/2018		6.38	6.67			6.09	
12/4/2018							6.33
12/5/2018					6.15		
2/5/2019		5.83	6.63		6.08	6.04	
2/6/2019							6.13
2/25/2019		5.93					
2/26/2019			6.64			6.17	
2/27/2019					6.11		6.12
8/20/2019		5.73	6.33		6.11	5.4	
8/21/2019							5.97
4/13/2020		5.83			6.18	5.82	
4/15/2020			6.77	7.93			6.16
8/24/2020					6.11		
8/26/2020		5.87	6.68	7.83		5.96	6.11
3/16/2021					6.22		
3/17/2021						5.92	
3/22/2021		5.51					
3/23/2021							6.04
3/24/2021			6.86	8.01			
3/30/2021	8.52						
10/5/2021		5.76	6.58		6.24	5.74	6.06
10/11/2021				7.82			
10/12/2021	8.62						

# Time Series

Constituent: pH (pH) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	6.81	6.93				
2/8/2018	6.73	6.96				
2/12/2018		6.88				
4/25/2018	6.61	6.89				
6/26/2018	6.59	6.85				
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	6.6	6.94			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	6.64	6.93			5.6	5.55
12/3/2018			6.6		5.73	5.6
12/4/2018	6.68					
12/5/2018		6.94				
2/5/2019			6.66			
2/6/2019	6.62	6.73				
2/7/2019					5.44	5.51
2/25/2019			6.6		5.46	5.54
2/27/2019	6.56	6.85				
8/20/2019			6.3			
8/21/2019	6.16	6.61			5.13	5.44
4/13/2020			6.66	5.84		
4/14/2020	6.49	7.02				
4/15/2020					5.31	5.52
8/24/2020			6.64	6	4.65	5.38
8/26/2020	6.29	6.75				
3/16/2021					5.47	5.56
3/17/2021				5.34		
3/23/2021	6.47	6.85				
3/24/2021			5.85			
10/5/2021			6.46	5.72		
10/12/2021	6.61	6.9			5.33	5.41



# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/13/2022 1:49 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	<0.00102	<0.00102	<0.00102	<0.00102			
2/6/2018	<0.00102						
2/7/2018		<0.00102	<0.00102				
2/8/2018				<0.00102			
4/23/2018	<0.00102						
4/24/2018		<0.00102	<0.00102	<0.00102			
6/26/2018	<0.00102						
6/27/2018		<0.00102	<0.00102	<0.00102	<0.00102		
7/18/2018					<0.00102		
8/6/2018					<0.00102		
8/7/2018	<0.00102	<0.00102					
8/8/2018			<0.00102	<0.00102			
9/5/2018					<0.00102		
9/24/2018					<0.00102		
10/22/2018	<0.00102	<0.00102					
10/23/2018			<0.00102	<0.00102			
10/24/2018					<0.00102	<0.00102	<0.00102
11/14/2018						<0.00102	<0.00102
11/28/2018						<0.00102	<0.00102
12/4/2018	<0.00102	<0.00102	<0.00102				
12/5/2018				<0.00102	0.00208 (J)	0.00349 (J)	<0.00102
12/18/2018						0.00395 (J)	<0.00102
1/3/2019						0.00488 (J)	<0.00102
1/24/2019						0.00707 (J)	<0.00102
2/5/2019	<0.00102				0.00387 (J)	0.00938 (J)	<0.00102
2/6/2019		<0.00102	<0.00102	<0.00102			
6/24/2019						0.00563 (J)	
8/19/2019						0.00316 (J)	<0.00102
8/20/2019					0.00328 (J)		
8/21/2019	<0.00102						
8/22/2019		<0.00102	<0.00102	<0.00102			
4/14/2020			<0.00102	<0.00102			
4/15/2020	<0.00102	<0.00102				0.00434 (J)	
4/16/2020					0.00608 (J)		<0.00102
8/24/2020							<0.00102
8/25/2020	<0.00102				0.00247 (J)	0.00262 (J)	
8/26/2020		<0.00102	<0.00102	<0.00102			
3/16/2021	<0.00102						
3/22/2021					0.00488	0.0134	<0.00102
3/23/2021		<0.00102	<0.00102	<0.00102			
10/5/2021	<0.00102			<0.00102			
10/6/2021						0.00262	<0.00102
10/11/2021		<0.00102					
10/12/2021			<0.00102		0.00287		

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.00102				
2/6/2018			<0.00102				
4/23/2018			<0.00102				
6/27/2018			<0.00102				
8/7/2018			<0.00102				
10/22/2018			<0.00102				
12/4/2018			<0.00102				
2/5/2019			<0.00102				
8/20/2019			<0.00102				
4/14/2020		<0.00102		<0.00102			
4/15/2020	<0.00102		<0.00102				<0.00102
8/25/2020	<0.00102		<0.00102				<0.00102
8/26/2020		<0.00102		<0.00102			
3/16/2021	0.000935 (J)						
3/22/2021							<0.00102
3/23/2021		<0.00102		<0.00102			
3/24/2021			<0.00102				
10/6/2021					<0.00102		<0.00102
10/11/2021		<0.00102	<0.00102	<0.00102		<0.00102	
10/12/2021	0.00068 (J)						

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.00102					
12/7/2017			<0.00102		<0.00102	<0.00102	<0.00102
2/6/2018		<0.00102	<0.00102		<0.00102		
2/8/2018						<0.00102	<0.00102
4/24/2018		<0.00102	<0.00102				
4/25/2018					<0.00102	<0.00102	<0.00102
6/26/2018			<0.00102			<0.00102	<0.00102
6/27/2018		<0.00102			<0.00102		
8/6/2018			<0.00102				
8/7/2018		<0.00102			<0.00102	<0.00102	
8/8/2018							<0.00102
10/22/2018		<0.00102	<0.00102				
10/23/2018					<0.00102	<0.00102	<0.00102
12/3/2018		<0.00102	<0.00102			<0.00102	
12/4/2018							<0.00102
12/5/2018					<0.00102		
2/5/2019		<0.00102	<0.00102		<0.00102	<0.00102	
2/6/2019							<0.00102
6/18/2019		<0.00102					
8/20/2019		<0.00102	<0.00102		<0.00102	<0.00102	
8/21/2019							<0.00102
4/13/2020		<0.00102			<0.00102	<0.00102	
4/15/2020			<0.00102	<0.00102			<0.00102
8/24/2020					<0.00102		
8/26/2020		<0.00102	<0.00102	<0.00102		<0.00102	<0.00102
3/16/2021					<0.00102		
3/17/2021						<0.00102	
3/22/2021		<0.00102					
3/23/2021							<0.00102
3/24/2021			<0.00102	<0.00102			
3/30/2021	<0.00102						
10/5/2021		<0.00102	<0.00102		<0.00102	<0.00102	<0.00102
10/11/2021				<0.00102			
10/12/2021	<0.00102						

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.00102	<0.00102				
2/8/2018	<0.00102	<0.00102				
4/25/2018	<0.00102	<0.00102				
6/26/2018	<0.00102	<0.00102				
6/27/2018			<0.00102		<0.00102	<0.00102
7/18/2018			<0.00102		<0.00102	<0.00102
8/7/2018			<0.00102			
8/8/2018	<0.00102	<0.00102			<0.00102	<0.00102
9/5/2018			<0.00102		<0.00102	<0.00102
9/24/2018			<0.00102		<0.00102	<0.00102
10/22/2018			<0.00102			
10/23/2018	<0.00102	<0.00102			<0.00102	<0.00102
12/3/2018			<0.00102		<0.00102	<0.00102
12/4/2018	<0.00102					
12/5/2018		<0.00102				
2/5/2019			<0.00102			
2/6/2019	<0.00102	<0.00102				
2/7/2019					<0.00102	<0.00102
8/20/2019			<0.00102			
8/21/2019	<0.00102	<0.00102			<0.00102	<0.00102
4/13/2020			<0.00102	<0.00102		
4/14/2020	<0.00102	<0.00102				
4/15/2020					<0.00102	<0.00102
8/24/2020			<0.00102	<0.00102	<0.00102	<0.00102
8/26/2020	<0.00102	<0.00102				
3/16/2021					<0.00102	<0.00102
3/17/2021				<0.00102		
3/23/2021	<0.00102	<0.00102				
3/24/2021			<0.00102			
10/5/2021			<0.00102	<0.00102		
10/12/2021	<0.00102	<0.00102			<0.00102	<0.00102

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/13/2022 1:49 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		<1	95	240	120		
7/18/2018					120		
8/6/2018					110		
8/7/2018	660	<1					
8/8/2018			110	260			
9/5/2018					86		
9/24/2018					80		
10/22/2018	580	<1					
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		

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			210				
2/6/2018			190				
4/23/2018			140				
6/27/2018			130				
8/7/2018			150				
10/22/2018			160				
12/4/2018			170				
2/5/2019			145				
2/26/2019			148				
8/20/2019			110				
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			
3/16/2021	18.5						
3/22/2021							2.04
3/23/2021		71.8		168			
3/24/2021			101				
10/6/2021					8.35		2.44
10/11/2021		61.7	112	174		13.8	
10/12/2021	36.7						

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		250					
12/7/2017			<1		19	10	14
2/6/2018		230	<1		20		
2/8/2018						11	10
4/24/2018		260	<1				
4/25/2018					22	13	11
6/26/2018			<1			11	11
6/27/2018		230			18		
8/6/2018			<1				
8/7/2018		200			20	12	
8/8/2018							13
10/22/2018		190	<1				
10/23/2018					18	11	13
12/3/2018		200	<1			12	
12/4/2018							9.8
12/5/2018					20		
2/5/2019		263	5.38		24.3	13.9	
2/6/2019							10.8
2/25/2019		246					
2/26/2019			5.1			14.1	
2/27/2019					24.7		8.98
6/18/2019		245					
8/20/2019		222	7.34		21.3	12.3	
8/21/2019							11.8
4/13/2020		256			21.9	13.9	
4/15/2020			17.2	1.25			7.95
8/24/2020					21.2		
8/26/2020		246	15.5	1.21		13.1	9.19
3/16/2021					18.8		
3/17/2021						13.7	
3/22/2021		254					
3/23/2021							8.08
3/24/2021			19.9	1.39			
3/30/2021	10.3						
10/5/2021		228	37.8		14.4	14.2	9.19
10/11/2021				1.7			
10/12/2021	15.2						

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/13/2022 1:49 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	6.5	9				
2/8/2018	8.9					
2/12/2018		8.3				
4/25/2018	7.9	12				
6/26/2018	7.5	8.5				
6/27/2018			2.2 (J)		<1	<1
7/18/2018			2.5 (J)		<1	<1
8/7/2018			<1			
8/8/2018	7.3	6.7			<1	<1
9/5/2018			1.4 (J)		<1	<1
9/24/2018			<1		<1	<1
10/22/2018			1.7 (J)			
10/23/2018	7.8	9.4			<1	<1
12/3/2018			2.1 (J)		<1	<1
12/4/2018	8.2					
12/5/2018		7.8				
2/5/2019			3.99			
2/6/2019	9.53	17				
2/7/2019					0.639 (J)	1.69
2/25/2019			4.01		<1	1.53
2/27/2019	8.25	12.4				
8/20/2019			3.73			
8/21/2019	10.8	11.3			1.21	1.62
4/13/2020			3.83	1.48		
4/14/2020	12.5	15.9				
4/15/2020					0.554 (J)	1.68
8/24/2020			4.16	3.88	<1	1.31
8/26/2020	16.1	12.9				
3/16/2021					1.02	1.7
3/17/2021				1.64		
3/23/2021	9.21	15.7				
3/24/2021			2.88			
10/5/2021			2.17	5.29		
10/12/2021	16	18			0.895 (J)	1.34



# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/13/2022 1:49 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	<0.0002	<0.0002	<0.0002			
2/6/2018	<0.0002						
2/7/2018		<0.0002	<0.0002				
2/8/2018				<0.0002			
4/23/2018	<0.0002						
4/24/2018		<0.0002	<0.0002	<0.0002			
6/26/2018	<0.0002						
6/27/2018		<0.0002	<0.0002	<0.0002	<0.0002		
7/18/2018					<0.0002		
8/6/2018					<0.0002		
8/7/2018	<0.0002	<0.0002					
8/8/2018			<0.0002	<0.0002			
9/5/2018					<0.0002		
9/24/2018					<0.0002		
10/22/2018	<0.0002	<0.0002					
10/23/2018			<0.0002	<0.0002			
10/24/2018					<0.0002	<0.0002	<0.0002
11/14/2018						<0.0002	<0.0002
11/28/2018						<0.0002	<0.0002
12/4/2018	<0.0002	<0.0002	<0.0002				
12/5/2018				<0.0002	<0.0002	<0.0002	<0.0002
12/18/2018						<0.0002	<0.0002
1/3/2019						<0.0002	<0.0002
1/24/2019						<0.0002	<0.0002
2/5/2019	<0.0002				<0.0002	<0.0002	<0.0002
2/6/2019		<0.0002	<0.0002	<0.0002			
6/24/2019						<0.0002	
8/19/2019						<0.0002	<0.0002
8/20/2019					<0.0002		
8/21/2019	<0.0002						
8/22/2019		<0.0002	<0.0002	<0.0002			
4/14/2020			<0.0002	<0.0002			
4/15/2020	<0.0002	<0.0002				<0.0002	
4/16/2020					<0.0002		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.0002				<0.0002	<0.0002	
8/26/2020		<0.0002	<0.0002	<0.0002			
3/16/2021	0.000112 (J)						
3/22/2021					<0.0002	<0.0002	<0.0002
3/23/2021		<0.0002	<0.0002	<0.0002			
10/5/2021	<0.0002			<0.0002			
10/6/2021						<0.0002	<0.0002
10/11/2021		<0.0002					
10/12/2021			<0.0002	<0.0002			

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			<0.0002				
2/6/2018			<0.0002				
4/23/2018			<0.0002				
6/27/2018			<0.0002				
8/7/2018			<0.0002				
10/22/2018			0.000213 (J)				
12/4/2018			<0.0002				
2/5/2019			0.000256 (J)				
8/20/2019			0.000322 (J)				
4/14/2020		<0.0002		<0.0002			
4/15/2020	<0.0002		0.000318 (J)				<0.0002
8/25/2020	<0.0002		0.000347 (J)				<0.0002
8/26/2020		<0.0002		<0.0002			
3/16/2021	<0.0002						
3/22/2021							<0.0002
3/23/2021		<0.0002		0.000145 (J)			
3/24/2021			0.00037				
10/6/2021					<0.0002		<0.0002
10/11/2021		<0.0002	0.00029	0.00013 (J)		<0.0002	
10/12/2021	<0.0002						

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		<0.0002					
12/7/2017			<0.0002		<0.0002	<0.0002	<0.0002
2/6/2018		<0.0002	<0.0002		<0.0002		
2/8/2018						<0.0002	<0.0002
4/24/2018		<0.0002	<0.0002				
4/25/2018					<0.0002	<0.0002	<0.0002
6/26/2018			<0.0002			<0.0002	<0.0002
6/27/2018		<0.0002			<0.0002		
8/6/2018			<0.0002				
8/7/2018		<0.0002			<0.0002	<0.0002	
8/8/2018							<0.0002
10/22/2018		<0.0002	<0.0002				
10/23/2018					<0.0002	<0.0002	<0.0002
12/3/2018		<0.0002	<0.0002			<0.0002	
12/4/2018							<0.0002
12/5/2018					<0.0002		
2/5/2019		<0.0002	<0.0002		<0.0002	<0.0002	
2/6/2019							<0.0002
6/18/2019		<0.0002					
8/20/2019		<0.0002	<0.0002		<0.0002	<0.0002	
8/21/2019							<0.0002
4/13/2020		<0.0002			<0.0002	<0.0002	
4/15/2020			<0.0002	<0.0002			<0.0002
8/24/2020					<0.0002		
8/26/2020		<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
3/16/2021					<0.0002		
3/17/2021						<0.0002	
3/22/2021		0.000121 (J)					
3/23/2021							<0.0002
3/24/2021			<0.0002	<0.0002			
3/30/2021	<0.0002						
10/5/2021		0.00014 (J)	<0.0002		<0.0002	<0.0002	<0.0002
10/11/2021				<0.0002			
10/12/2021	<0.0002						

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/13/2022 1:49 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	<0.0002	<0.0002				
2/8/2018	<0.0002	<0.0002				
4/25/2018	<0.0002	<0.0002				
6/26/2018	<0.0002	<0.0002				
6/27/2018			<0.0002		<0.0002	<0.0002
7/18/2018			<0.0002		<0.0002	<0.0002
8/7/2018			<0.0002			
8/8/2018	<0.0002	<0.0002			<0.0002	<0.0002
9/5/2018			<0.0002		<0.0002	<0.0002
9/24/2018			<0.0002		<0.0002	<0.0002
10/22/2018			<0.0002			
10/23/2018	<0.0002	<0.0002			<0.0002	<0.0002
12/3/2018			<0.0002		<0.0002	<0.0002
12/4/2018	<0.0002					
12/5/2018		<0.0002				
2/5/2019			<0.0002			
2/6/2019	<0.0002	<0.0002				
2/7/2019					<0.0002	<0.0002
8/20/2019			<0.0002			
8/21/2019	<0.0002	<0.0002			<0.0002	<0.0002
4/13/2020			<0.0002	<0.0002		
4/14/2020	<0.0002	<0.0002				
4/15/2020					<0.0002	<0.0002
8/24/2020			<0.0002	<0.0002	<0.0002	<0.0002
8/26/2020	<0.0002	<0.0002				
3/16/2021					<0.0002	<0.0002
3/17/2021				<0.0002		
3/23/2021	<0.0002	<0.0002				
3/24/2021			<0.0002			
10/5/2021			<0.0002	<0.0002		
10/12/2021	<0.0002	<0.0002			<0.0002	<0.0002

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/13/2022 1:49 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		

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/13/2022 1:49 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-21VC	GSD-AP-MW-22VB	GSD-AP-MW-2VA
12/6/2017			574				
2/6/2018			572				
4/23/2018			414				
6/27/2018			440				
8/7/2018			485				
10/22/2018			484				
12/4/2018			504				
2/5/2019			366				
2/26/2019			372				
8/20/2019			369				
4/14/2020		190		323			
4/15/2020	126		300				324
8/25/2020	107		339				321
8/26/2020		202		310			
3/16/2021	52						
3/22/2021							314
3/23/2021		174		385			
3/24/2021			287				
10/6/2021					864		317
10/11/2021		202	337	384		230	
10/12/2021	78.7						

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/13/2022 1:49 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2VB	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7
12/6/2017		628					
12/7/2017			189		215	136	137
2/6/2018		556	206		204		
2/8/2018						122	124
4/24/2018		510	193				
4/25/2018					192	102	106
6/26/2018			180			106	129
6/27/2018		486			180		
8/6/2018			182				
8/7/2018		487			183	71.3	
8/8/2018							142
10/22/2018		450	204				
10/23/2018					169	105	142
12/3/2018		492	168			102	
12/4/2018							121
12/5/2018					177		
2/5/2019		428	158		198	107	
2/6/2019							108
2/25/2019		441					
2/26/2019			191			99.3	
2/27/2019					185		103
6/18/2019		422					
8/20/2019		416	164		174	98.7	
8/21/2019							133
4/13/2020		433			192	90.7	
4/15/2020			170	218			102
8/24/2020					175		
8/26/2020		455	168	239		91.3	109
3/16/2021					184		
3/17/2021						80	
3/22/2021		427					
3/23/2021							92.7
3/24/2021			180	222			
3/30/2021	528						
10/5/2021		389	200		168	96.7	113
10/11/2021				220			
10/12/2021	536						

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/13/2022 1:49 PM

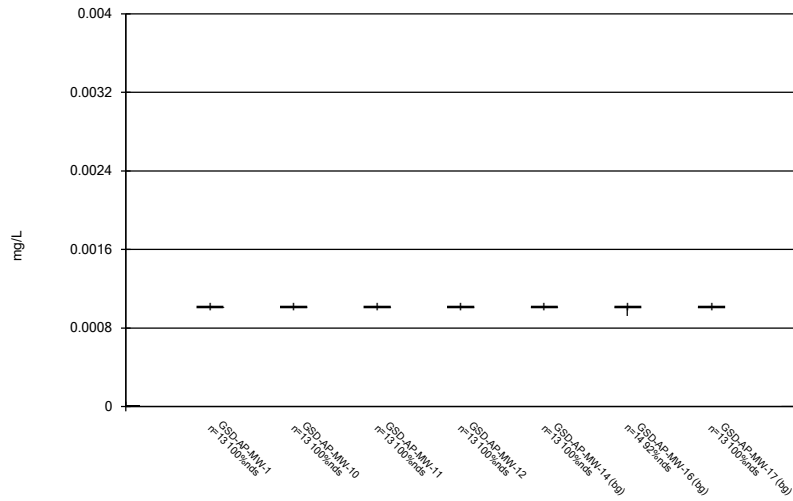
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
12/7/2017	253	183				
2/8/2018	229					
2/12/2018		201				
4/25/2018	223	180				
6/26/2018	232	191				
6/27/2018			144		48.7	44
7/18/2018			156		46	42.7
8/7/2018			140			
8/8/2018	208	192			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	209	185			35.3	31.3
12/3/2018			127		48.7	46
12/4/2018	213					
12/5/2018		200				
2/5/2019			113			
2/6/2019	212	151				
2/7/2019					42.7	32.7
2/25/2019			106		40.7	31.3
2/27/2019	211	186				
8/20/2019			141			
8/21/2019	226	200			46	42.7
4/13/2020			104	88		
4/14/2020	222	187				
4/15/2020					41.3	37.3
8/24/2020			114	115	42.7	37.3
8/26/2020	215	192				
3/16/2021					42	41.3
3/17/2021				53.3		
3/23/2021	200	178				
3/24/2021			94			
10/5/2021			108	101		
10/12/2021	245	169			38.7	35.3



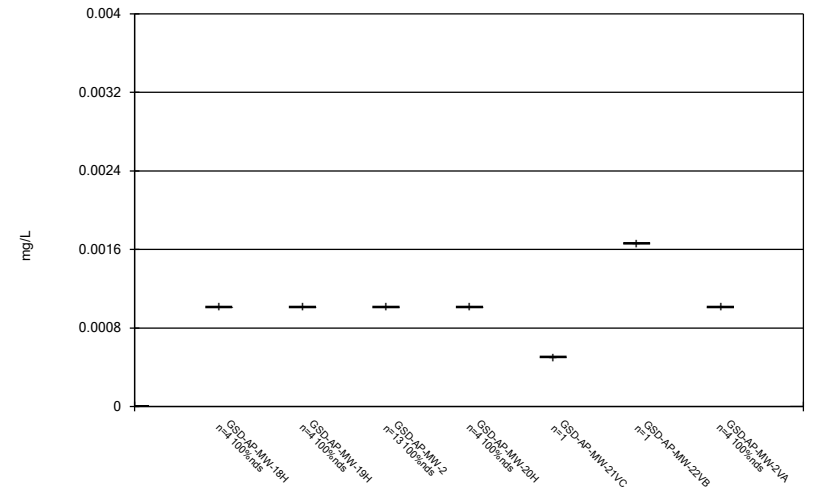
FIGURE B.

### Box & Whiskers Plot



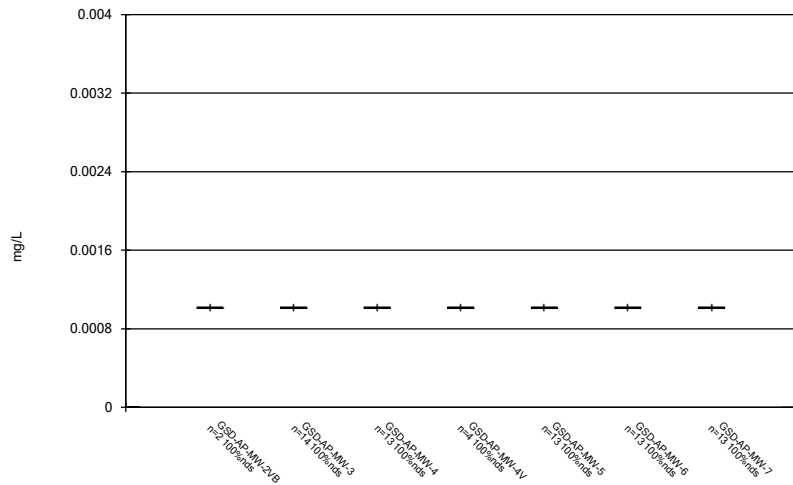
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



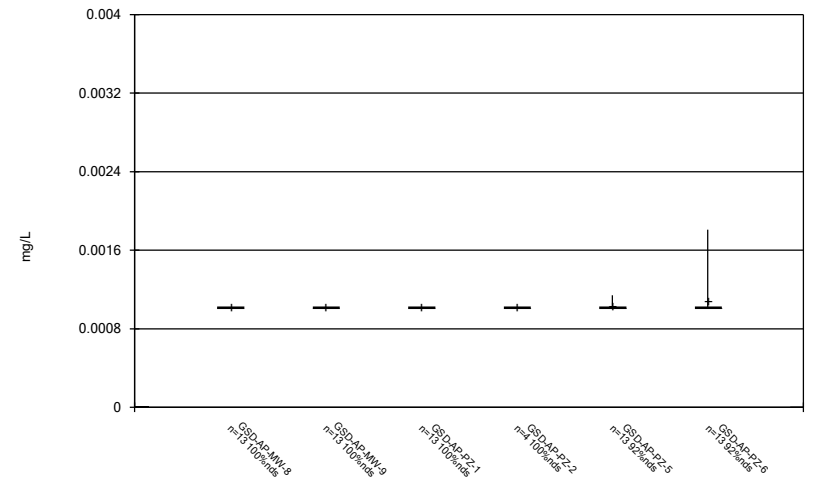
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



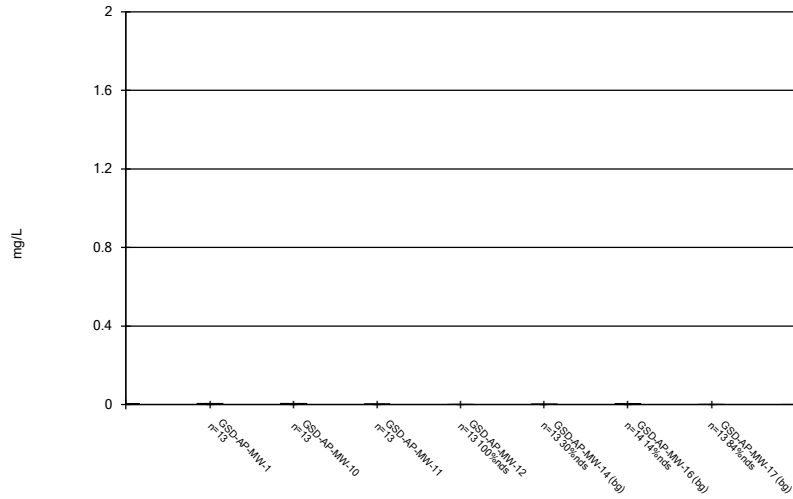
Constituent: Antimony Analysis Run 1/13/2022 1:52 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



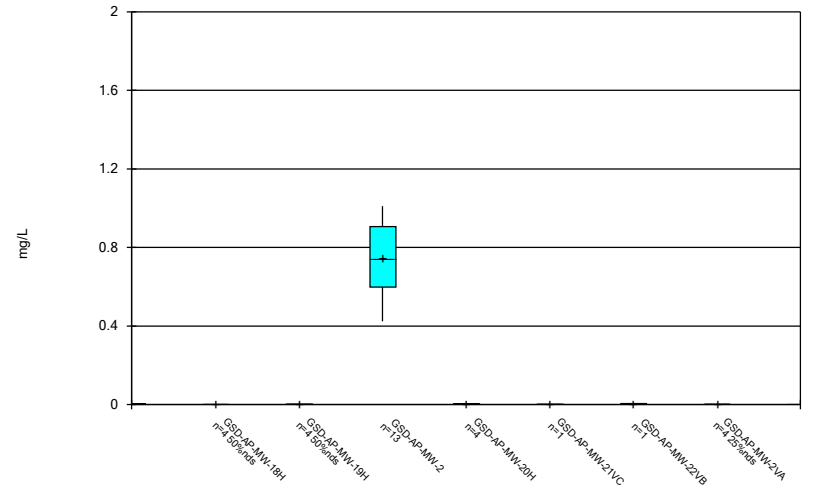
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



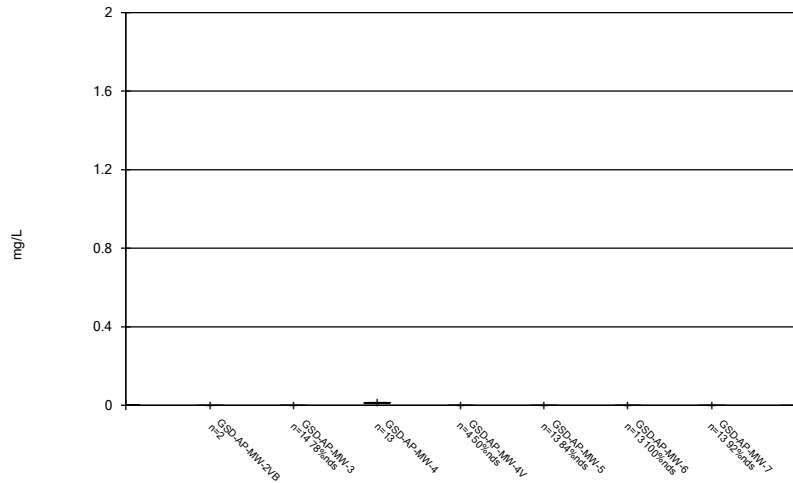
Constituent: Arsenic Analysis Run 1/13/2022 1:52 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



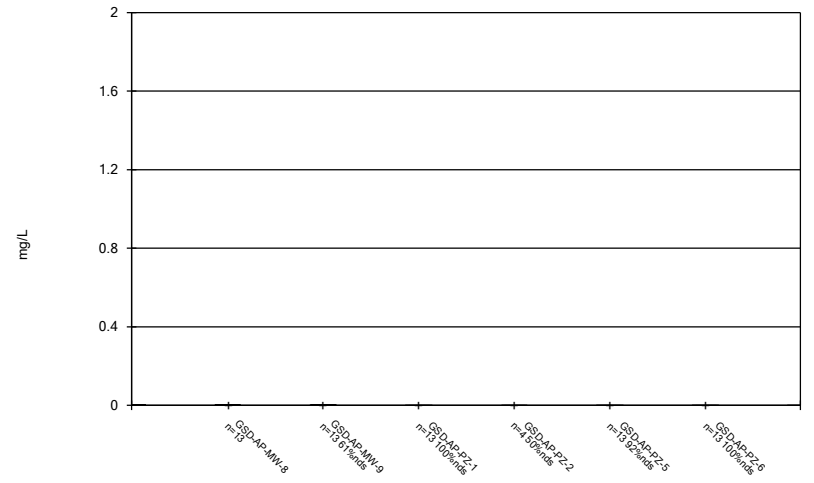
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



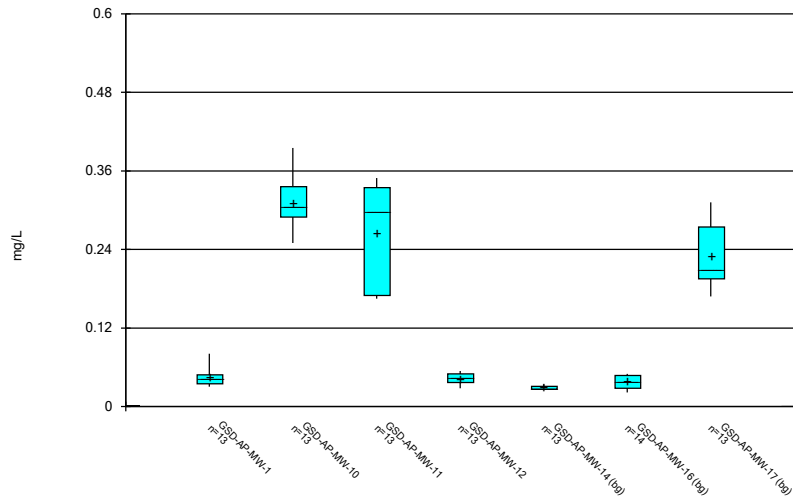
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



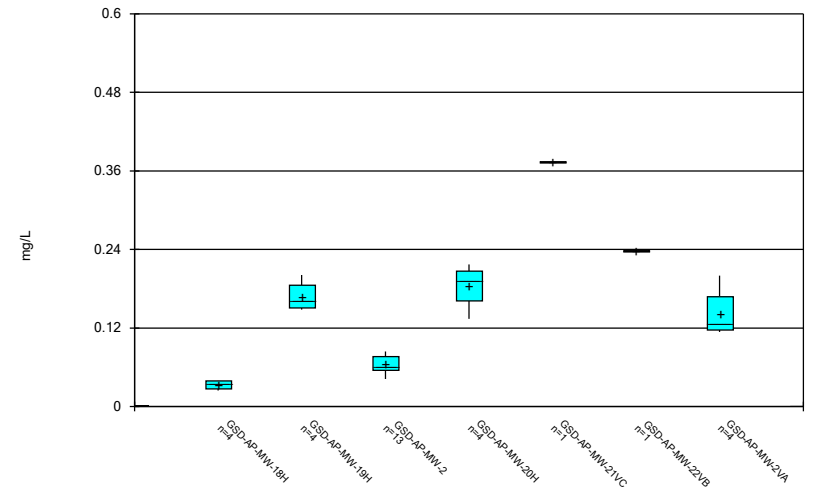
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



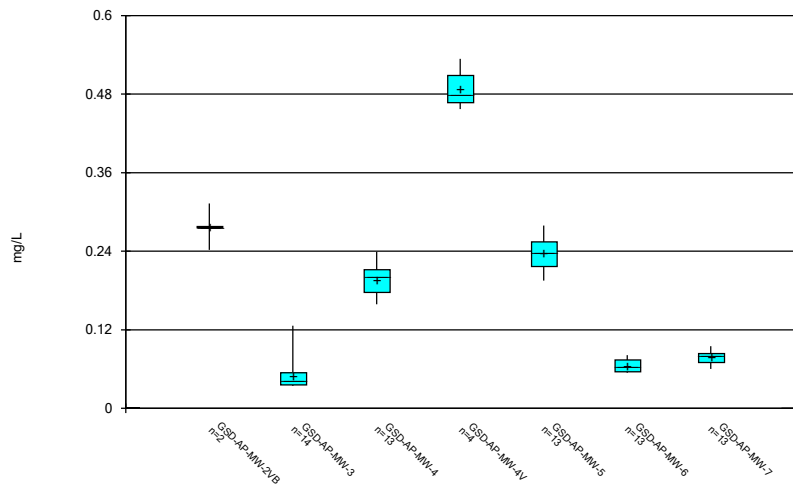
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



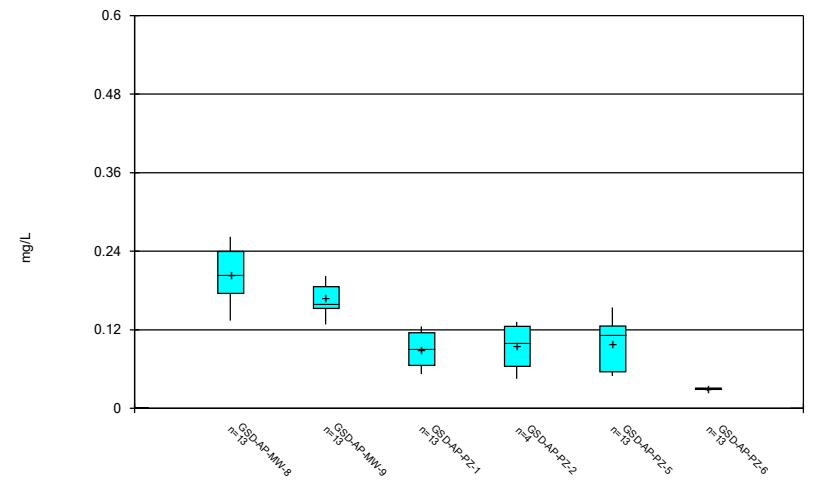
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



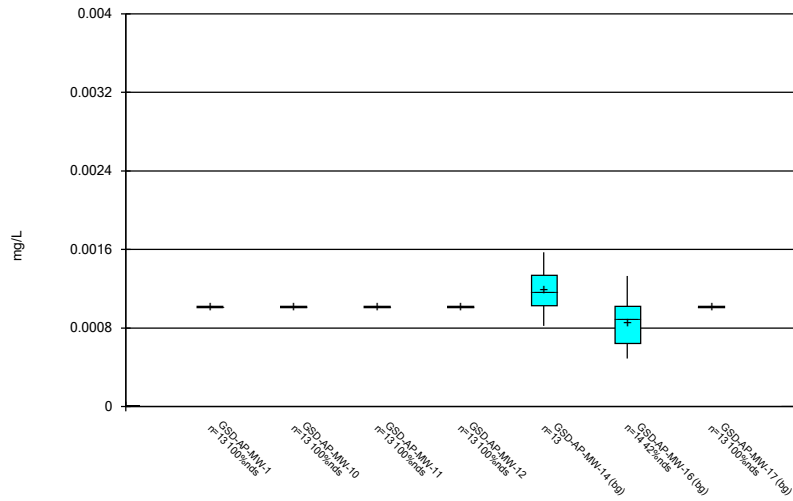
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



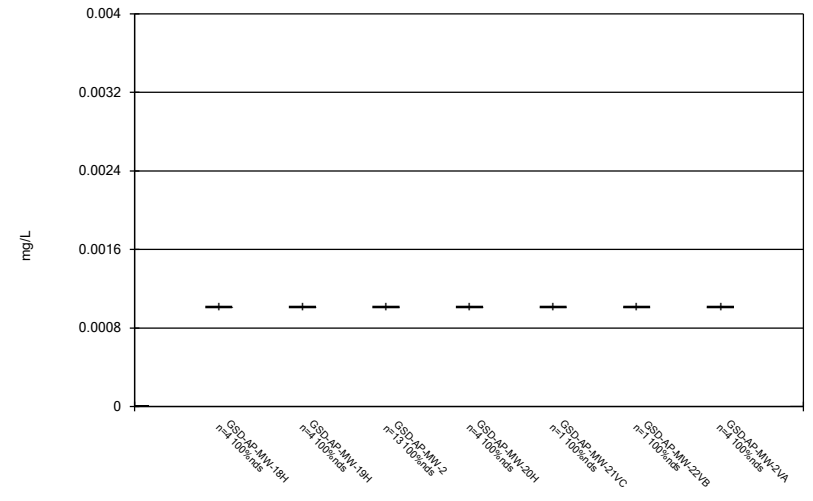
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



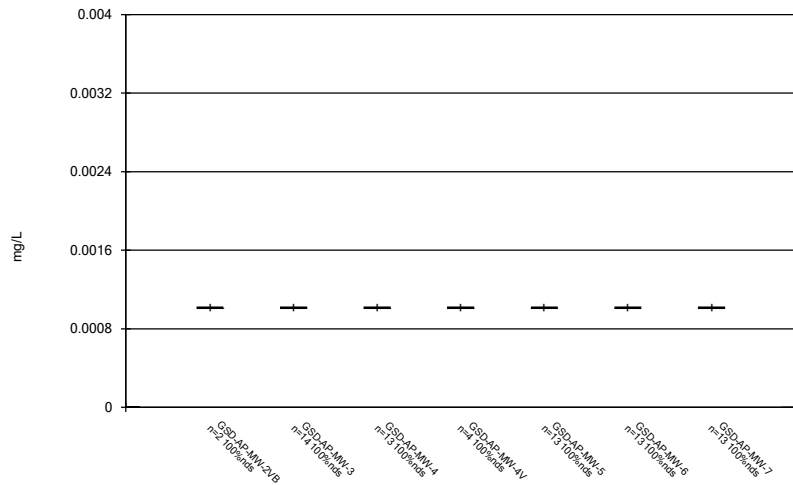
Constituent: Beryllium Analysis Run 1/13/2022 1:52 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



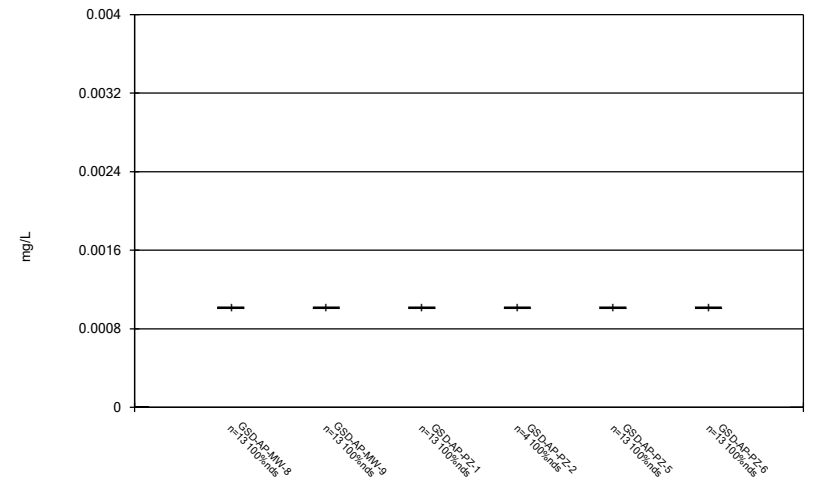
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



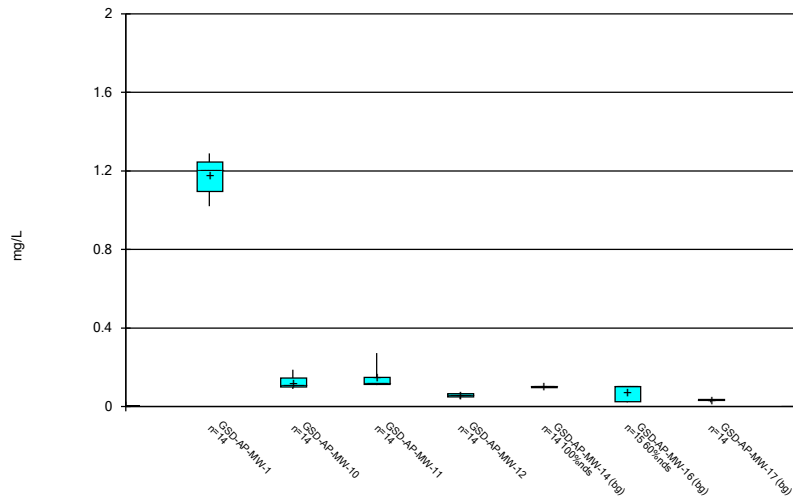
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



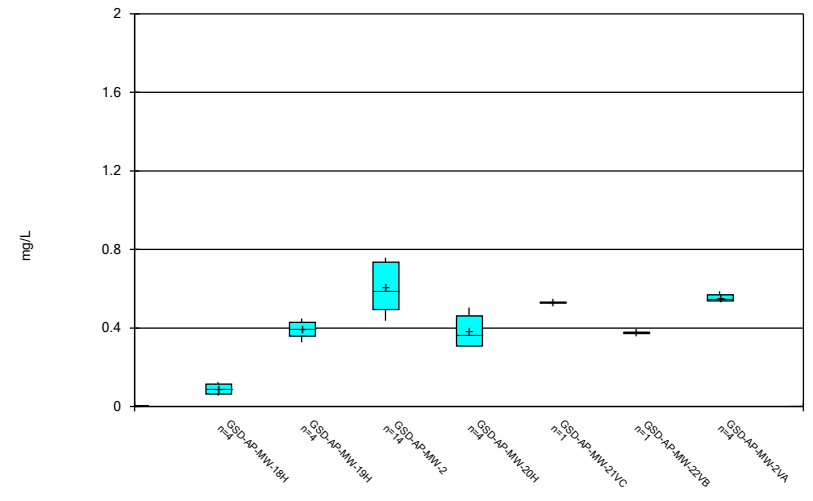
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



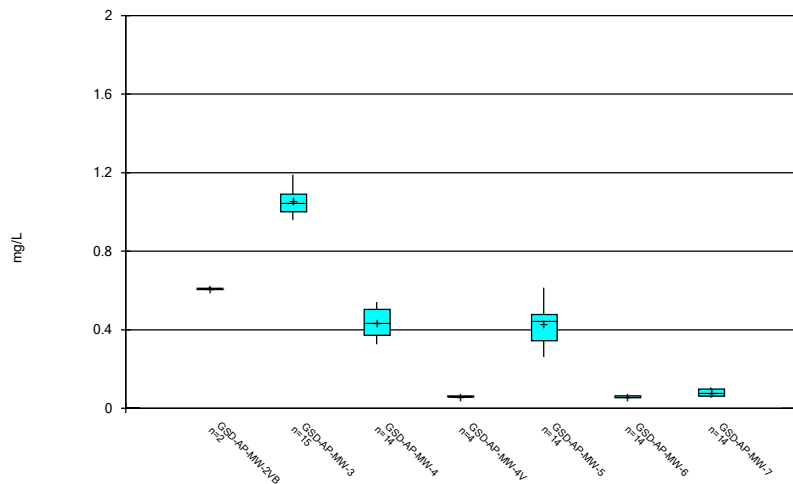
Constituent: Boron Analysis Run 1/13/2022 1:52 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



