

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

**ALABAMA POWER COMPANY  
PLANT BARRY  
GYPSUM POND**

**January 31, 2022**

Prepared for

Alabama Power Company  
Birmingham, Alabama

By

Southern Company Services  
Earth Science and Environmental Engineering



## CERTIFICATION STATEMENT

This *Annual Groundwater Monitoring and Corrective Action Report, Alabama Power Company - Plant Gaston Gypsum Pond* has been prepared in accordance with the United States Environmental Protection Agency's coal combustion residual rule (40 CFR Part 257, Subpart D) and ADEM Admin. Code Ch. 335-13-15 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.



1/31/2022

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AL Registered Professional Geologist

Date



1/31/2022

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Date



## **EXECUTIVE SUMMARY**

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 Semi-Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2021 semi-annual assessment groundwater monitoring activities at the Plant Barry Gypsum 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 Plant Barry Gypsum Pond is performed in accordance with the monitoring requirements § 257.90 through § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6).

The CCR unit began the monitoring period in assessment monitoring pursuant to § 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 and assessment monitoring was initiated in January 2018. Statistically significant levels (SSLs) of Appendix IV parameters have not been identified during assessment monitoring and therefore, the Site has remained in assessment monitoring.

Statistically significant levels (SSL) of Appendix IV parameters were not identified during the 2021 semi-annual monitoring periods, and in accordance with § 257.95(d) and ADEM Admin. Code r. 335-13-15-.06(6)(d), APC will continue semi-annual assessment monitoring.

The following summarizes results and activities conducted during the 2021 annual monitoring period:

- Completed the first semi-annual assessment groundwater monitoring event between May 11, 2021 and May 12, 2021.
- Submitted the First Semi-Annual Groundwater Monitoring and Corrective Action Report on July 31, 2021.
- Completed the second semi-annual assessment groundwater monitoring event between October 18, 2021 and October 19, 2021.

The CCR Unit concluded the monitoring period in Assessment Monitoring. The following next steps will be taken for the CCR Unit:

- Continue semi-annual assessment monitoring in March or April 2022 and submit first semi-annual groundwater monitoring report of 2022 to the Department by July 31, 2022.

An **Executive Summary Table** highlighting program status and significant findings from the most recent annual monitoring period has been included on the next page.

**Executive Summary Table.  
Monitoring Period Summary  
Plant Barry - Gypsum Pond**

Assessment Monitoring Initiated: January 15, 2018  
 Monitoring Period: January 1 - December 31, 2021  
 Beginning Status: Assessment  
 Ending Status: Assessment

**Statistical Analysis Results \***

**Appendix III SSIs**

<b>Parameter</b>	<b>Wells</b>
Boron	BY-GSA-MW-5, BY-GSA-MW-6
Calcium	BY-GSA-MW-5, BY-GSA-MW-6
Chloride	BY-GSA-MW-6, BY-GSA-MW-7
Fluoride	None
pH	BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-9
Sulfate	None
TDS	BY-GSA-MW-6

**Appendix IV SSLs**

None

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

**Assessment of Corrective Measures & Groundwater Remedy**

**Assessment of Corrective Measures**

Site Remains in Assessment Monitoring (§ 257.95(d) & Alabama Admin. Code r. 335-13-15-.06(6)(d))

**Groundwater Remedy**

Selected During Period: Yes  
 Selection Date: October 2021  
 Initiated During Period: No  
 Ongoing During Period: No

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## ABBREVIATIONS

ADEM	Alabama Department of Environmental Management
AL	Alabama
APC	Alabama Power Company
APCEL	APC Environmental Laboratory
ASD	Alternate Source Demonstration
ASTM	American Society for Testing and Materials
BGS	below ground surface
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
COC	chain of custody
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ft	feet
GW	groundwater
GWPS	Groundwater Protection Standard(s)
LCL	Lower Confidence Limit
m	meter
mg/L	milligram per liter
MSL	mean sea level
MW-	denotes “Monitoring Well”
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
SM	Standard Method(s)
SSI	statistically significant increase
SSL	statistically significant level
TAL	Test America, Inc.
TOC	top of casing
TDS	total dissolved solids
USGS	United States Geological Survey
UTLs	Upper Tolerance Limits

## **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, 2021 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2021 semi-annual assessment groundwater monitoring activities at the Plant Barry Gypsum 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 Plant Barry Gypsum Pond is performed in accordance with the monitoring requirements § 257.90 through § 257.95 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(6).

## **2.0 MONITORING PROGRAM STATUS**

In accordance with § 257.94(e) and ADEM Admin. Code r. 335-13-15-.06(5)(e), APC implemented assessment monitoring in January 2018. SSIs of Appendix III were identified at the Plant Barry Gypsum Pond during sampling events conducted in 2021 and the site remained in assessment monitoring. SSLs of Appendix IV constituents were not observed over the GWPS, in accordance with § 257.95(d) and ADEM Admin. Code r. 335-13-15-.06(6)(d), APC will continue assessment monitoring and will not implement assessment of corrective measures under § 257.96 and ADEM Admin. Code r. 335-13-15-.06(7).

### 3.0 SITE LOCATION AND DESCRIPTION

Alabama Power Company's Plant James M. Barry Electric Generating Plant (Plant Barry) is in northeastern Mobile County, Alabama, approximately 23 miles north of Mobile, AL and 1 mile east of the city of Bucks, AL. The physical address is 15300 U.S. Highway 43 North, Bucks, Alabama 36512. Plant Barry lies in Section 36 of Township 1 North, Range 1 West, Sections 31 and 32 of Township 1 North, Range 1 East, Section 1 of Township 1 South, Range 1 West, and Sections 5 and 6 of Township 1 South, Range 1 East. Section/Township/Range data are based on visual inspection of USGS topographic quadrangle maps and GIS maps (USGS, 1980, 1982a, 1982b, 1983).

The Gypsum Pond is located south-southwest of the main plant, between Sisters Creek to the north, Cold Creek to the south, and the plant's discharge canal to the east. **Figure 1, Site Location Map**, depicts the location of the Plant and Gypsum Pond with respect to the surrounding area. The Gypsum Pond was constructed between 2007 and 2010 and consists of a 21.3-acre gypsum storage cell and a 10.4-acre sedimentation pond.

#### 3.1 PHYSICAL SETTING

Plant Barry is located within the Southern Pine Hills and the Alluvial-deltaic Plain districts of the East Gulf Coastal Plain physiographic section. The Alluvial-deltaic Plain district is composed of alluvium and terrace deposits of the Mobile River delta and is characterized by very little topographical relief (Gillet et al., 2000). The Southern Pine Hills district is a southward sloping plain developed on Miocene Series clay, sand, and gravel deposits. The Southern Pine Hills district is dissected by surface water features, and near Plant Barry, displays gentle topographic relief (Davis, 1987). Land surface elevations near the Gypsum Pond slope from west to east and range from approximately 30 feet above mean sea level (MSL) to 10 feet MSL, respectively. **Figure 2, Site Topographic Map**, provides the topography of the site.

#### 3.2 SITE GEOLOGY AND HYDROGEOLOGY

The geology of the site is characterized by sedimentary deposits ranging in age from Tertiary to Quaternary. Sedimentary alluvial and terrace deposits of the Quaternary Period overlie largely unconsolidated Tertiary deposits in and adjacent to the flood plains of the Mobile River. At the site, Holocene age alluvial and low terrace deposits overlie undifferentiated Miocene Series sediments. Miocene Series sediments were primarily deposited in a regressive marine depositional environment. The Miocene Series is composed of

fine to very coarse-grained sand with interbedded sandy clays, silts, and shell fragments (Walter and Kidd, 1979). Siliciclastic sediments of the Miocene Series are often micaceous and pyritic, and contain wood fragments, shell debris, and heavy minerals (Chandler et al., 1985). Alluvial, low terrace, and coastal deposits reflect estuarine, deltaic, lagoonal, and shoreface deposition in lowland areas from late Pleistocene to Holocene time. These deposits consist of fine to coarse sand, which can be rich in heavy detrital minerals (Hsu, 1960), silt, sandy clay, clay, and shell fragments (Chandler et al., 1985). **Figure 3, Site Geologic Map**, illustrates the surface geology at the site and neighboring areas.

Generalized near-surface stratigraphy of the site, in descending order, consists of (1) lean to flat clay down to an elevation of 10 feet MSL, (2) a poorly to well-sorted sand with lenses of clay down to elevations between -45 and -50 feet MSL, and (3) a basal clay layer (Unit 3). These units are considered part of the Pleistocene to Holocene age alluvial, low terrace, and coastal deposits described above.

The uppermost clay interval is described as a gray to brown to reddish-yellow, sandy lean clay that occasionally grades into an organic rich fat clay near the base of the unit. Some spatial heterogeneity is observed, as the clay is not present at boring location MW-1 and found to be much thicker at boring location MW-10. Portions of this clay-rich interval are likely inclusive of fill materials placed during construction of the Gypsum Pond.

Underlying the clay, an interval consists largely of coarse sediments and includes zones of clayey sand, well-sorted sand, poorly-sorted sand, and gravelly sand to gravel. The vertical and horizontal heterogeneity of these sands are not uncommon, as sand beds deposited in stream or creek valleys are lenticular and generally can be traced over only short distances (Davis, 1987). Clay stringers or clay-rich intervals are also encountered but are not prevalent. These clays represent low-energy deposition, while sands and gravels represent higher-energy environments. Gravel or sandy gravel intervals may be representative of buried creek beds.

Beneath the sandy layer, a medium to high plasticity, mottled gray to brown fat clay with sand was encountered in boring MW-8. At some locations (MW-6 and MW-7), the upper surface of this unit was described as a clayey sand or clayey gravel. Borings conducted at the site generally did not penetrate the vertical extent of this clay unit. However, limited data suggest this unit is 10 feet thick or greater beneath the site. **Figure 4A, Geologic Cross-Section A-A'** and **Figure 4B, Geologic Cross-Section B-B'**,

illustrate the geologic layering beneath the site. The two major aquifers in northern Mobile County are the Miocene-Pliocene Aquifer and the Watercourse Aquifer.

The thickness of the Miocene-Pliocene Aquifer, which consists of the Miocene Series undifferentiated and the Pliocene-age Citronelle Formation, is about 3,400 feet in coastal areas to the south, but it is much thinner in northern Mobile County. This aquifer consists of beds of sand, gravel, and clay, where groundwater flows through sand and gravel beds that are irregular in thickness and of limited lateral extent. Clay intervals between the sand units are not laterally extensive enough to prevent downward movement of ground water, but they do provide semi-confinement in some areas. Correlation of one sand unit to another is difficult, due to the discontinuous nature of these deposits. In Northern Mobile County, the principal water-bearing sands in the aquifer are at the base of the Miocene- Pliocene sequence (Gillett et al., 2000). Although adequate supplies are available shallower, the Miocene-Pliocene Aquifer will yield one million gallons per day per well in deeper wells. Large-capacity wells screened in this aquifer generally range in depth from 150 to 800 feet BGS, with specific capacities that range from 5 to 35 gallons per minute per foot of drawdown (Reed and McCain, 1972).

The Watercourse Aquifer is composed of Quaternary alluvial and low terrace deposits consisting of interbedded sand, gravel, and clay. Buried sand and gravel channels, which yield large amounts of water, are surrounded by silty and clayey sediments that do not yield significant amounts of water but allow infiltration of water to recharge the sand and gravel beds. The present channels of the Mobile River are directly connected to some individual buried channels (Gillett et al., 2000). Alluvium and low terrace deposits in the Mobile River basin are a potential source of 0.5 to 1.0 million gallons per day per well. Wells ranging in depth from approximately 90 to 150 feet yield large capacities where saturated sands are of sufficient thickness. Specific capacities in these wells range from 6 to 73 gallons per minute per foot of drawdown (Reed and McCain, 1972).

Porous sands provide large quantities of water from deposits throughout Mobile County. Geologic units ranging in age from Miocene to Holocene are partially composed of permeable sands that yield water. Wells screened in these sands within 150 feet of the land surface typically yield adequate supplies for domestic use in northern Mobile County (Reed and McCain, 1972).