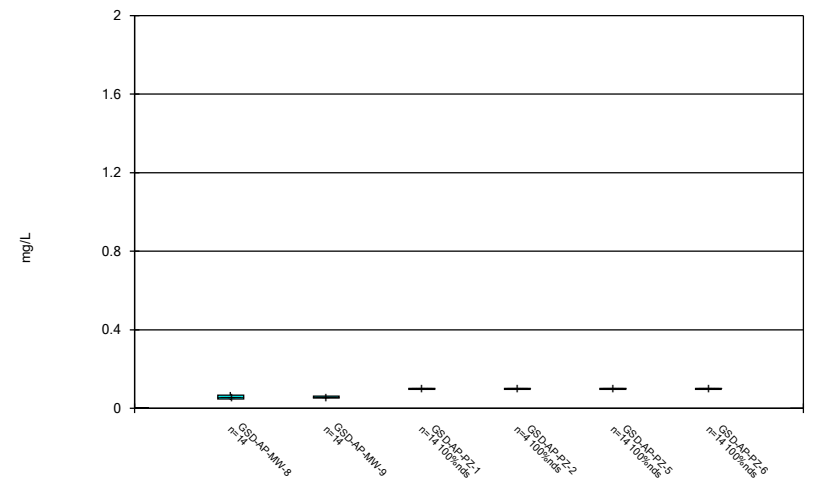
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



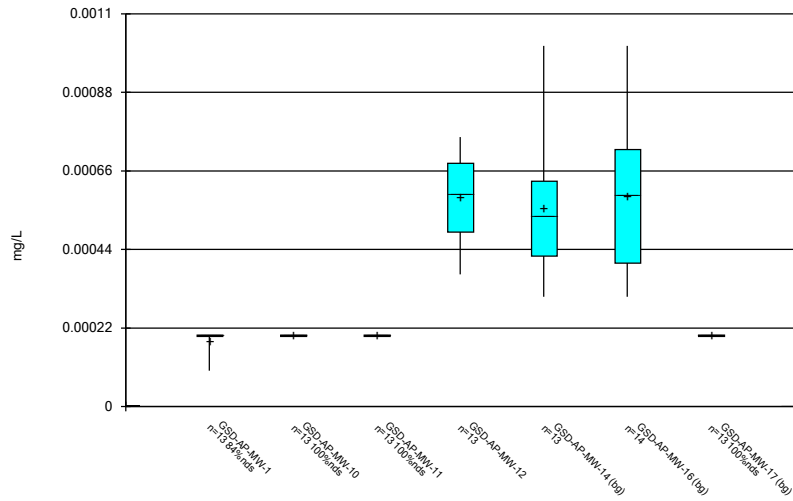
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



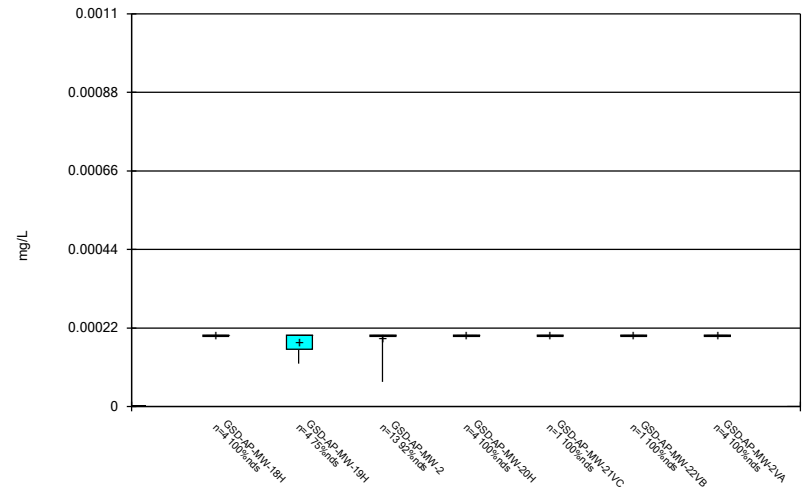
Constituent: Boron Analysis Run 1/13/2022 1:52 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



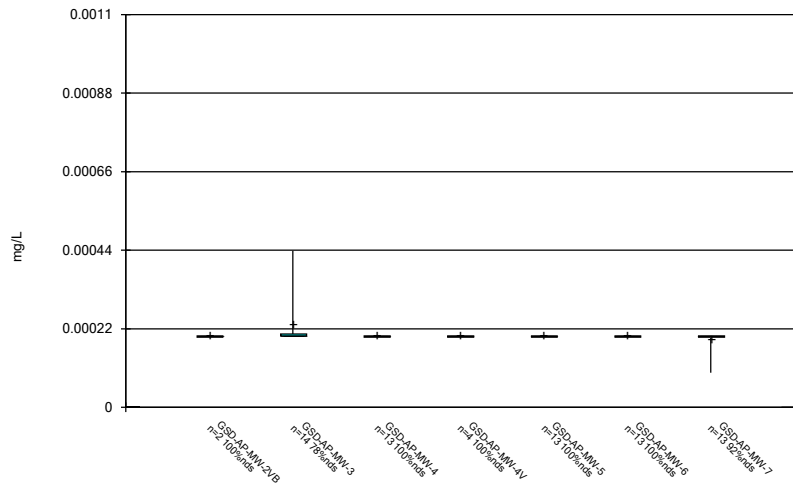
Constituent: Cadmium Analysis Run 1/13/2022 1:52 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



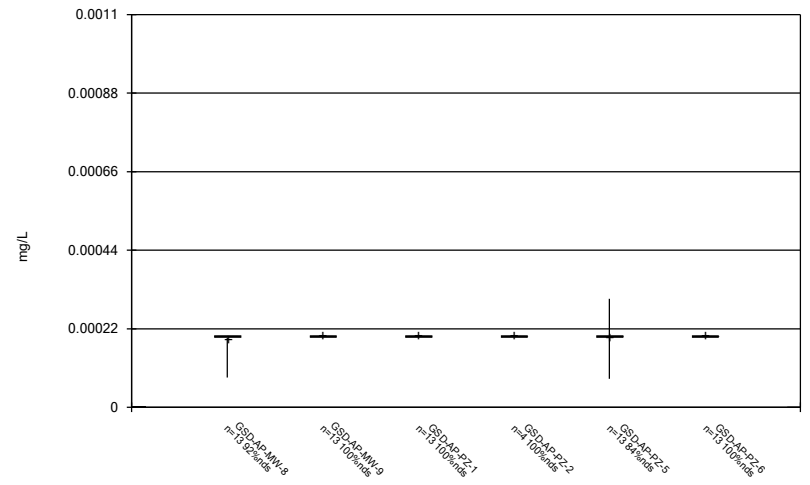
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



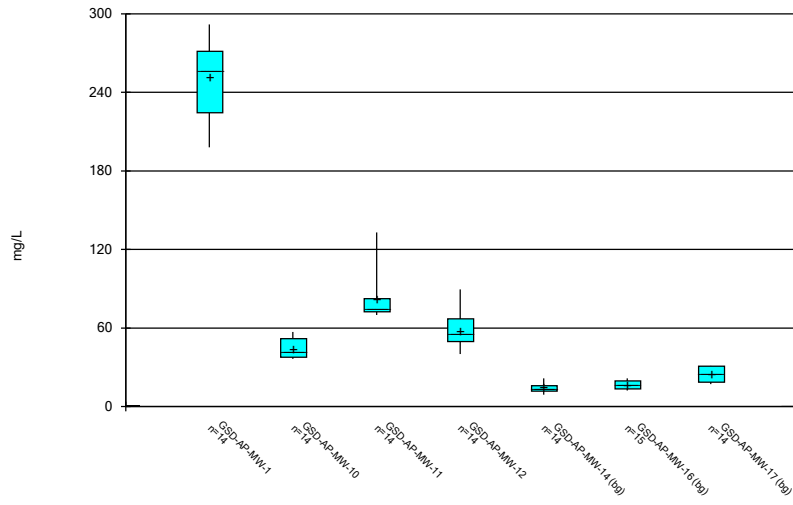
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



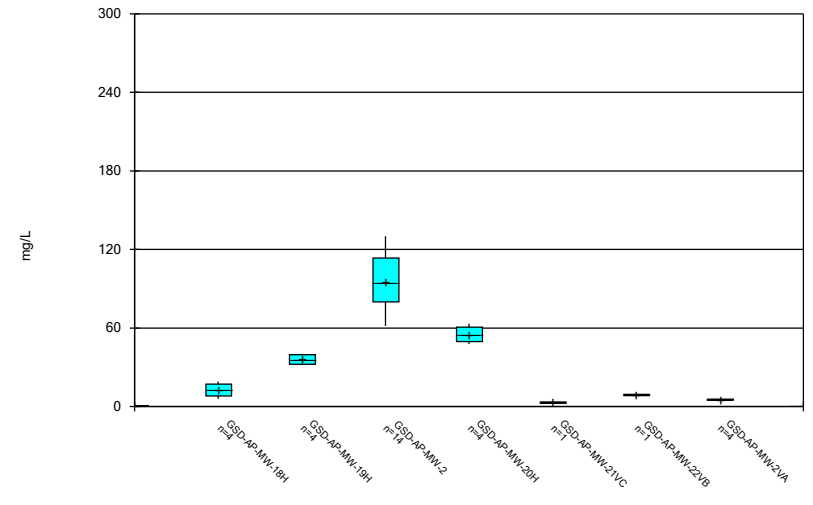
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



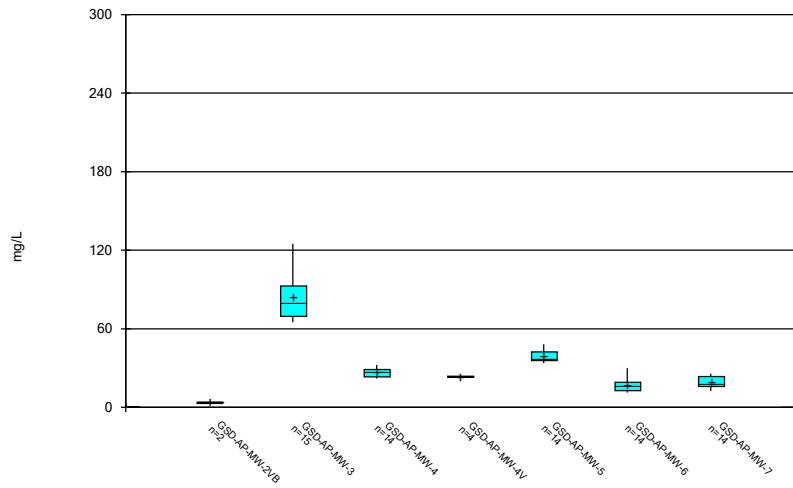
Constituent: Calcium Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



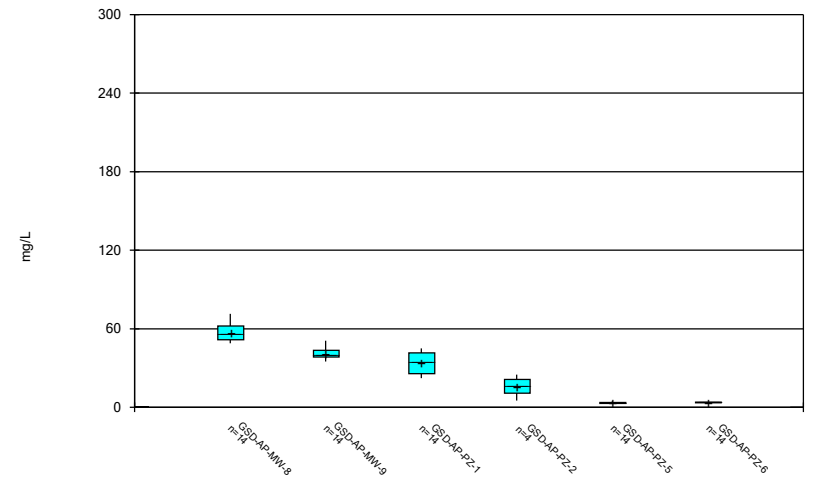
Constituent: Calcium Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

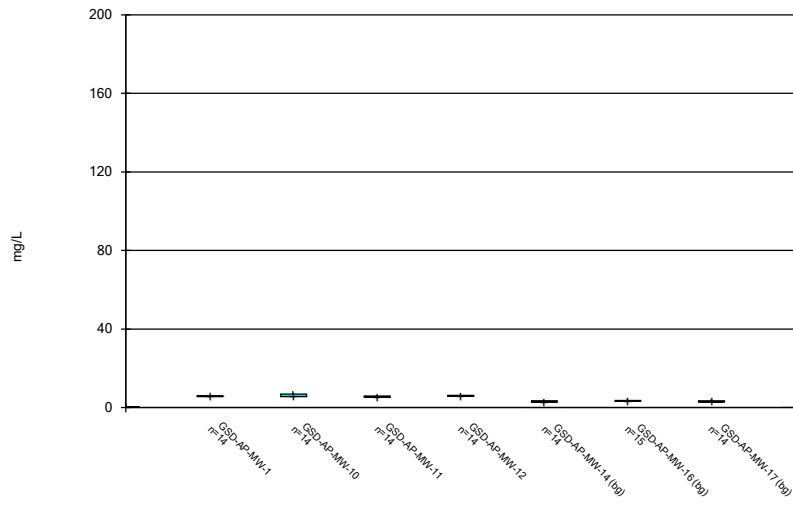
### Box & Whiskers Plot



Constituent: Calcium Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

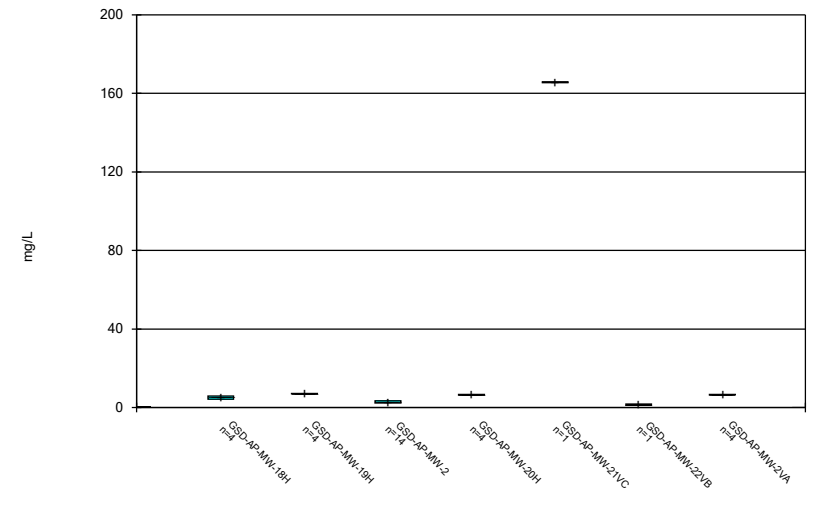


### Box & Whiskers Plot



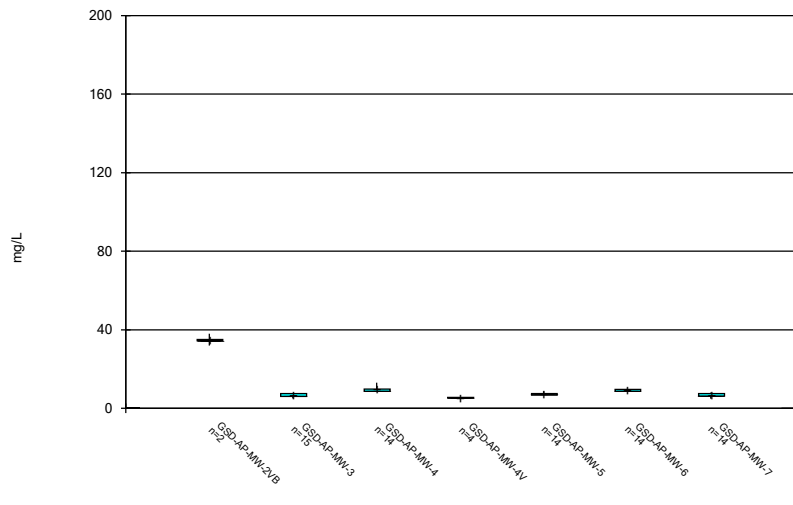
Constituent: Chloride Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



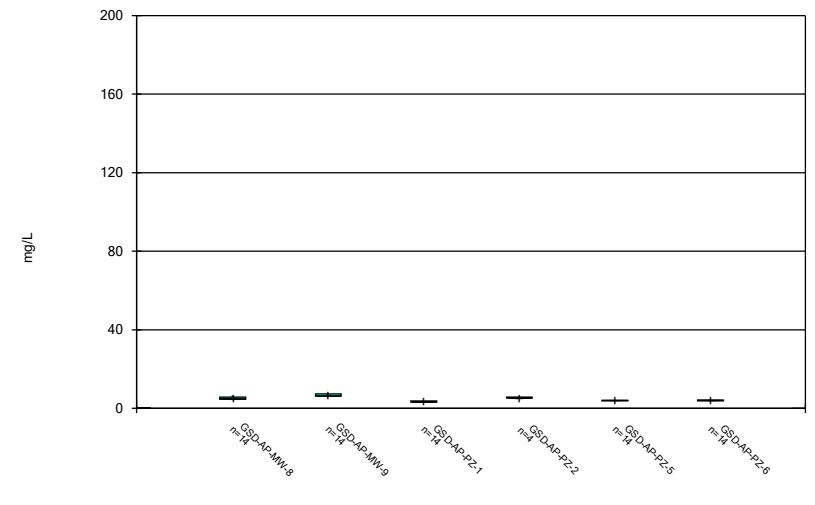
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



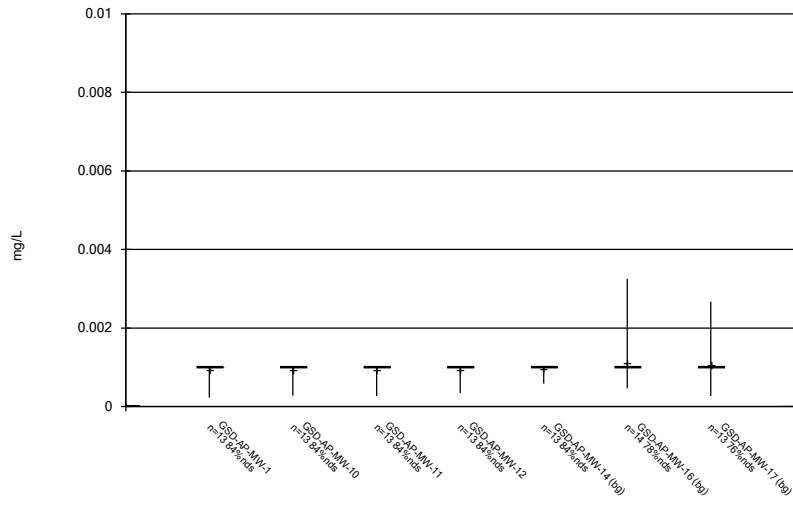
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



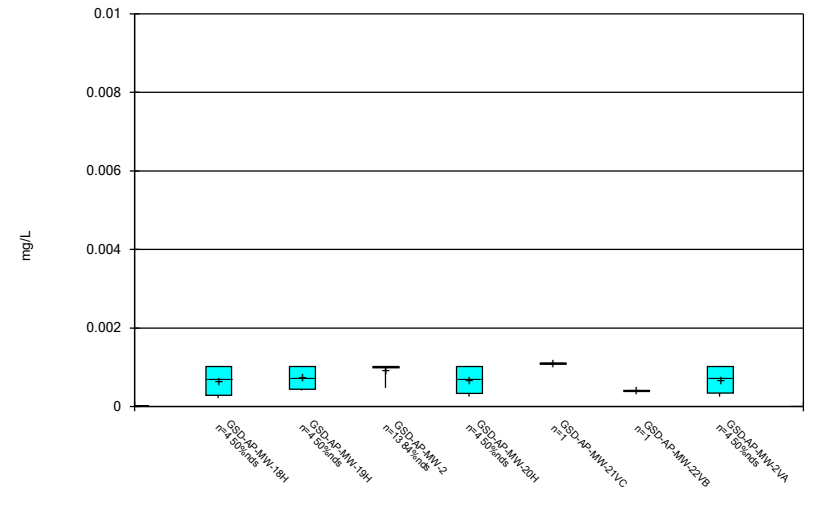
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



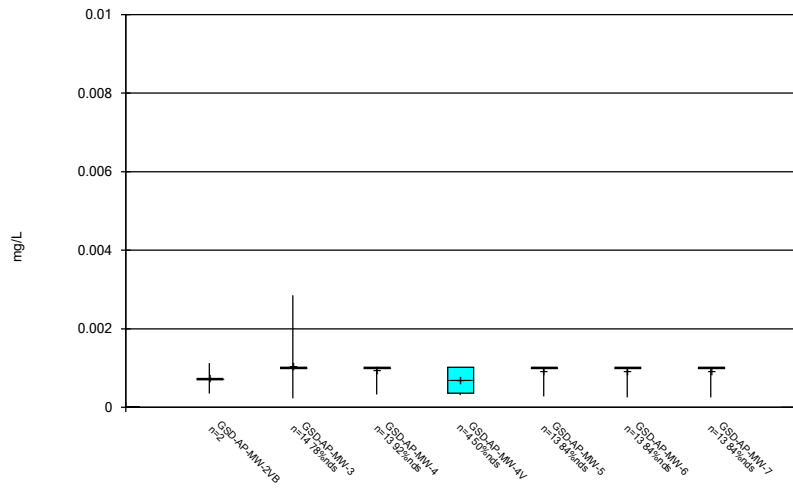
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



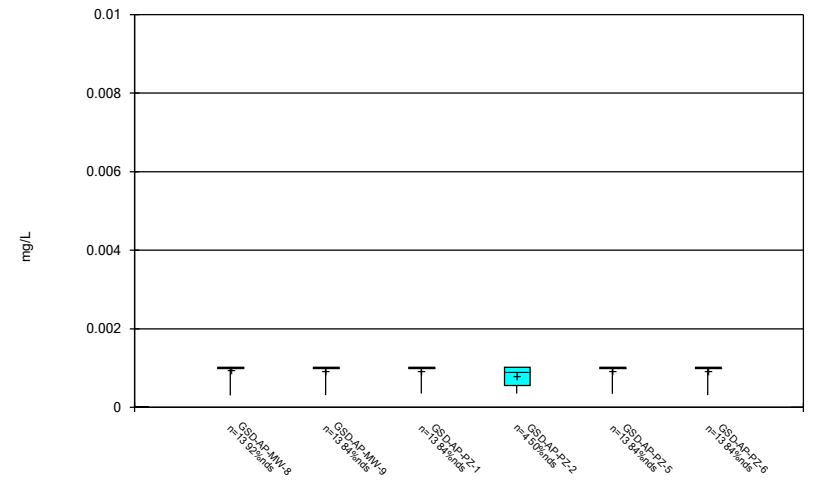
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



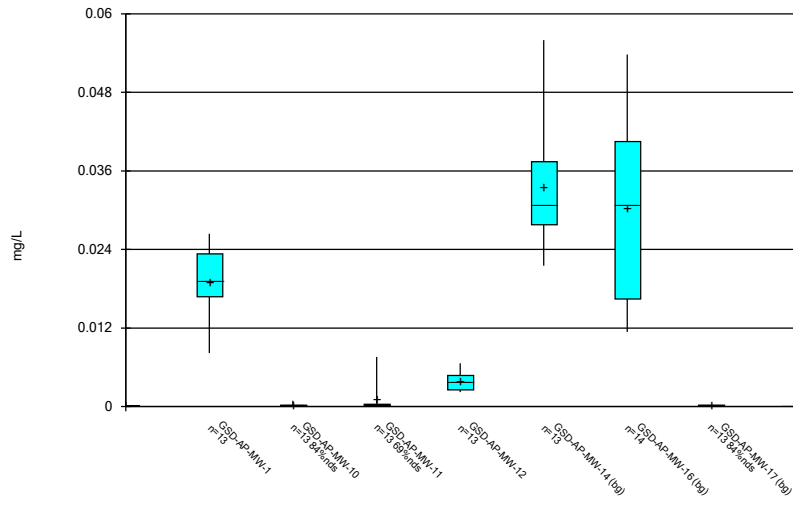
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



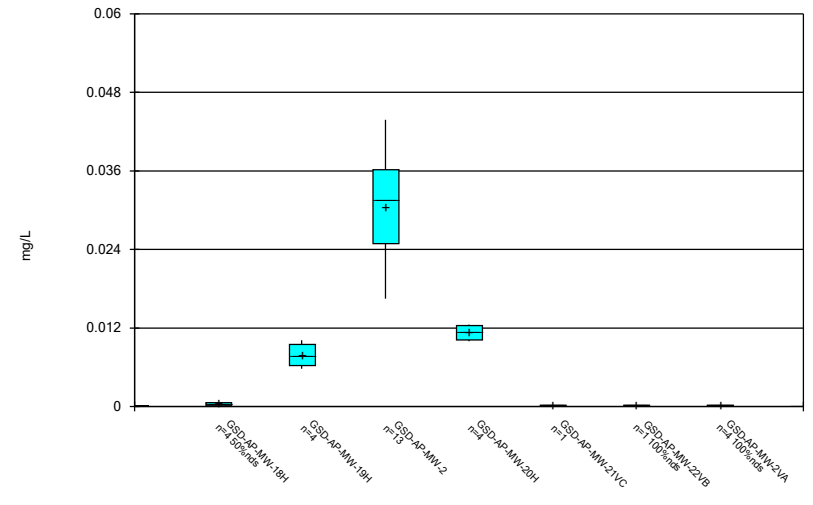
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



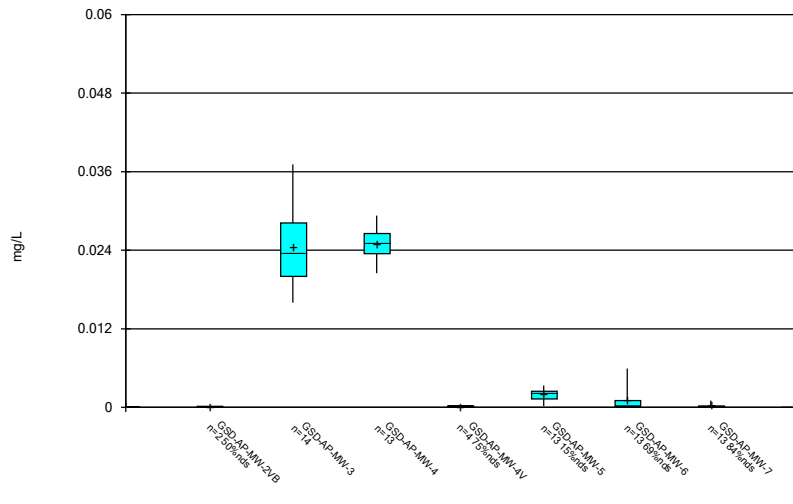
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



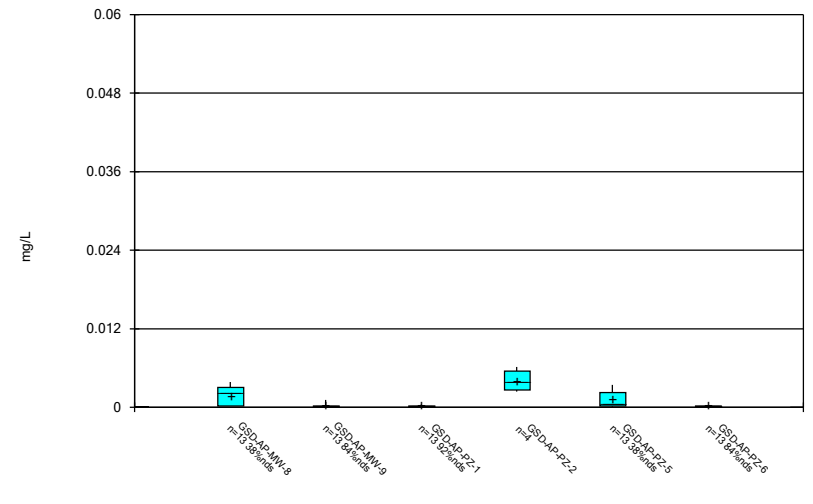
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



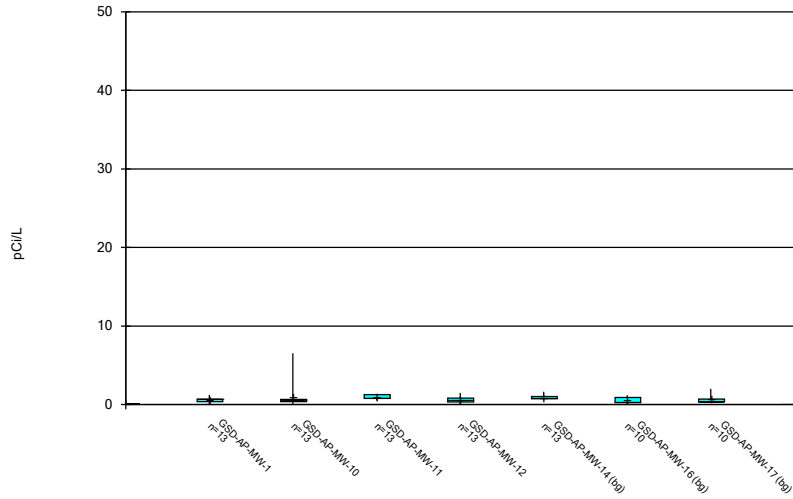
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



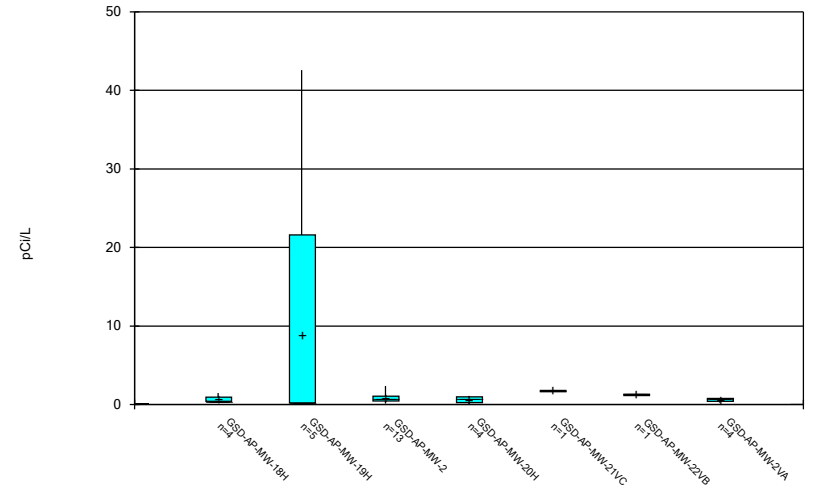
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



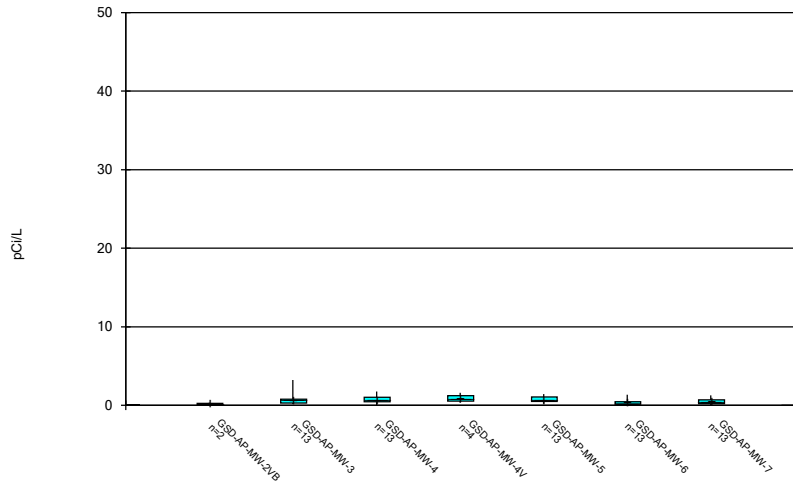
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



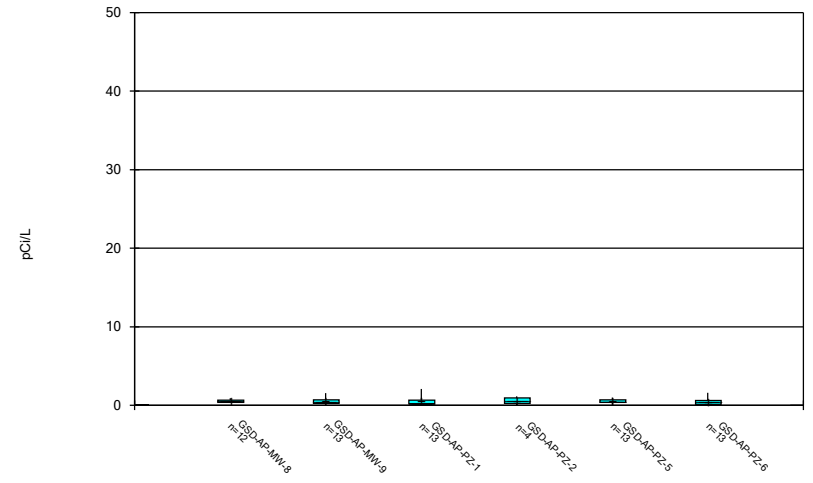
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



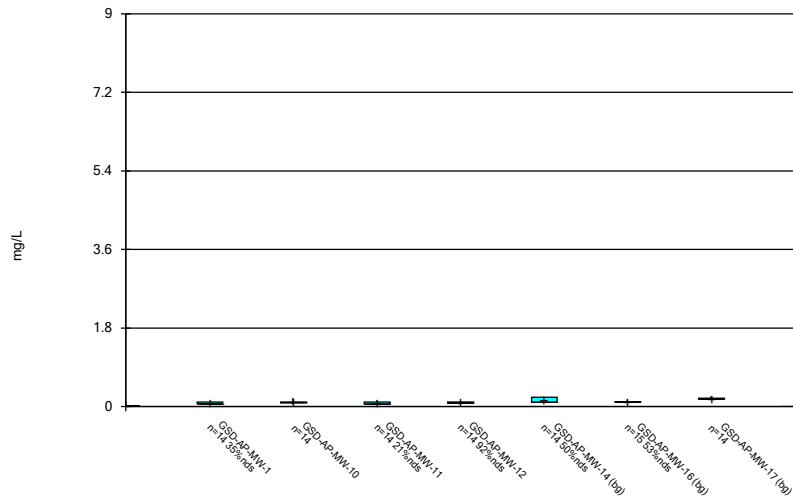
Constituent: Combined Radium 226 + 228 Analysis Run 1/13/2022 1:53 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



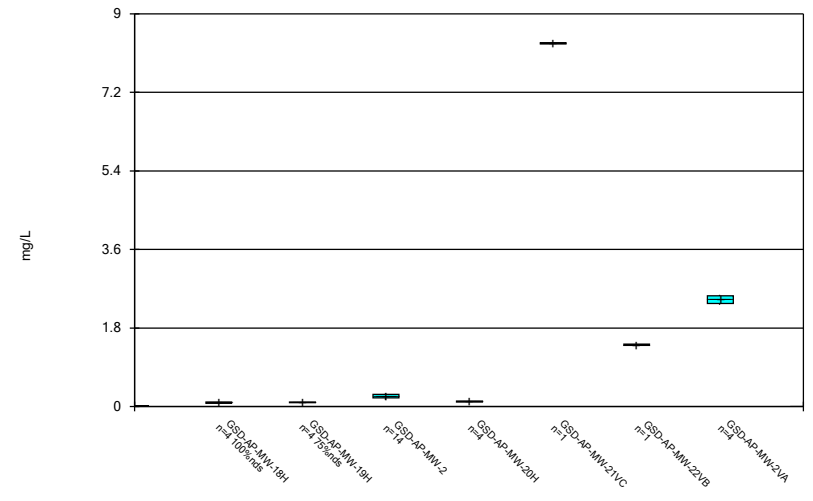
Constituent: Combined Radium 226 + 228 Analysis Run 1/13/2022 1:53 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



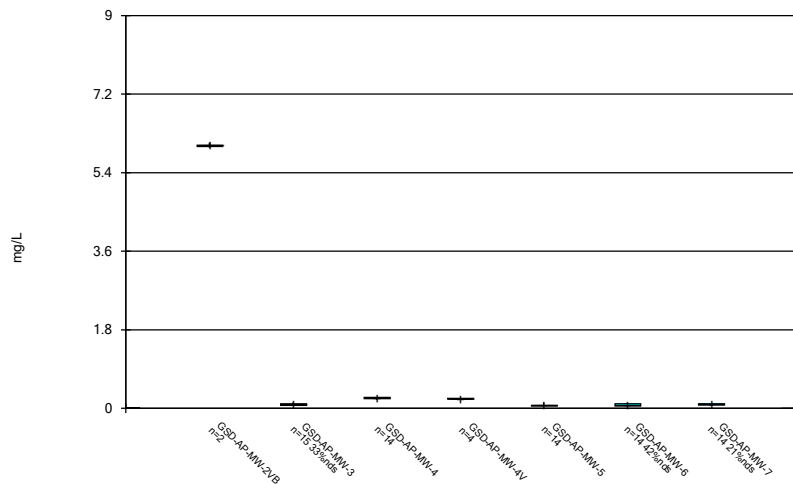
Constituent: Fluoride Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



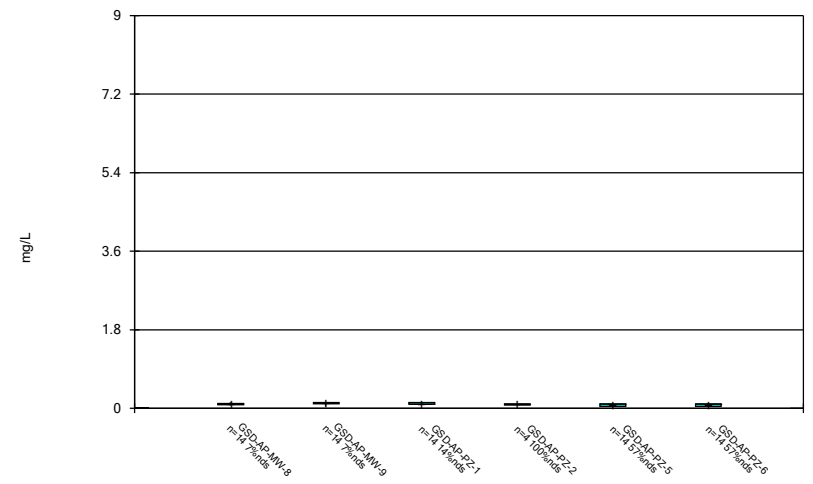
Constituent: Fluoride Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



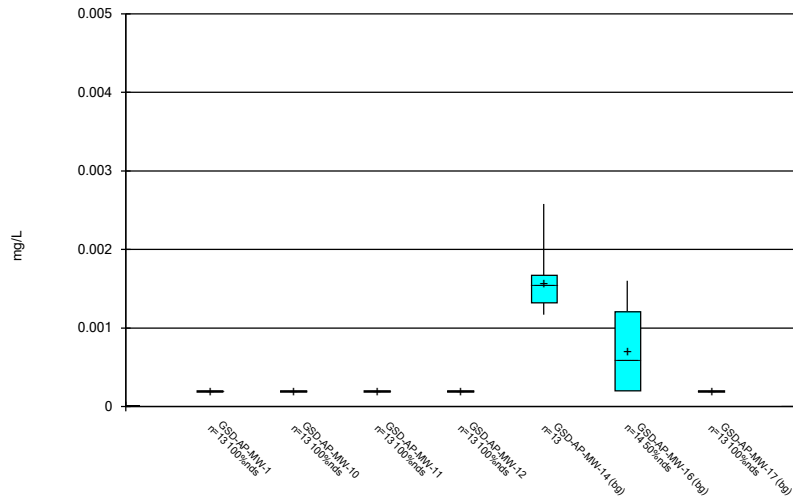
Constituent: Fluoride Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



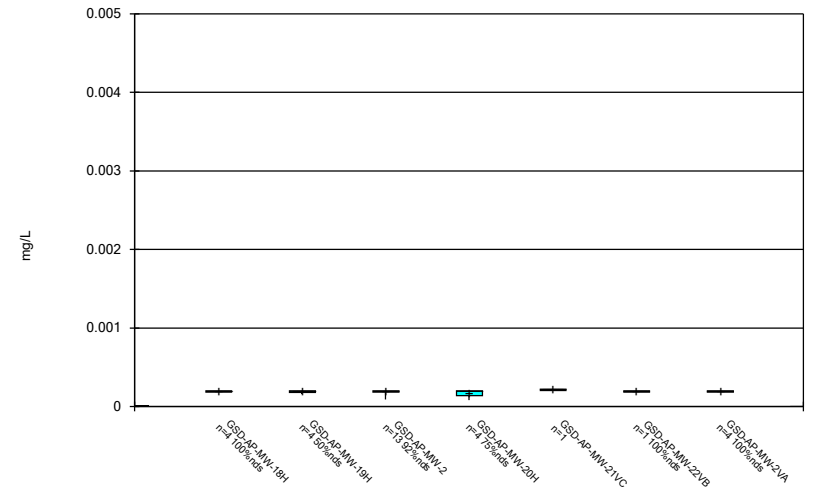
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



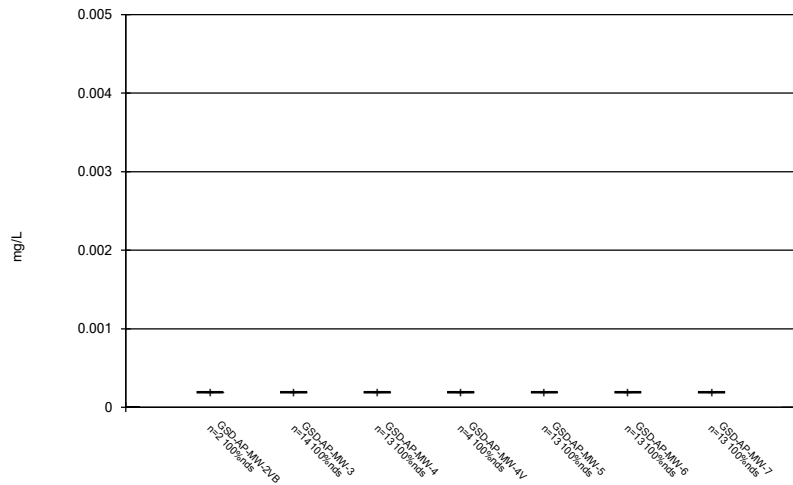
Constituent: Lead Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



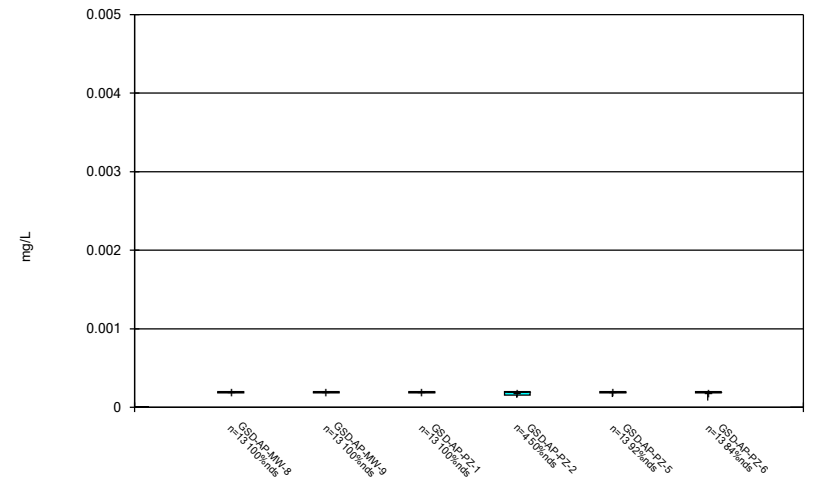
Constituent: Lead Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



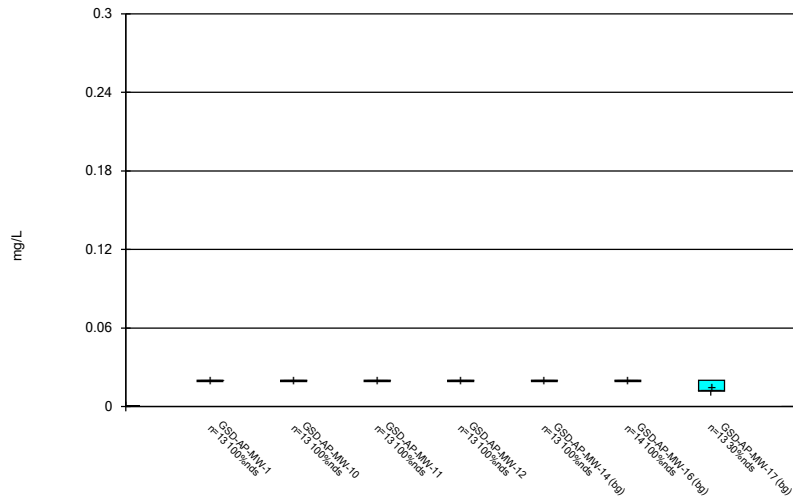
Constituent: Lead Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