### **3.2.1 Uppermost Aquifer**

The uppermost aquifer beneath the site corresponds to alluvial, low terrace, and coastal deposit sands, which are part of the Watercourse Aquifer system. At the site, the Watercourse Aquifer consists of medium to coarse sands with discrete gravelly sand and gravel. Clay nodules, lenses, and stringers are present, but are not prevalent. Depth to the top of the Watercourse Aquifer generally ranges between 15 and 25 feet below ground surface (BGS) and appears to extend down to approximately 65 to 70 feet BGS, where clays are encountered. Groundwater recharge to the Watercourse Aquifer is largely accomplished by infiltration of precipitation and subsequent percolation down to the water table. Regionally, the Watercourse and Miocene-Pliocene Aquifers are considered to be hydraulically connected due to the discontinuous nature of clay aquitards. Locally, semi-confined to confined conditions may be present when a sufficient aquitard separates the aquifers or sand units.

### **3.2.2 Flow Interpretation**

Groundwater flow at the site is a subdued replica of the natural topography where gravity is the dominant force driving flow. Groundwater flows from higher topographic elevations south of the Gypsum Pond to lower topographic elevations to the north. East of the Gypsum Pond, groundwater flow bends towards the northeast and the Plant Barry discharge canal. Groundwater flow is accomplished by porous or Darcian flow mechanics through sands of the Watercourse Aquifer. A potentiometric surface map for the site is presented in a later section.

## **3.3 GROUNDWATER MONITORING SYSTEM**

Pursuant to § 257.91 and ADEM Admin. Code r. 335-13-15-.06(2), Plant Barry has installed a groundwater monitoring well network to monitor groundwater quality within the uppermost aquifer. The certified groundwater monitoring system for the Plant Barry Gypsum Pond is designed to monitor groundwater flow passing the waste boundary of the CCR unit. Wells were sited to serve as upgradient or 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

The groundwater monitoring network comprises 11 monitoring wells and 1 piezometer. Piezometer BY-GSA-PZ-12 is used to enhance groundwater potentiometric surfaces and constrain flow direction. Monitoring well locations and piezometers are presented on **Figure 5, Monitoring Well Location Map. Table 1A, Compliance Monitoring Well Network Details**, summarizes the monitoring well construction details and design purpose for the Plant Barry Gypsum Pond.

#### 3.3.1.1 Upgradient Wells

Data used to establish background water quality or selection of upgradient wells include (1) review of groundwater elevation data and potentiometric surface contour maps to determine groundwater flow direction and (2) a screening of Appendix III CCR indicator parameters (chiefly calcium, sulfate, and boron for Gypsum) for apparently elevated concentrations.

Monitoring well locations BY-GSA-MW-1 through BY-GSA-MW-4 serve as upgradient locations for the Gypsum Pond. Groundwater generally flows from south to north across the Site. Upgradient wells are located south of the Gypsum Pond as determined by water level monitoring and potentiometric surface maps constructed for the Site. **Table 1a** summarizes well construction details for upgradient monitoring well locations.

#### 3.3.1.2 Downgradient Wells

Monitoring well locations BY-GSA-MW-5 through BY-GSA-MW-10 and BY-GSA-PZ-11 are used as downgradient locations for the Gypsum Pond. As requested in the ADEM Letter of November 14, 2019, Responding to CCR Documents Submitted to ADEM for Plants Barry, Miller, Gaston, Greene County, and Gorgas; piezometer BY-GSA-PZ-11 was re-designated and used as a downgradient monitoring well during the first semi-annual sampling event of 2020. This change was included in the updated Groundwater Monitoring Plan submitted to ADEM in April 2020 and revised in August 2020. Downgradient monitoring wells are located lateral to and north of the Gypsum Pond as determined by water level monitoring and potentiometric surface maps constructed for the site. **Table 1a** summarizes well construction details for downgradient monitoring well locations.

Piezometers

Location BY-GSA-PZ-12 is used as a water level-only piezometer to enhance groundwater potentiometric surfaces and constrain flow direction. **Table 1b, Piezometer Network Details**, summarizes the piezometer construction details and design purpose for the Plant Barry Gypsum Pond.

### **3.3.1.3 Monitoring Well Replacement and Abandonment**

During 2021, no monitoring well replacement or abandonment activities occurred.

## **3.4 GROUNDWATER MONITORING HISTORY**

In accordance with § 257.94(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 October 17, 2017. Background sampling was performed over the period of February 2016 to June 2017. Groundwater sampling for the first detection monitoring event after the background period was performed in September 2017.

Based on results of the 2017 Annual Groundwater and Corrective Action Monitoring Report, Alabama Power initiated an assessment monitoring program on January 15, 2018. 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 April 2018, within 90 days of initiating the assessment monitoring program. Statistical evaluations of 2018 assessment monitoring data did not identify SSLs of Appendix IV constituents above the GWPS. Therefore, in accordance with § 257.95(d) and Alabama Admin. Code r. 335-13-15-.06(6)(d), the Site remained in Assessment Monitoring.

### **3.4.1 Available Monitoring Data**

Laboratory analytical data is available for the groundwater monitoring history outlined in **Section 3.4**. Tabulated results for Appendix III and Appendix IV constituents by monitoring well are included in **Appendix A, Groundwater Analytical Data**.

### **3.4.2 Historical Groundwater Flow**

Historical groundwater elevations and potentiometric surface maps show that groundwater flow patterns are consistent across monitoring events and as described in **Section 3.2.2**. Tables summarizing groundwater elevations from all groundwater monitoring events since 2016 are included in **Appendix B, Historical Groundwater Elevations Summary**.

### **3.4.3 Monitoring Variance**

The groundwater monitoring program at the Site is operating under a Variance granted by the Department 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 groundwater protection standards (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) late winter – mid spring and (2) early to late fall. 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 which often foster a degree of natural variability in groundwater quality.

During routine semi-annual monitoring events, all compliance 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 changes in geochemical facies in Site groundwater.

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 preceding year. The Site entered an Assessment Monitoring program pursuant to 40 CFR § 257.95(a) and ADEM Admin. Code r. 335-13-15-.06(6)(a) in January 2018. Statistical evaluations of 2018 assessment monitoring data did not identify SSLs of Appendix IV constituents above the GWPS. Therefore, in accordance with § 257.95(d) and Alabama Admin. Code r. 335-13-15-.06(6)(d), the Site remained in assessment monitoring.