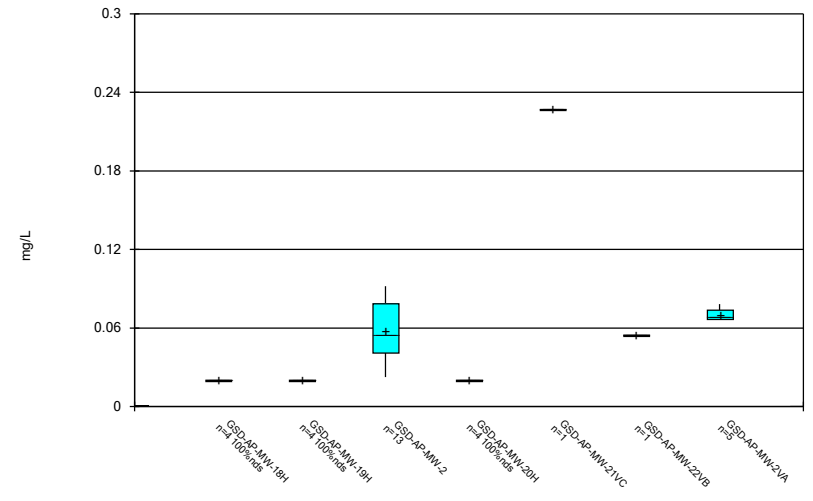
Constituent: Lead Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



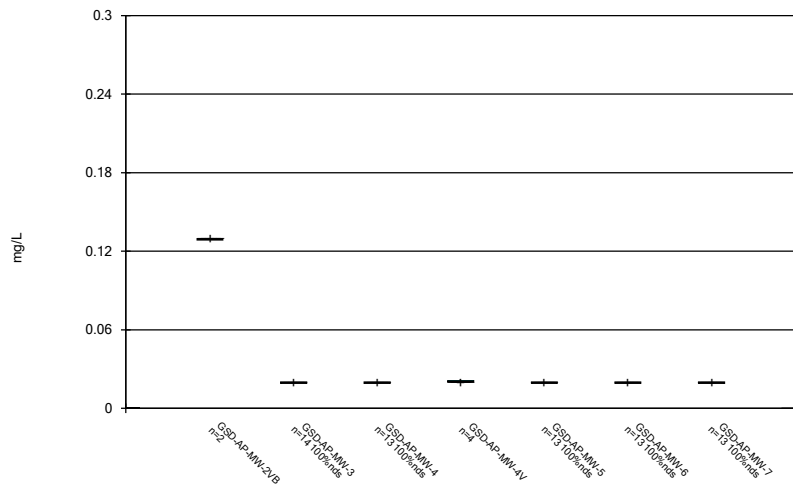
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



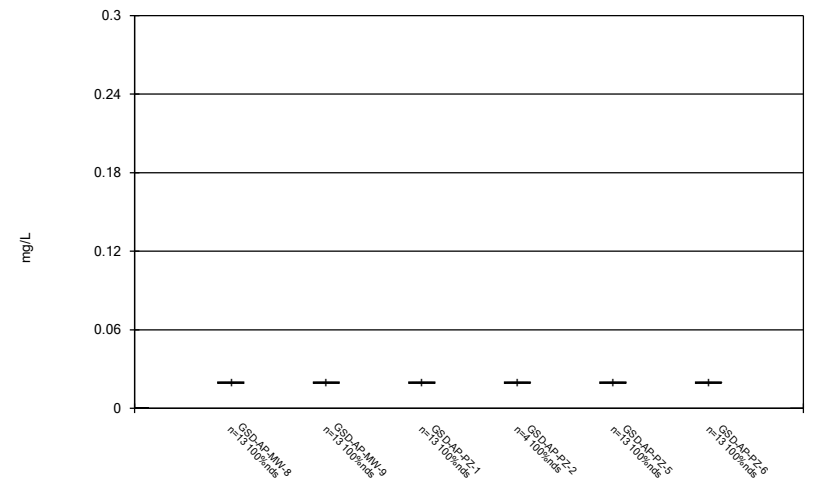
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



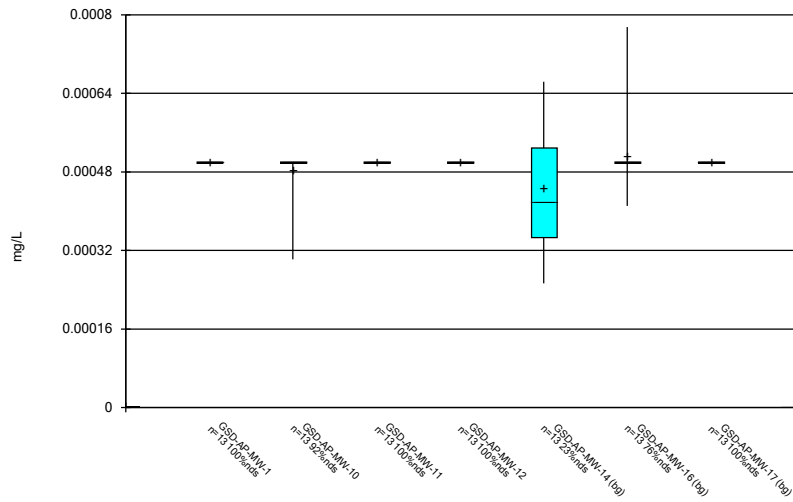
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



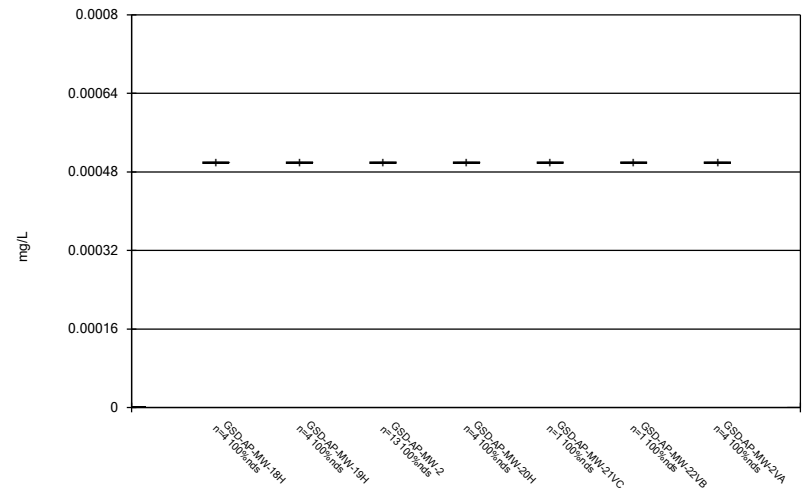
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



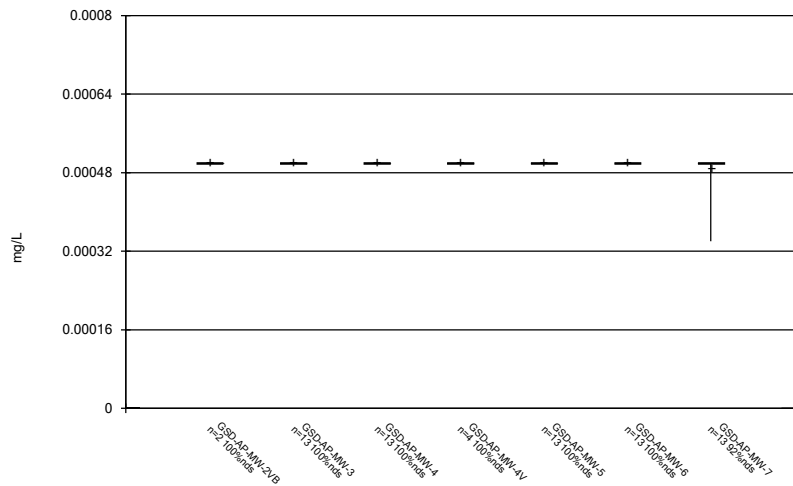
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



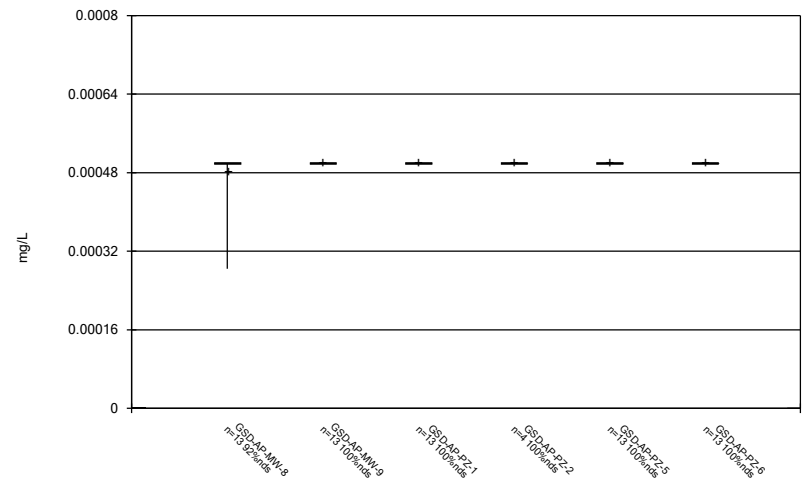
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



Constituent: Mercury Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

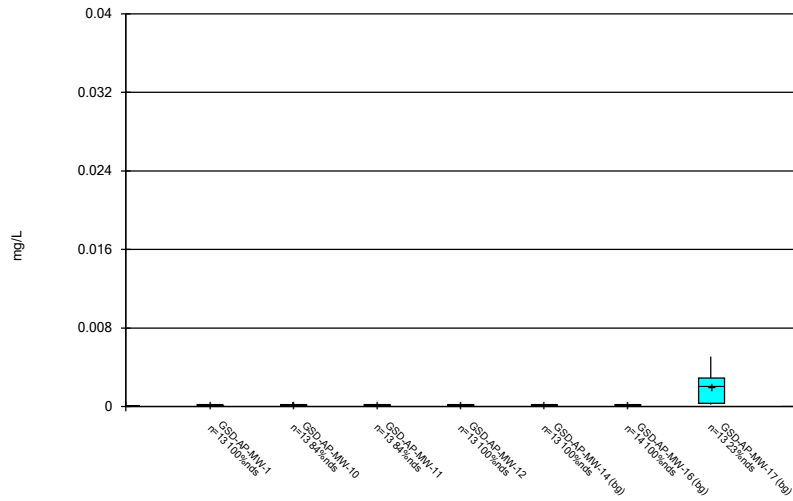
### Box & Whiskers Plot



Constituent: Mercury Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

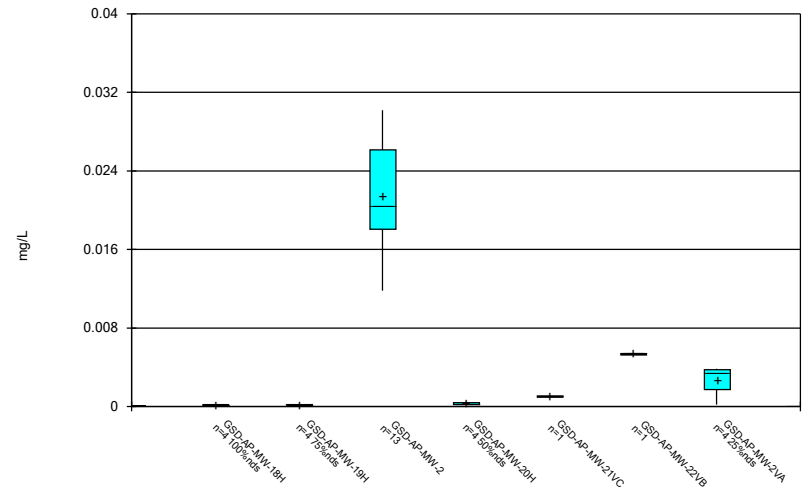


### Box & Whiskers Plot



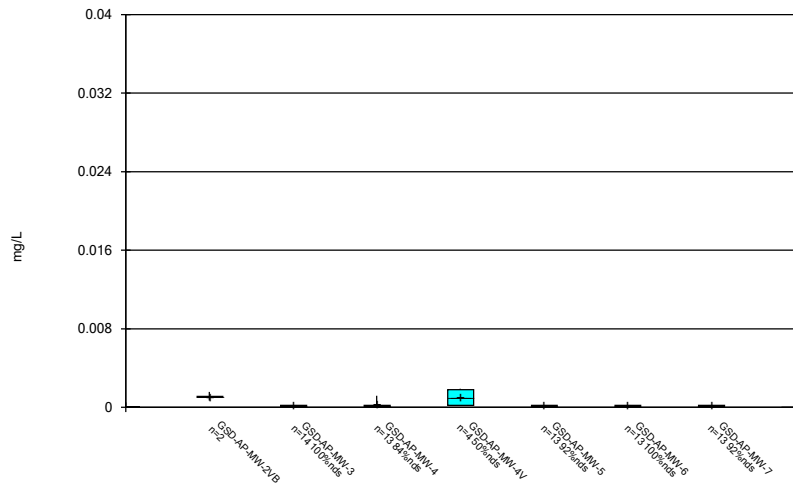
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



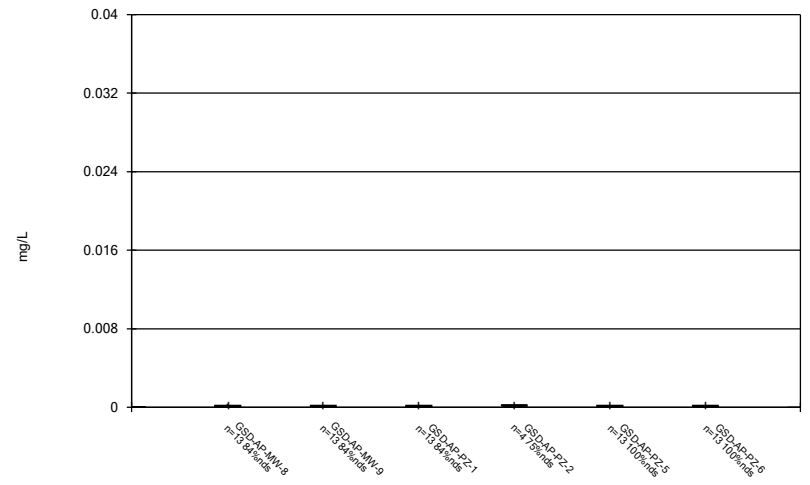
Constituent: Molybdenum Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



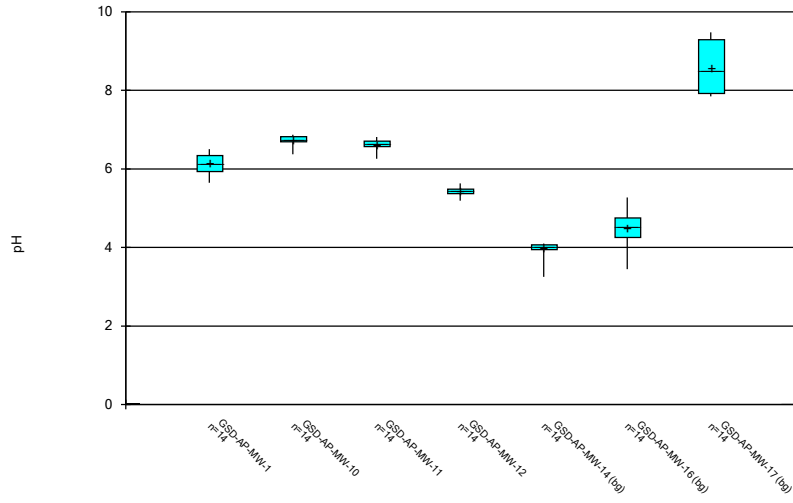
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



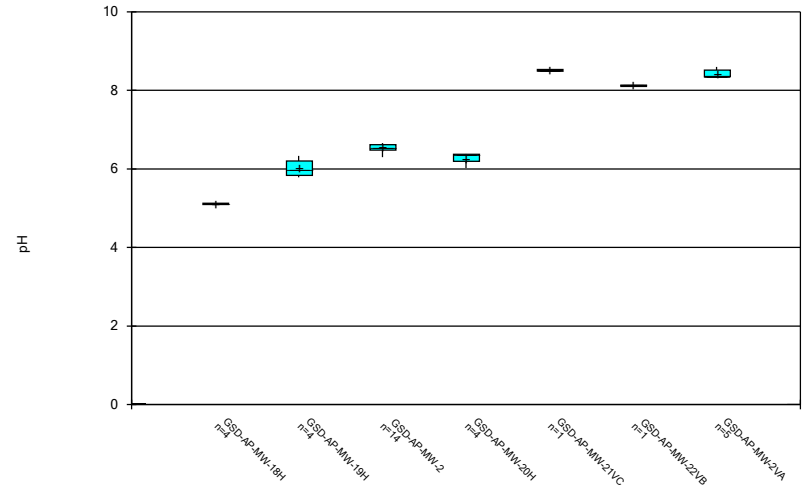
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



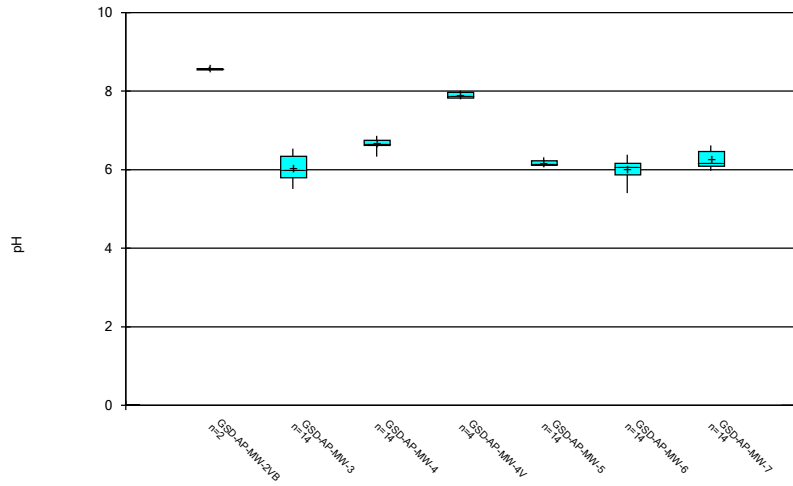
Constituent: pH Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



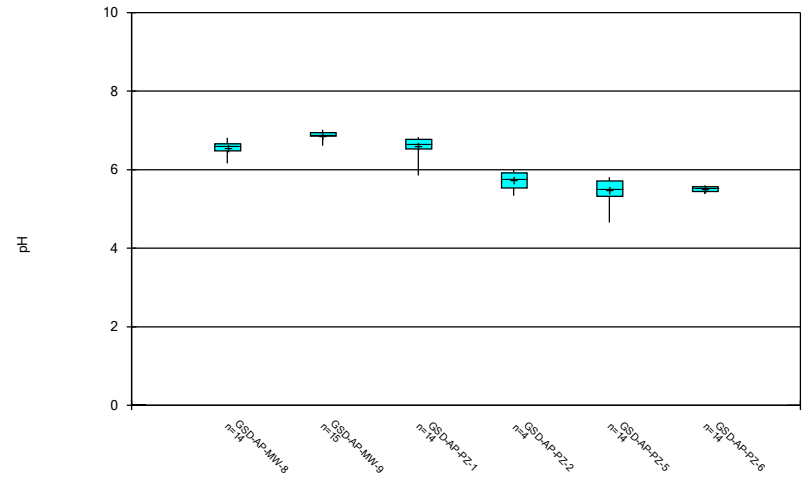
Constituent: pH Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



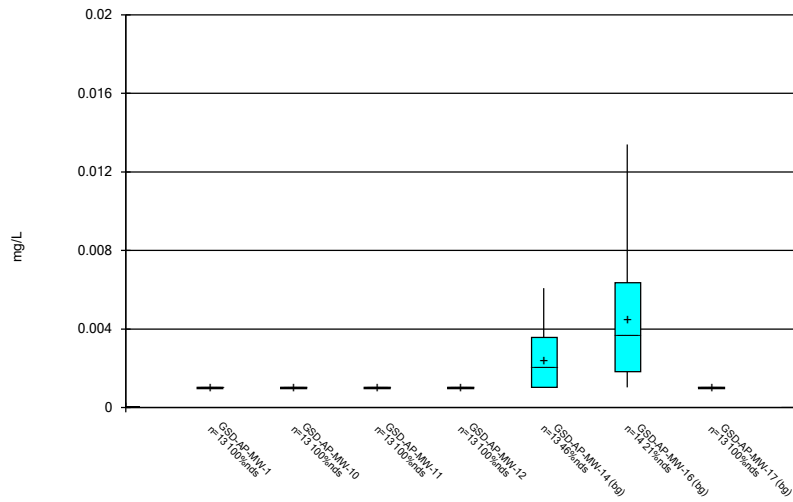
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



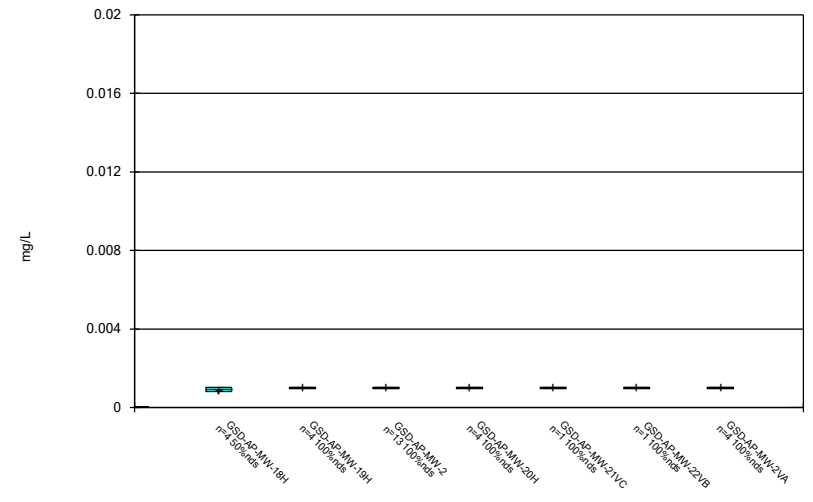
Constituent: pH Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



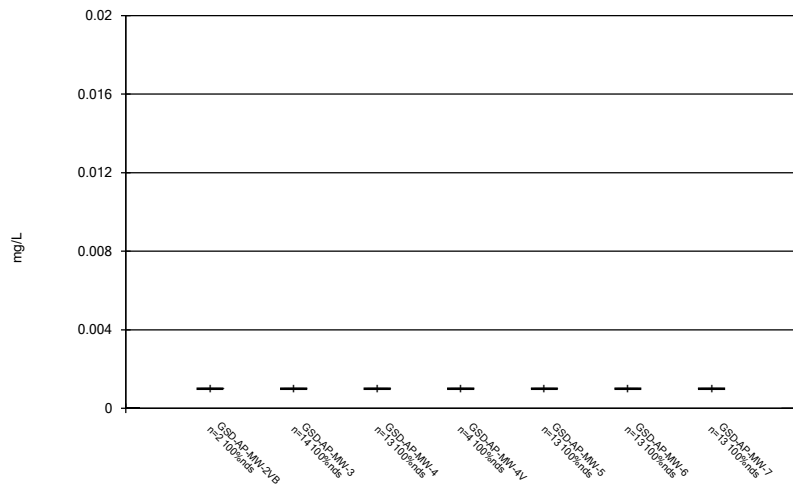
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



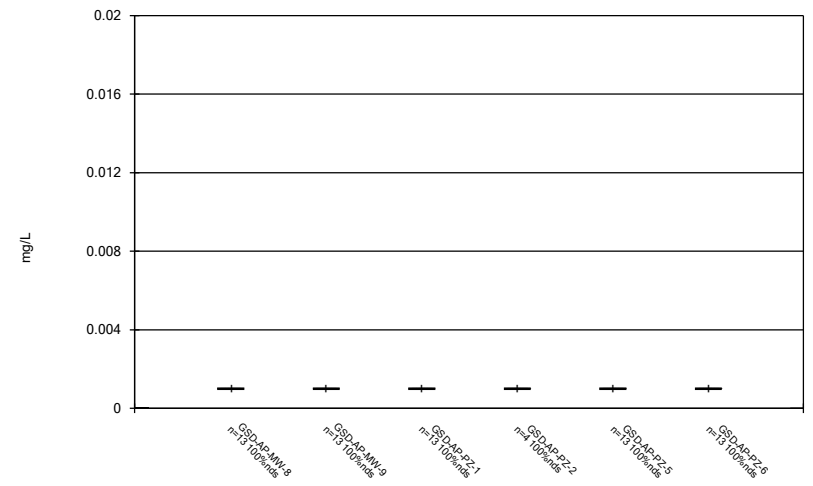
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



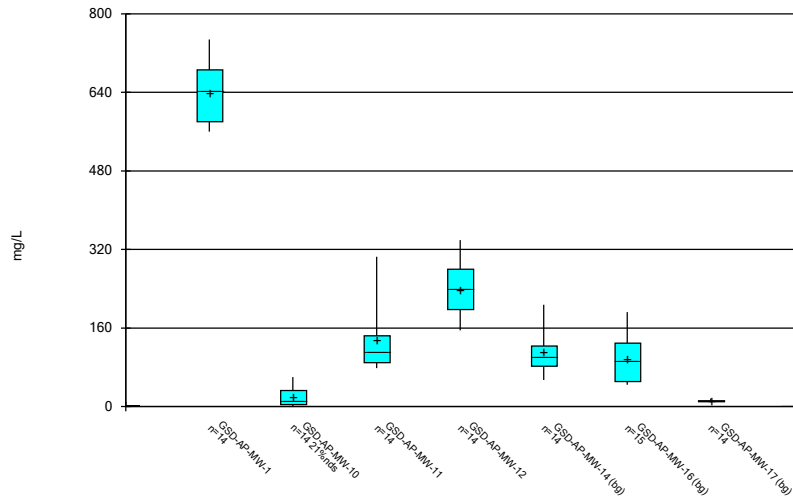
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



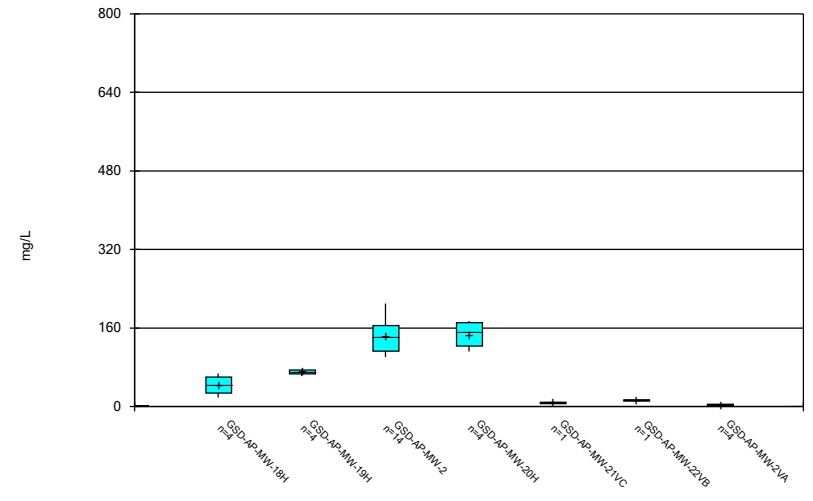
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



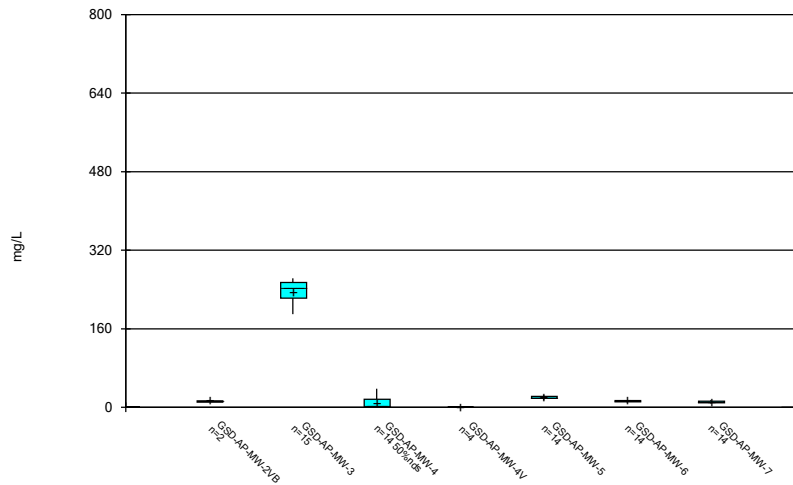
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



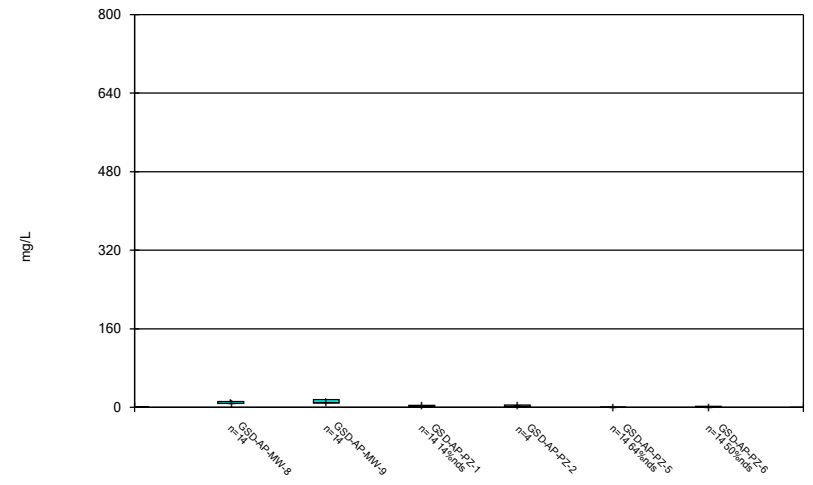
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



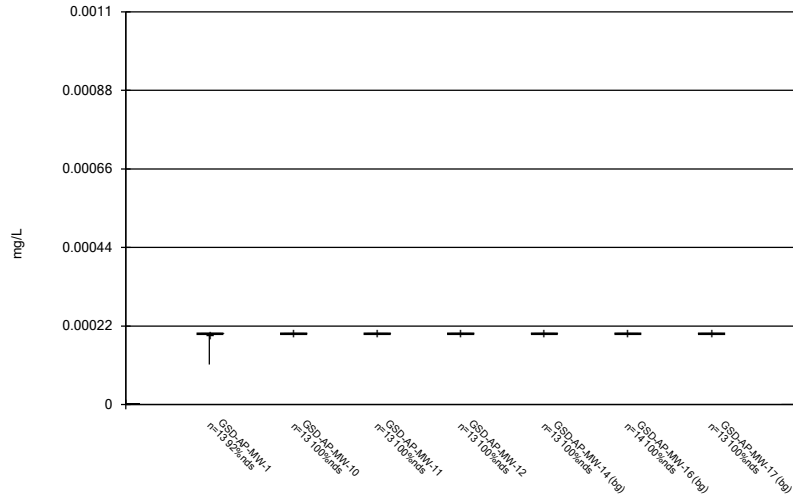
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



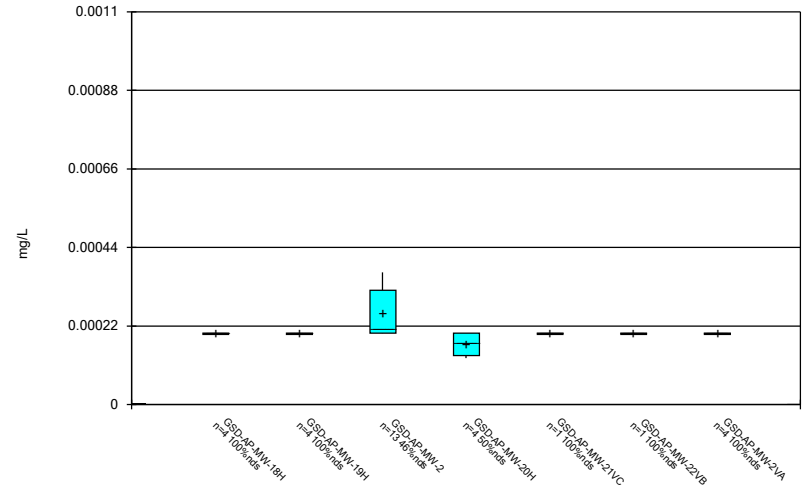
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



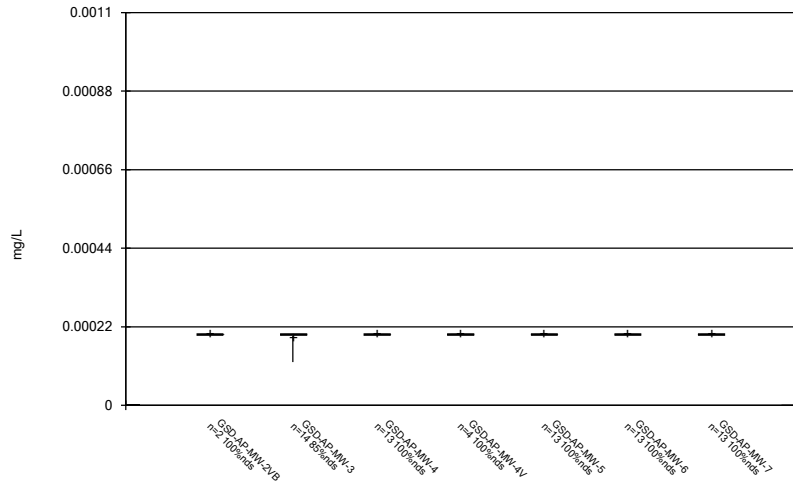
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



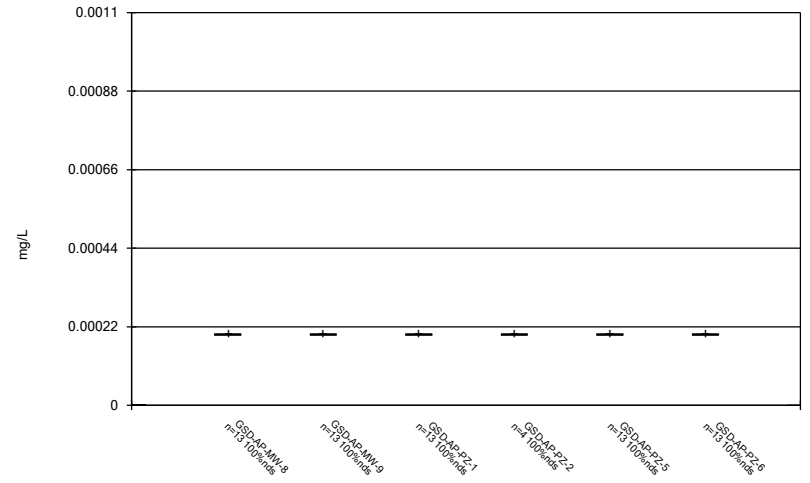
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



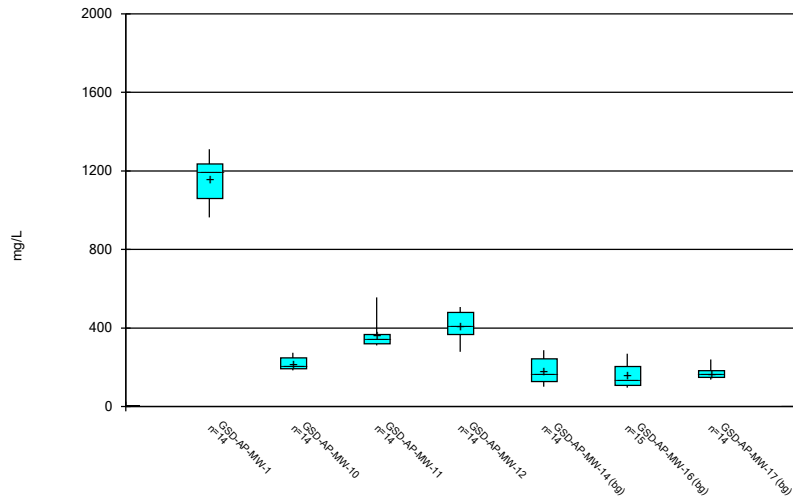
Constituent: Thallium Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



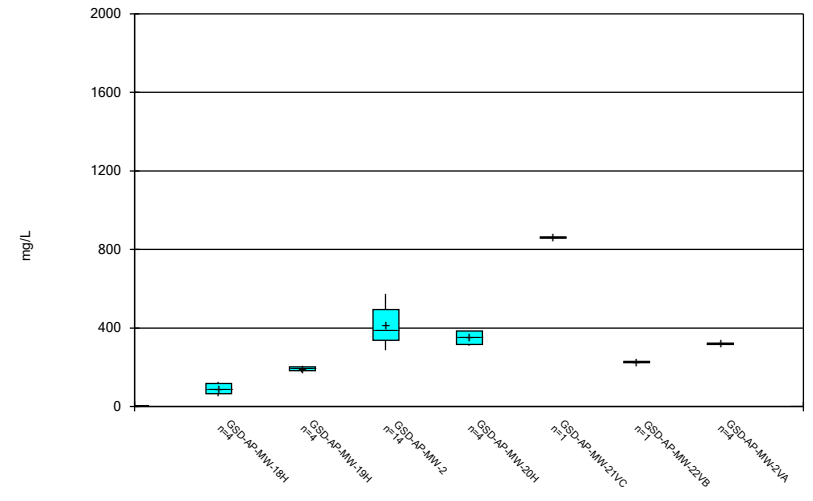
Constituent: Thallium Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



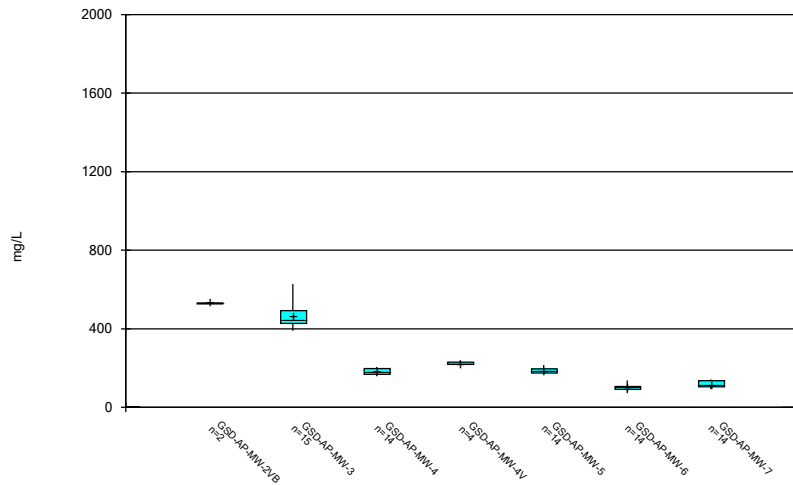
Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



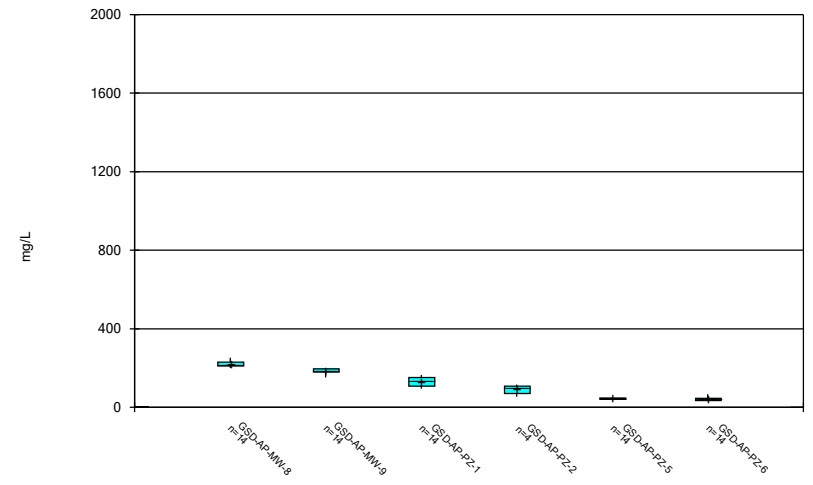
Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/13/2022 1:53 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

FIGURE C.

# Outlier Summary

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/11/2022, 1:50 PM

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GSD-AP-MW-8 Combined Radium 226 + 228 (pCi/L)

12/7/2017

7.45 (o)



FIGURE D.

# Appendix III Welch's t-test/Mann-Whitney - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 7/16/2021, 2:09 PM

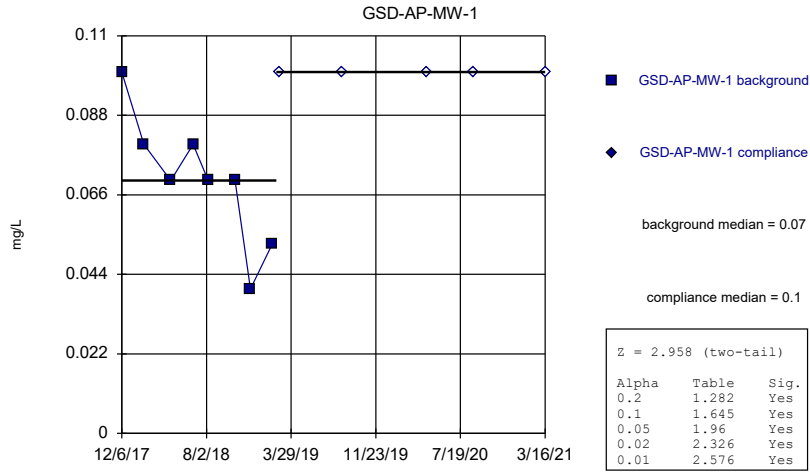
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Fluoride (mg/L)	GSD-AP-MW-1	2.958	Yes	Mann-W
pH (pH)	GSD-AP-MW-1	-2.858	Yes	Mann-W
pH (pH)	GSD-AP-MW-11	-2.642	Yes	Mann-W
pH (pH)	GSD-AP-MW-3	-2.639	Yes	Mann-W
pH (pH)	GSD-AP-MW-7	-2.855	Yes	Mann-W
pH (pH)	GSD-AP-MW-8	-3.001	Yes	Mann-W
pH (pH)	GSD-AP-PZ-5	-2.708	Yes	Mann-W

# Appendix III Welch's t-test/Mann-Whitney - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 7/16/2021, 2:09 PM

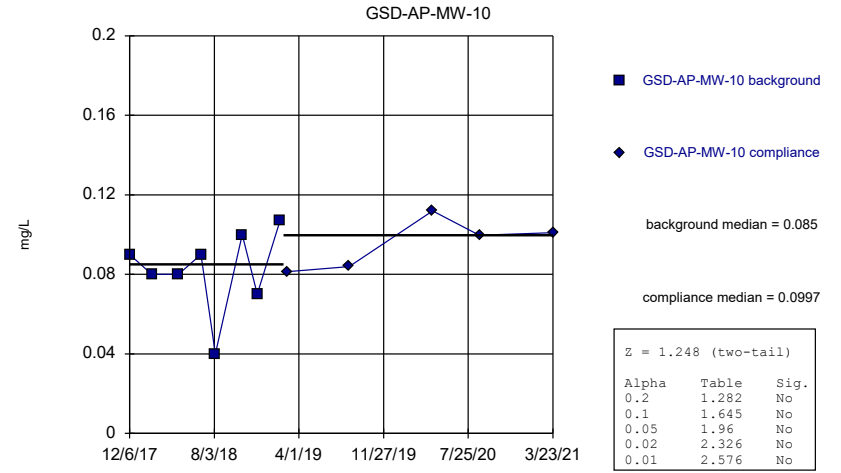
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>2.958</b>	<b>Yes</b>	<b>Mann-W</b>
Fluoride (mg/L)	GSD-AP-MW-10	1.248	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-11	2.317	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-12	0.6325	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-2.005	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	-1.313	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-1.84	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-2	0.07329	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-3	0.3267	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-4	0.0737	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-5	0.6633	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-6	2.495	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-7	0.2217	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-8	-1.982	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-9	1.702	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-1	-1.709	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-5	2.386	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-6	2.451	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-1</b>	<b>-2.858</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-10	0.6615	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-11</b>	<b>-2.642</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-12	-0.3665	No	Mann-W
pH (pH)	GSD-AP-MW-14 (bg)	-2.436	No	Mann-W
pH (pH)	GSD-AP-MW-16 (bg)	-2.052	No	Mann-W
pH (pH)	GSD-AP-MW-17 (bg)	-1.391	No	Mann-W
pH (pH)	GSD-AP-MW-2	-1.466	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-3</b>	<b>-2.639</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-4	0.5872	No	Mann-W
pH (pH)	GSD-AP-MW-5	-0.8894	No	Mann-W
pH (pH)	GSD-AP-MW-6	-2.126	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-MW-7</b>	<b>-2.855</b>	<b>Yes</b>	<b>Mann-W</b>
<b>pH (pH)</b>	<b>GSD-AP-MW-8</b>	<b>-3.001</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-MW-9	-2.014	No	Mann-W
pH (pH)	GSD-AP-PZ-1	-2.569	No	Mann-W
<b>pH (pH)</b>	<b>GSD-AP-PZ-5</b>	<b>-2.708</b>	<b>Yes</b>	<b>Mann-W</b>
pH (pH)	GSD-AP-PZ-6	-1.69	No	Mann-W

Mann-Whitney (Wilcoxon Rank Sum)



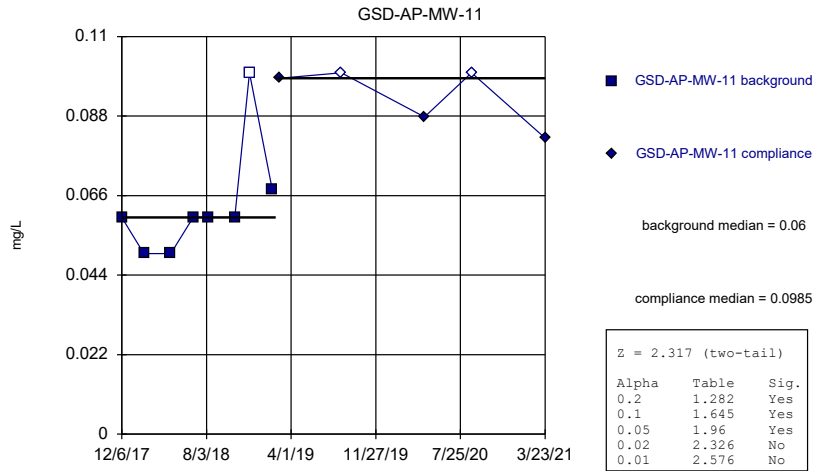
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



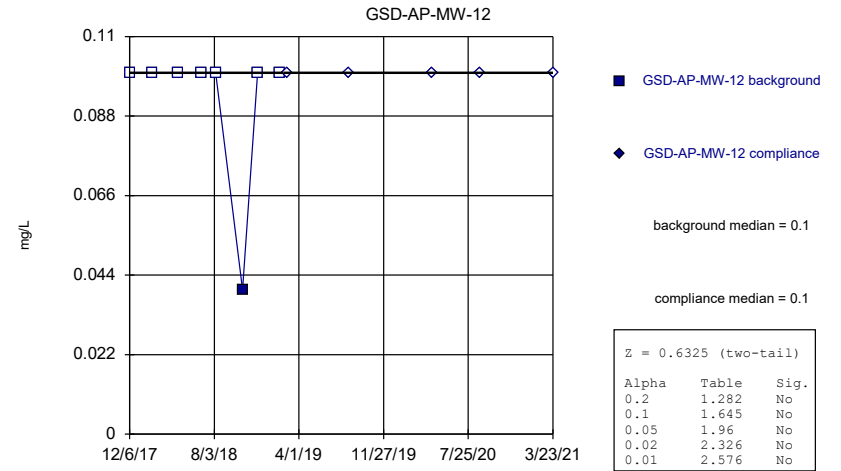
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

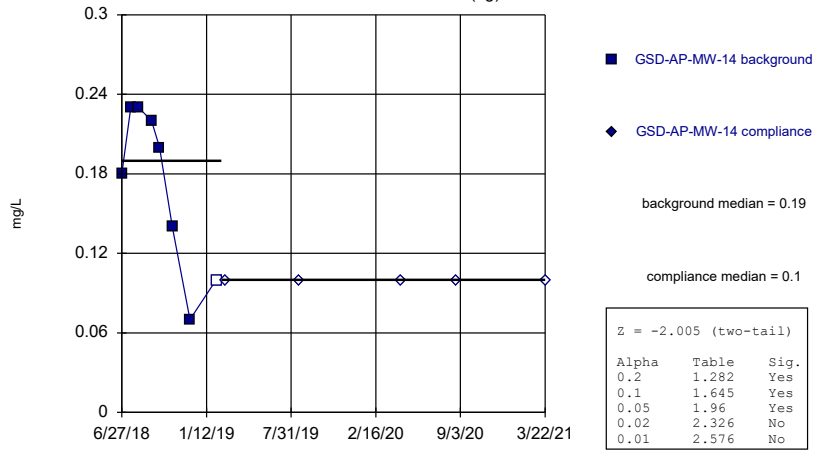
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

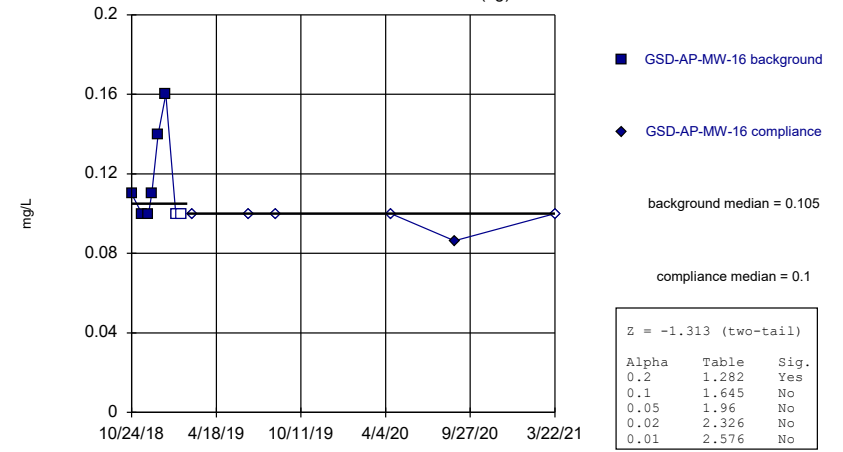
GSD-AP-MW-14 (bg)



Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

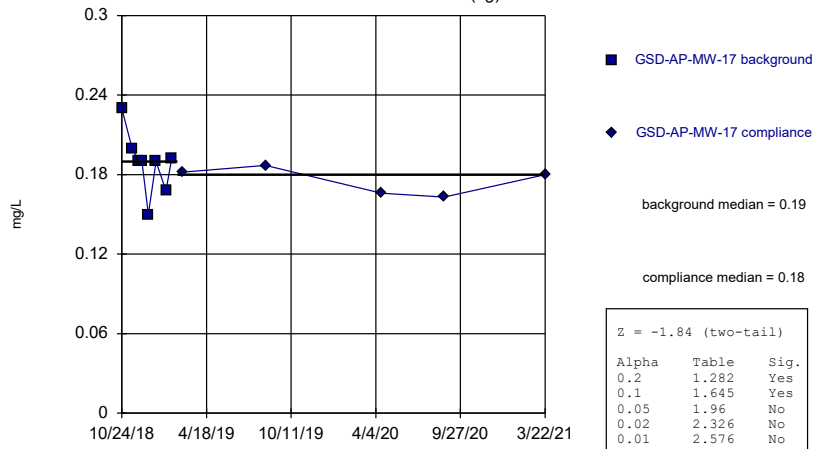
GSD-AP-MW-16 (bg)



Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

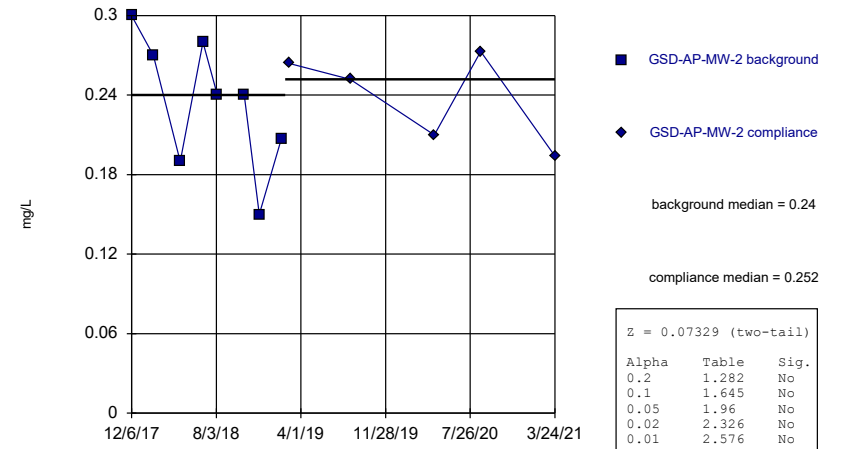
GSD-AP-MW-17 (bg)



Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

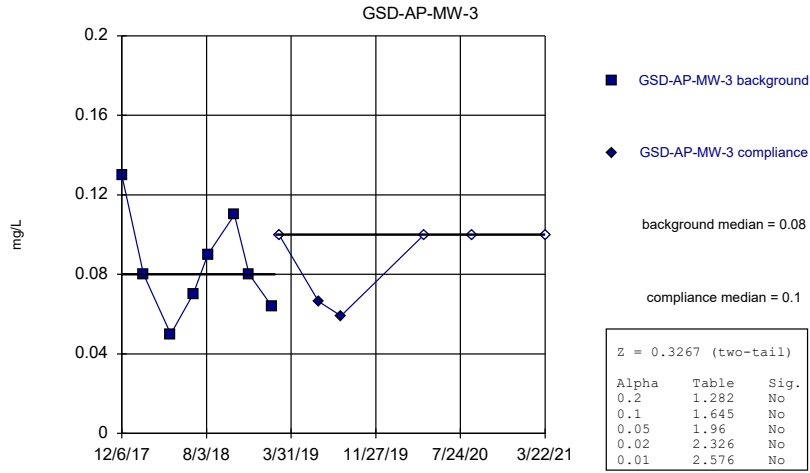
Mann-Whitney (Wilcoxon Rank Sum)

GSD-AP-MW-2



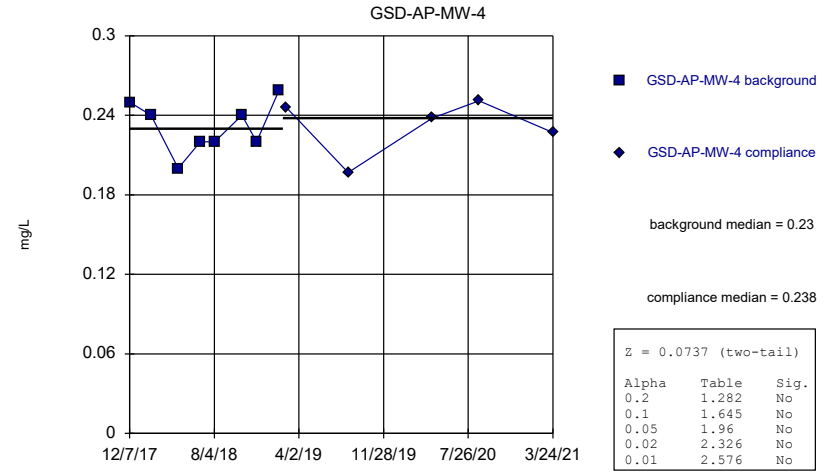
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



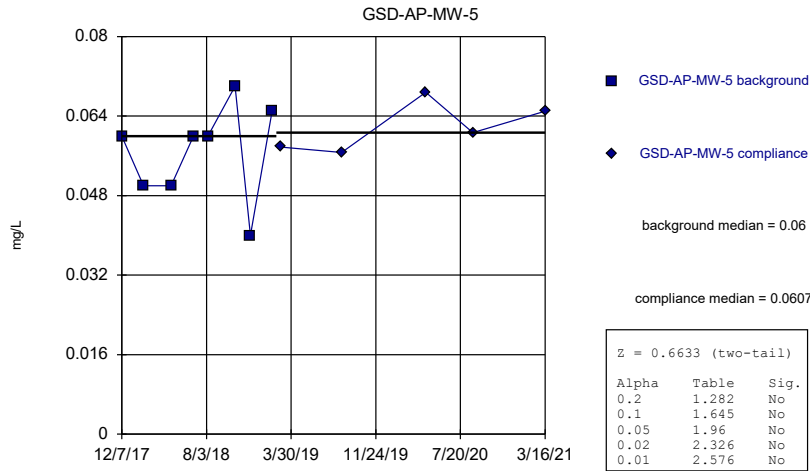
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



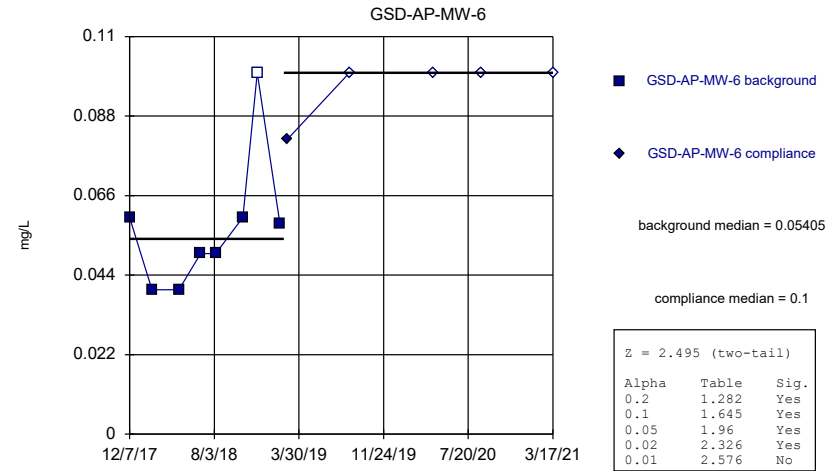
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



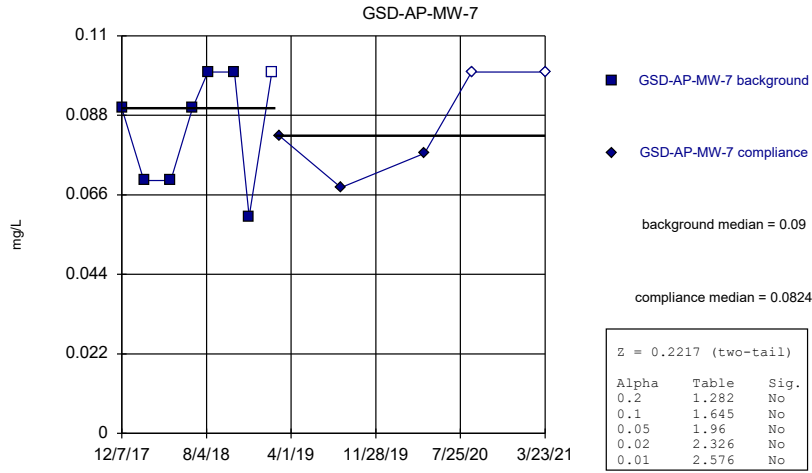
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



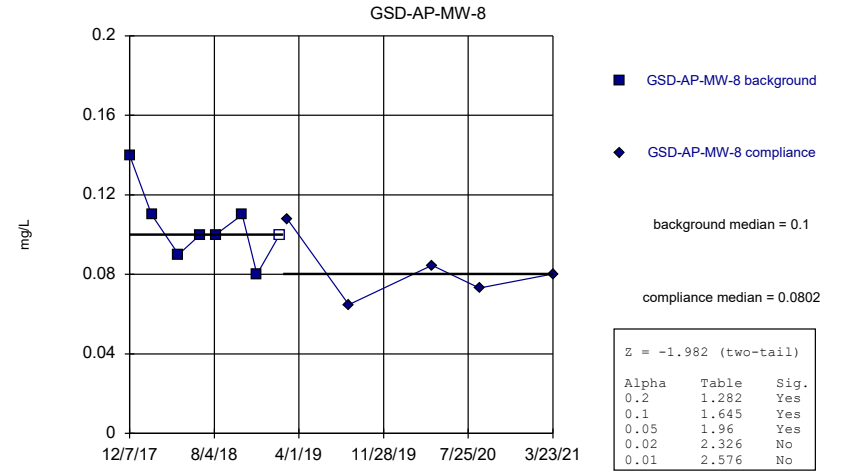
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



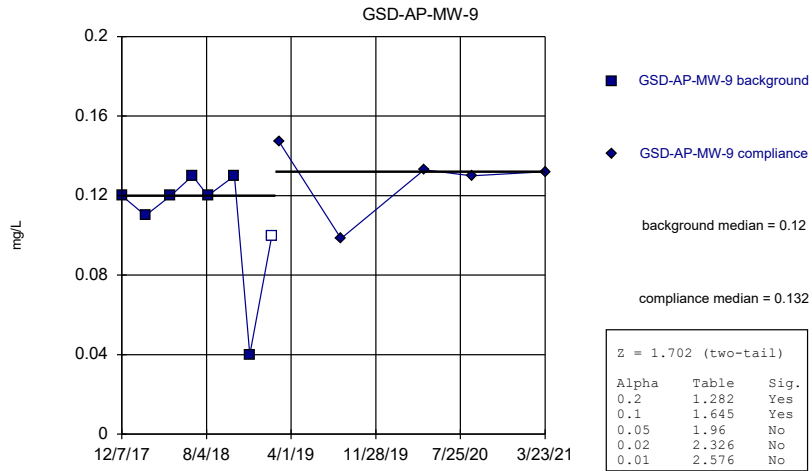
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



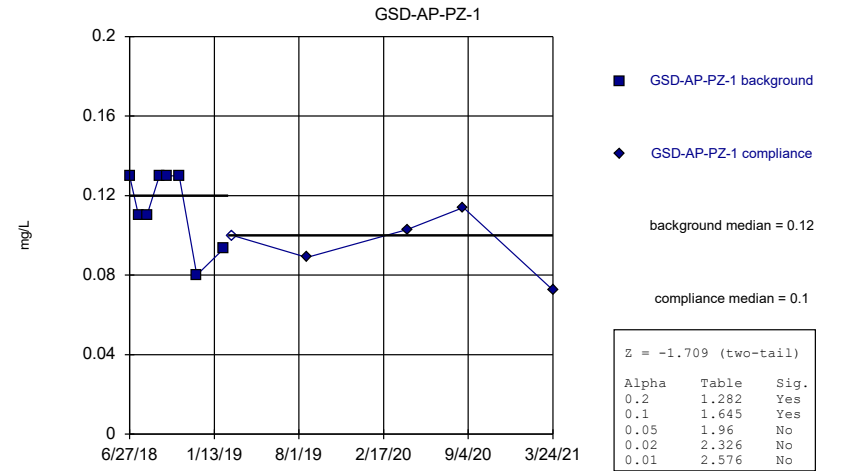
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



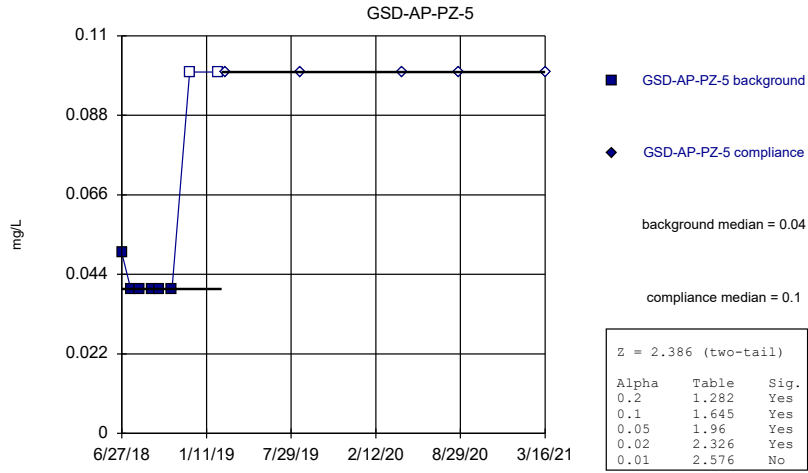
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



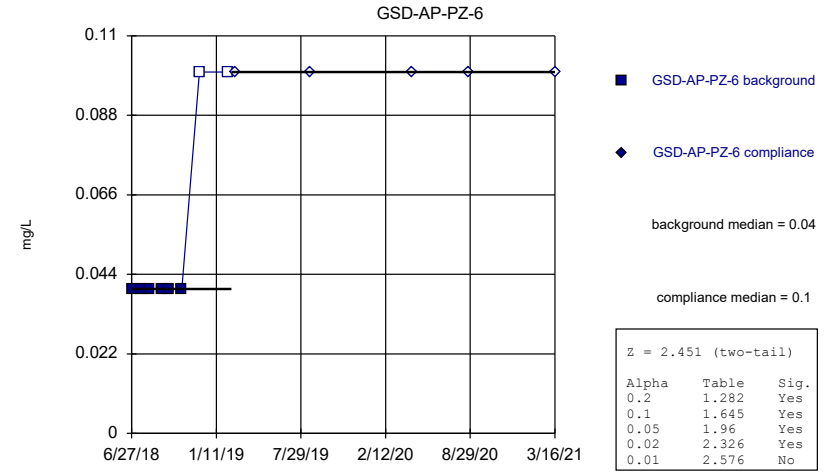
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



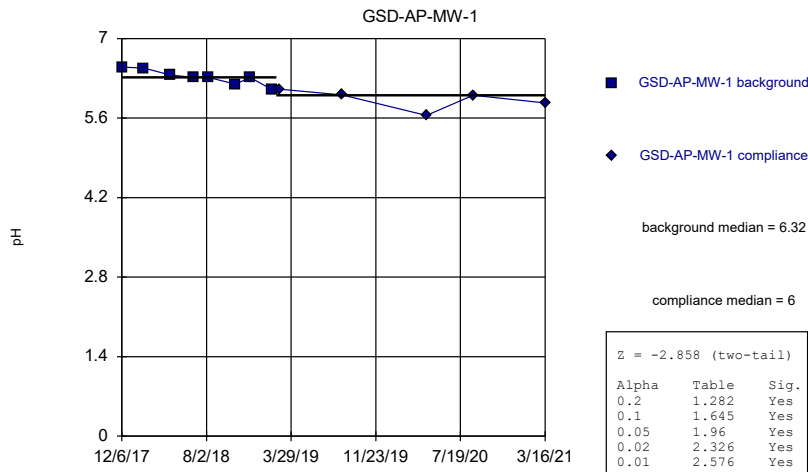
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



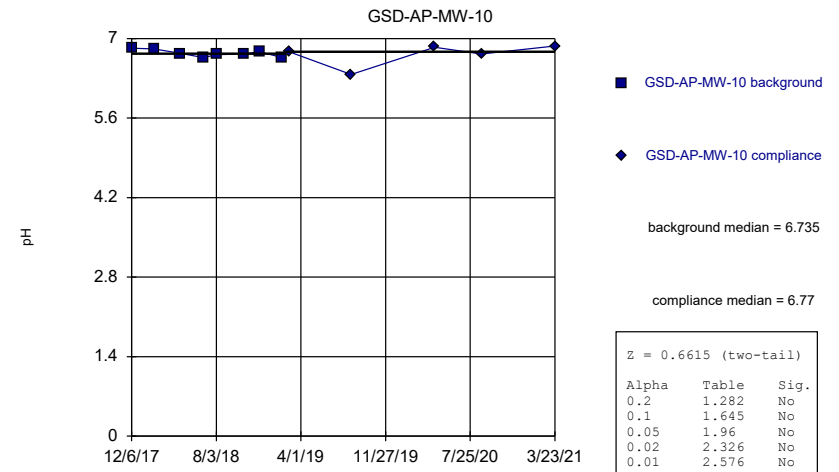
Constituent: Fluoride Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

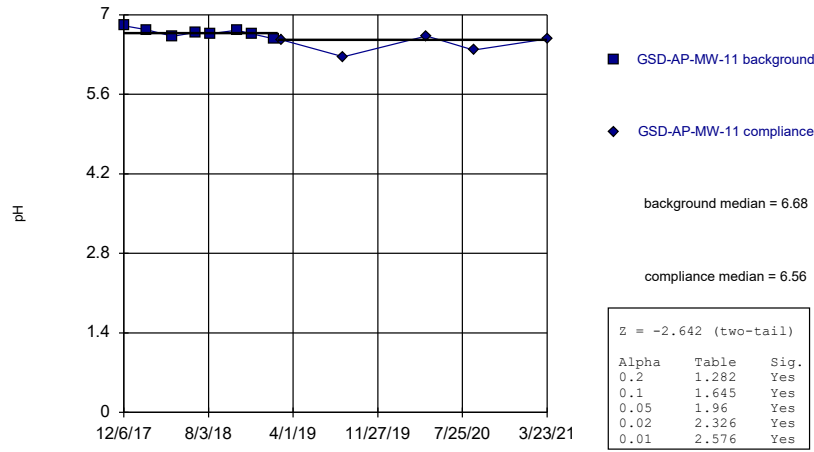


Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



Mann-Whitney (Wilcoxon Rank Sum)

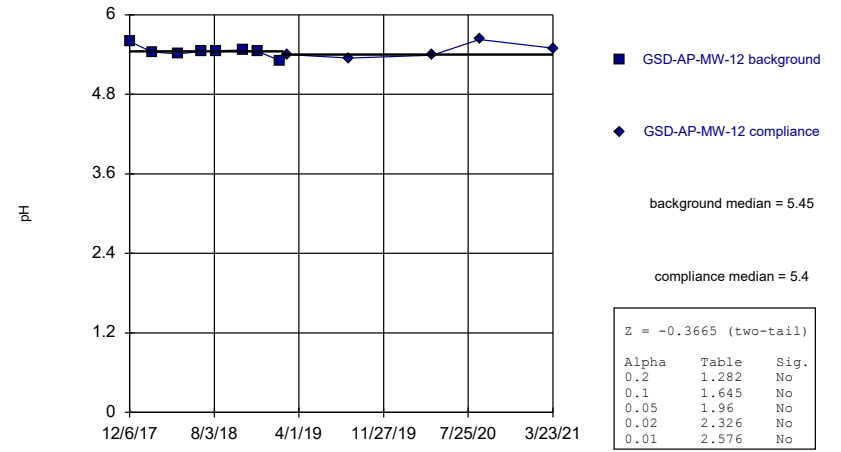
GSD-AP-MW-11



Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

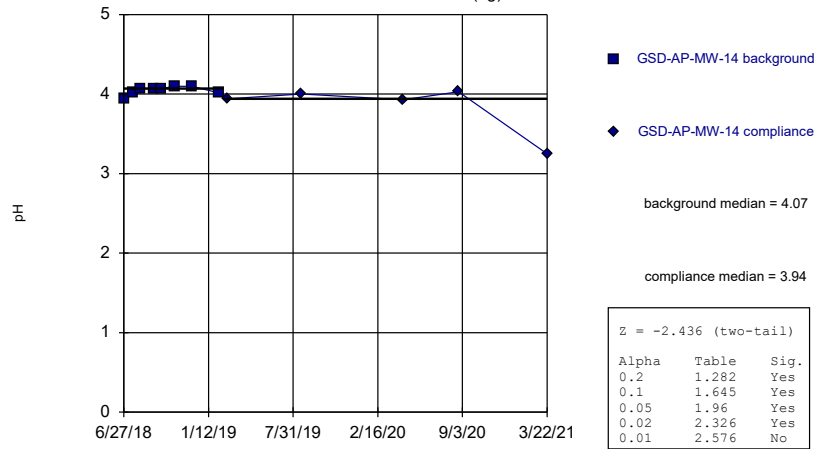
GSD-AP-MW-12



Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

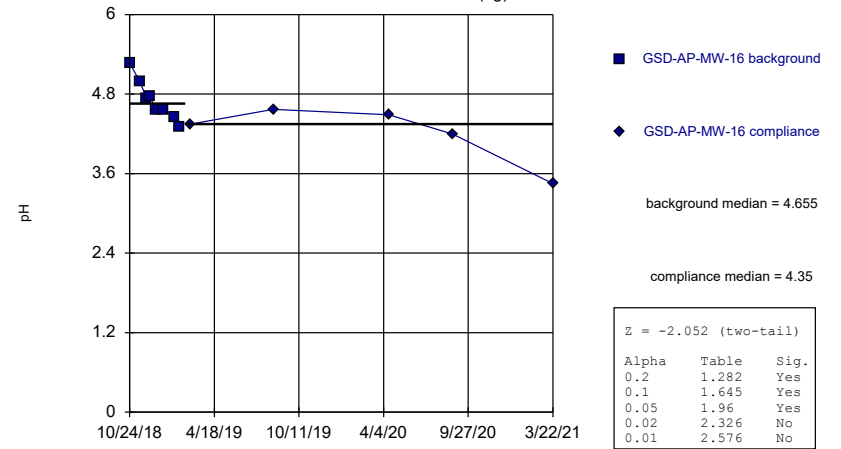
GSD-AP-MW-14 (bg)



Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

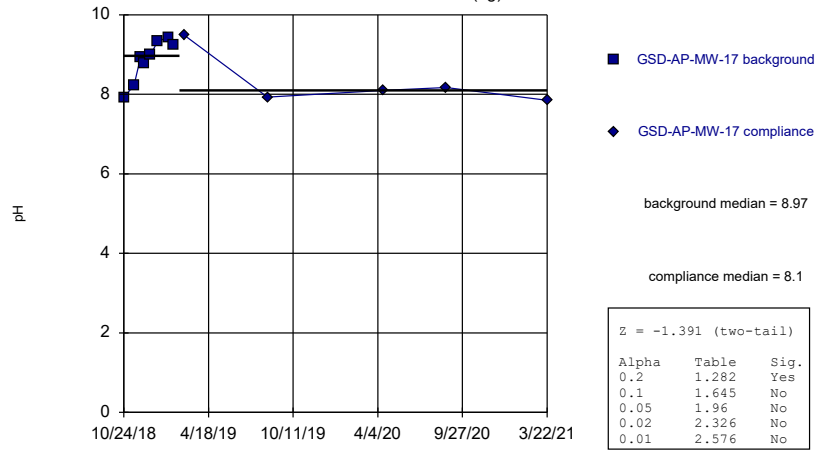
GSD-AP-MW-16 (bg)



Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

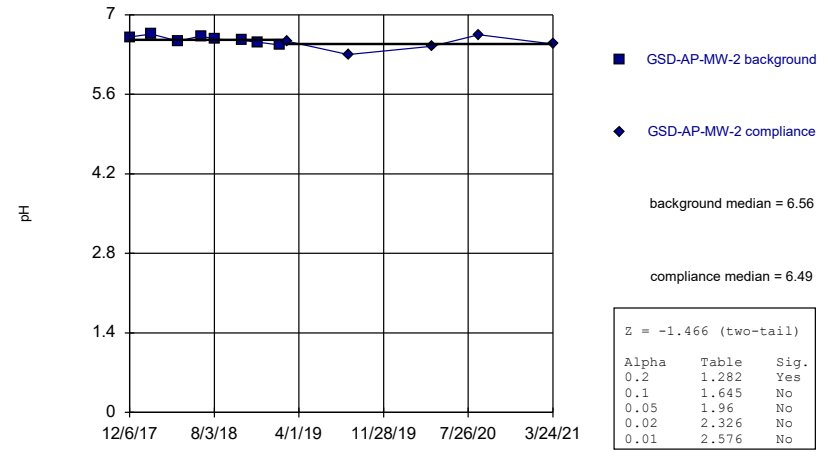
GSD-AP-MW-17 (bg)



Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

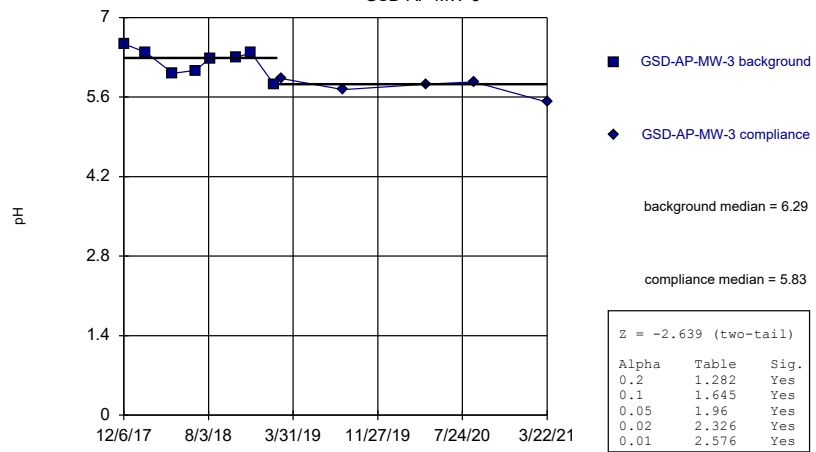
GSD-AP-MW-2



Constituent: pH Analysis Run 7/16/2021 2:06 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

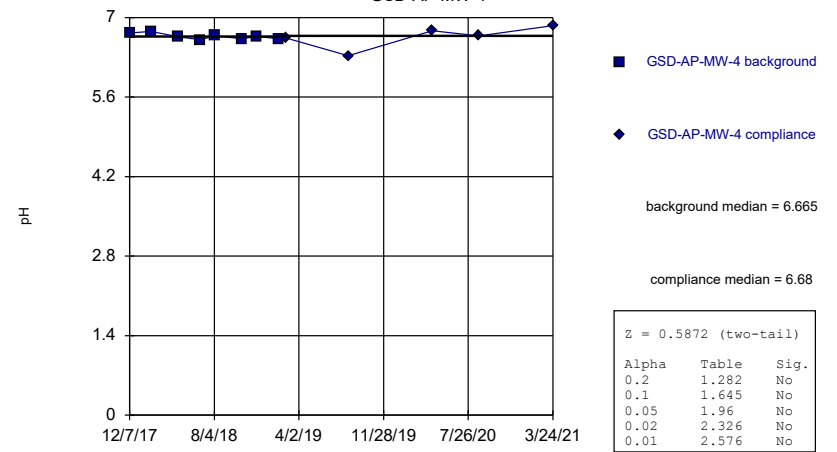
GSD-AP-MW-3



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

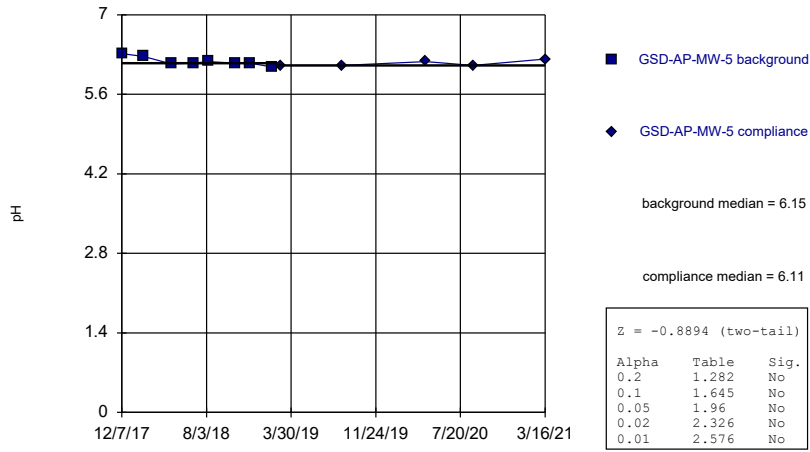
GSD-AP-MW-4



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

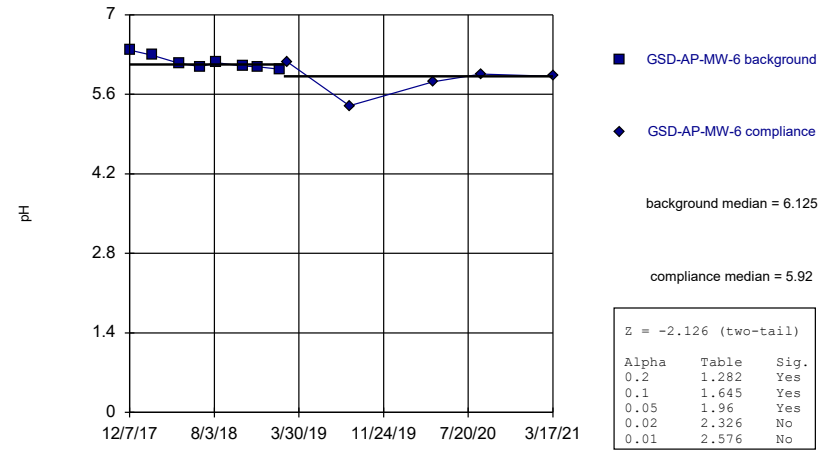
GSD-AP-MW-5



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

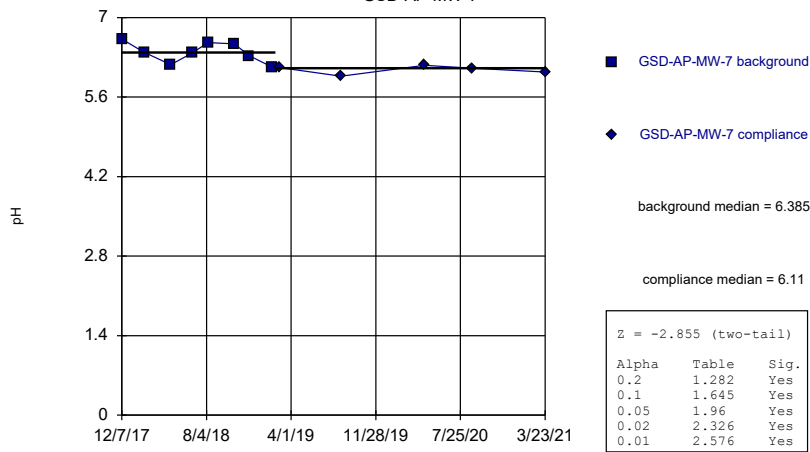
GSD-AP-MW-6



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

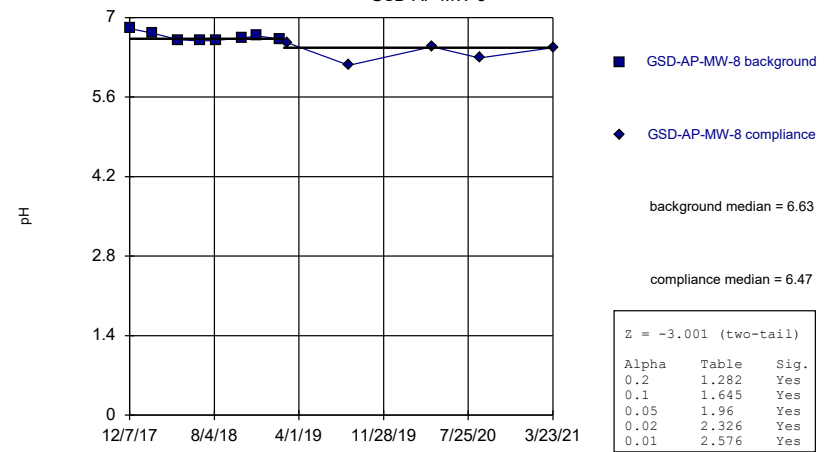
GSD-AP-MW-7



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

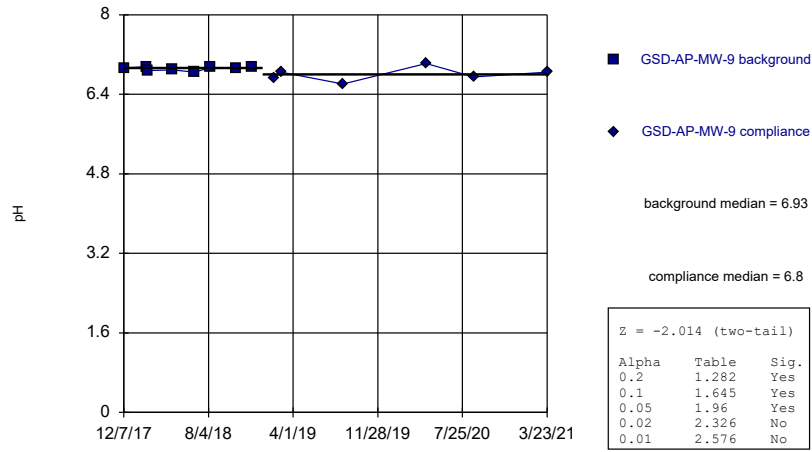
GSD-AP-MW-8



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

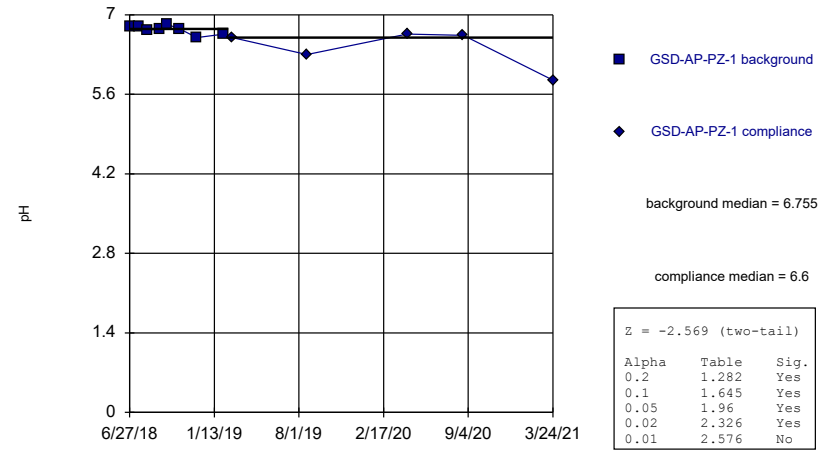
GSD-AP-MW-9



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

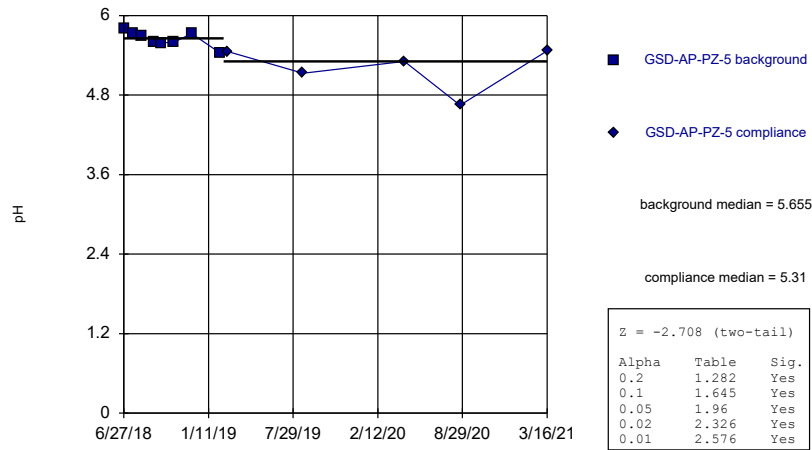
GSD-AP-PZ-1



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

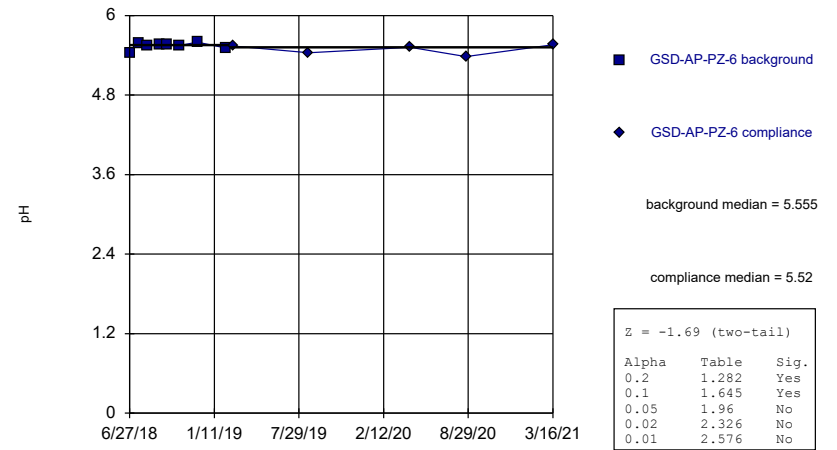
GSD-AP-PZ-5



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

GSD-AP-PZ-6



Constituent: pH Analysis Run 7/16/2021 2:07 PM View: Appendix III - Intrawell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
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		<0.1
8/21/2019		<0.1
4/15/2020		<0.1
8/25/2020		<0.1
3/16/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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	<0.1	
2/6/2019	0.0678 (J)	
2/27/2019		0.0985 (J)
8/22/2019		<0.1
4/14/2020		0.0878 (J)
8/26/2020		<0.1
3/23/2021		0.0819 (J)

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-12	GSD-AP-MW-12
12/6/2017	<0.1	
2/8/2018	<0.1	
4/24/2018	<0.1	
6/27/2018	<0.1	
8/8/2018	<0.1	
10/23/2018	0.04 (J)	
12/5/2018	<0.1	
2/6/2019	<0.1	
2/27/2019		<0.1
8/22/2019		<0.1
4/14/2020		<0.1
8/26/2020		<0.1
3/23/2021		<0.1



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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	<0.1	
2/28/2019		<0.1
8/20/2019		<0.1
4/16/2020		<0.1
8/25/2020		<0.1
3/22/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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	<0.1	
2/5/2019	<0.1	
2/28/2019		<0.1
6/24/2019		<0.1 (D)
8/19/2019		<0.1
4/15/2020		<0.1
8/25/2020		0.0863 (J)
3/22/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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		<0.1
6/18/2019		0.0664 (J)
8/20/2019		0.0592 (J)
4/13/2020		<0.1
8/26/2020		<0.1
3/22/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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)

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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	<0.1	
2/5/2019	0.0581 (J)	
2/26/2019		0.0816 (J)
8/20/2019		<0.1
4/13/2020		<0.1
8/26/2020		<0.1
3/17/2021		<0.1



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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)

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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		<0.1
8/20/2019		0.0889 (J)
4/13/2020		0.103
8/24/2020		0.114
3/24/2021		0.0725 (J)

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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	<0.1	
2/7/2019	<0.1	
2/25/2019		<0.1
8/21/2019		<0.1
4/15/2020		<0.1
8/24/2020		<0.1
3/16/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
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	<0.1	
2/7/2019	<0.1	
2/25/2019		<0.1
8/21/2019		<0.1
4/15/2020		<0.1
8/24/2020		<0.1
3/16/2021		<0.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 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	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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



# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - IntraWell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 7/16/2021 2:09 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	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



FIGURE E.