#### **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 Barry 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 5 NTU.
- Temperature and ORP – record only, no stabilization criteria.

During purging and sampling a SmarTroll 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 for the monitoring events are included in **Appendix C, Laboratory and Field Records**.

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

Groundwater samples were collected within the designated size and type of laboratory-supplied containers required for specific parameters. Sample bottles were pre-preserved by the laboratory.

Where temperature control was required, samples were placed in an ice-packed cooler and cooled to less than 6 °C immediately after collection. Blue ice or other cooling packs were not used for cooling samples. An ice-packed cooler was on hand when samples were collected.

### **3.5.3 Chain of Custody**

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

#### **3.5.4 Laboratory Analysis**

Laboratory analyses were performed by the APC Environmental Laboratory (APCEL) in Calera, Alabama and Pace Analytical Services, LLC (Pace). Both APCEL and Pace 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. Groundwater data and COC records for the monitoring events are presented in **Appendix C**.

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

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 preceding year. Semi-annual Assessment Monitoring sampling events occurred in May 2021 and October 2021.

Semi-annual assessment monitoring event 1 was performed between May 11, 2021 and May 12, 2021. A groundwater monitoring report summarizing data and activities from semi-annual sampling event 1 was submitted to the Department in July 2021. Semi-annual assessment monitoring event occurred between October 18, 2021 and October 19, 2021.

Groundwater samples were analyzed for the full list of Appendix III and Appendix IV parameters during each 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 C**, in accordance with the requirements of § 257.90(e)(3) and ADEM Admin. Code r. 335-13-15-.06(1)(f)3.

#### 4.0 GROUNDWATER ELEVATIONS AND FLOW

During the first semi-annual sampling event, groundwater elevations ranged from 4.70 to 7.49 feet NAVD88 (feet above reference 1988 North American Vertical Datum). **Figure 6A, Potentiometric Surface Contour Map (May 24, 2021)** depicts groundwater elevations and inferred groundwater flow direction from higher elevation to lower.

During the second semi-annual sampling event, groundwater elevations ranged from 4.22 to 7.19 feet NAVD88 (feet above reference 1988 North American Vertical Datum). **Figure 6B, Potentiometric Surface Contour Map (October 18, 2021)** depicts groundwater elevations and inferred groundwater flow direction from higher elevation to lower.

As shown on **Figures 6A** and **6B**, groundwater flows from south to north consistent with historic observations. Recent groundwater elevation data has been tabulated and included in **Table 3, Groundwater Elevation Summary**.

#### 4.1 GROUNDWATER FLOW VELOCITY CALCULATIONS

Groundwater flow rates at the Site were calculated based on hydraulic gradients, hydraulic conductivity from previous slug test results, and an estimated effective porosity of the screened horizon. Slug testing results from piezometers located near the Gypsum Pond provide an average hydraulic conductivity of  $4.27 \times 10^{-3}$  cm/sec, which correlates favorably with a long duration pumping test of the Watercourse Aquifer that revealed an average hydraulic conductivity of  $3.3 \times 10^{-3}$  cm/sec. The pumping test-derived hydraulic conductivity value of  $3.3 \times 10^{-3}$  cm/sec or 9.4 ft/day was used because the larger volume of aquifer allows averaging of small-scale heterogeneities, while slug tests are smaller in scale and could allow more results to skew an average. An estimated effective porosity of 25% 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:

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

$K$  = 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 and is tabulated in **Appendix D, Groundwater Flow Velocity Calculations**. **Appendix D** presents the horizontal flow velocity calculated using groundwater elevation data from the sampling events in 2021.

## 5.0 EVALUATION OF GROUNDWATER QUALITY DATA

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at an interval of one 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 differences are below 20%, the difference is considered acceptable and no further action is needed. Where an RPD is greater than 20%, further evaluation is required to attempt to determine the cause of the difference and potentially result in qualified data. **Table 4A, Relative Percent Difference Calculations**, provides the resulting RPD values for sample and sample duplicates identified during the second semi-annual sampling event. Arsenic and total dissolved solids (TDS) were detected at low level concentrations of duplicate groundwater samples collected from well locations BY-GSA-MW-7 and BY-UP-MW-3, respectively. Though RPD values exceeded 20%, both sample and duplicate concentrations

were less than five times the MDL/RL. Consequently, validation flags to indicate RPD criteria failure were not required.

Arsenic and chromium were detected at low level concentrations in the equipment blank and field blank collected on October 19, 2021, during the second semi-annual sampling event. **Table 4B, Field QC: Blank Detections** summarizes the results of the QC sample detections for the second semi-annual monitoring event. These detections are reported by the laboratory as estimated concentrations, above the MDL and below the RL, and qualified in the analytical report with a “J flag.” The reported concentrations are well below established background concentrations and the GWPS. However, because arsenic and chromium were detected above the MDL in equipment or field QC samples the resulting concentrations were compared and subsequently validated. Well locations with reported detections less than five times the blank detection limit were flagged with a (+) U\* and MDL/RL values modified based upon the blank concentrations. **Table 4C, Field QC: Data Validation Results** summarizes the resulting qualifications for arsenic and chromium constituents during the second semi-annual monitoring event. Statistical Methodology and Tests

## 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, are used for calcium, chloride, sulfate, and TDS to determine whether there has been a statistically significant increase (SSI) over background groundwater quality. Interwell prediction limits, combined with a 1-of-2 verification strategy, are used to evaluate boron, fluoride, and pH. Intrawell prediction limits use screened historical data within a given well to establish limits for parameters at that well. The most recent sample from the same well is compared to its respective background to identify statistically significant increases (SSIs) over background. 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 October 2017 Statistical Analysis Plan, which was updated in the September 2019 data screening evaluation. 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 used in the statistical analysis. The reporting limit used 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 monitoring, Appendix IV constituents are sampled semi-annually, and concentrations are 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 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 2021 semi-annual monitoring events in May and October were statistically analyzed in accordance with the Professional Engineer (PE)-certified Statistical Analysis Plan (October 2017) and updated August 2020 performed 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**

A review of the Sanitas results presented in **Appendix F, Statistical Analysis** identified the following Appendix III SSIs during the first semi-annual monitoring event:

- BY-GSA-MW-5: Boron, Calcium, Chloride, sulfate, and TDS.