# Appendix III - Upgradient Well Trend Tests - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 2:29 PM

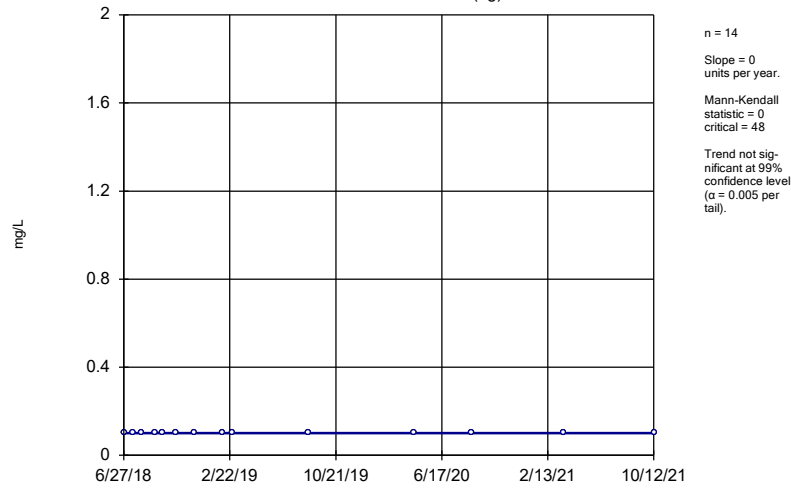
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.412	-67	-48	Yes	14	0	n/a	n/a	0.01	NP

# Appendix III - Upgradient Well Trend Tests - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 2:29 PM

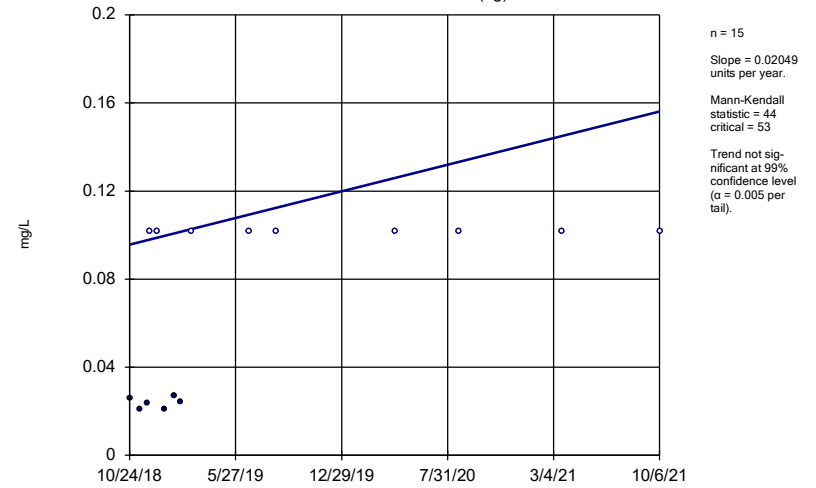
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	48	No	14	100	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0.02049	44	53	No	15	60	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.001687	-35	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-1.044	-16	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-0.5887	-13	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.622	25	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	0.02255	13	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-7	-53	No	15	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.412</b>	<b>-67</b>	<b>-48</b>	<b>Yes</b>	<b>14</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-14 (bg)	-4.795	-10	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	29.67	42	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-1.162	-42	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-11	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	26.27	37	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.097	-18	-48	No	14	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator GSD-AP-MW-14 (bg)



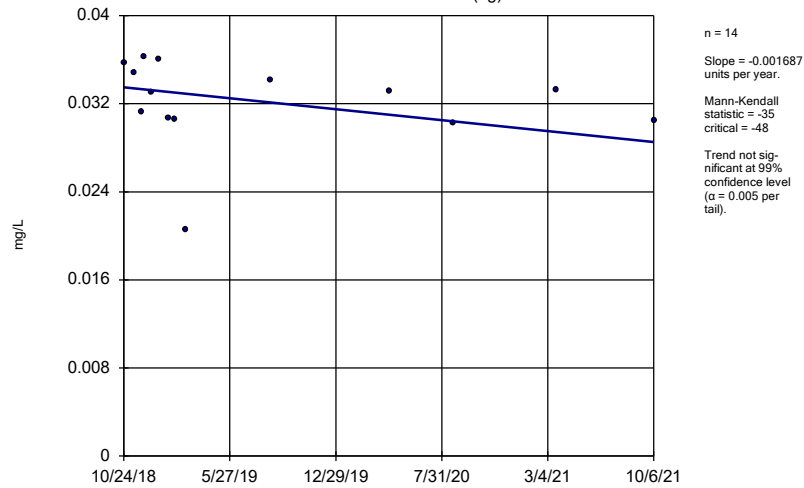
Constituent: Boron Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-16 (bg)



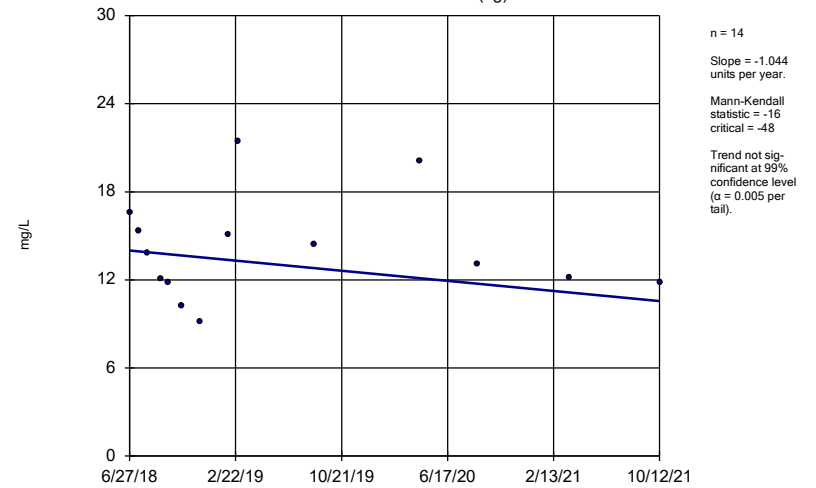
Constituent: Boron Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-17 (bg)



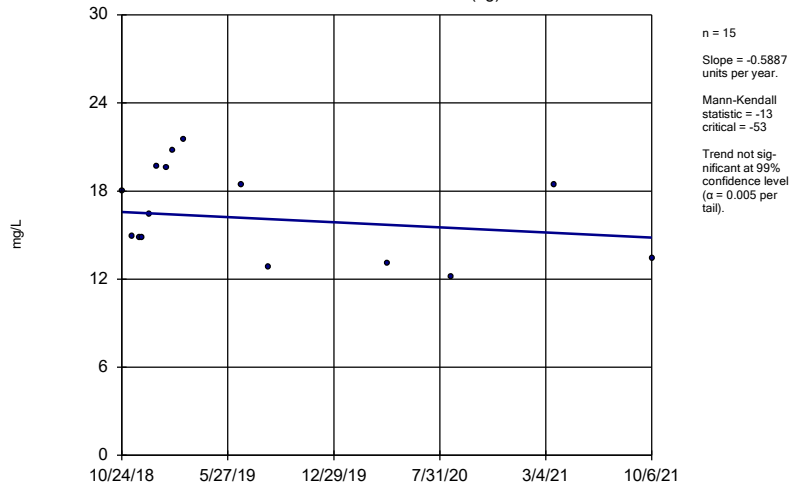
Constituent: Boron Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-14 (bg)



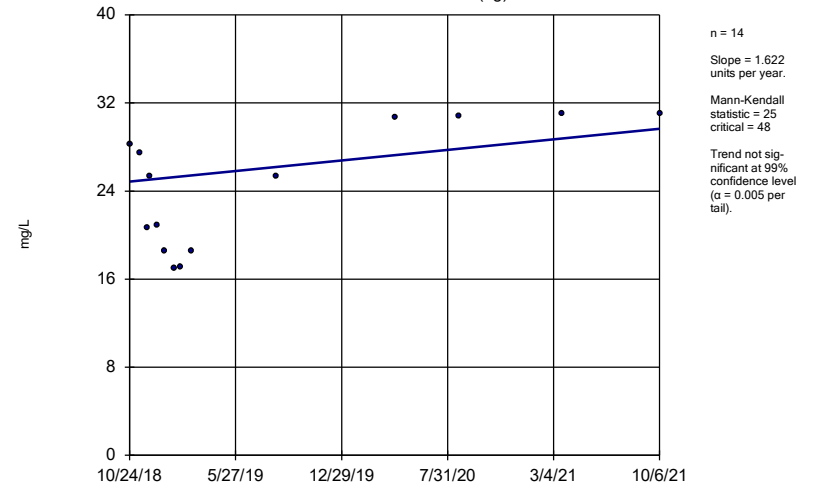
Constituent: Calcium Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-16 (bg)



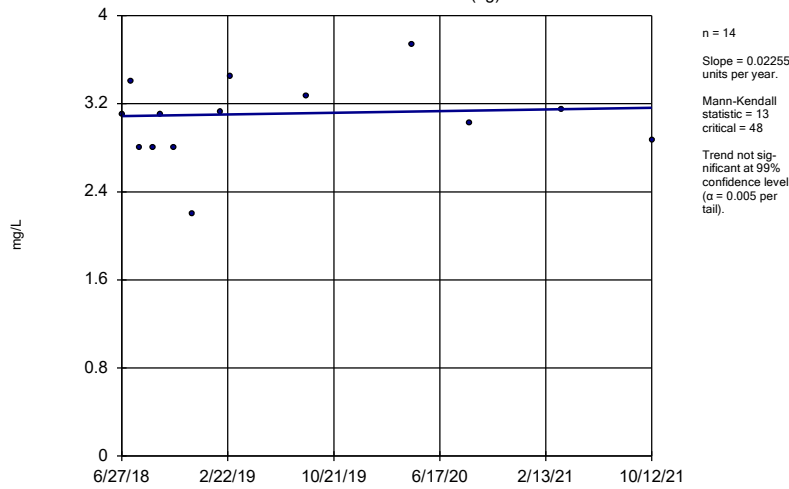
Constituent: Calcium Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-17 (bg)



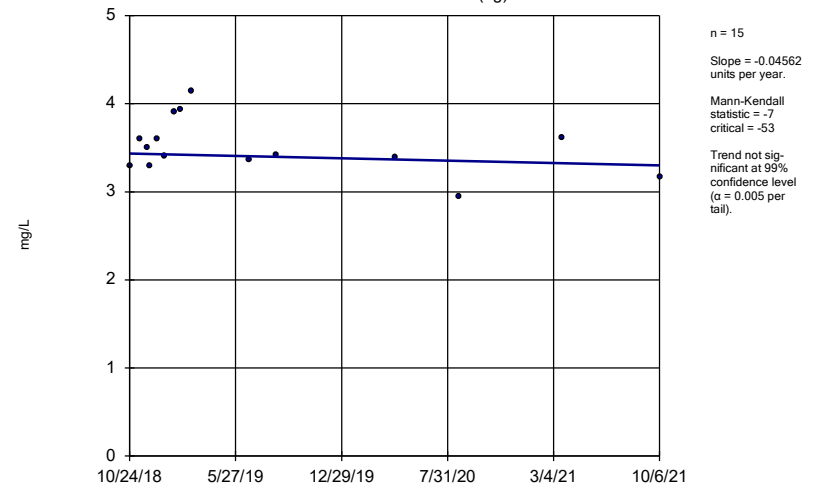
Constituent: Calcium Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-14 (bg)



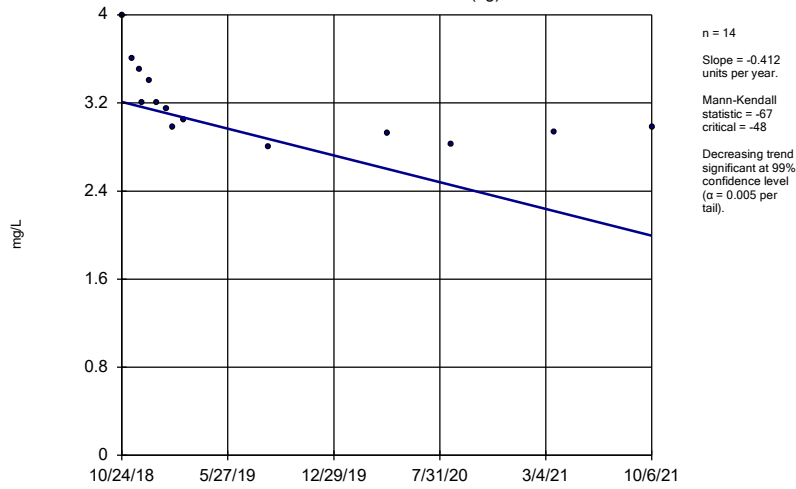
Constituent: Chloride Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-16 (bg)



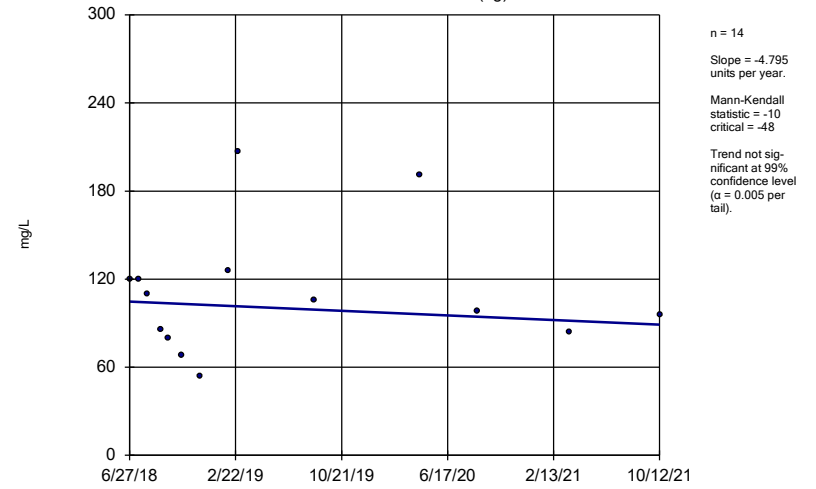
Constituent: Chloride Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-17 (bg)



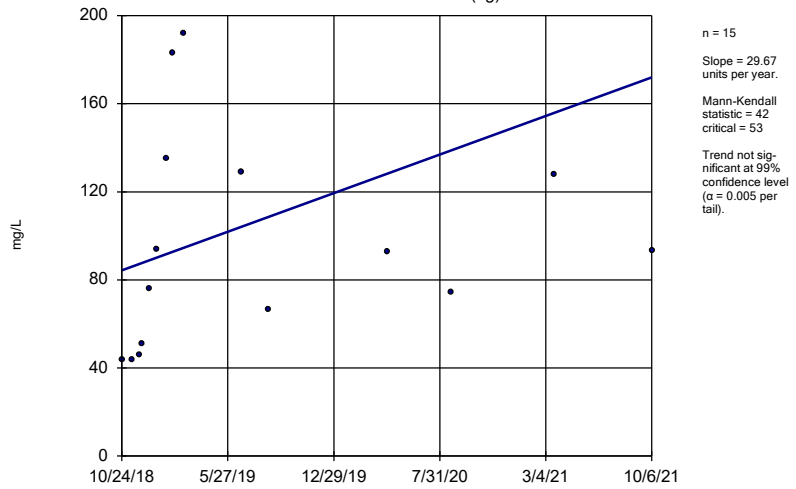
Constituent: Chloride Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-14 (bg)



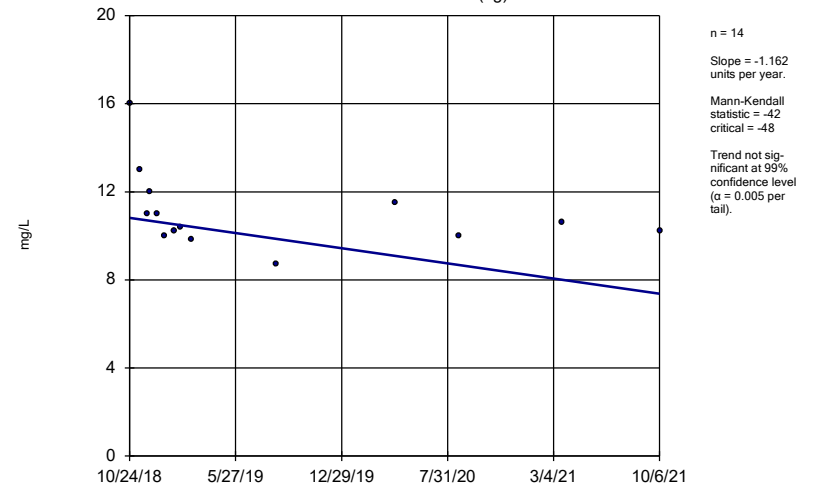
Constituent: Sulfate Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-16 (bg)



Constituent: Sulfate Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

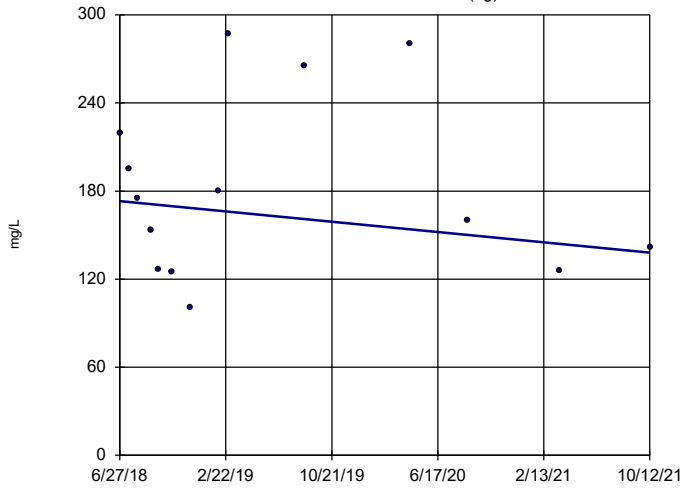
### Sen's Slope Estimator GSD-AP-MW-17 (bg)



Constituent: Sulfate Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Wells  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

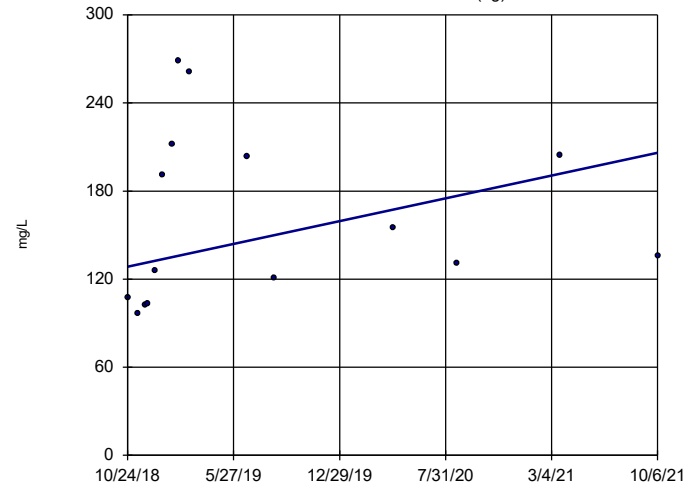
GSD-AP-MW-14 (bg)



n = 14  
 Slope = -10.61  
 units per year.  
 Mann-Kendall  
 statistic = -11  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

### Sen's Slope Estimator

GSD-AP-MW-16 (bg)



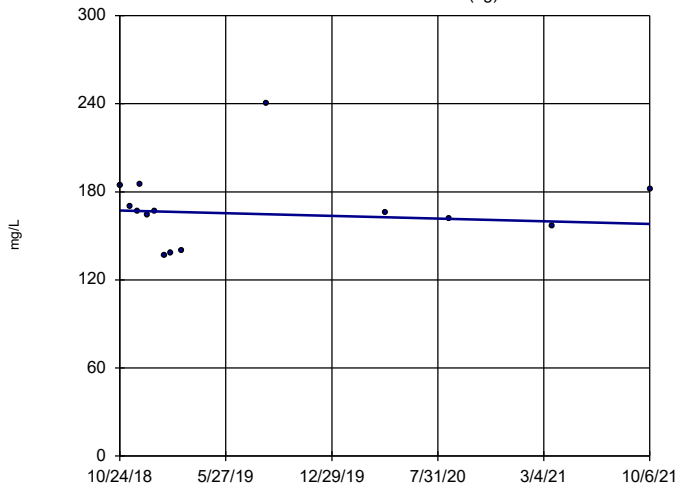
n = 15  
 Slope = 26.27  
 units per year.  
 Mann-Kendall  
 statistic = 37  
 critical = 53  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Well  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Well  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-17 (bg)



n = 14  
 Slope = -3.097  
 units per year.  
 Mann-Kendall  
 statistic = -18  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:28 PM View: Appendix III - Upgradient Well  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

FIGURE F.



# Appendix III - Intrawell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 2:23 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-10	0.1381	n/a	10/11/2021	0.201	Yes	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	10/12/2021	0.134	Yes	13	0.0646	0.01756	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-5	0.08126	n/a	10/5/2021	0.122	Yes	13	0.05878	0.008293	0	None	No	0.0005016	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-12	5.692	5.209	10/5/2021	5.19	Yes	13	5.451	0.08911	0	None	No	0.0002508	Param Intra 1 of 2

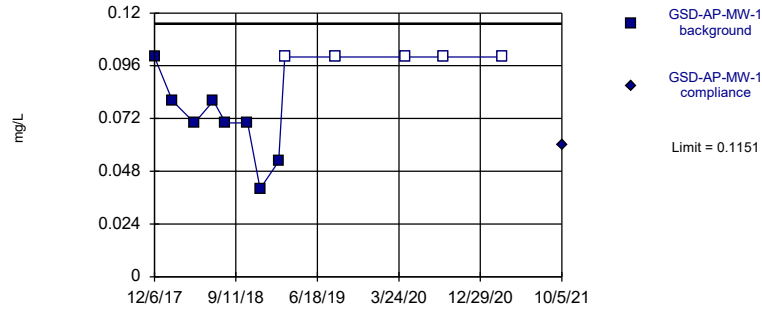
# Appendix III - Intrawell Prediction Limits - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/13/2022, 2:23 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	10/5/2021	0.0601J	No	13	0.06075	0.02003	38.46	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-10</b>	<b>0.1381</b>	<b>n/a</b>	<b>10/11/2021</b>	<b>0.201</b>	<b>Yes</b>	<b>13</b>	<b>0.08731</b>	<b>0.01872</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	GSD-AP-MW-11	0.1122	n/a	10/12/2021	0.134	Yes	13	0.0646	0.01756	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-12	0.1	n/a	10/5/2021	0.1ND	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	10/12/2021	0.1ND	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	0.16	n/a	10/6/2021	0.1ND	No	14	n/a	n/a	50	n/a	n/a	0.008612	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-17	0.2376	n/a	10/6/2021	0.175	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	10/11/2021	0.283	No	13	0.2362	0.04323	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-3	0.1327	n/a	10/5/2021	0.1ND	No	14	0.07516	0.0217	28.57	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-4	0.2837	n/a	10/5/2021	0.214	No	13	0.2314	0.01931	0	None	No	0.0005016	Param Intra 1 of 2
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>0.08126</b>	<b>n/a</b>	<b>10/5/2021</b>	<b>0.122</b>	<b>Yes</b>	<b>13</b>	<b>0.05878</b>	<b>0.008293</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	GSD-AP-MW-6	0.08914	n/a	10/5/2021	0.1ND	No	13	0.05192	0.01373	38.46	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-7	0.109	n/a	10/5/2021	0.0933J	No	13	0.0755	0.01236	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-8	0.149	n/a	10/12/2021	0.123	No	13	0.09544	0.01975	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-9	0.1665	n/a	10/12/2021	0.147	No	13	0.01415	0.005005	7.692	None	x^2	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-1	0.1606	n/a	10/5/2021	0.1ND	No	13	0.1071	0.01975	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-5	0.1	n/a	10/12/2021	0.1ND	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	0.1	n/a	10/12/2021	0.1ND	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	10/5/2021	5.79	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	10/11/2021	6.72	No	13	2060	147.3	0	None	x^4	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-11	7.012	6.206	10/12/2021	6.66	No	13	6.609	0.1486	0	None	No	0.0002508	Param Intra 1 of 2
<b>pH (pH)</b>	<b>GSD-AP-MW-12</b>	<b>5.692</b>	<b>5.209</b>	<b>10/5/2021</b>	<b>5.19</b>	<b>Yes</b>	<b>13</b>	<b>5.451</b>	<b>0.08911</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-14	4.1	3.25	10/12/2021	4.04	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	10/6/2021	4.16	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	10/6/2021	7.92	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	10/11/2021	6.59	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	10/5/2021	5.76	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	10/5/2021	6.58	No	13	6.665	0.1229	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-5	6.352	5.982	10/5/2021	6.24	No	13	6.167	0.06836	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-6	6.703	5.385	10/5/2021	5.74	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	10/5/2021	6.06	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	10/12/2021	6.61	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	10/12/2021	6.9	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	10/5/2021	6.46	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	10/12/2021	5.33	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	10/12/2021	5.41	No	13	5.523	0.06473	0	None	No	0.0002508	Param Intra 1 of 2

Sanitas™ v.9.6.32 . UG  
Hollow symbols indicate censored values.  
Within Limit

Prediction Limit  
Intrawell Parametric

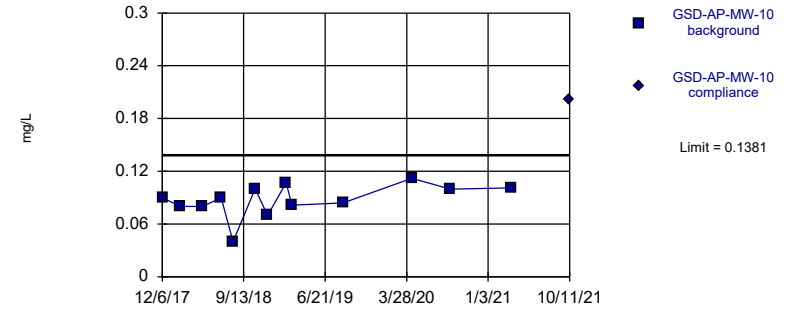


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.06075, Std. Dev.=0.02003, n=13, 38.46% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8338, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sanitas™ v.9.6.32 . UG  
Exceeds Limit

Prediction Limit  
Intrawell Parametric

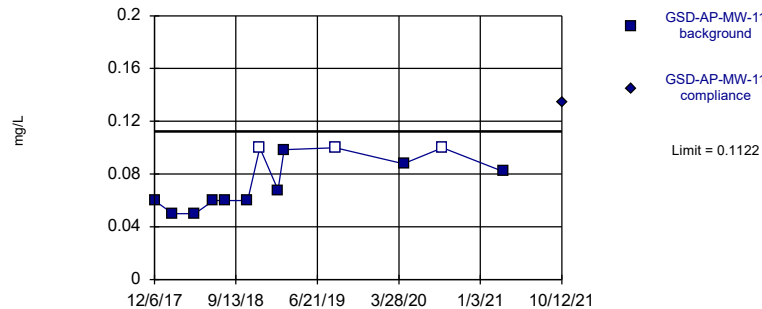


Background Data Summary: Mean=0.08731, Std. Dev.=0.01872, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9056, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sanitas™ v.9.6.32 . UG  
Hollow symbols indicate censored values.  
Exceeds Limit

Prediction Limit  
Intrawell Parametric

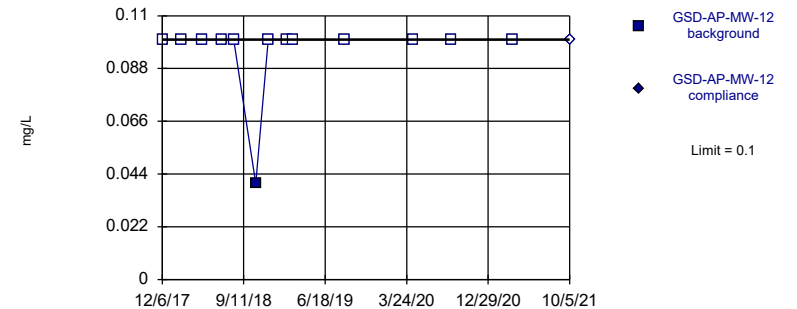


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.0646, Std. Dev.=0.01756, n=13, 23.08% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8429, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sanitas™ v.9.6.32 . UG  
Hollow symbols indicate censored values.  
Within Limit

Prediction Limit  
Intrawell Non-parametric

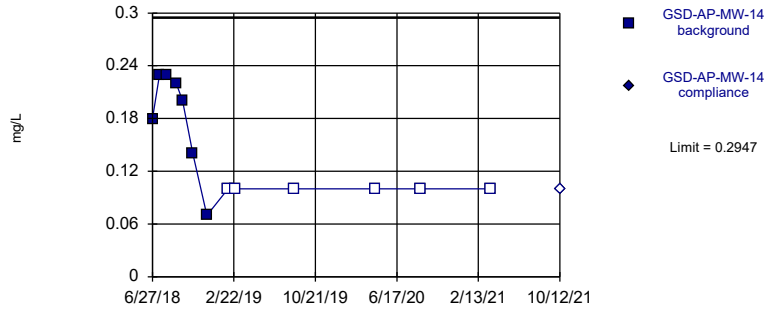


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 92.31% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Fluoride Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sanitas™ v.9.6.32 . UG  
Hollow symbols indicate censored values.  
Within Limit

Prediction Limit  
Intrawell Parametric

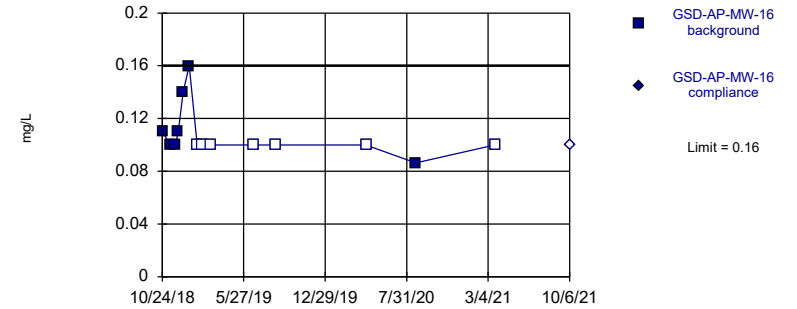


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.1209, Std. Dev.=0.06411, n=13, 46.15% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.821, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

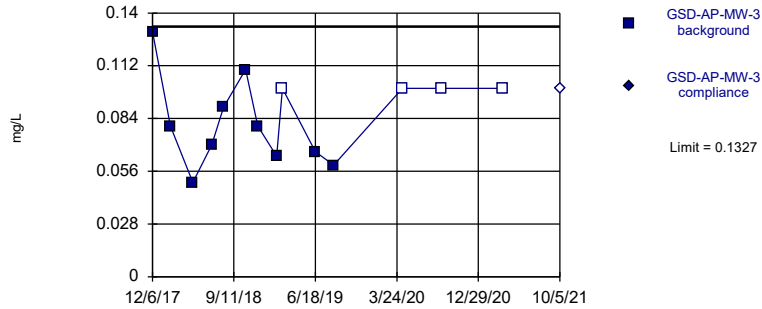
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Hollow symbols indicate censored values.  
Within Limit

Prediction Limit  
Intrawell Non-parametric



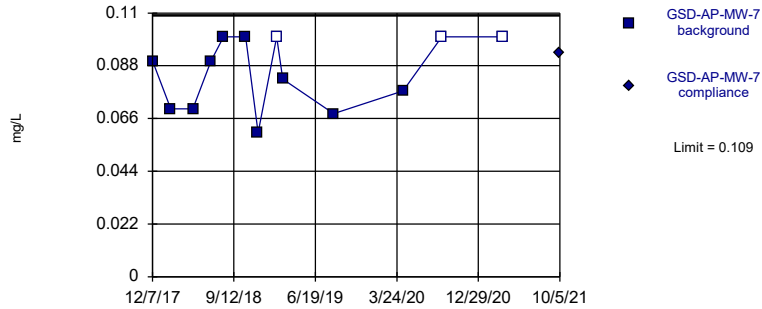
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Hollow symbols indicate censored values.  
Within Limit

Prediction Limit  
Intrawell Parametric



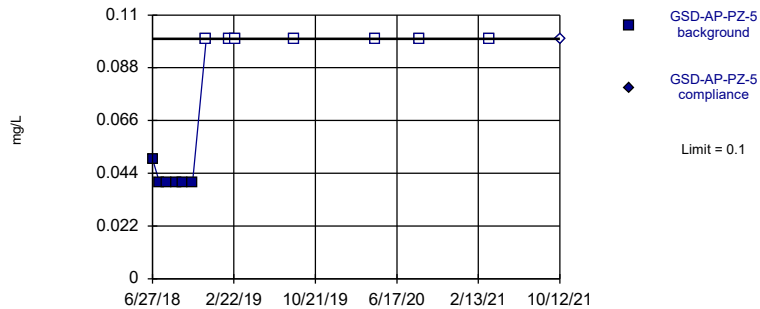
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Hollow symbols indicate censored values.  
Within Limit

Prediction Limit  
Intrawell Parametric



Within Limit

Prediction Limit  
Intrawell Non-parametric

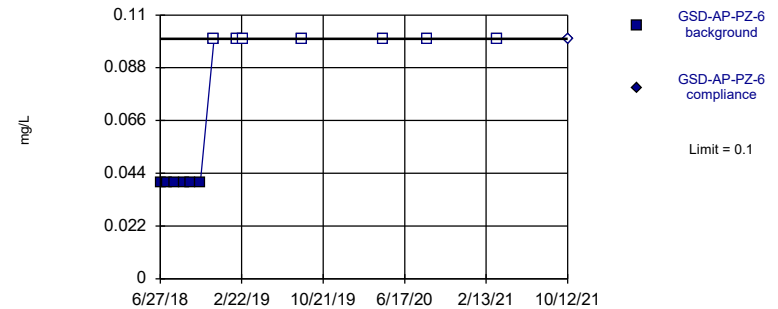


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 53.85% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Fluoride Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

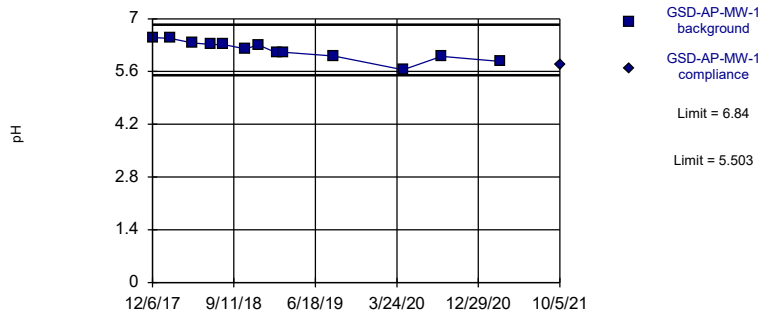


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 53.85% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Fluoride Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

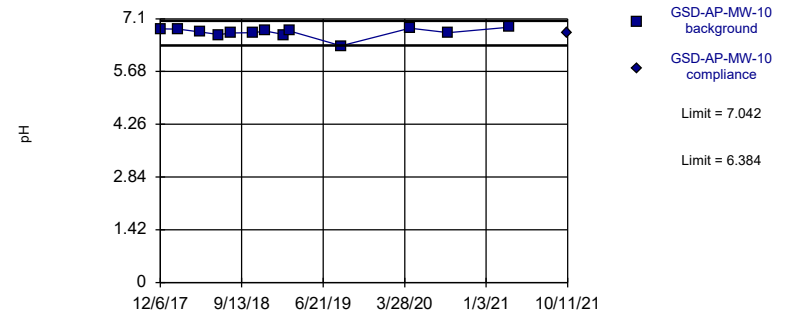


Background Data Summary: Mean=6.172, Std. Dev.=0.2466, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9507, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

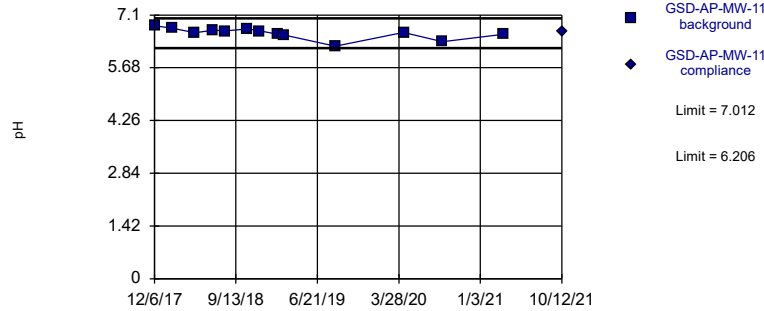


Background Data Summary (based on x^4 transformation): Mean=2060, Std. Dev.=147.3, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8204, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

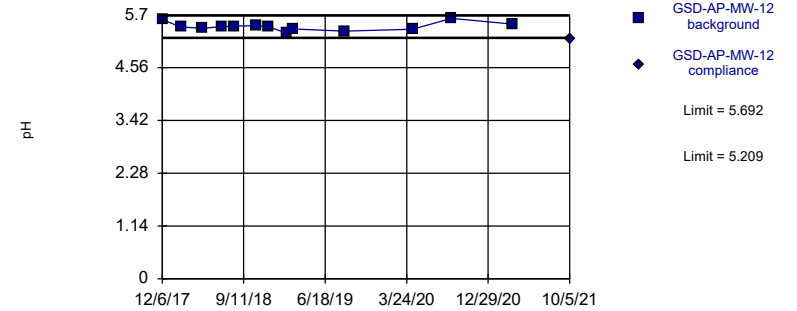


Background Data Summary: Mean=6.609, Std. Dev.=0.1486, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.894, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Exceeds Limits

Prediction Limit  
Intrawell Parametric

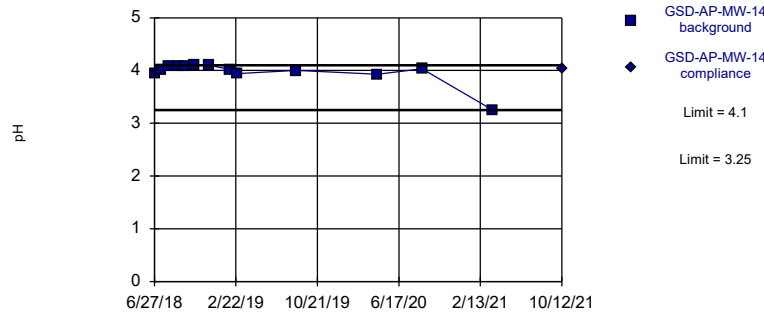


Background Data Summary: Mean=5.451, Std. Dev.=0.08911, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.939, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Non-parametric

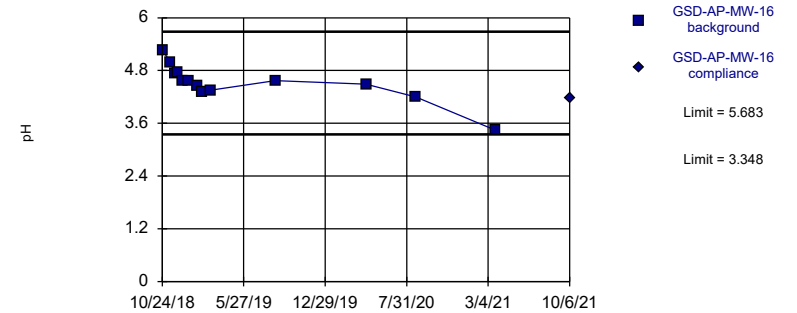


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 13 background values. Well-constituent pair annual alpha = 0.03858. Individual comparison alpha = 0.01938 (1 of 2).

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric



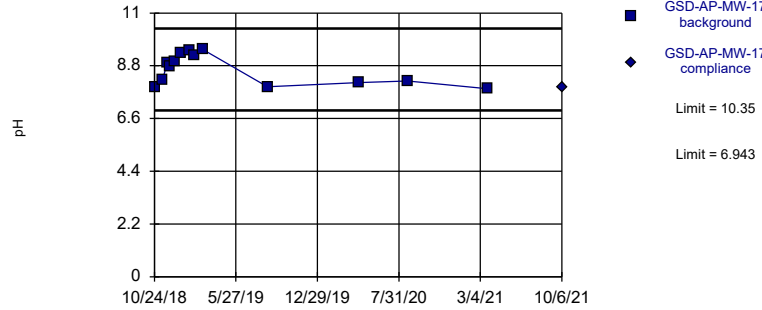
Background Data Summary: Mean=4.515, Std. Dev.=0.4307, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9225, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



Within Limits

Prediction Limit  
Intrawell Parametric

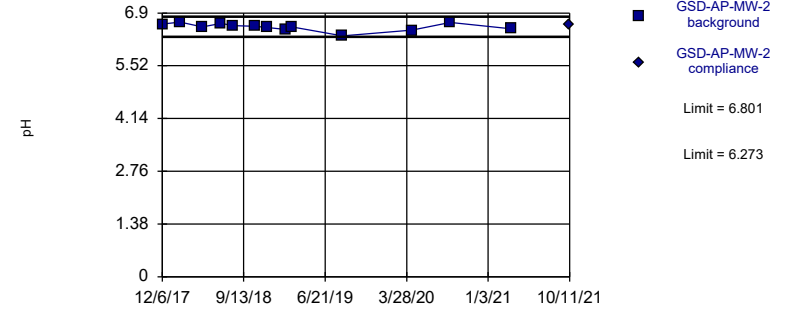


Background Data Summary: Mean=8.645, Std. Dev.=0.6277, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8772, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

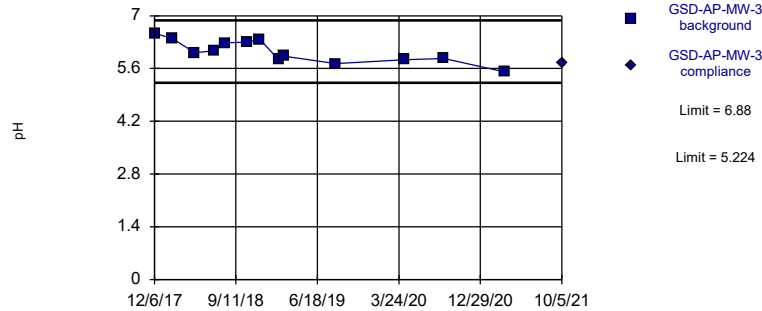


Background Data Summary: Mean=6.537, Std. Dev.=0.09742, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9249, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

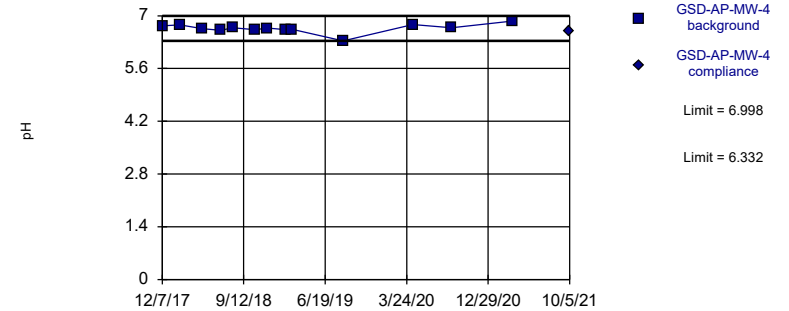


Background Data Summary: Mean=6.052, Std. Dev.=0.3053, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.961, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

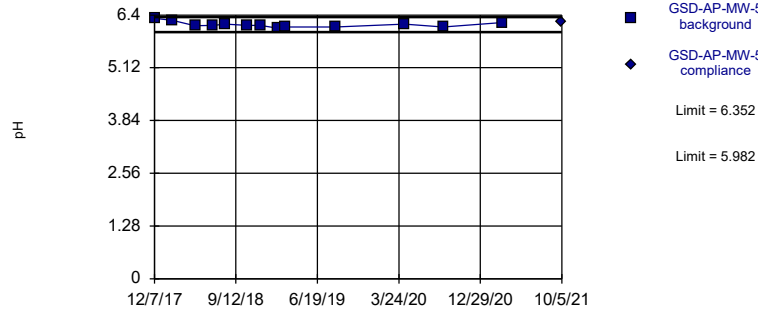


Background Data Summary: Mean=6.665, Std. Dev.=0.1229, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8446, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:20 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

### Prediction Limit Intrawell Parametric

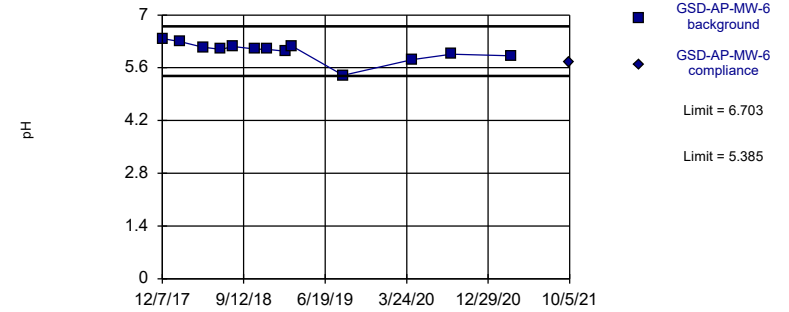


Background Data Summary: Mean=6.167, Std. Dev.=0.06836, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9003, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:21 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

### Prediction Limit Intrawell Parametric

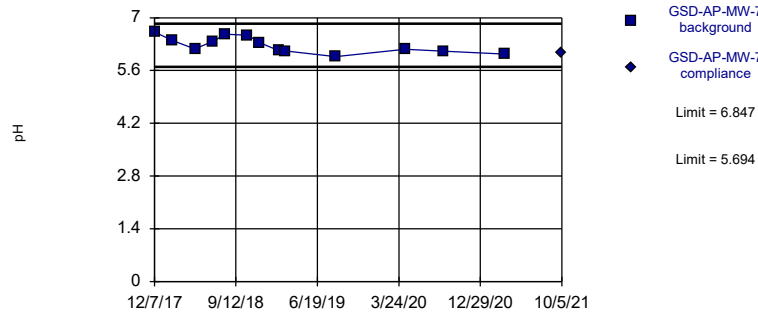


Background Data Summary: Mean=6.044, Std. Dev.=0.243, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8773, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:21 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

### Prediction Limit Intrawell Parametric

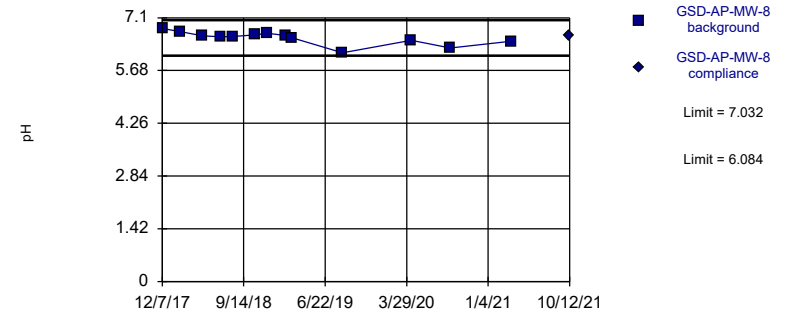


Background Data Summary: Mean=6.271, Std. Dev.=0.2126, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9235, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:21 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

### Prediction Limit Intrawell Parametric

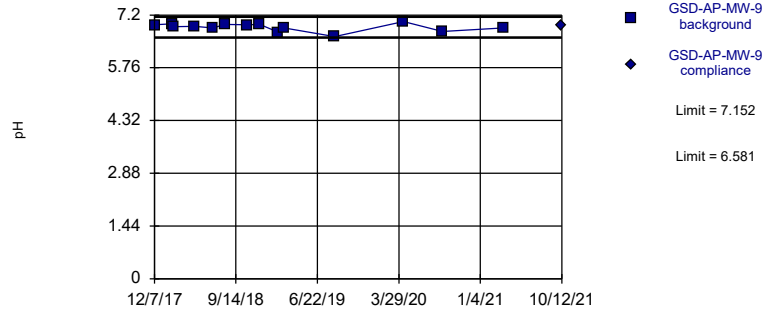


Background Data Summary: Mean=6.558, Std. Dev.=0.1748, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.913, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:21 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

### Prediction Limit Intrawell Parametric

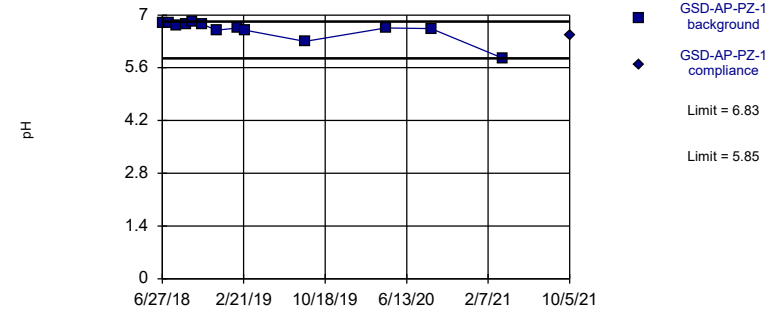


Background Data Summary: Mean=6.866, Std. Dev.=0.1077, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9109, critical = 0.825. Kappa = 2.651 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:21 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

### Prediction Limit Intrawell Non-parametric

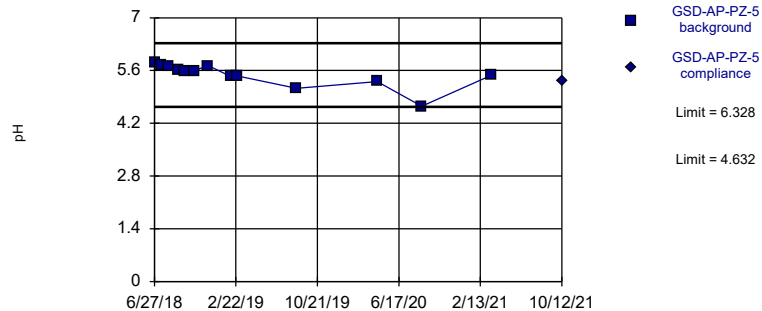


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 13 background values. Well-constituent pair annual alpha = 0.03858. Individual comparison alpha = 0.01938 (1 of 2).

Constituent: pH Analysis Run 1/13/2022 2:21 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

### Prediction Limit Intrawell Parametric

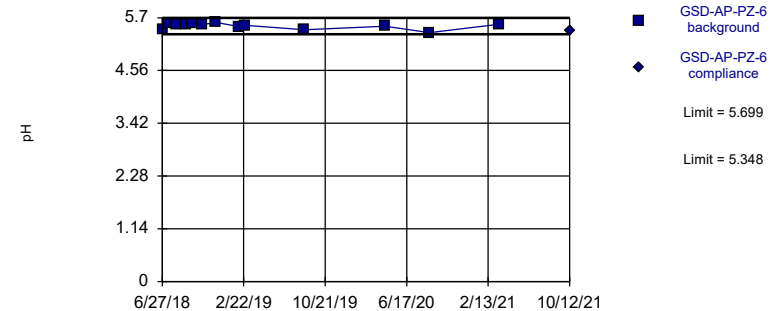


Background Data Summary: Mean=5.48, Std. Dev.=0.3127, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8416, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/13/2022 2:21 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 1/13/2022 2:21 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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	<0.1	
8/21/2019	<0.1	
4/15/2020	<0.1	
8/25/2020	<0.1	
3/16/2021	<0.1	
10/5/2021		0.0601 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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	<0.1	
2/6/2019	0.0678 (J)	
2/27/2019	0.0985 (J)	
8/22/2019	<0.1	
4/14/2020	0.0878 (J)	
8/26/2020	<0.1	
3/23/2021	0.0819 (J)	
10/12/2021		0.134

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	<0.1	
2/8/2018	<0.1	
4/24/2018	<0.1	
6/27/2018	<0.1	
8/8/2018	<0.1	
10/23/2018	0.04 (J)	
12/5/2018	<0.1	
2/6/2019	<0.1	
2/27/2019	<0.1	
8/22/2019	<0.1	
4/14/2020	<0.1	
8/26/2020	<0.1	
3/23/2021	<0.1	
10/5/2021		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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	<0.1	
2/28/2019	<0.1	
8/20/2019	<0.1	
4/16/2020	<0.1	
8/25/2020	<0.1	
3/22/2021	<0.1	
10/12/2021		<0.1



# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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	<0.1	
2/5/2019	<0.1	
2/28/2019	<0.1	
6/24/2019	<0.1 (D)	
8/19/2019	<0.1	
4/15/2020	<0.1	
8/25/2020	0.0863 (J)	
3/22/2021	<0.1	
10/6/2021		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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	<0.1	
6/18/2019	0.0664 (J)	
8/20/2019	0.0592 (J)	
4/13/2020	<0.1	
8/26/2020	<0.1	
3/22/2021	<0.1	
10/5/2021		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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	<0.1	
2/5/2019	0.0581 (J)	
2/26/2019	0.0816 (J)	
8/20/2019	<0.1	
4/13/2020	<0.1	
8/26/2020	<0.1	
3/17/2021	<0.1	
10/5/2021		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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)



# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	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	<0.1	
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		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 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	<0.1	
2/7/2019	<0.1	
2/25/2019	<0.1	
8/21/2019	<0.1	
4/15/2020	<0.1	
8/24/2020	<0.1	
3/16/2021	<0.1	
10/12/2021		<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/13/2022 2:23 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	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	<0.1	
2/7/2019	<0.1	
2/25/2019	<0.1	
8/21/2019	<0.1	
4/15/2020	<0.1	
8/24/2020	<0.1	
3/16/2021	<0.1	
10/12/2021		<0.1

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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



# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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



# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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	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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

# Prediction Limit

Constituent: pH (pH) Analysis Run 1/13/2022 2:23 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

FIGURE G.



FIGURE H.

# Appendix III - Prediction Limit Exceedances Trend Test - Significant Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/13/2022, 3:06 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GSD-AP-MW-1	-0.06242	-61	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.08037	-64	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-3	0.05252	59	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.056	-68	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.069	-67	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-18.36	-55	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.022	52	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-14.19	-52	-48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-11.11	-67	-53	Yes	15	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.412	-67	-48	Yes	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.7197	-92	-53	Yes	15	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-11	0.01846	57	48	Yes	14	21.43	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.5008	-70	-48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-81.47	-68	-48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	22.44	49	48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-63.87	-63	-48	Yes	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-43.33	-73	-53	Yes	15	0	n/a	n/a	0.01	NP

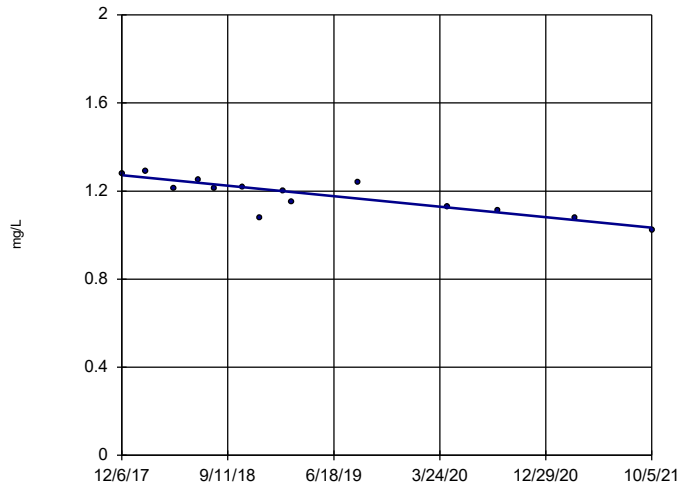
# Appendix III - Prediction Limit Exceedances Trend Test - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 3:06 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>-0.06242</b>	<b>-61</b>	<b>-48</b>	<b>Yes</b>	<b>14</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-11	0.01128	44	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	48	No	14	100	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0.02049	44	53	No	15	60	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.001687	-35	-48	No	14	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-0.08037</b>	<b>-64</b>	<b>-48</b>	<b>Yes</b>	<b>14</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-3</b>	<b>0.05252</b>	<b>59</b>	<b>53</b>	<b>Yes</b>	<b>15</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-4</b>	<b>-0.056</b>	<b>-68</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-0.069</b>	<b>-67</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-18.36</b>	<b>-55</b>	<b>-48</b>	<b>Yes</b>	<b>14</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	0.3552	11	48	No	14	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>4.022</b>	<b>52</b>	<b>48</b>	<b>Yes</b>	<b>14</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	2.155	15	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-1.044	-16	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-0.5887	-13	-53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.622	25	48	No	14	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-14.19</b>	<b>-52</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-11.11</b>	<b>-67</b>	<b>-53</b>	<b>Yes</b>	<b>15</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-5	-2.198	-33	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-8	-0.8321	-11	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-9	0.7715	11	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-1	-0.02609	-6	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-10	0.02804	3	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-11	-0.05489	-6	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-12	0.06337	13	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	0.02255	13	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-7	-53	No	15	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.412</b>	<b>-67</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-0.7197</b>	<b>-92</b>	<b>-53</b>	<b>Yes</b>	<b>15</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	0.183	23	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.3869	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-6	-0.2376	-40	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.5316	-44	-48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-8	0.1905	26	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-9	0.2026	27	48	No	14	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-10	0.01072	41	48	No	14	0	n/a	n/a	0.01	NP
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>0.01846</b>	<b>57</b>	<b>48</b>	<b>Yes</b>	<b>14</b>	<b>21.43</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-0.04431	-47	-48	No	14	50	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	0	-33	-53	No	15	53.33	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-0.009217	-44	-48	No	14	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-5	0.004584	33	48	No	14	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-12	-0.04154	-18	-48	No	14	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-14 (bg)	-0.01834	-18	-48	No	14	0	n/a	n/a	0.01	NP
<b>pH (pH)</b>	<b>GSD-AP-MW-16 (bg)</b>	<b>-0.5008</b>	<b>-70</b>	<b>-48</b>	<b>Yes</b>	<b>14</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)	-0.09143	-10	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-1	-1.272	-2	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-4.795	-10	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	29.67	42	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-1.162	-42	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-3	0.8391	4	53	No	15	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-81.47</b>	<b>-68</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>22.44</b>	<b>49</b>	<b>48</b>	<b>Yes</b>	<b>14</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	0	0	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-11	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	26.27	37	53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.097	-18	-48	No	14	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-63.87</b>	<b>-63</b>	<b>-48</b>	<b>Yes</b>	<b>14</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>-43.33</b>	<b>-73</b>	<b>-53</b>	<b>Yes</b>	<b>15</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

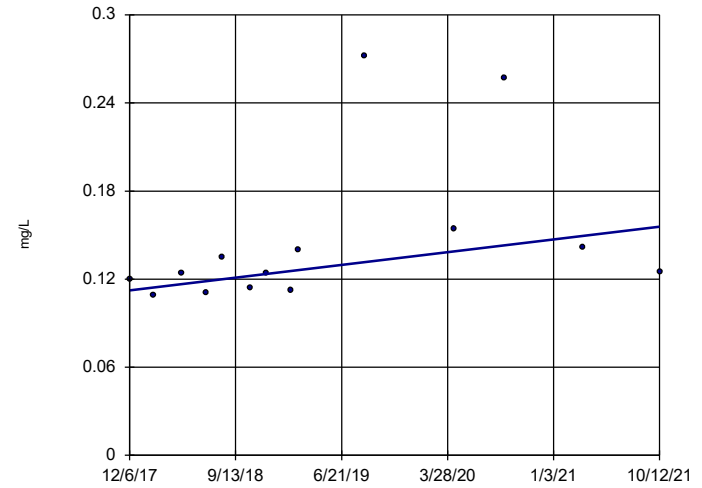


n = 14  
 Slope = -0.06242  
 units per year.  
 Mann-Kendall  
 statistic = -61  
 critical = -48  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-11

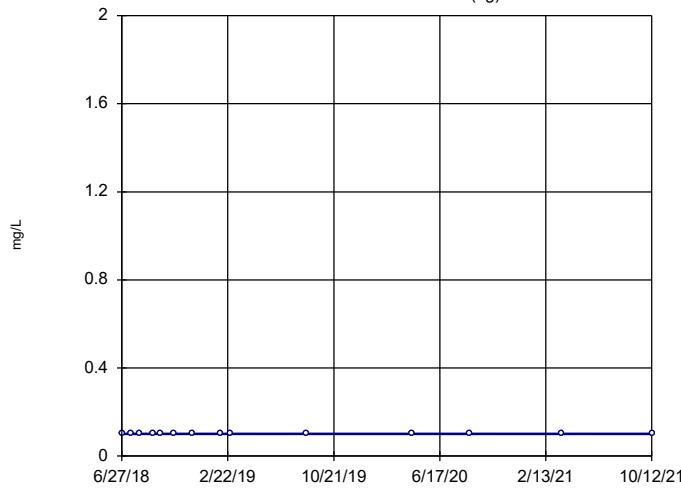


n = 14  
 Slope = 0.01128  
 units per year.  
 Mann-Kendall  
 statistic = 44  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-14 (bg)

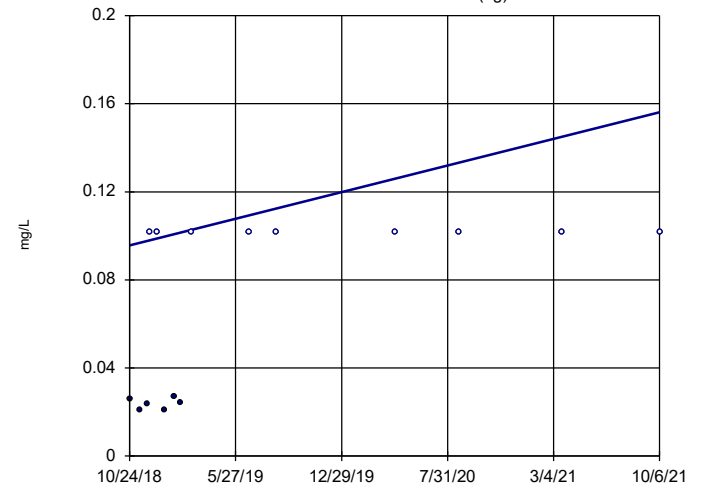


n = 14  
 Slope = 0  
 units per year.  
 Mann-Kendall  
 statistic = 0  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-16 (bg)

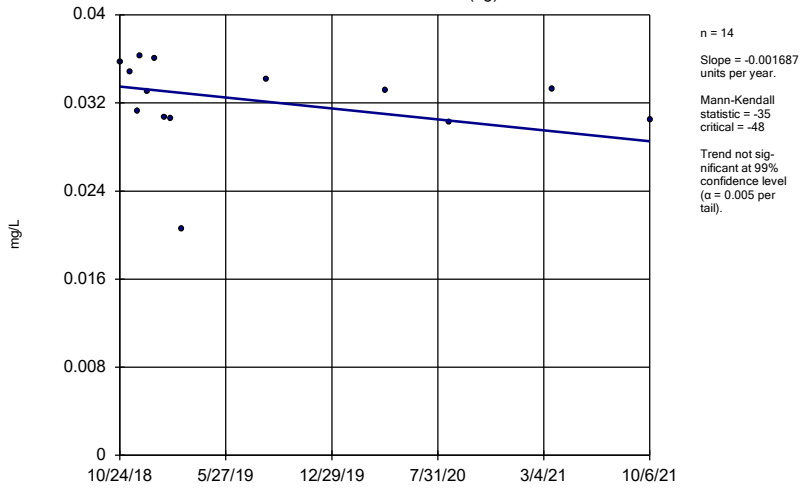


n = 15  
 Slope = 0.02049  
 units per year.  
 Mann-Kendall  
 statistic = 44  
 critical = 53  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

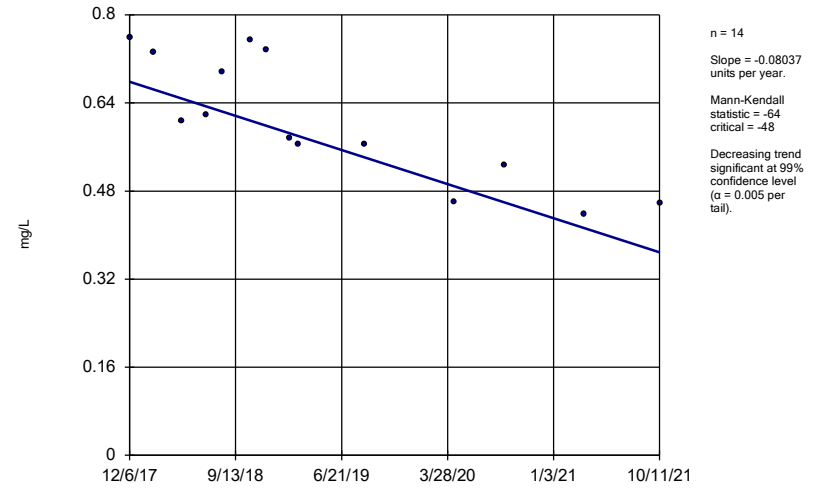
GSD-AP-MW-17 (bg)



Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

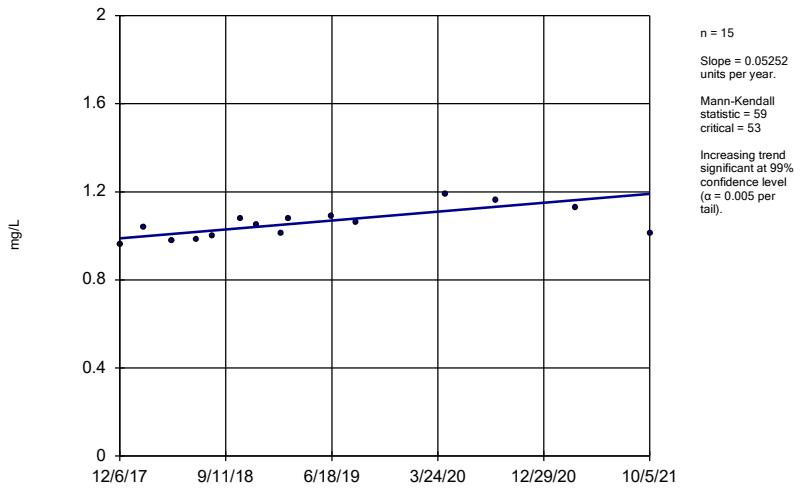
GSD-AP-MW-2



Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

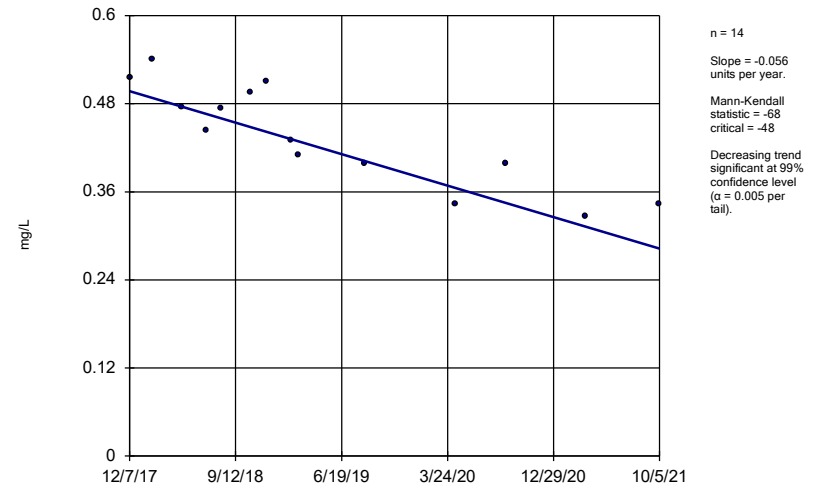
GSD-AP-MW-3



Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

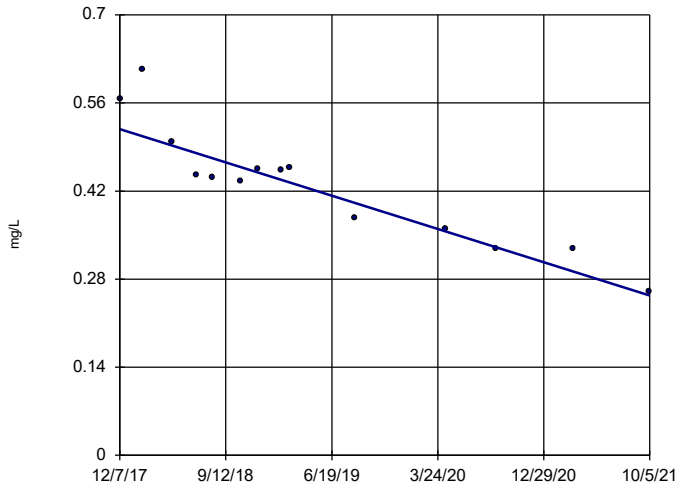
GSD-AP-MW-4



Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-5

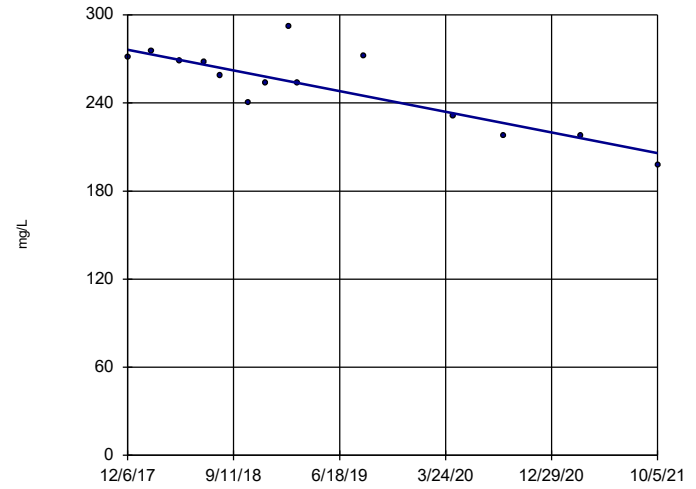


n = 14  
 Slope = -0.069  
 units per year.  
 Mann-Kendall  
 statistic = -67  
 critical = -48  
 Decreasing trend  
 significant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Boron Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-1

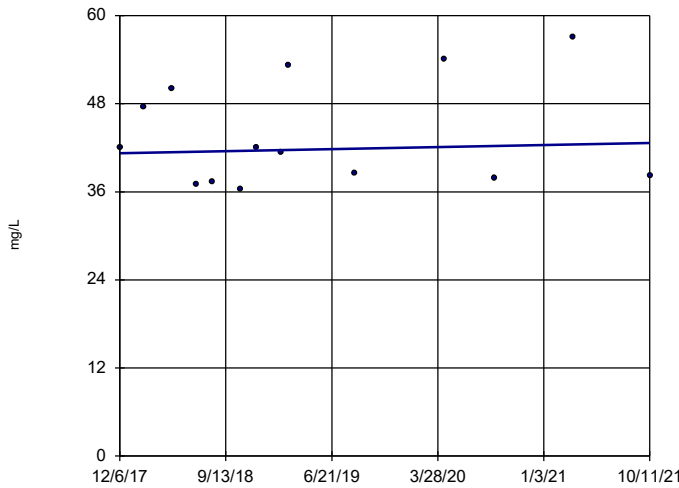


n = 14  
 Slope = -18.36  
 units per year.  
 Mann-Kendall  
 statistic = -55  
 critical = -48  
 Decreasing trend  
 significant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-10

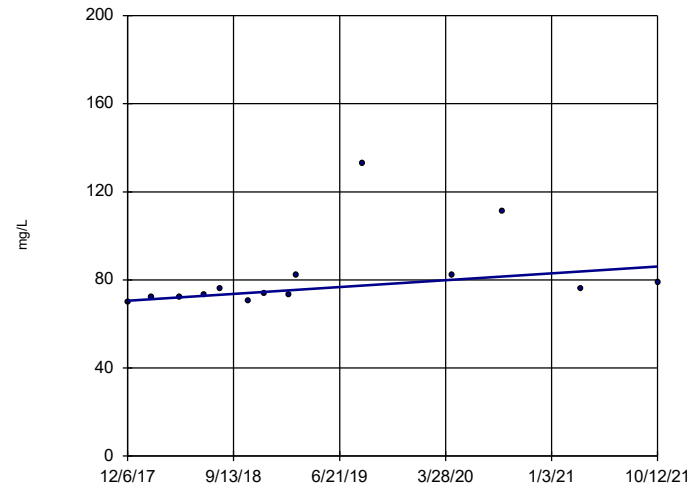


n = 14  
 Slope = 0.3552  
 units per year.  
 Mann-Kendall  
 statistic = 11  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

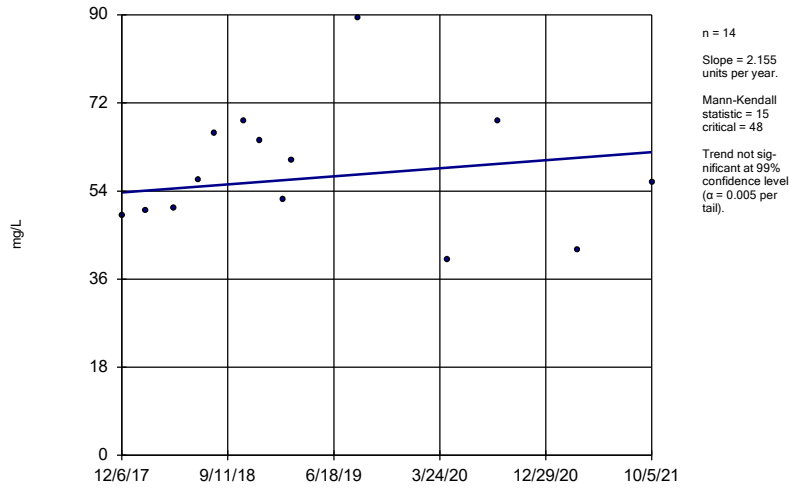
GSD-AP-MW-11



n = 14  
 Slope = 4.022  
 units per year.  
 Mann-Kendall  
 statistic = 52  
 critical = 48  
 Increasing trend  
 significant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

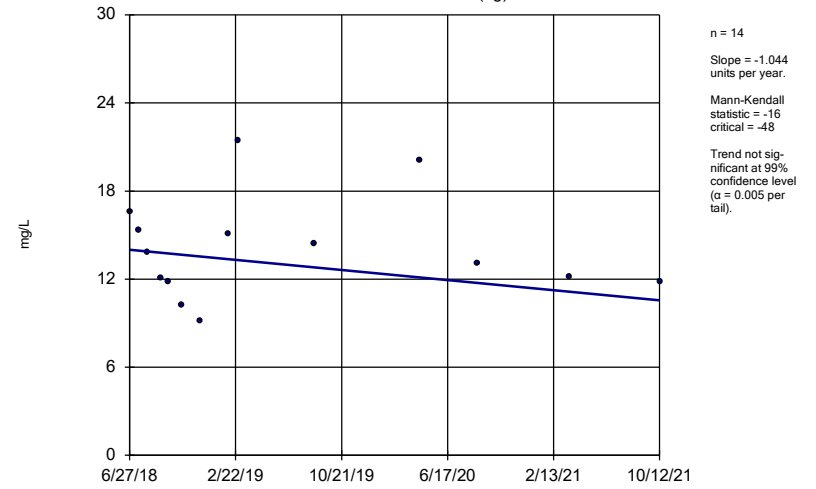
Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-12



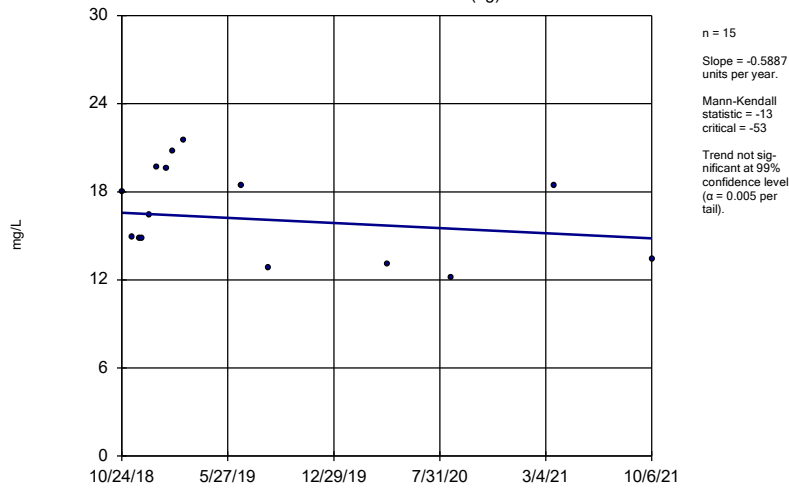
Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-14 (bg)



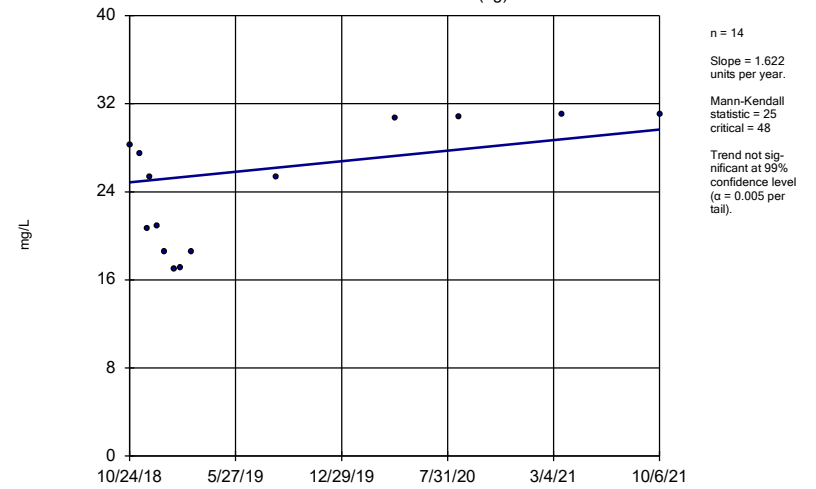
Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-16 (bg)



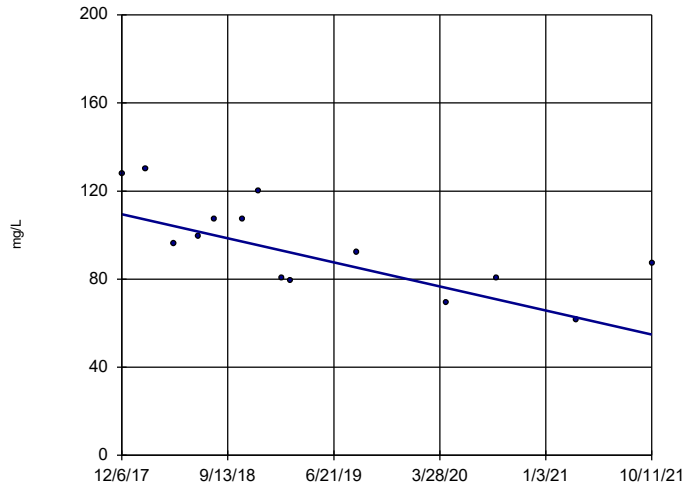
Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-17 (bg)



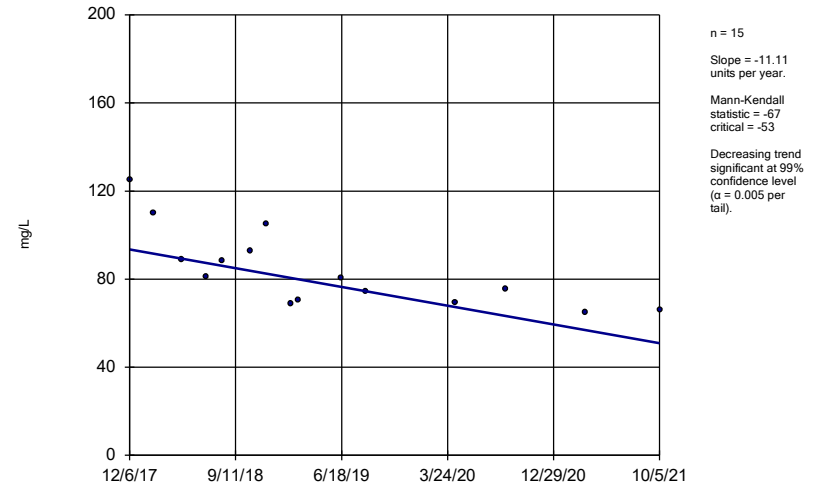
Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-2



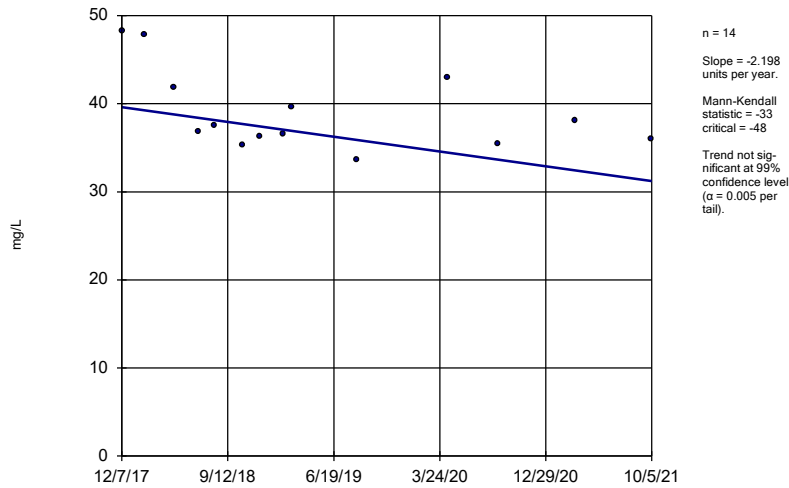
Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-3



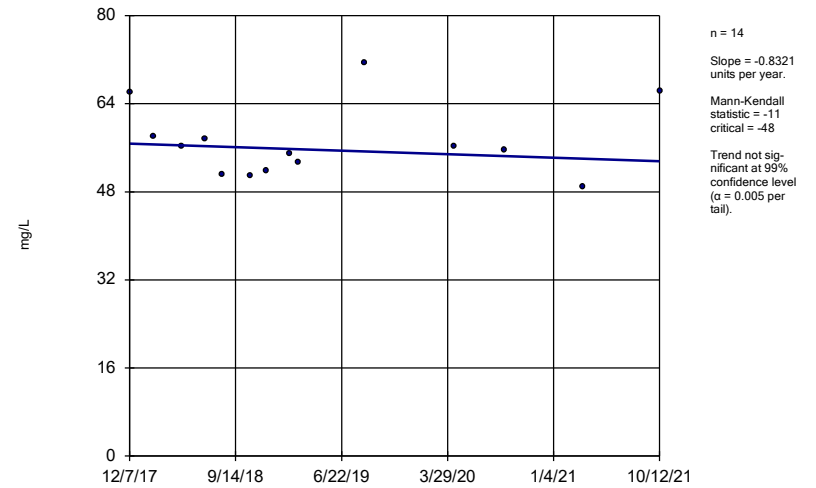
Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-5



Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-8

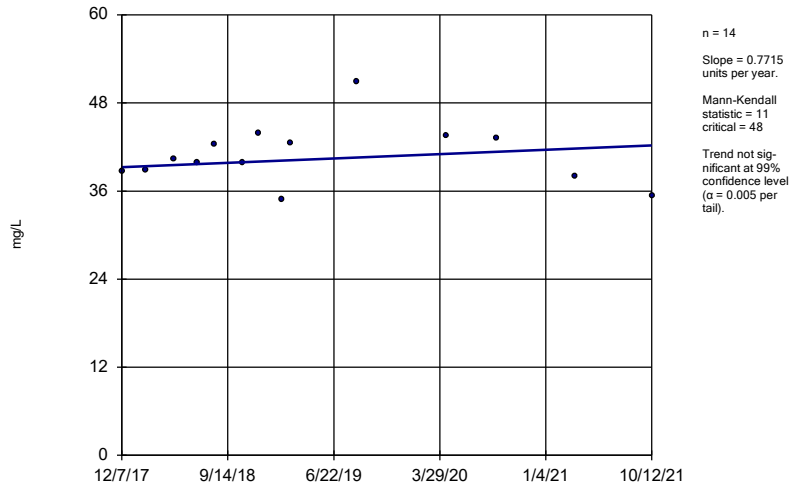


Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



### Sen's Slope Estimator

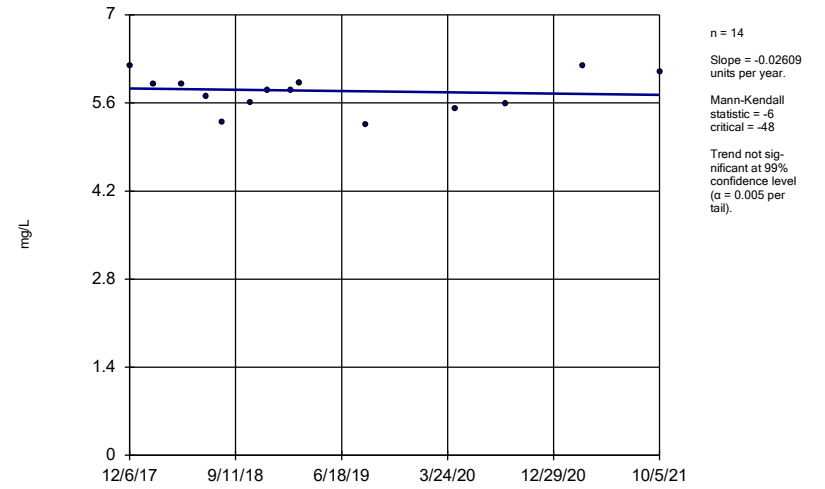
GSD-AP-MW-9



Constituent: Calcium Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

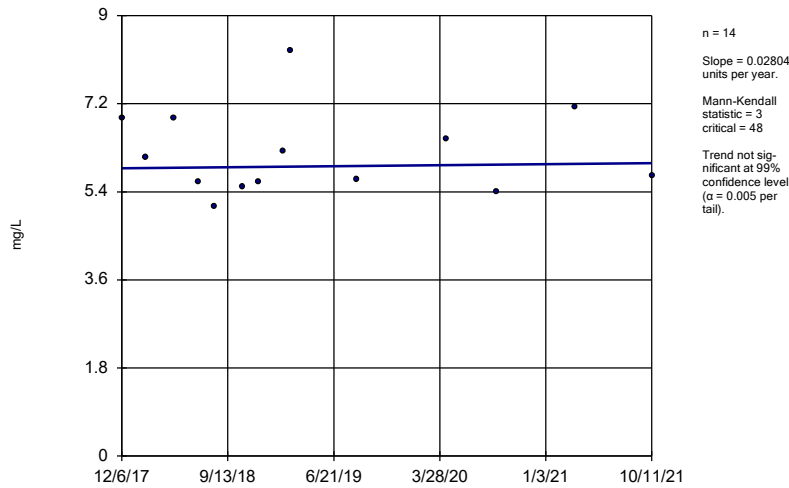
GSD-AP-MW-1



Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

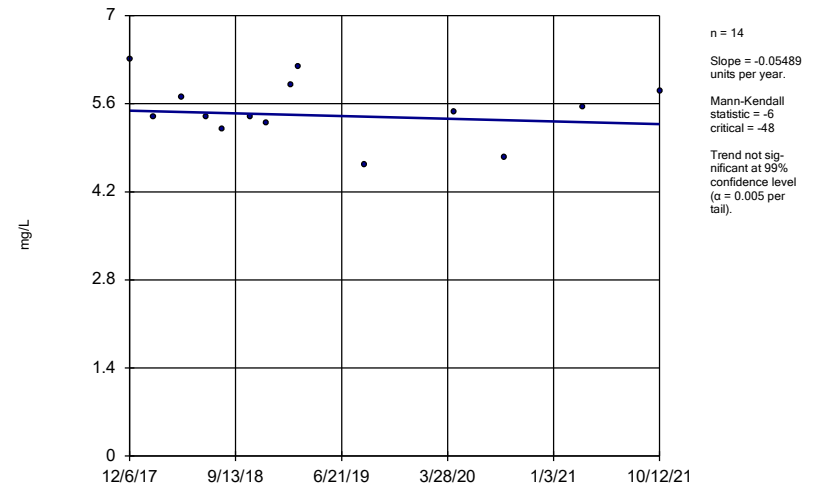
GSD-AP-MW-10



Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

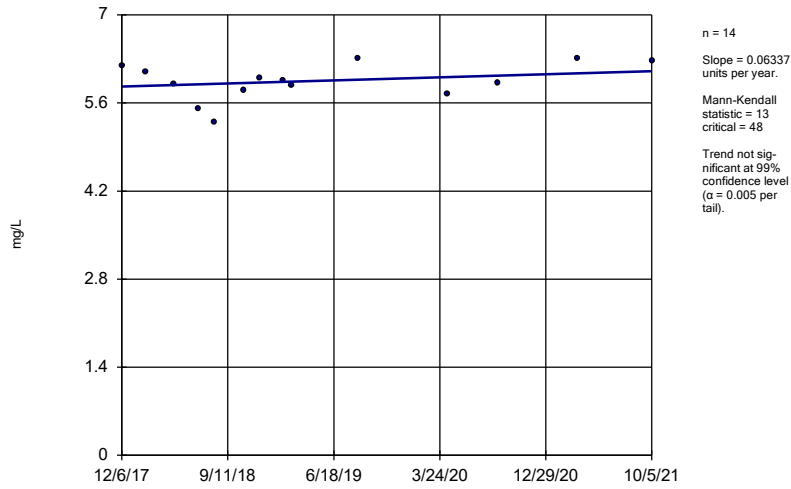
### Sen's Slope Estimator

GSD-AP-MW-11



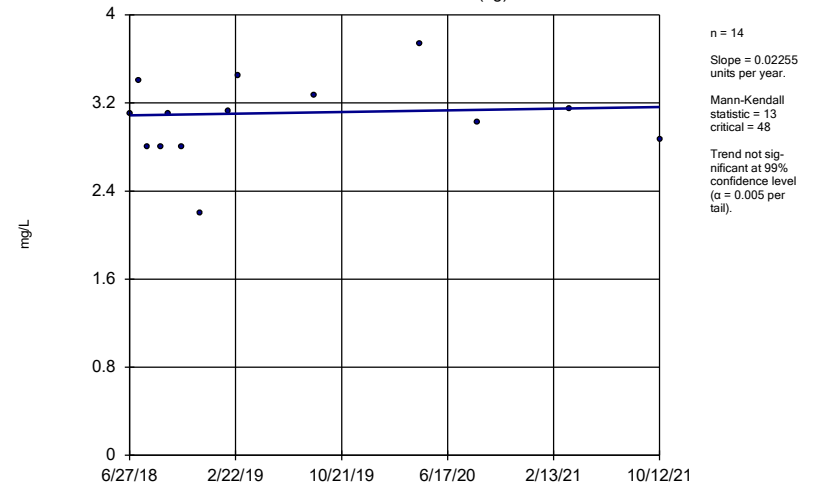
Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-12



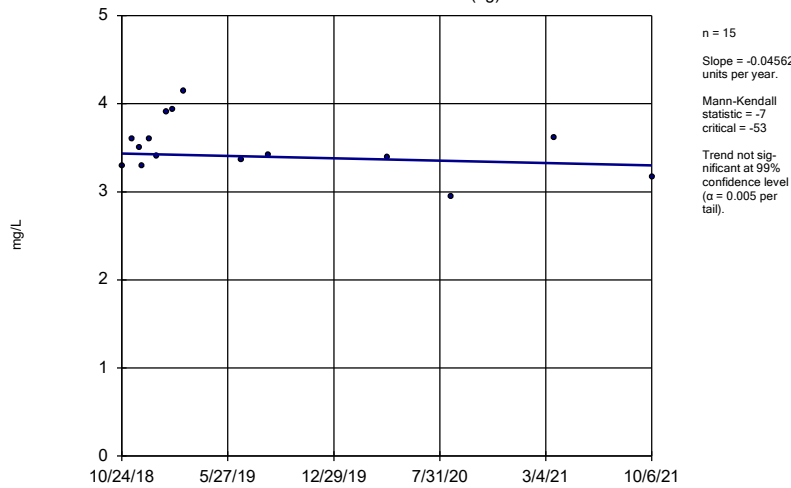
Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-14 (bg)