- BY-GSA-MW-6: Boron, Calcium, Chloride, pH, and TDS.
- BY-GSA-MW-7: Chloride.
- BY-GSA-MW-9: Sulfate and pH.
- BY-GSA-MW-10: pH.

During the second semi-annual monitoring event the following SSIs over background:

- BY-GSA-MW-5: Boron and Calcium.
- BY-GSA-MW-6: Boron, Calcium, Chloride, pH, and TDS.
- BY-GSA-MW-7: Chloride and pH.
- BY-GSA-MW-9: pH.

Since the site is performing assessment monitoring, no further action is required regarding these SSIs.

### 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**.

A review of the Sanitas results presented in **Appendix F** did not identify any Appendix IV SSLs during the first or second semi-annual monitoring events. **Table 7, First Semi-Annual Monitoring Event Analytical Summary**, and **Table 8, Second Semi-Annual Monitoring Event Analytical Summary**, provides a summary of all constituent concentrations for the 2021 semi-annual sampling events.

#### 5.3.2.1 First Semi-Annual Groundwater Monitoring Event

A review of the Sanitas results presented in **Appendix F** did not identify any Appendix IV SSLs during the first semi-annual monitoring event. **Table 6, First Semi-Annual Monitoring Event Analytical Summary** provides a summary of all constituent concentrations for the first semi-annual sampling event of 2021.

#### 5.3.2.2 Second Semi-Annual Groundwater Monitoring Event

During the second semi-annual monitoring event, statistical analysis of Appendix IV data did not identify any SSLs. **Table 7, Second Semi-Annual Monitoring Event Analytical Summary** provides a summary of all constituent concentrations for the second semi-annual sampling event of 2021. Statistical results for the second semi-annual monitoring event are included in **Appendix F**.

## **6.0 SUMMARY AND CONCLUSIONS**

Based on results reported in the *2017 Annual Groundwater and Corrective Action Monitoring Report*, APC initiated an assessment monitoring program on January 15, 2018. Groundwater samples were subsequently collected from the certified well network and analyzed for Appendix III and IV parameters.

The certified compliance monitoring well network is resampled on a semi-annual basis. The groundwater samples were analyzed for all Appendix III and IV parameters. Statistical evaluations of the May and October 2021 assessment monitoring data did not identify SSLs of Appendix IV constituents above the GWPS. Therefore, in accordance with § 257.95(d) and Alabama Admin. Code r. 335-13-15-.06(6)(d), APC will continue assessment monitoring. The following future actions will be taken or are recommended for the Site:

The first semi-annual assessment monitoring event is planned for first quarter of 2022 and a groundwater monitoring report summarizing this event will be submitted by July 31, 2022.

## 7.0 REFERENCES

- Alabama Department of Environmental Management (ADEM), 2018, Solid Waste Program, Division 13, ADEM Admin. Code r. 335-13-15.
- ASTM Standard D5092, 2004(2010)e1, Standard Practice for Design and Installation of Groundwater Monitoring Wells, ASTM International, West Conshohocken, PA, DOI 10.1520/D5092-04R10E01, [www.astm.org](http://www.astm.org).
- Chandler, R.V., Moore, J.D., and Gillet, B., 1985, Ground-water chemistry and salt-water encroachment, southern Baldwin County, Alabama: Alabama Geological Survey Bulletin 126, p. 166.
- Davis, M.E., 1987, Stratigraphic and Hydrogeologic Framework of the Alabama Coastal Plain, U.S. Geological Survey, Water-Resources Investigations Report 87-4112.
- Gillet, B., Raymond, D.E., Moore, J.D., and Tew, B.H., 2000, Hydrogeology and Vulnerability to Contamination of Major Aquifers in Alabama: Area 13, Geological Survey of Alabama.
- USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance.
- USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. *40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*. [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN-2050-AE81. April.
- United States Geological Survey (USGS), 1980 (Photorevised 1985), The Basin Alabama Quadrangle, 7.5 Minute Series Topographic Map.
- United States Geological Survey (USGS), 1982a (Photorevised 1985), Creola Alabama Quadrangle, 7.5 Minute Series Topographic Map.
- United States Geological Survey (USGS), 1982b, Mount Vernon Alabama Quadrangle, 7.5 Minute Series Topographic Map.
- United States Geological Survey (USGS), 1983, Stiggins Lake Alabama Quadrangle, 7.5 Minute Series Topographic Map.
- Walter, G.R., and Kidd, R.E., 1979, Ground-water management techniques for the control of salt-water encroachment in Gulf Coast aquifer, a summary report: Geological Survey of Alabama open-file report, p. 84.

# Figures



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



SCALE 1:24000

DATE 11/5/2020

DRAWN BY KWR

CHECKED BY GBD

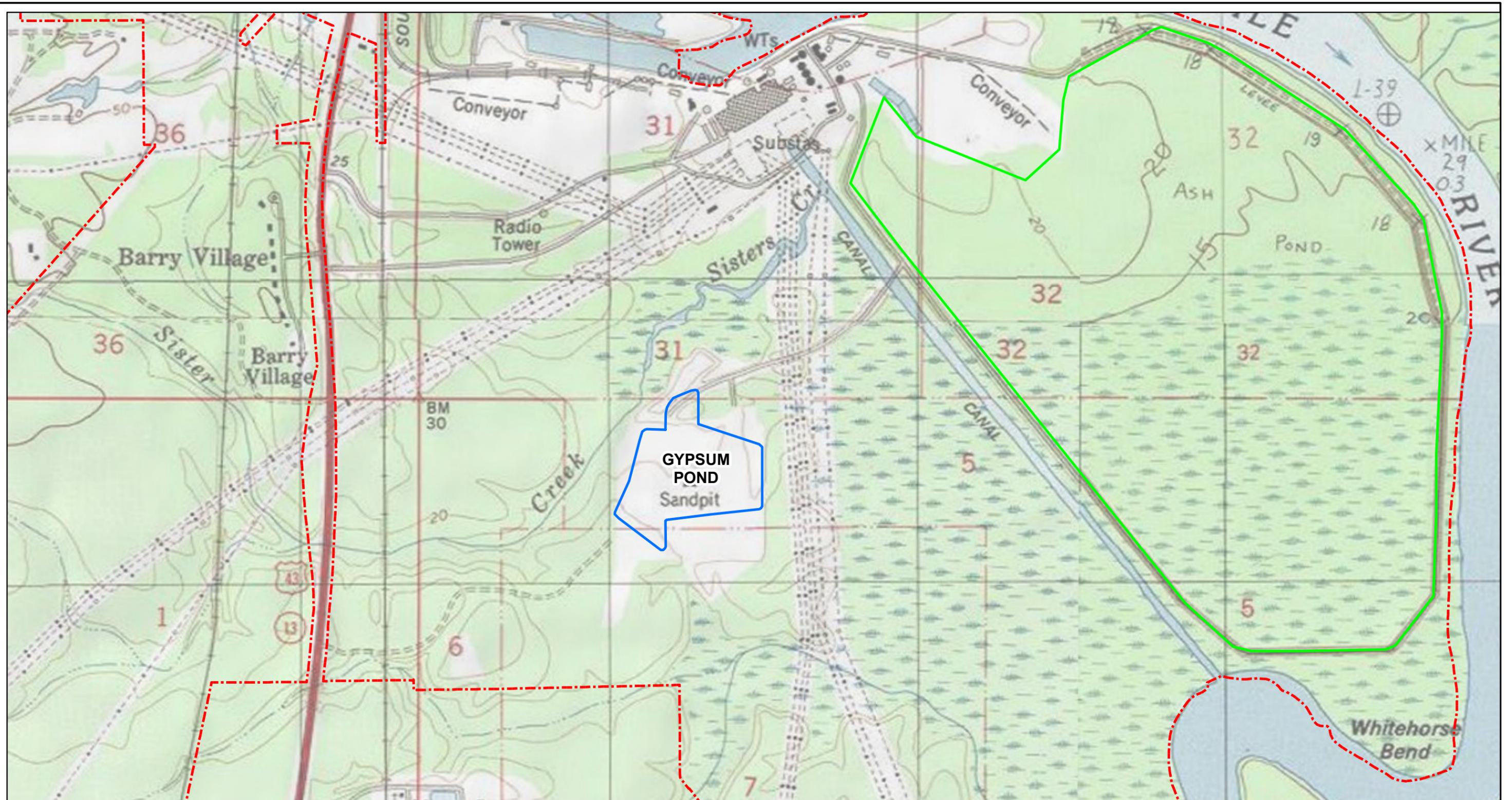
DRAWING TITLE

SITE LOCATION MAP  
PLANT BARRY GYPSUM POND

FIGURE NO

**FIGURE 1**





- Legend**
- Property Boundary (Approximate)
  - Ash Pond Boundary
  - Gypsum Storage Area Boundary



SCALE 1:12000

DATE 11/5/2020

DRAWN BY KWR

CHECKED BY GBD

DRAWING TITLE  
**SITE TOPOGRAPHIC MAP  
 PLANT BARRY GYPSUM POND**

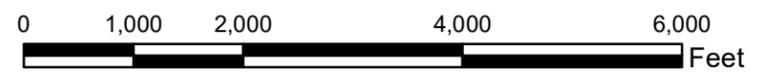
FIGURE NO  
**FIGURE 2**





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

- Geologic Units**
-  Alluvial, coastal, and low terrace deposits (Qalt)
  -  Miocene Series undifferentiated (Tm)