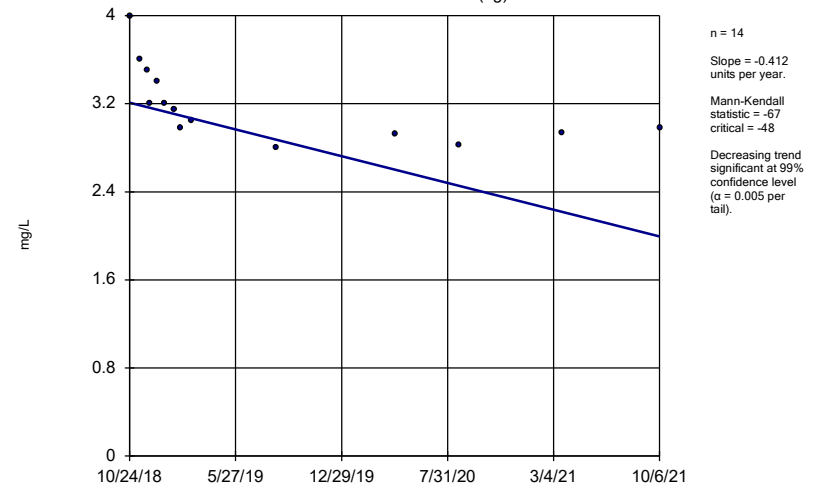
Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-16 (bg)



Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

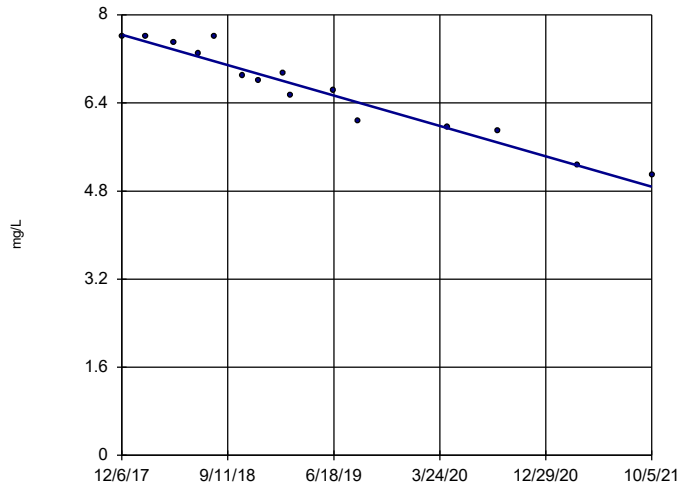
Sen's Slope Estimator  
GSD-AP-MW-17 (bg)



Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-3

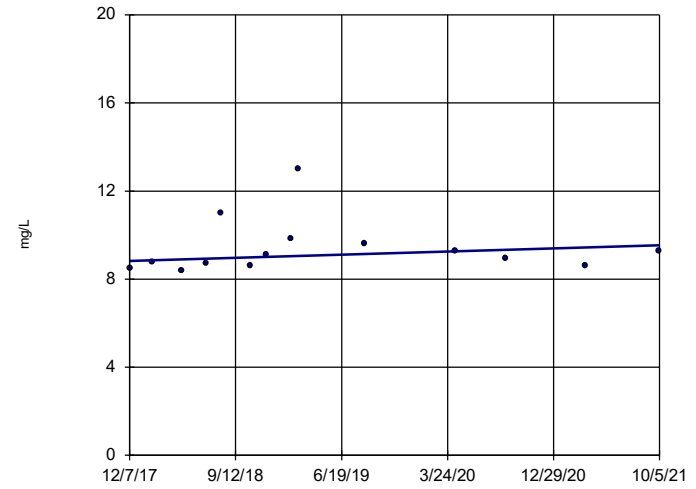


n = 15  
 Slope = -0.7197  
 units per year.  
 Mann-Kendall  
 statistic = -92  
 critical = -53  
 Decreasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-4

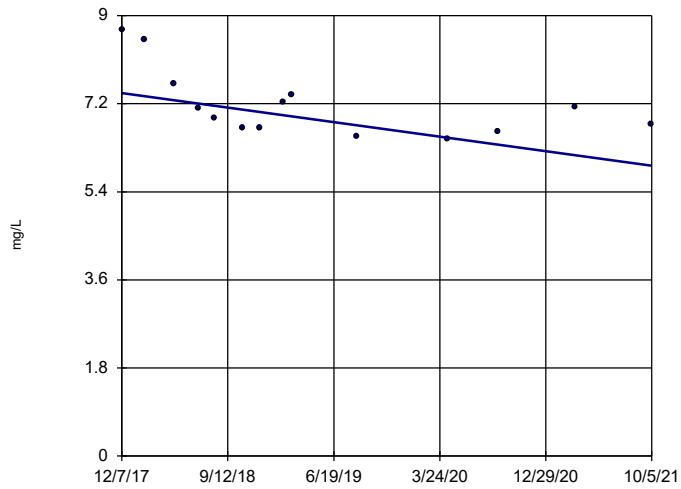


n = 14  
 Slope = 0.183  
 units per year.  
 Mann-Kendall  
 statistic = 23  
 critical = 48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-5

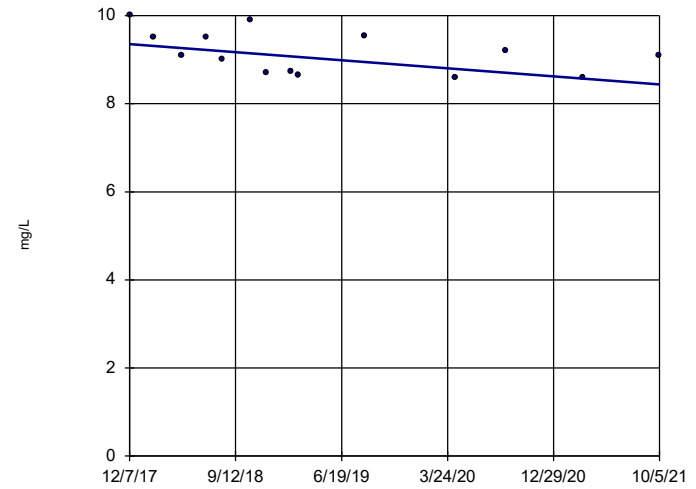


n = 14  
 Slope = -0.3869  
 units per year.  
 Mann-Kendall  
 statistic = -44  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-6

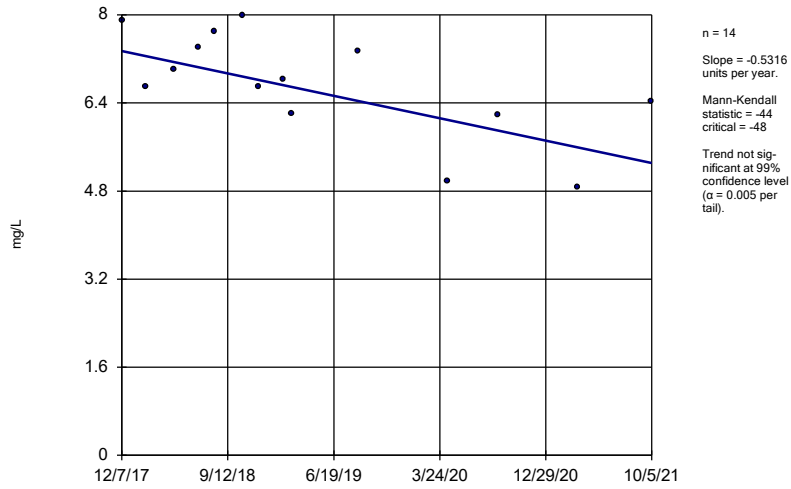


n = 14  
 Slope = -0.2376  
 units per year.  
 Mann-Kendall  
 statistic = -40  
 critical = -48  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

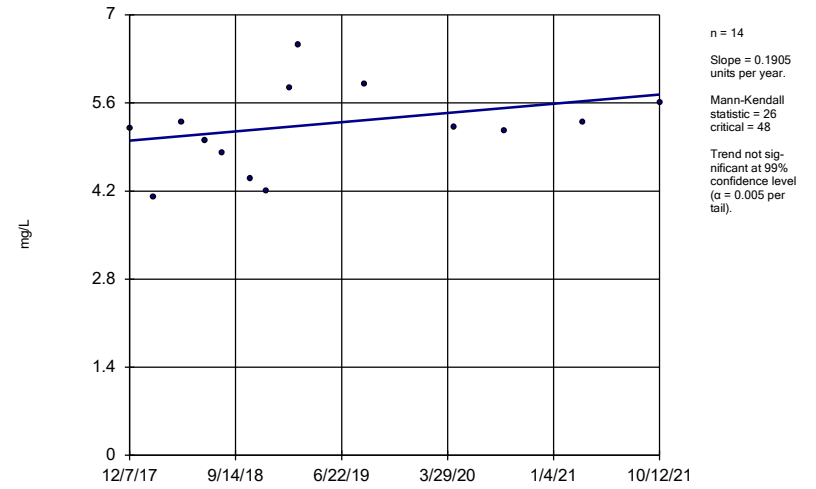
GSD-AP-MW-7



Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

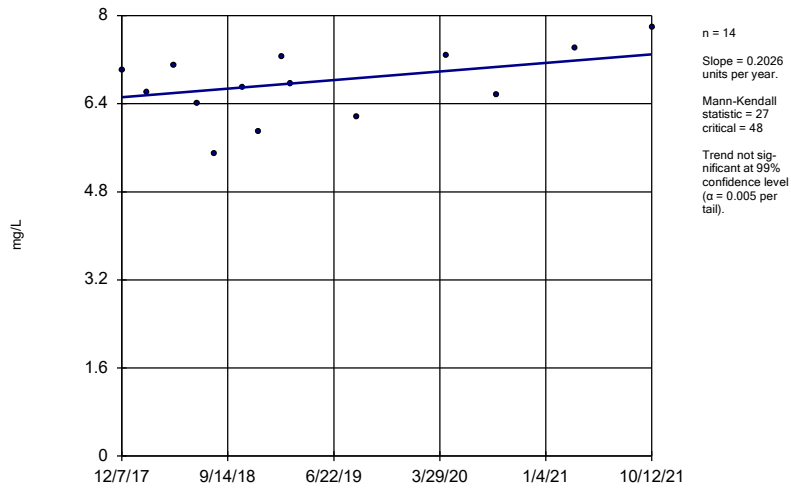
GSD-AP-MW-8



Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

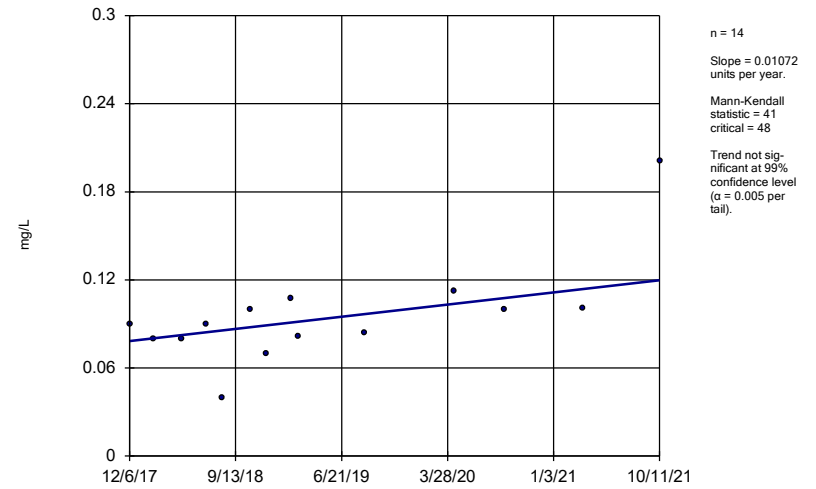
GSD-AP-MW-9



Constituent: Chloride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

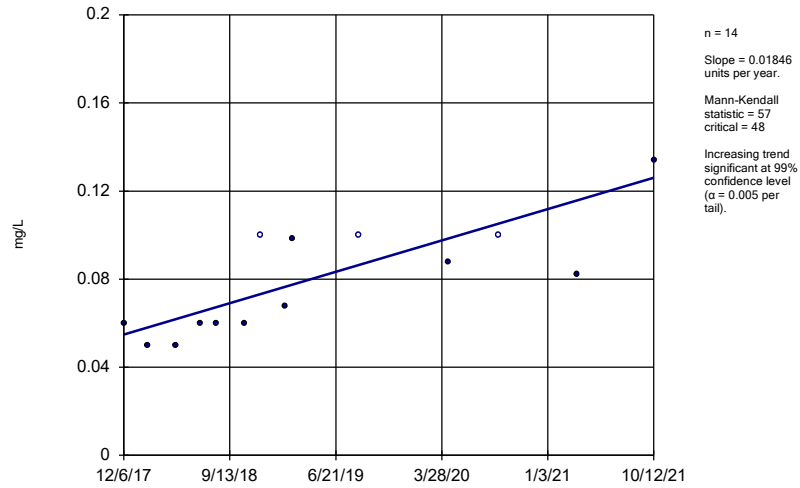
### Sen's Slope Estimator

GSD-AP-MW-10

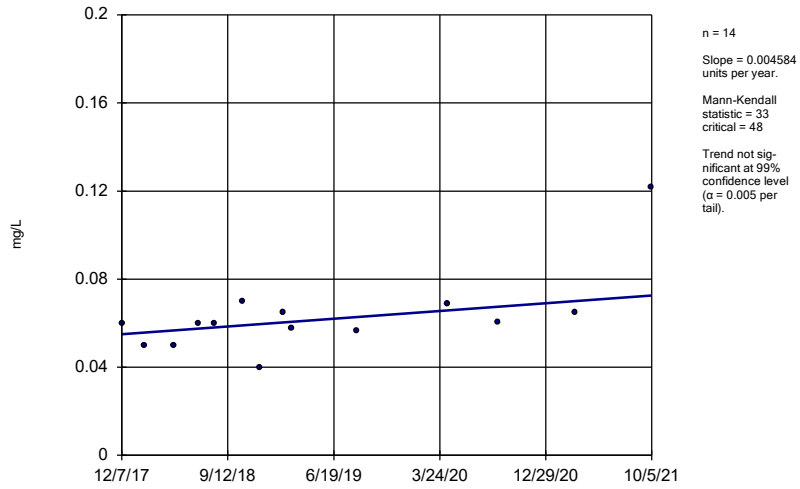


Constituent: Fluoride Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

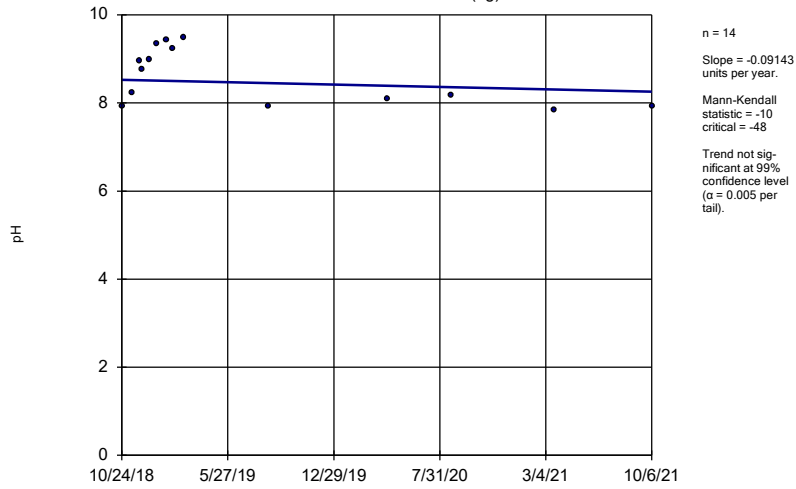
### Sen's Slope Estimator GSD-AP-MW-11



### Sen's Slope Estimator GSD-AP-MW-5

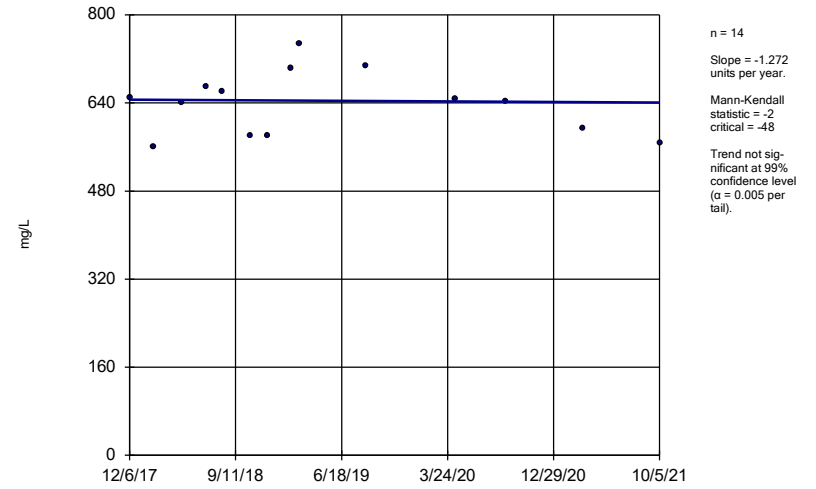


### Sen's Slope Estimator GSD-AP-MW-17 (bg)



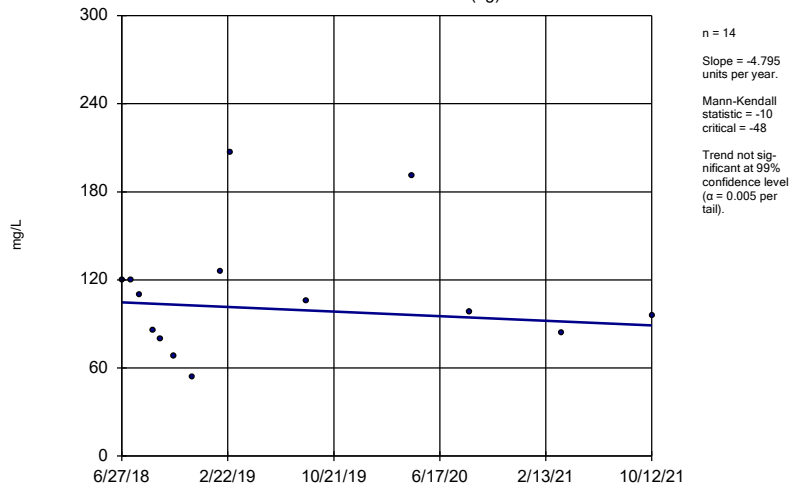
Constituent: pH Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-1



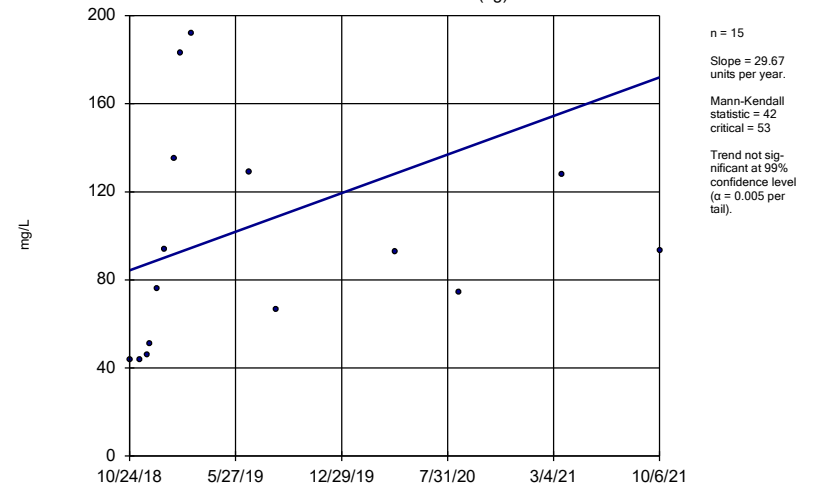
Constituent: Sulfate Analysis Run 1/13/2022 2:46 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-14 (bg)



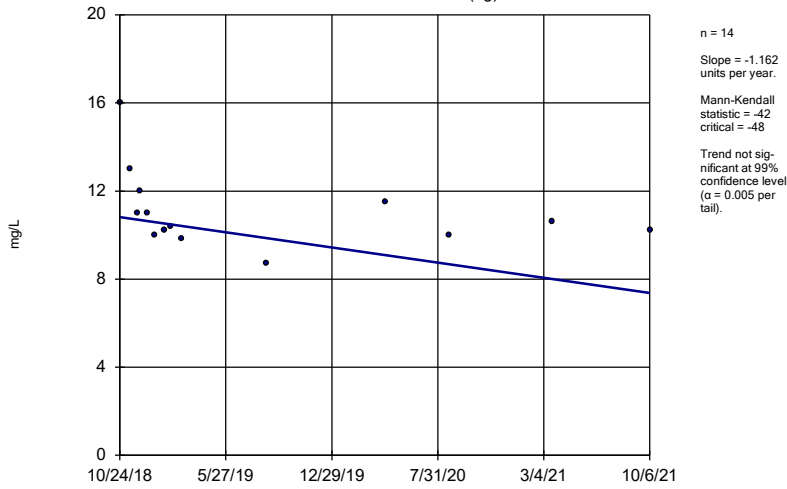
Constituent: Sulfate Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-16 (bg)



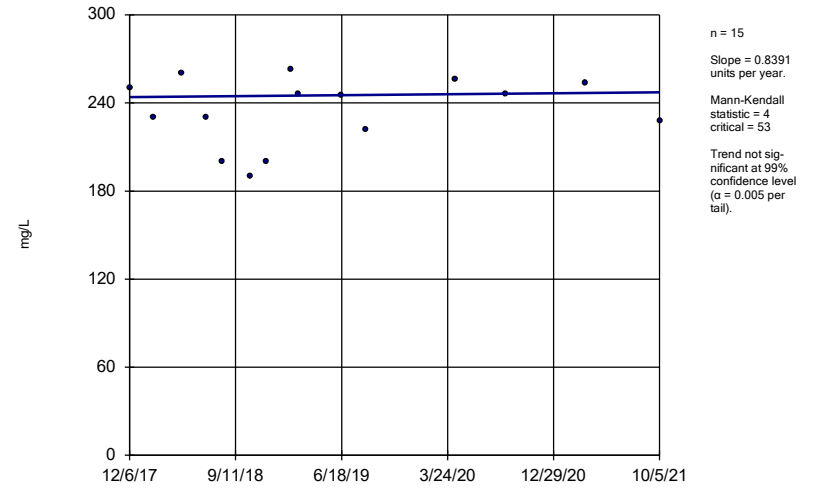
Constituent: Sulfate Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-17 (bg)



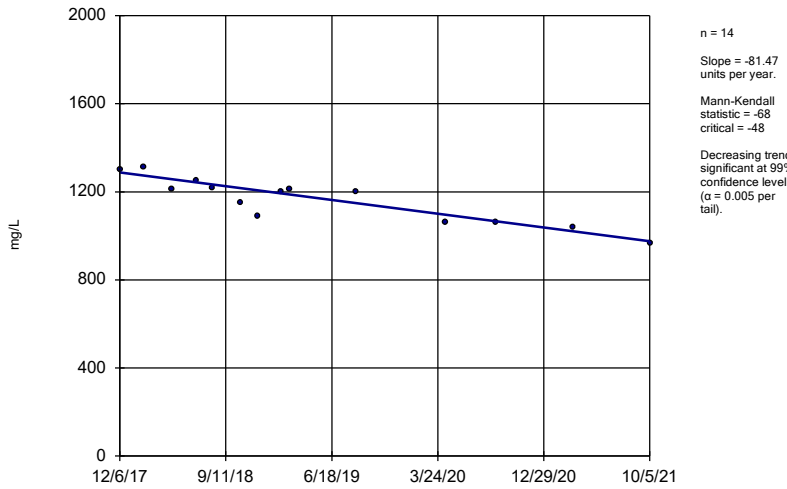
Constituent: Sulfate Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-3



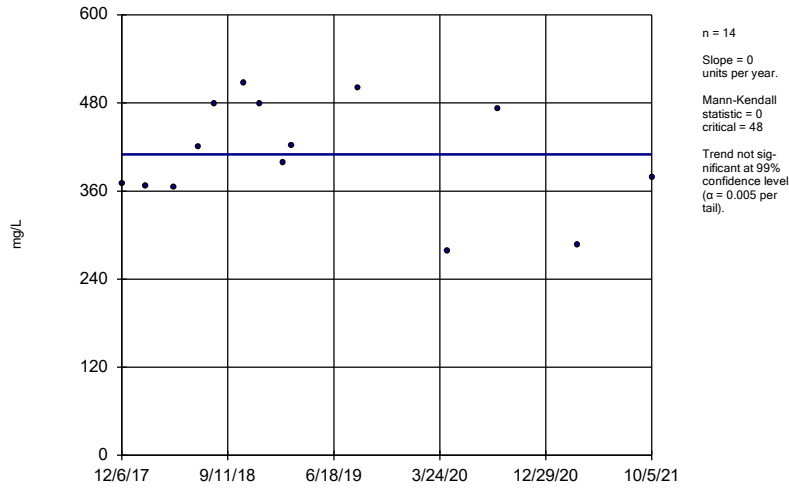
Constituent: Sulfate Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-1



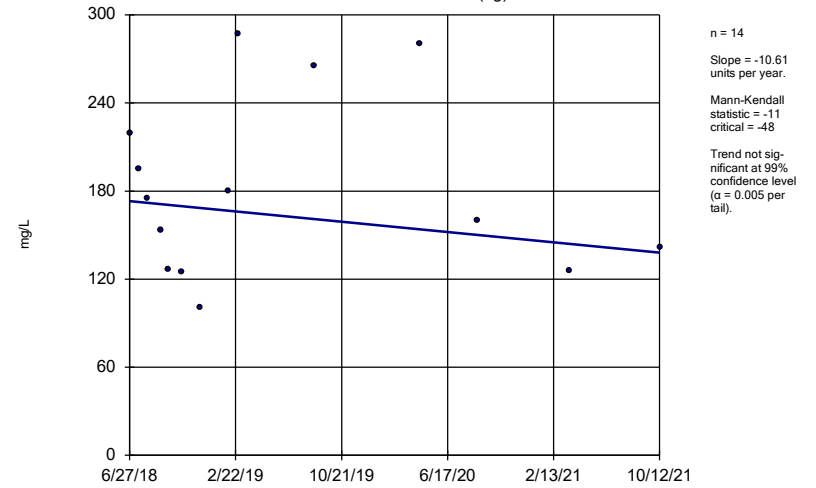


### Sen's Slope Estimator GSD-AP-MW-12



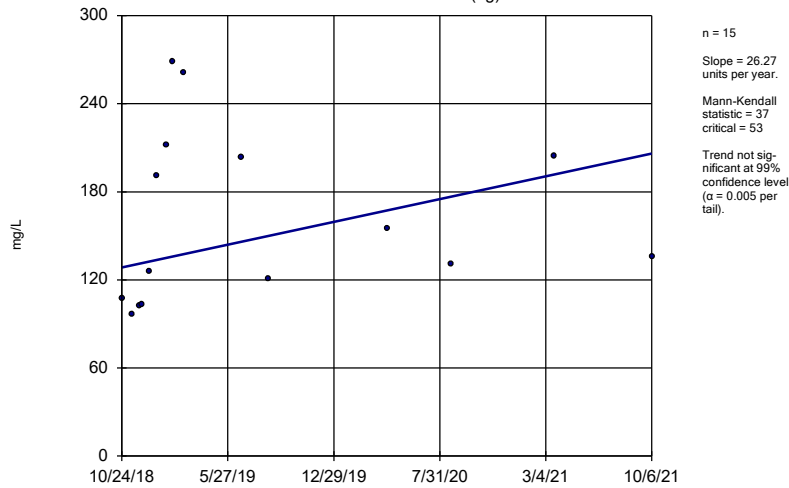
Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-14 (bg)



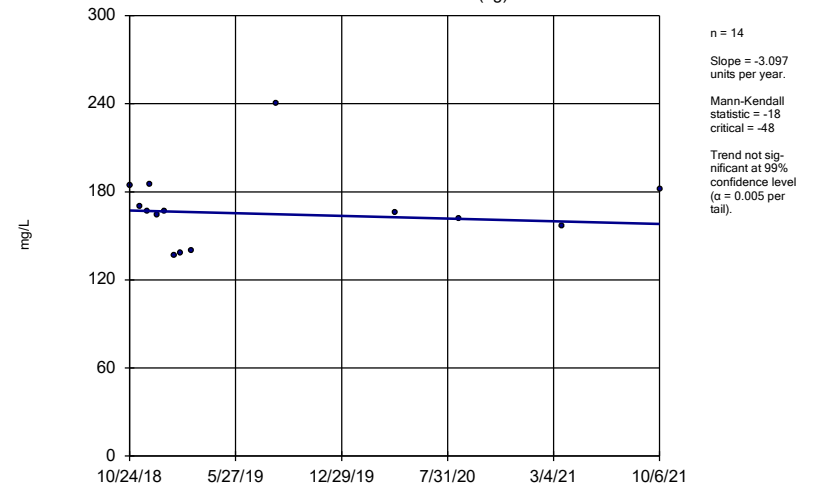
Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator GSD-AP-MW-16 (bg)



Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

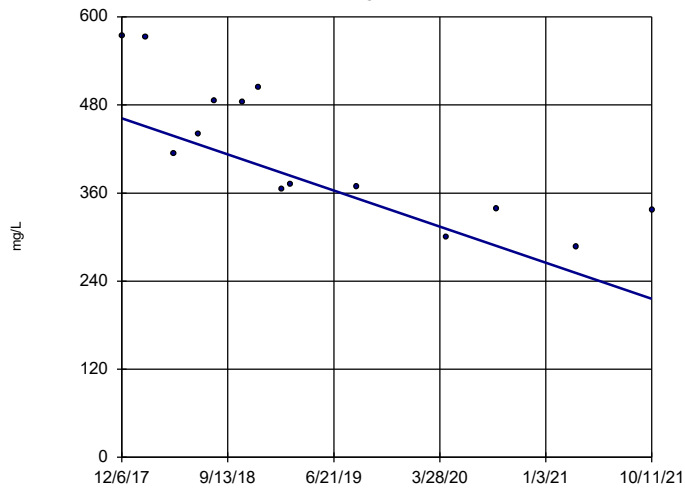
### Sen's Slope Estimator GSD-AP-MW-17 (bg)



Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-2

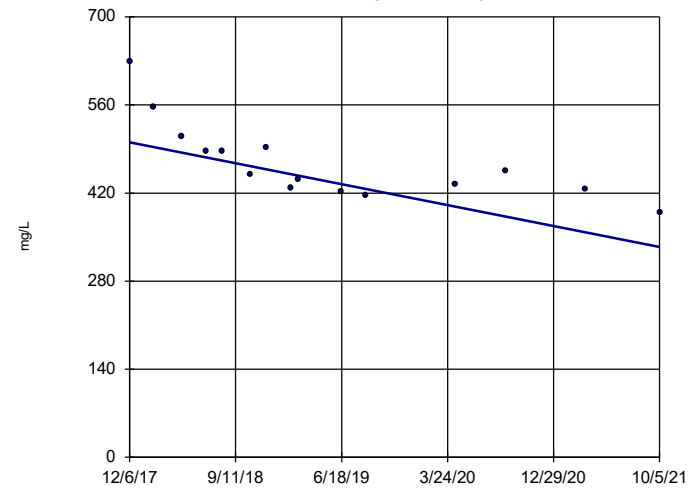


n = 14  
 Slope = -63.87  
 units per year.  
 Mann-Kendall  
 statistic = -63  
 critical = -48  
 Decreasing trend  
 significant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-3



n = 15  
 Slope = -43.33  
 units per year.  
 Mann-Kendall  
 statistic = -73  
 critical = -53  
 Decreasing trend  
 significant at 99%  
 confidence level  
 (α = 0.005 per  
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/13/2022 2:47 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

FIGURE I.

# 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 J.

<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 K.

# Appendix IV - Confidence Intervals - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/11/2022, 3:53 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-2	0.8867	0.4825	0.01	Yes	8	0.1907	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01443	0.01112	0.01	Yes	8	0.001561	0	No	0.01	Param.



# Appendix IV - Confidence Intervals - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/11/2022, 3:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	GSD-AP-PZ-5	0.00114	0.00102	0.006	No	8	0.00004243	87.5	No	0.004	NP (NDs)
Antimony (mg/L)	GSD-AP-PZ-6	0.00181	0.00102	0.006	No	8	0.0002793	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-1	0.004635	0.003167	0.01	No	8	0.0006925	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-10	0.004268	0.002367	0.01	No	8	0.0008972	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-11	0.002875	0.002467	0.01	No	8	0.0001991	0	x^2	0.01	Param.
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>0.8867</b>	<b>0.4825</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.1907</b>	<b>0</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-3	0.00021	0.0002	0.01	No	8	0.000003536	75	No	0.004	NP (NDs)
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>0.01443</b>	<b>0.01112</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.001561</b>	<b>0</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-5	0.0002	0.0000817	0.01	No	8	0.00004545	75	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-7	0.0002	0.00007	0.01	No	8	0.00004596	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-8	0.003237	0.002685	0.01	No	8	0.0002603	0	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-9	0.00118	0.0002	0.01	No	8	0.0004166	50	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-2	0.0002	0.0000826	0.01	No	4	0.00006571	50	No	0.0625	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-5	0.0002	0.0000808	0.01	No	8	0.00004214	87.5	No	0.004	NP (NDs)
Barium (mg/L)	GSD-AP-MW-1	0.04302	0.03178	2	No	8	0.005302	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-10	0.3583	0.272	2	No	8	0.0407	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-11	0.331	0.165	2	No	8	0.07117	0	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-MW-12	0.05203	0.03202	2	No	8	0.009438	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-2	0.07826	0.04999	2	No	8	0.01334	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-3	0.0545	0.0344	2	No	8	0.00667	0	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-MW-4	0.208	0.1663	2	No	8	0.01968	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-5	0.2509	0.2179	2	No	8	0.01556	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-6	0.07455	0.0586	2	No	8	0.007523	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-7	0.08968	0.06367	2	No	8	0.01227	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-8	0.2499	0.1821	2	No	8	0.03199	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-9	0.1978	0.1452	2	No	8	0.02484	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-1	0.09461	0.05414	2	No	8	0.01909	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-2	0.1828	0.006264	2	No	4	0.03889	0	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-5	0.126	0.0494	2	No	8	0.03219	0	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-PZ-6	0.0311	0.02888	2	No	8	0.001049	0	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-1	0.0002	0.0001	0.005	No	8	0.00004583	75	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-12	0.00069	0.0004022	0.005	No	8	0.0001357	0	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-2	0.0002	0.0000688	0.005	No	8	0.00004639	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-3	0.000438	0.0002	0.005	No	8	0.00009918	62.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-7	0.0002	0.000097	0.005	No	8	0.00003642	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-8	0.0002	0.0000832	0.005	No	8	0.0000413	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-PZ-5	0.0002	0.00008	0.005	No	8	0.00004243	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-1	0.00102	0.00023	0.1	No	8	0.0003342	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-10	0.00102	0.00028	0.1	No	8	0.0003269	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-11	0.00102	0.00027	0.1	No	8	0.0002981	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-12	0.00102	0.00034	0.1	No	8	0.0002947	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-2	0.00102	0.00047	0.1	No	8	0.0002523	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-3	0.00285	0.00023	0.1	No	8	0.0008008	62.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-4	0.00102	0.000323	0.1	No	8	0.0002464	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-5	0.00102	0.00028	0.1	No	8	0.000317	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-6	0.00102	0.00025	0.1	No	8	0.0003369	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-7	0.00102	0.00025	0.1	No	8	0.000323	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-8	0.00102	0.0003	0.1	No	8	0.0002546	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-9	0.00102	0.00031	0.1	No	8	0.0003042	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-1	0.00102	0.00035	0.1	No	8	0.0002899	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-2	0.001027	0.00008704	0.1	No	4	0.0003163	50	No	0.01	Param.
Chromium (mg/L)	GSD-AP-PZ-5	0.00102	0.00034	0.1	No	8	0.0002748	75	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-6	0.00102	0.00031	0.1	No	8	0.0002832	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-1	0.02458	0.0164	0.056	No	8	0.003859	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-10	0.00089	0.000203	0.056	No	8	0.0002416	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-11	0.00756	0.000203	0.056	No	8	0.003052	50	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-12	0.005722	0.003605	0.056	No	8	0.0009986	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-2	0.04018	0.02285	0.056	No	8	0.008175	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-3	0.02557	0.01775	0.056	No	8	0.003689	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-4	0.0277	0.0231	0.056	No	8	0.002167	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-5	0.00233	0.000203	0.056	No	8	0.0007658	12.5	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-6	0.00104	0.000203	0.056	No	8	0.0003829	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-7	0.00102	0.00018	0.056	No	8	0.0002901	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-MW-8	0.003677	0.001444	0.056	No	8	0.001466	25	x^2	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-9	0.00113	0.000203	0.056	No	8	0.0004069	75	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-1	0.00044	0.000203	0.056	No	8	0.00008379	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-2	0.008085	0.00006002	0.056	No	4	0.001767	0	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-5	0.00227	0.00008	0.056	No	8	0.0009513	50	No	0.004	NP (normality)

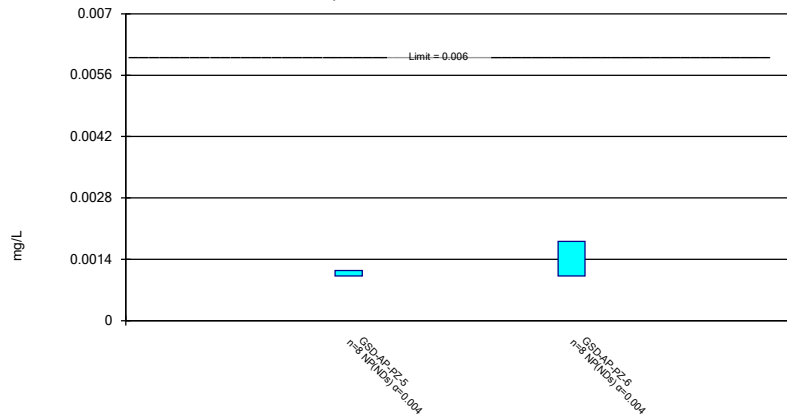
# Appendix IV - Confidence Intervals - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 1/11/2022, 3:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Cobalt (mg/L)	GSD-AP-PZ-6	0.000203	0.000108	0.056	No	8	0.00003756	75	No	0.004	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-1	0.9405	0.3485	5	No	8	0.2792	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-10	2.742	0.0046	5	No	8	2.17	0	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-11	1.318	0.7526	5	No	8	0.2668	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-12	1.226	0.1273	5	No	8	0.5182	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-2	1.54	0.2978	5	No	8	0.6692	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-3	1.65	0.1921	5	No	8	0.9789	0	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-4	1.285	0.1217	5	No	8	0.5489	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-5	1.235	0.3811	5	No	8	0.4027	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-6	1.36	-0.086	5	No	8	0.4386	0	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-7	0.9326	0.07467	5	No	8	0.4047	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-8	0.7288	0.2854	5	No	8	0.2092	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-9	1.146	0.1025	5	No	8	0.4922	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-1	2.07	-0.129	5	No	8	0.678	0	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-2	1.673	-0.496	5	No	4	0.4778	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-5	0.7655	0.172	5	No	8	0.28	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-6	1.116	0.003433	5	No	8	0.4985	0	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-1	0.1	0.04	4	No	8	0.026	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-10	0.1425	0.07281	4	No	8	0.04055	0	ln(x)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-11	0.1109	0.06956	4	No	8	0.01912	37.5	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-12	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-2	0.2781	0.1802	4	No	8	0.04616	0	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-3	0.1	0.0592	4	No	8	0.01915	62.5	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-4	0.2536	0.2094	4	No	8	0.02083	0	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-5	0.0889	0.04612	4	No	8	0.02389	0	ln(x)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-6	0.1	0.0581	4	No	8	0.0153	75	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-7	0.08844	0.06404	4	No	8	0.01568	37.5	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-8	0.1098	0.06858	4	No	8	0.01946	12.5	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-9	0.148	0.08501	4	No	8	0.03587	12.5	x^2	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-1	0.1038	0.07601	4	No	8	0.0133	25	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-5	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-PZ-6	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-MW-2	0.0002	0.00009	0.015	No	8	0.00003889	87.5	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-2	0.0002	0.00012	0.015	No	4	0.00003873	50	No	0.0625	NP (normality)
Lead (mg/L)	GSD-AP-PZ-5	0.0002	0.00013	0.015	No	8	0.00002475	87.5	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-6	0.0002	0.0000835	0.015	No	8	0.00004652	75	No	0.004	NP (NDs)
Lithium (mg/L)	GSD-AP-MW-2	0.06589	0.02824	0.04	No	8	0.01776	0	No	0.01	Param.
Mercury (mg/L)	GSD-AP-MW-10	0.0005	0.000302	0.002	No	8	0.00007	87.5	No	0.004	NP (NDs)
Mercury (mg/L)	GSD-AP-MW-7	0.0005	0.00034	0.002	No	8	0.00005657	87.5	No	0.004	NP (NDs)
Mercury (mg/L)	GSD-AP-MW-8	0.0005	0.000284	0.002	No	8	0.00007637	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-10	0.00045	0.000203	0.1	No	8	0.00008728	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-11	0.000203	0.000124	0.1	No	8	0.00003133	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-2	0.02559	0.01494	0.1	No	8	0.005024	0	No	0.01	Param.
Molybdenum (mg/L)	GSD-AP-MW-4	0.00118	0.000203	0.1	No	8	0.0004365	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-5	0.000203	0.00015	0.1	No	8	0.00001874	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-7	0.000203	0.0001	0.1	No	8	0.00003642	87.5	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-8	0.000357	0.000203	0.1	No	8	0.0000635	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-9	0.00027	0.00018	0.1	No	8	0.00002612	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-1	0.000203	0.00007	0.1	No	8	0.00005544	75	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-2	0.00028	0.000203	0.1	No	4	0.0000385	75	No	0.0625	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-1	0.0002	0.000112	0.002	No	8	0.00003111	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-2	0.0003549	0.0002241	0.002	No	8	0.00006169	12.5	No	0.01	Param.
Thallium (mg/L)	GSD-AP-MW-3	0.0002	0.000121	0.002	No	8	0.00003257	75	No	0.004	NP (NDs)

### Non-Parametric Confidence Interval

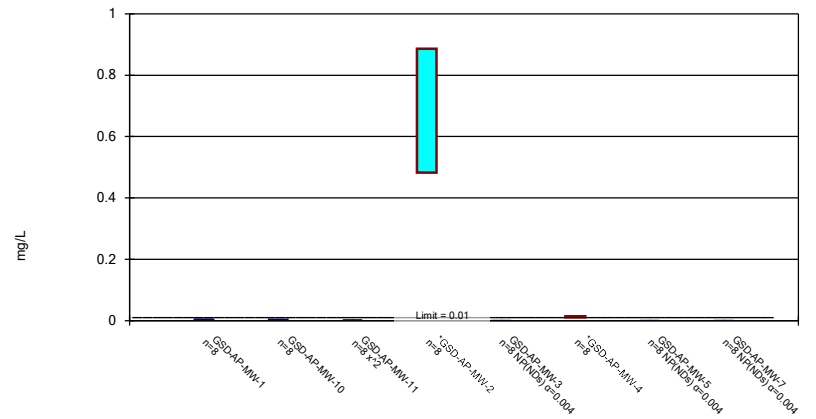
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

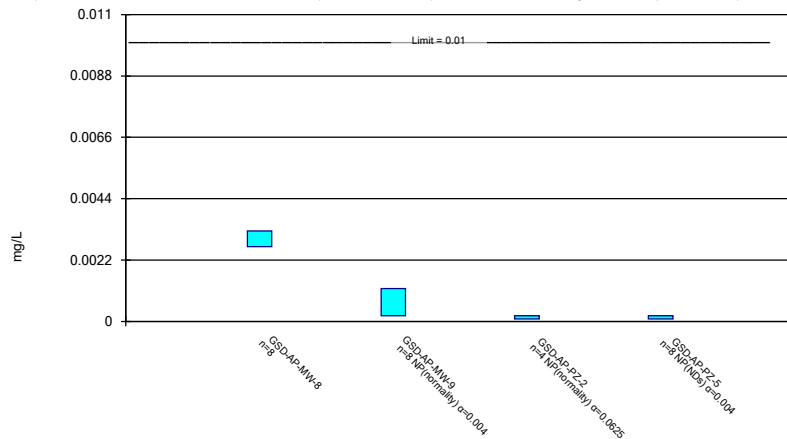
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

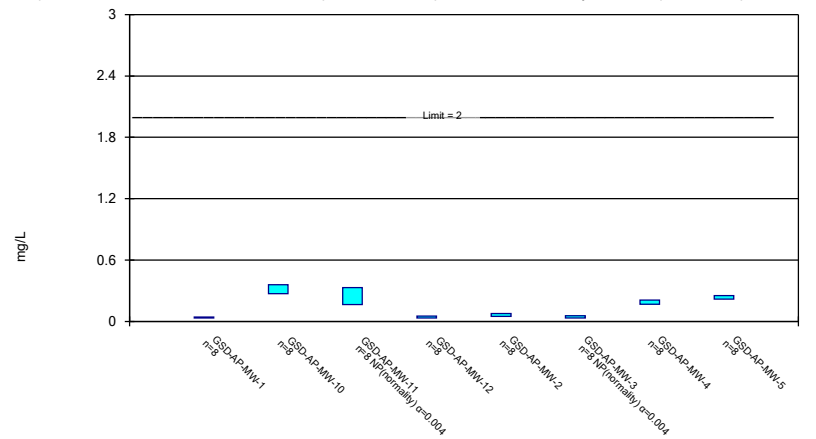
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