SCALE 1:20000

DATE 11/5/2020

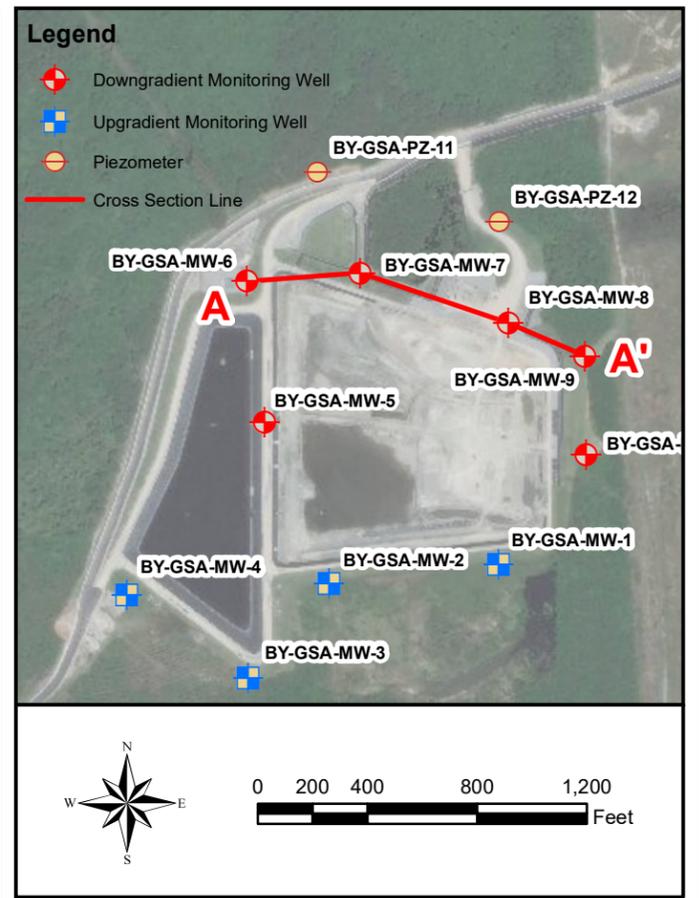
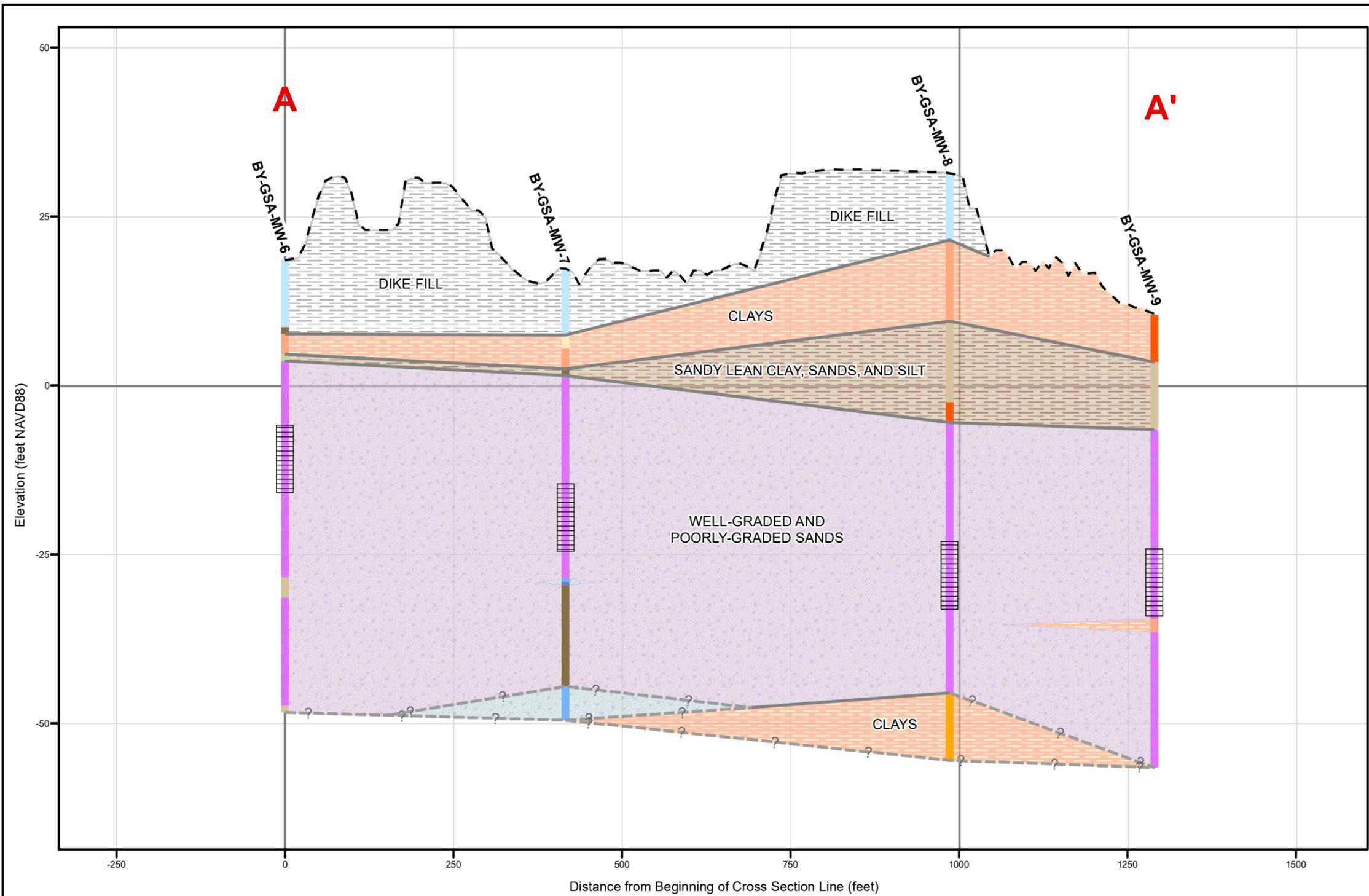
DRAWN BY KWR