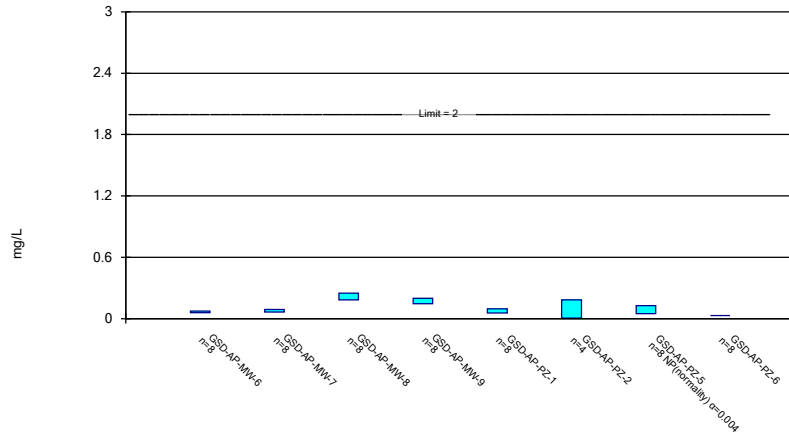
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

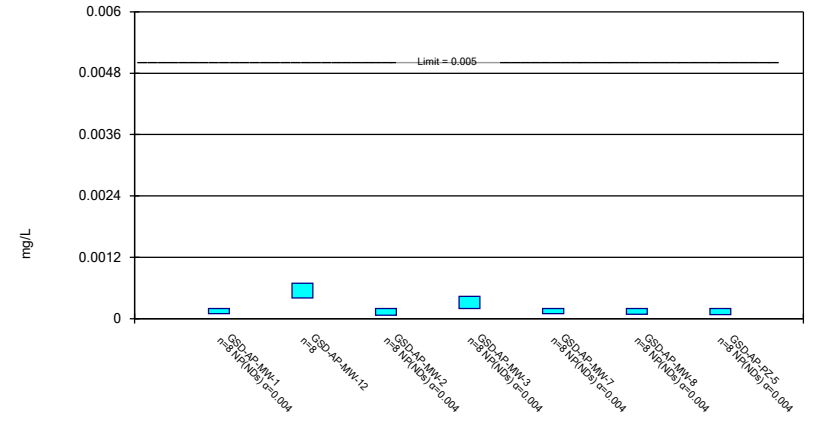
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

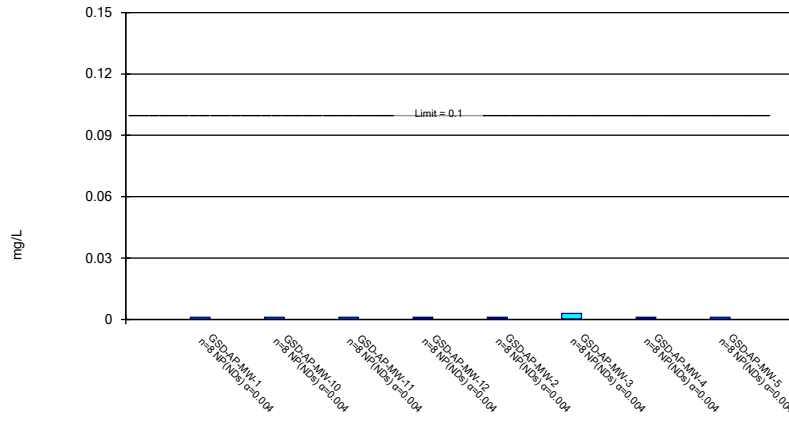
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

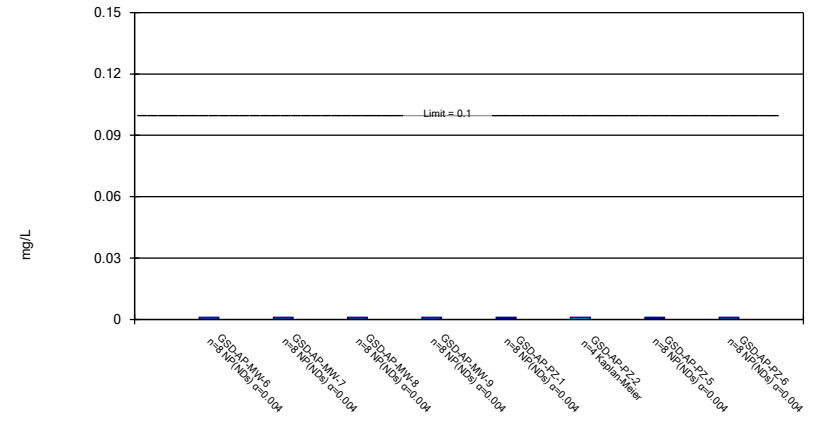
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

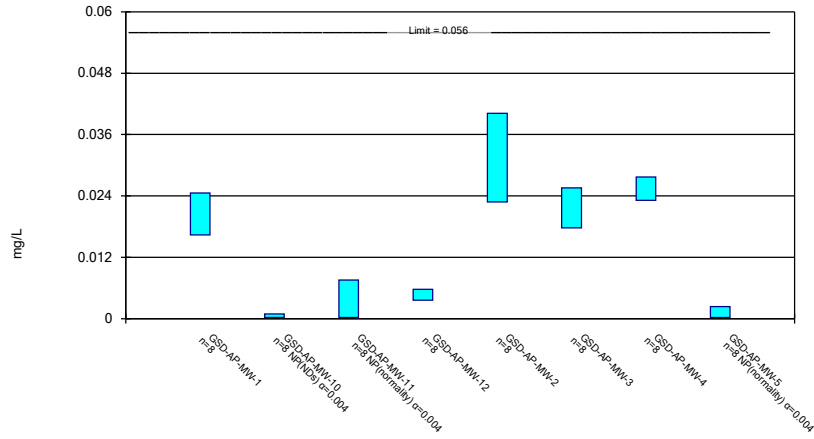
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 1/11/2022 3:49 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

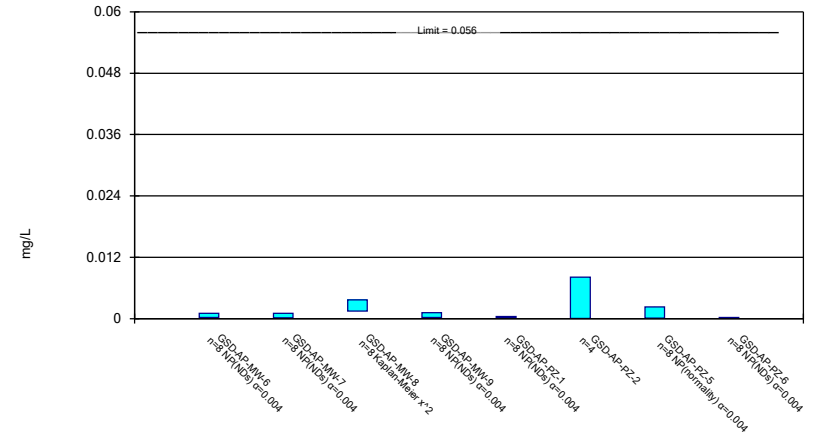
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

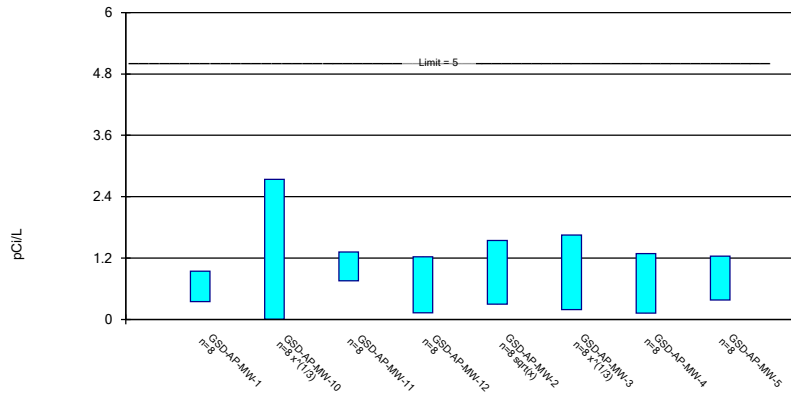
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric Confidence Interval

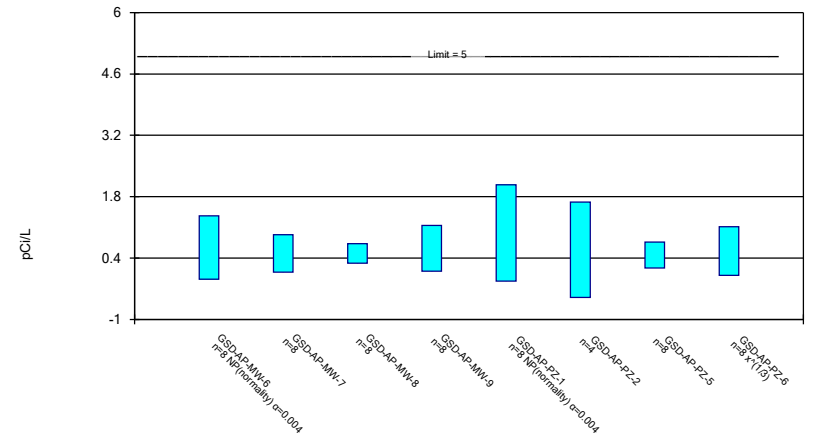
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

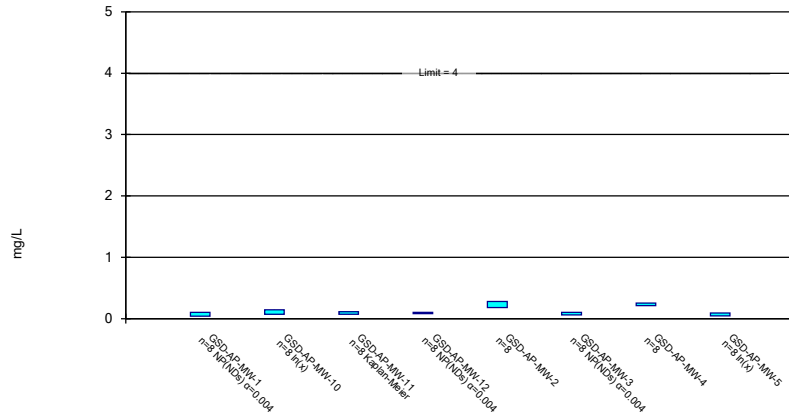
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

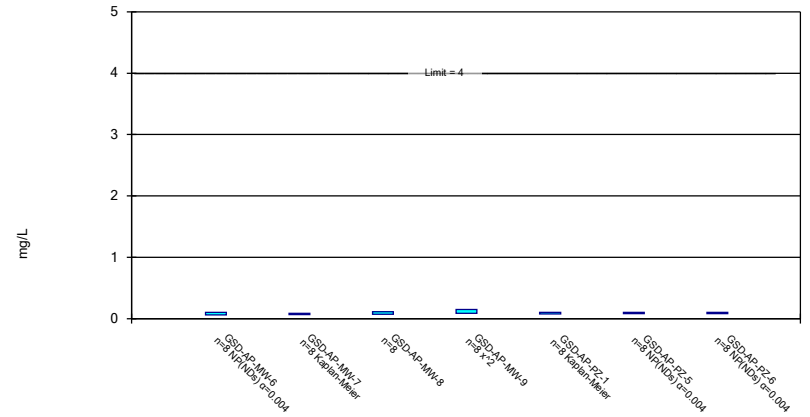
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

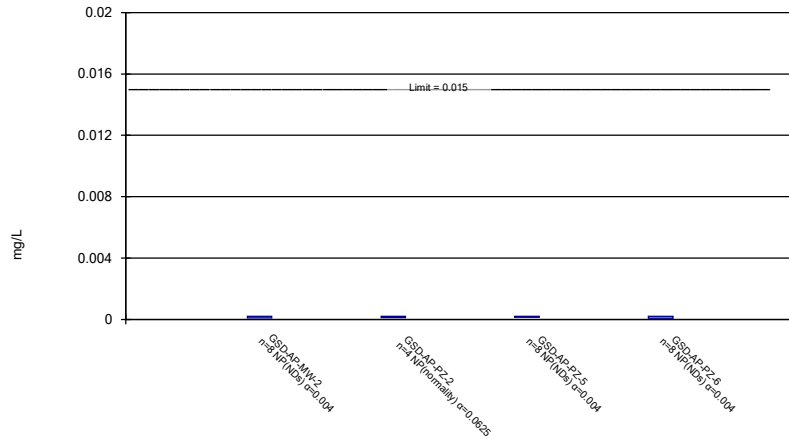
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

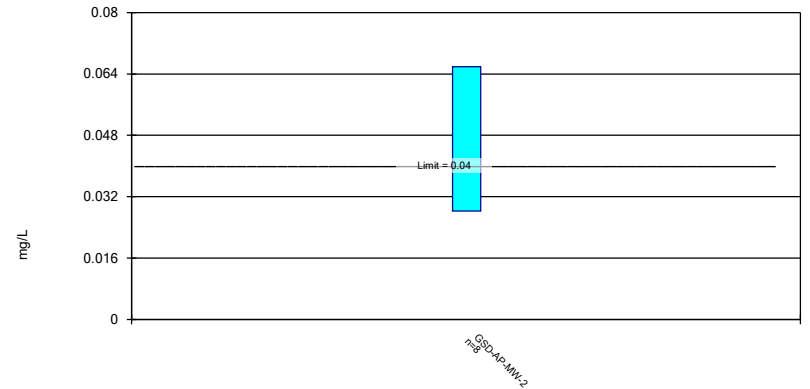
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric Confidence Interval

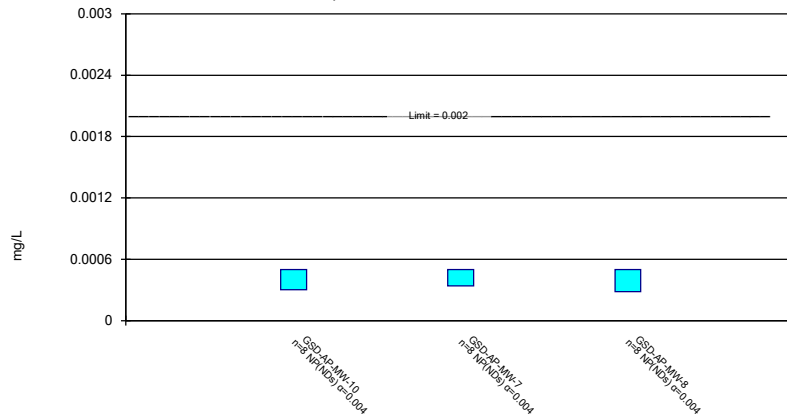
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

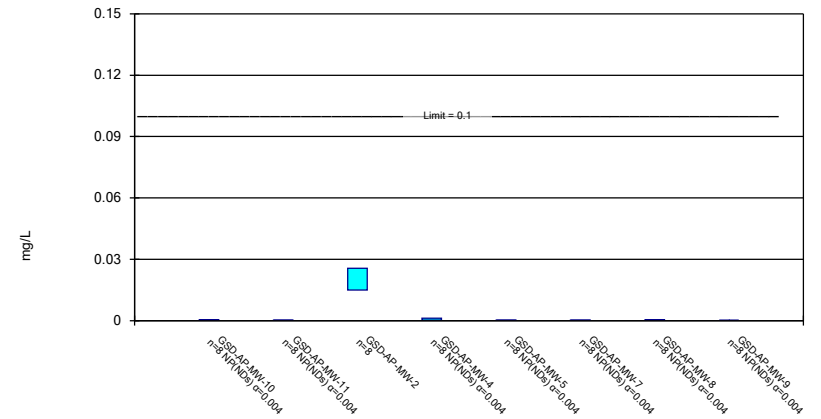
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

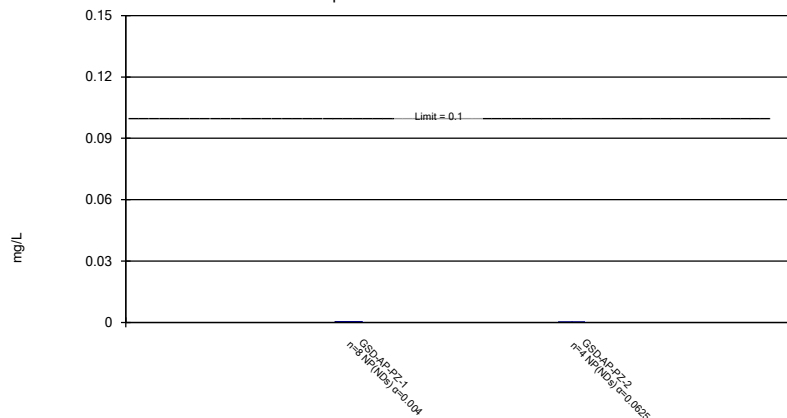
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 1/11/2022 3:50 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 1/11/2022 3:50 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 on n.



Constituent: Thallium Analysis Run 1/11/2022 3:50 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-5	GSD-AP-PZ-6
10/23/2018	<0.00102	<0.00102
12/3/2018	<0.00102	<0.00102
2/7/2019	0.00114 (J)	0.00181 (J)
8/21/2019	<0.00102	<0.00102
4/15/2020	<0.00102	<0.00102
8/24/2020	<0.00102	<0.00102
3/16/2021	<0.00102	<0.00102
10/12/2021	<0.00102	<0.00102
Mean	0.001035	0.001119
Std. Dev.	4.243E-05	0.0002793
Upper Lim.	0.00114	0.00181
Lower Lim.	0.00102	0.00102



# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 1/11/2022 3:53 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	GSD-AP-MW-5	GSD-AP-MW-7
10/22/2018	0.00451 (J)	0.00404 (J)		1.01		0.0144		
10/23/2018			0.00287 (J)				<0.0002	<0.0002
12/3/2018					<0.0002	0.0119		
12/4/2018	0.00471 (J)	0.00332 (J)	0.00271 (J)	0.553				<0.0002
12/5/2018							<0.0002	
2/5/2019	0.00365 (J)			0.74	<0.0002	0.0107	<0.0002	
2/6/2019		0.00333 (J)	0.00272 (J)					<0.0002
6/18/2019					<0.0002			
8/20/2019				0.825	<0.0002	0.0141	<0.0002	
8/21/2019	0.00444 (J)							<0.0002
8/22/2019		0.00394 (J)	0.00229 (J)					
4/13/2020					<0.0002		<0.0002	
4/14/2020			0.00286 (J)					
4/15/2020	0.00309 (J)	0.00236 (J)		0.709		0.0121		<0.0002
8/24/2020							<0.0002	
8/25/2020	0.00435 (J)			0.727				
8/26/2020		0.00422 (J)	0.00246 (J)		<0.0002	0.0133		<0.0002
3/16/2021	0.0029						8.17E-05 (J)	
3/22/2021					0.0002 (J)			
3/23/2021		0.00163	0.00275					<0.0002
3/24/2021				0.489		0.011		
10/5/2021	0.00356				0.00021	0.0147	0.00013 (J)	7E-05 (J)
10/11/2021		0.0037		0.424				
10/12/2021			0.00272					
Mean	0.003901	0.003318	0.002673	0.6846	0.0002012	0.01278	0.0001765	0.0001837
Std. Dev.	0.0006925	0.0008972	0.0001991	0.1907	3.536E-06	0.001561	4.545E-05	4.596E-05
Upper Lim.	0.004635	0.004268	0.002875	0.8867	0.00021	0.01443	0.0002	0.0002
Lower Lim.	0.003167	0.002367	0.002467	0.4825	0.0002	0.01112	8.17E-05	7E-05

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-2	GSD-AP-PZ-5
10/23/2018	0.00246 (J)	<0.0002		<0.0002
12/3/2018				<0.0002
12/4/2018	0.00328 (J)			
12/5/2018		0.00111 (J)		
2/6/2019	0.00325 (J)	<0.0002		
2/7/2019				<0.0002
8/21/2019	0.00302 (J)	<0.0002		<0.0002
4/13/2020			<0.0002	
4/14/2020	0.00295 (J)	0.00118 (J)		
4/15/2020				<0.0002
8/24/2020			<0.0002	<0.0002
8/26/2020	0.00304 (J)	<0.0002		
3/16/2021				8.08E-05 (J)
3/17/2021			8.26E-05 (J)	
3/23/2021	0.00282	0.00063		
10/5/2021			9E-05 (J)	
10/12/2021	0.00287	0.00064		<0.0002
Mean	0.002961	0.000545	0.0001431	0.0001851
Std. Dev.	0.0002603	0.0004166	6.571E-05	4.214E-05
Upper Lim.	0.003237	0.00118	0.0002	0.0002
Lower Lim.	0.002685	0.0002	8.26E-05	8.08E-05

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 1/11/2022 3:53 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	GSD-AP-MW-4	GSD-AP-MW-5
10/22/2018	0.0427	0.29			0.0536		0.209	
10/23/2018			0.311	0.054				0.26
12/3/2018						0.0545	0.214	
12/4/2018	0.0434	0.305	0.331		0.0589			
12/5/2018				0.0493				0.245
2/5/2019	0.0439				0.0418	0.0363	0.173	0.215
2/6/2019		0.265	0.286	0.036				
6/18/2019						0.0369		
8/20/2019					0.0685	0.0405	0.188	0.238
8/21/2019	0.037							
8/22/2019		0.302	0.214	0.0455				
4/13/2020						0.0349		0.241
4/14/2020			0.168	0.0279				
4/15/2020	0.0329	0.35			0.0607		0.159	
8/24/2020								0.238
8/25/2020	0.0358				0.0812			
8/26/2020		0.322	0.165	0.0503		0.0363	0.181	
3/16/2021	0.0331							0.217
3/22/2021						0.0354		
3/23/2021		0.395	0.169	0.0315				
3/24/2021					0.0676		0.171	
10/5/2021	0.0304			0.0417		0.0344	0.202	0.221
10/11/2021		0.292			0.0807			
10/12/2021			0.17					
Mean	0.0374	0.3151	0.2268	0.04203	0.06413	0.03865	0.1871	0.2344
Std. Dev.	0.005302	0.0407	0.07117	0.009438	0.01334	0.00667	0.01968	0.01556
Upper Lim.	0.04302	0.3583	0.331	0.05203	0.07826	0.0545	0.208	0.2509
Lower Lim.	0.03178	0.272	0.165	0.03202	0.04999	0.0344	0.1663	0.2179

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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
10/22/2018					0.102			
10/23/2018	0.0608	0.0898	0.17	0.183			0.125	0.0298
12/3/2018	0.0633				0.0784		0.126	0.0307
12/4/2018		0.0789	0.189					
12/5/2018				0.186				
2/5/2019	0.0551				0.0578			
2/6/2019		0.0685	0.226	0.128				
2/7/2019							0.0602	0.028
8/20/2019	0.0731				0.097			
8/21/2019		0.0946	0.194	0.183			0.085	0.0312
4/13/2020	0.0635				0.0529	0.0832		
4/14/2020			0.262	0.186				
4/15/2020		0.0653					0.0535	0.0296
8/24/2020					0.0733	0.132	0.0565	0.031
8/26/2020	0.0771	0.0845	0.235	0.202				
3/16/2021							0.0553	0.0293
3/17/2021	0.0656					0.045		
3/23/2021		0.0602	0.249	0.157				
3/24/2021					0.0525			
10/5/2021	0.0741	0.0716			0.0811	0.118		
10/12/2021			0.203	0.147			0.0494	0.0303
Mean	0.06658	0.07668	0.216	0.1715	0.07438	0.09455	0.07636	0.02999
Std. Dev.	0.007523	0.01227	0.03199	0.02484	0.01909	0.03889	0.03219	0.001049
Upper Lim.	0.07455	0.08968	0.2499	0.1978	0.09461	0.1828	0.126	0.0311
Lower Lim.	0.0586	0.06367	0.1821	0.1452	0.05414	0.006264	0.0494	0.02888

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 1/11/2022 3:53 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	GSD-AP-PZ-5
10/22/2018	<0.0002		<0.0002				
10/23/2018		0.000552 (J)			<0.0002	<0.0002	<0.0002
12/3/2018				<0.0002			<0.0002
12/4/2018	<0.0002		<0.0002		<0.0002	<0.0002	
12/5/2018		0.000661 (J)					
2/5/2019	<0.0002		<0.0002	<0.0002			
2/6/2019		0.000583 (J)			<0.0002	<0.0002	
2/7/2019							<0.0002
6/18/2019				<0.0002			
8/20/2019			<0.0002	<0.0002			
8/21/2019	<0.0002				<0.0002	<0.0002	<0.0002
8/22/2019		0.000755 (J)					
4/13/2020				0.000438 (J)			
4/14/2020		0.000425 (J)				<0.0002	
4/15/2020	<0.0002		<0.0002		<0.0002		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.0002		<0.0002				
8/26/2020		0.000618 (J)		<0.0002	<0.0002	<0.0002	
3/16/2021	0.000102 (J)						<0.0002
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	<0.0002		
10/11/2021			<0.0002				
10/12/2021						<0.0002	8E-05 (J)
Mean	0.0001752	0.0005461	0.0001836	0.0002547	0.0001871	0.0001854	0.000185
Std. Dev.	4.583E-05	0.0001357	4.639E-05	9.918E-05	3.642E-05	4.13E-05	4.243E-05
Upper Lim.	0.0002	0.00069	0.0002	0.000438	0.0002	0.0002	0.0002
Lower Lim.	0.0001	0.0004022	6.88E-05	0.0002	9.7E-05	8.32E-05	8E-05

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 1/11/2022 3:53 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	GSD-AP-MW-4	GSD-AP-MW-5
10/22/2018	<0.00102	<0.00102			<0.00102		<0.00102	
10/23/2018			<0.00102	<0.00102				<0.00102
12/3/2018						<0.00102	<0.00102	
12/4/2018	<0.00102	<0.00102	<0.00102		<0.00102			
12/5/2018				<0.00102				<0.00102
2/5/2019	<0.00102				<0.00102	<0.00102	<0.00102	<0.00102
2/6/2019		<0.00102	<0.00102	<0.00102				
6/18/2019						0.00285 (J)		
8/20/2019					<0.00102	<0.00102	<0.00102	<0.00102
8/21/2019	<0.00102							
8/22/2019		<0.00102	<0.00102	<0.00102				
4/13/2020						<0.00102		<0.00102
4/14/2020			<0.00102	<0.00102				
4/15/2020	<0.00102	<0.00102			<0.00102		<0.00102	
8/24/2020								<0.00102
8/25/2020	<0.00102				<0.00102			
8/26/2020		<0.00102	<0.00102	<0.00102		<0.00102	<0.00102	
3/16/2021	0.000376 (J)							0.000397 (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)		0.000323 (J)	
10/5/2021	0.00023 (J)			0.00034 (J)		0.00023 (J)	<0.00102	0.00028 (J)
10/11/2021		0.00028 (J)			0.00048 (J)			
10/12/2021			0.00027 (J)					
Mean	0.0008407	0.0008437	0.0008629	0.0008614	0.0008837	0.001059	0.0009329	0.0008496
Std. Dev.	0.0003342	0.0003269	0.0002981	0.0002947	0.0002523	0.0008008	0.0002464	0.000317
Upper Lim.	0.00102	0.00102	0.00102	0.00102	0.00102	0.00285	0.00102	0.00102
Lower Lim.	0.00023	0.00028	0.00027	0.00034	0.00047	0.00023	0.000323	0.00028

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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
10/22/2018					<0.00102			
10/23/2018	<0.00102	<0.00102	<0.00102	<0.00102			<0.00102	<0.00102
12/3/2018	<0.00102				<0.00102		<0.00102	<0.00102
12/4/2018		<0.00102	<0.00102					
12/5/2018				<0.00102				
2/5/2019	<0.00102				<0.00102			
2/6/2019		<0.00102	<0.00102	<0.00102				
2/7/2019							<0.00102	<0.00102
8/20/2019	<0.00102				<0.00102			
8/21/2019		<0.00102	<0.00102	<0.00102			<0.00102	<0.00102
4/13/2020	<0.00102				<0.00102	<0.00102		
4/14/2020			<0.00102	<0.00102				
4/15/2020		<0.00102					<0.00102	<0.00102
8/24/2020					<0.00102	<0.00102	<0.00102	<0.00102
8/26/2020	<0.00102	<0.00102	<0.00102	<0.00102				
3/16/2021							0.000534 (J)	0.000534 (J)
3/17/2021	0.000338 (J)					0.000764 (J)		
3/23/2021		0.000406 (J)	0.0003 (J)	0.000422 (J)				
3/24/2021					0.000442 (J)			
10/5/2021	0.00025 (J)	0.00025 (J)			0.00035 (J)	0.00035 (J)		
10/12/2021			<0.00102	0.00031 (J)			0.00034 (J)	0.00031 (J)
Mean	0.0008385	0.000847	0.00093	0.0008565	0.000864	0.0007885	0.0008742	0.0008705
Std. Dev.	0.0003369	0.000323	0.0002546	0.0003042	0.0002899	0.0003163	0.0002748	0.0002832
Upper Lim.	0.00102	0.00102	0.00102	0.00102	0.00102	0.001027	0.00102	0.00102
Lower Lim.	0.00025	0.00025	0.0003	0.00031	0.00035	8.704E-05	0.00034	0.00031

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 1/11/2022 3:53 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	GSD-AP-MW-4	GSD-AP-MW-5
10/22/2018	0.0243	<0.000203			0.0438		0.0259	
10/23/2018			<0.000203	0.00399 (J)				0.0023 (J)
12/3/2018						0.0238	0.0228	
12/4/2018	0.0166	<0.000203	<0.000203		0.0252			
12/5/2018				0.00466 (J)				0.00233 (J)
2/5/2019	0.0264				0.0362	0.0232	0.0263	0.0021 (J)
2/6/2019		<0.000203	<0.000203	0.00485 (J)				
6/18/2019						0.0263		
8/20/2019					0.0366	0.0257	0.0293	0.00223 (J)
8/21/2019	0.0242							
8/22/2019		<0.000203	0.00756	0.00658				
4/13/2020						0.0209		<0.000203
4/14/2020			<0.000203	0.0035 (J)				
4/15/2020	0.0178	<0.000203			0.0324		0.0252	
8/24/2020								0.00222 (J)
8/25/2020	0.0193				0.0298			
8/26/2020		<0.000203	0.00599	0.00547		0.0191	0.0231	
3/16/2021	0.0184							0.00136
3/22/2021						0.0183		
3/23/2021		0.00037	0.000388	0.00378				
3/24/2021					0.0316		0.0268	
10/5/2021	0.0169			0.00448		0.016	0.0238	0.00116
10/11/2021		0.00089			0.0165			
10/12/2021			0.00027					
Mean	0.02049	0.0003098	0.001878	0.004664	0.03151	0.02166	0.0254	0.001738
Std. Dev.	0.003859	0.0002416	0.003052	0.0009986	0.008175	0.003689	0.002167	0.0007658
Upper Lim.	0.02458	0.00089	0.00756	0.005722	0.04018	0.02557	0.0277	0.00233
Lower Lim.	0.0164	0.000203	0.000203	0.003605	0.02285	0.01775	0.0231	0.000203



# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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
10/22/2018					<0.000203			
10/23/2018	<0.000203	<0.000203	<0.000203	<0.000203			<0.000203	<0.000203
12/3/2018	<0.000203				<0.000203		0.00227 (J)	<0.000203
12/4/2018		<0.000203	<0.000203					
12/5/2018				<0.000203				
2/5/2019	<0.000203				<0.000203			
2/6/2019		<0.000203	0.00232 (J)	<0.000203				
2/7/2019							<0.000203	<0.000203
8/20/2019	<0.000203				<0.000203			
8/21/2019		<0.000203	0.00303 (J)	<0.000203			0.00225 (J)	<0.000203
4/13/2020	<0.000203				<0.000203	0.00489 (J)		
4/14/2020			0.00385 (J)	<0.000203				
4/15/2020		<0.000203					<0.000203	<0.000203
8/24/2020					<0.000203	0.00237 (J)	<0.000203	<0.000203
8/26/2020	<0.000203	<0.000203	0.00388 (J)	<0.000203				
3/16/2021							0.000384	0.000108 (J)
3/17/2021	0.00102					0.00616		
3/23/2021		0.00102	0.003	0.00103				
3/24/2021					<0.000203			
10/5/2021	0.00104	0.00018 (J)			0.00044	0.00287		
10/12/2021			0.00298	0.00113			8E-05 (J)	0.00014 (J)
Mean	0.0004098	0.0003023	0.002433	0.0004223	0.0002326	0.004073	0.0007245	0.0001833
Std. Dev.	0.0003829	0.0002901	0.001466	0.0004069	8.379E-05	0.001767	0.0009513	3.756E-05
Upper Lim.	0.00104	0.00102	0.003677	0.00113	0.00044	0.008085	0.00227	0.000203
Lower Lim.	0.000203	0.00018	0.001444	0.000203	0.000203	6.002E-05	8E-05	0.000108

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/11/2022 3:53 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	GSD-AP-MW-4	GSD-AP-MW-5
10/22/2018	0.691	0.36 (U)			0.996	0.749	1.06	
10/23/2018			1.3	0.796				1.01
12/3/2018						0.749	0.697	
12/4/2018	0.213 (U)	0.407 (U)	1.05		0.739			
12/5/2018				0.498 (U)				0.876
2/5/2019	0.637				1.09	0.299 (U)	0.467 (U)	0.551 (U)
2/6/2019		0.537	0.779	-0.0241 (U)				
8/20/2019					0.553 (U)	0.709 (U)	0.814	0.206 (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)		1.19
4/14/2020			0.922 (U)	0.643 (U)				
4/15/2020	0.538 (U)	0.64 (U)			0.182 (U)		-0.0841 (U)	
8/24/2020								0.482 (U)
8/25/2020	0.502 (U)				0.43 (U)			
8/26/2020		0.221 (U)	1.28	1.31		0.177 (U)	0.26 (U)	
3/16/2021	0.722 (U)							0.709 (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)		0.664 (U)	
10/5/2021	1.21			1.48		3.21	1.75	1.44
10/11/2021		6.52			2.38			
10/12/2021			1.02 (U)					
Mean	0.6445	1.187	1.035	0.6766	0.8924	0.8873	0.7035	0.808
Std. Dev.	0.2792	2.17	0.2668	0.5182	0.6692	0.9789	0.5489	0.4027
Upper Lim.	0.9405	2.742	1.318	1.226	1.54	1.65	1.285	1.235
Lower Lim.	0.3485	0.0046	0.7526	0.1273	0.2978	0.1921	0.1217	0.3811

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	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
10/22/2018					0.621			
10/23/2018	0.243 (U)	0.703	0.319 (U)	0.395 (U)			0.383 (U)	0.352 (U)
12/3/2018	0.304 (U)				0.188 (U)		0.736	0.238 (U)
12/4/2018		0.325 (U)	0.875					
12/5/2018				0.52 (U)				
2/5/2019	0.196 (U)				0.274 (U)			
2/6/2019		0.0774 (U)	0.378 (U)	0.244 (U)				
2/7/2019							0.0202 (U)	0.395 (U)
8/20/2019	-0.086 (U)				0.663			
8/21/2019		-0.0134 (U)	0.552 (U)	1.53 (U)			0.442 (U)	-0.00256 (U)
4/13/2020	0.0901 (U)				-0.129 (U)	0.472 (U)		
4/14/2020			0.641 (U)	0.119 (U)				
4/15/2020		0.526 (U)					0.432 (U)	0.000738 (U)
8/24/2020					0.177 (U)	-0.00312 (U)	0.454 (U)	0.404 (U)
8/26/2020	0.416 (U)	0.691 (U)	0.339 (U)	1.18				
3/16/2021							0.32 (U)	0.589 (U)
3/17/2021	0.539 (U)					0.756 (U)		
3/23/2021		0.45 (U)	0.662 (U)	0.694 (U)				
3/24/2021					0.245 (U)			
10/5/2021	1.36	1.27			2.07	1.13		
10/12/2021			0.291 (U)	0.311 (U)			0.963 (U)	1.57
Mean	0.3828	0.5036	0.5071	0.6241	0.5136	0.5887	0.4688	0.4433
Std. Dev.	0.4386	0.4047	0.2092	0.4922	0.678	0.4778	0.28	0.4985
Upper Lim.	1.36	0.9326	0.7288	1.146	2.07	1.673	0.7655	1.116
Lower Lim.	-0.086	0.07467	0.2854	0.1025	-0.129	-0.496	0.172	0.003433

# Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 1/11/2022 3:53 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	GSD-AP-MW-4	GSD-AP-MW-5
12/3/2018							0.22	
12/4/2018	0.04 (J)	0.07 (J)	<0.1		0.15			
12/5/2018				<0.1				0.04 (J)
2/5/2019	0.0525 (J)				0.207	0.064 (J)	0.259	0.0651 (J)
2/6/2019		0.107	0.0678 (J)	<0.1				
2/25/2019						<0.1		
2/26/2019	<0.1	0.0813 (J)			0.264		0.246	
2/27/2019			0.0985 (J)	<0.1				0.0578 (J)
6/18/2019						0.0664 (J)		
8/20/2019					0.252	0.0592 (J)	0.197	0.0567 (J)
8/21/2019	<0.1							
8/22/2019		0.084 (J)	<0.1	<0.1				
4/13/2020						<0.1		0.0688 (J)
4/14/2020			0.0878 (J)	<0.1				
4/15/2020	<0.1	0.112			0.21		0.238	
8/24/2020								0.0607 (J)
8/25/2020	<0.1				0.273			
8/26/2020		0.0997 (J)	<0.1	<0.1		<0.1	0.251	
3/16/2021	<0.1							0.065 (J)
3/22/2021						<0.1		
3/23/2021		0.101	0.0819 (J)	<0.1				
3/24/2021					0.194		0.227	
10/5/2021	0.0601 (J)			<0.1		<0.1	0.214	0.122
10/11/2021		0.201			0.283			
10/12/2021			0.134					
Mean	0.08158	0.107	0.09625	0.1	0.2291	0.0862	0.2315	0.06701
Std. Dev.	0.026	0.04055	0.01912	0	0.04616	0.01915	0.02083	0.02389
Upper Lim.	0.1	0.1425	0.1109	0.1	0.2781	0.1	0.2536	0.0889
Lower Lim.	0.04	0.07281	0.06956	0.1	0.1802	0.0592	0.2094	0.04612

# Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-PZ-6
12/3/2018	<0.1				0.08 (J)	<0.1	<0.1
12/4/2018		0.06 (J)	0.08 (J)				
12/5/2018				0.04 (J)			
2/5/2019	0.0581 (J)				0.0934 (J)		
2/6/2019		<0.1	<0.1	<0.1			
2/7/2019						<0.1	<0.1
2/25/2019					<0.1	<0.1	<0.1
2/26/2019	0.0816 (J)						
2/27/2019		0.0824 (J)	0.108	0.147			
8/20/2019	<0.1				0.0889 (J)		
8/21/2019		0.068 (J)	0.0648 (J)	0.0984 (J)		<0.1	<0.1
4/13/2020	<0.1				0.103		
4/14/2020			0.0845 (J)	0.133			
4/15/2020		0.0775 (J)				<0.1	<0.1
8/24/2020					0.114	<0.1	<0.1
8/26/2020	<0.1	<0.1	0.0732 (J)	0.13			
3/16/2021						<0.1	<0.1
3/17/2021	<0.1						
3/23/2021		<0.1	0.0802 (J)	0.132			
3/24/2021					0.0725 (J)		
10/5/2021	<0.1	0.0933 (J)			<0.1		
10/12/2021			0.123	0.147		<0.1	<0.1
Mean	0.09246	0.08515	0.08921	0.1159	0.09398	0.1	0.1
Std. Dev.	0.0153	0.01568	0.01946	0.03587	0.0133	0	0
Upper Lim.	0.1	0.08844	0.1098	0.148	0.1038	0.1	0.1
Lower Lim.	0.0581	0.06404	0.06858	0.08501	0.07601	0.1	0.1

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 1/11/2022 3:53 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
10/22/2018	<0.0002			
10/23/2018			<0.0002	<0.0002
12/3/2018			<0.0002	<0.0002
12/4/2018	<0.0002			
2/5/2019	<0.0002			
2/7/2019			<0.0002	<0.0002
8/20/2019	<0.0002			
8/21/2019			<0.0002	<0.0002
4/13/2020		<0.0002		
4/15/2020	<0.0002		<0.0002	<0.0002
8/24/2020		<0.0002	<0.0002	<0.0002
8/25/2020	<0.0002			
3/16/2021			0.00013 (J)	8.35E-05 (J)
3/17/2021		0.000191 (J)		
3/24/2021	<0.0002			
10/5/2021		0.00012 (J)		
10/11/2021	9E-05 (J)			
10/12/2021			<0.0002	0.00012 (J)
Mean	0.0001862	0.0001777	0.0001912	0.0001754
Std. Dev.	3.889E-05	3.873E-05	2.475E-05	4.652E-05
Upper Lim.	0.0002	0.0002	0.0002	0.0002
Lower Lim.	9E-05	0.00012	0.00013	8.35E-05

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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GSD-AP-MW-2

10/22/2018	0.0804
12/4/2018	0.0474
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
Mean	0.04706
Std. Dev.	0.01776
Upper Lim.	0.06589
Lower Lim.	0.02824

# Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-10	GSD-AP-MW-7	GSD-AP-MW-8
10/22/2018	<0.0005		
10/23/2018		<0.0005	<0.0005
12/4/2018	0.000302 (J)	0.00034 (J)	0.000284 (J)
2/6/2019	<0.0005	<0.0005	<0.0005
8/21/2019		<0.0005	<0.0005
8/22/2019	<0.0005		
4/14/2020			<0.0005
4/15/2020	<0.0005	<0.0005	
8/26/2020	<0.0005	<0.0005	<0.0005
3/23/2021	<0.0005	<0.0005	<0.0005
10/5/2021		<0.0005	
10/11/2021	<0.0005		
10/12/2021			<0.0005
Mean	0.0004753	0.00048	0.000473
Std. Dev.	7E-05	5.657E-05	7.637E-05
Upper Lim.	0.0005	0.0005	0.0005
Lower Lim.	0.000302	0.00034	0.000284



# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-2	GSD-AP-MW-4	GSD-AP-MW-5	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
10/22/2018	<0.000203		0.0198	<0.000203				
10/23/2018		<0.000203			<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018				<0.000203				
12/4/2018	<0.000203	<0.000203	0.0118			<0.000203	<0.000203	
12/5/2018					<0.000203			<0.000203
2/5/2019			0.0196	<0.000203	<0.000203			
2/6/2019	<0.000203	<0.000203				<0.000203	<0.000203	<0.000203
8/20/2019			0.027	<0.000203	<0.000203			
8/21/2019						<0.000203	<0.000203	<0.000203
8/22/2019	<0.000203	<0.000203						
4/13/2020					<0.000203			
4/14/2020		<0.000203					<0.000203	<0.000203
4/15/2020	<0.000203		0.0202	<0.000203		<0.000203		
8/24/2020					<0.000203			
8/25/2020			0.0269					
8/26/2020	<0.000203	<0.000203		<0.000203		<0.000203	<0.000203	<0.000203
3/16/2021					<0.000203			
3/23/2021	0.000204	0.000124 (J)				<0.000203	0.000357	0.00027
3/24/2021			0.0164	0.00118				
10/5/2021				0.00111	0.00015 (J)	0.0001 (J)		
10/11/2021	0.00045		0.0204					
10/12/2021		0.00015 (J)					0.00032	0.00018 (J)
Mean	0.000234	0.0001865	0.02026	0.0004385	0.0001964	0.0001901	0.0002369	0.0002085
Std. Dev.	8.728E-05	3.133E-05	0.005024	0.0004365	1.874E-05	3.642E-05	6.35E-05	2.612E-05
Upper Lim.	0.00045	0.000203	0.02559	0.00118	0.000203	0.000203	0.000357	0.00027
Lower Lim.	0.000203	0.000124	0.01494	0.000203	0.00015	0.0001	0.000203	0.00018

# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 1/11/2022 3:53 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
10/22/2018	<0.000203	
12/3/2018	<0.000203	
2/5/2019	<0.000203	
8/20/2019	<0.000203	
4/13/2020	<0.000203	<0.000203
8/24/2020	<0.000203	<0.000203
3/17/2021		<0.000203
3/24/2021	9.88E-05 (J)	
10/5/2021	7E-05 (J)	0.00028
Mean	0.0001734	0.0002223
Std. Dev.	5.544E-05	3.85E-05
Upper Lim.	0.000203	0.00028
Lower Lim.	7E-05	0.000203

# Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 1/11/2022 3:53 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-3
10/22/2018	<0.0002	0.000213 (J)	
12/3/2018			<0.0002
12/4/2018	<0.0002	<0.0002	
2/5/2019	<0.0002	0.000256 (J)	<0.0002
6/18/2019			<0.0002
8/20/2019		0.000322 (J)	<0.0002
8/21/2019	<0.0002		
4/13/2020			<0.0002
4/15/2020	<0.0002	0.000318 (J)	
8/25/2020	<0.0002	0.000347 (J)	
8/26/2020			<0.0002
3/16/2021	0.000112 (J)		
3/22/2021			0.000121 (J)
3/24/2021		0.00037	
10/5/2021	<0.0002		0.00014 (J)
10/11/2021		0.00029	
Mean	0.000189	0.0002895	0.0001826
Std. Dev.	3.111E-05	6.169E-05	3.257E-05
Upper Lim.	0.0002	0.0003549	0.0002
Lower Lim.	0.000112	0.0002241	0.000121