CHECKED BY GBD

DRAWING TITLE  
**SITE GEOLOGIC MAP  
 PLANT BARRY GYPSUM POND**

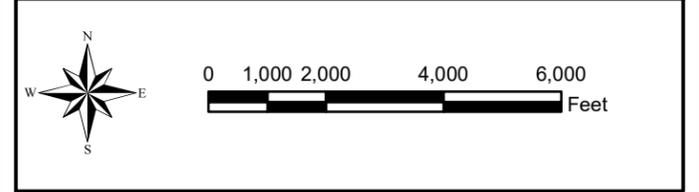
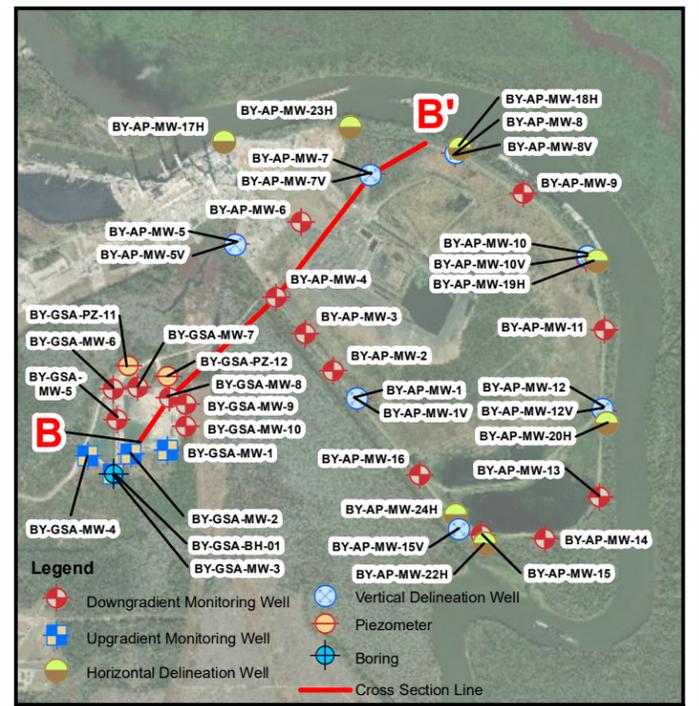
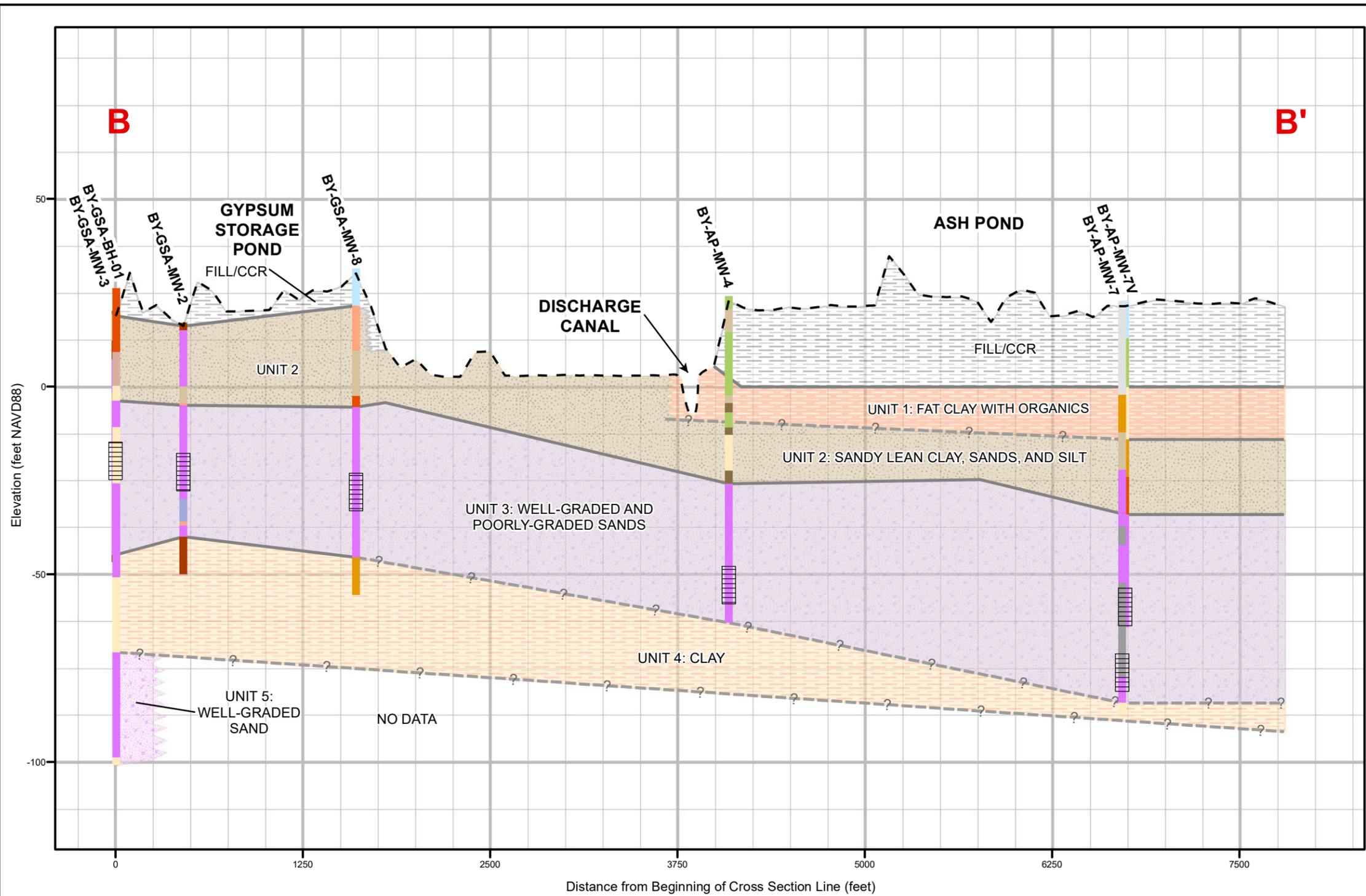
FIGURE NO  
**FIGURE 3**





Notes: 1. Source of ground surface elevation data: Lidar  
 2. NAVD88 indicates North American Vertical Datum of 1988.  
 3. Vertical exaggeration: 25x.

Legend		Borehole Description		Geologic Unit		SCALE	DRAWING TITLE		
<ul style="list-style-type: none"> <li> Ground Surface Elevation</li> <li> Screened Interval</li> <li> Unit Boundary (inferred)</li> <li> Unit Boundary</li> </ul>	<ul style="list-style-type: none"> <li> Hydroexcavation</li> <li> Fat Clay</li> <li> Lean Clay</li> <li> Sandy Fat Clay</li> <li> Sandy Lean Clay</li> <li> Silt</li> </ul>	<ul style="list-style-type: none"> <li> Clayey Sand</li> <li> Silty Sand</li> <li> Well-graded and Poorly-graded Sand</li> <li> Clayey Gravel</li> <li> Silty Gravel</li> </ul>	<ul style="list-style-type: none"> <li> Fill</li> <li> Clays</li> <li> Sandy Lean Clay, Sands, and Silt</li> <li> Sands</li> <li> Gravels</li> </ul>	As Shown	<b>GEOLOGIC CROSS SECTION A - A'</b> <b>PLANT BARRY GYPSUM POND</b>				
				DATE				6/22/2020	
				DRAWN BY				KWR	
				CHECKED BY				GBD	
						FIGURE NO	<b>FIGURE 4A</b>		



Notes: 1. Source of ground surface elevation data: Lidar  
 2. Source of Discharge Canal depth: Bathymetry  
 3. NAVD88 indicates North American Vertical Datum of 1988.  
 4. Vertical exaggeration: 25x.

Legend		Borehole Description			Geologic Unit		
Ground Surface Elevation	Hydroexcavation	Sandy Fat Clay	Clayey Silty Sand	Fill	Unit 3: Well-graded and Poorly-graded Sands		
Screen Interval	Fill	Sandy Lean Clay	Silty Sand	Unit 1: Fat Clay with Organics	Unit 4: Clay		
Unit Boundary (inferred)	No Recovery	Organic Silt or Clay	Well-graded and Poorly-graded Sands	Unit 2: Sandy Lean Clay, Sands, and Silts	Unit 5: Well-graded Sand		
Unit Boundary	Fat Clay	Silt	Well-graded and Poorly-graded Gravels	Sandy Lean Clay, Sands, and Silts			
	Lean Clay	Clayey Sand					

SCALE	As Shown
DATE	6/22/2020
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE

## GEOLOGIC CROSS SECTION B - B' PLANT BARRY GYPSUM POND

FIGURE NO

### FIGURE 4B



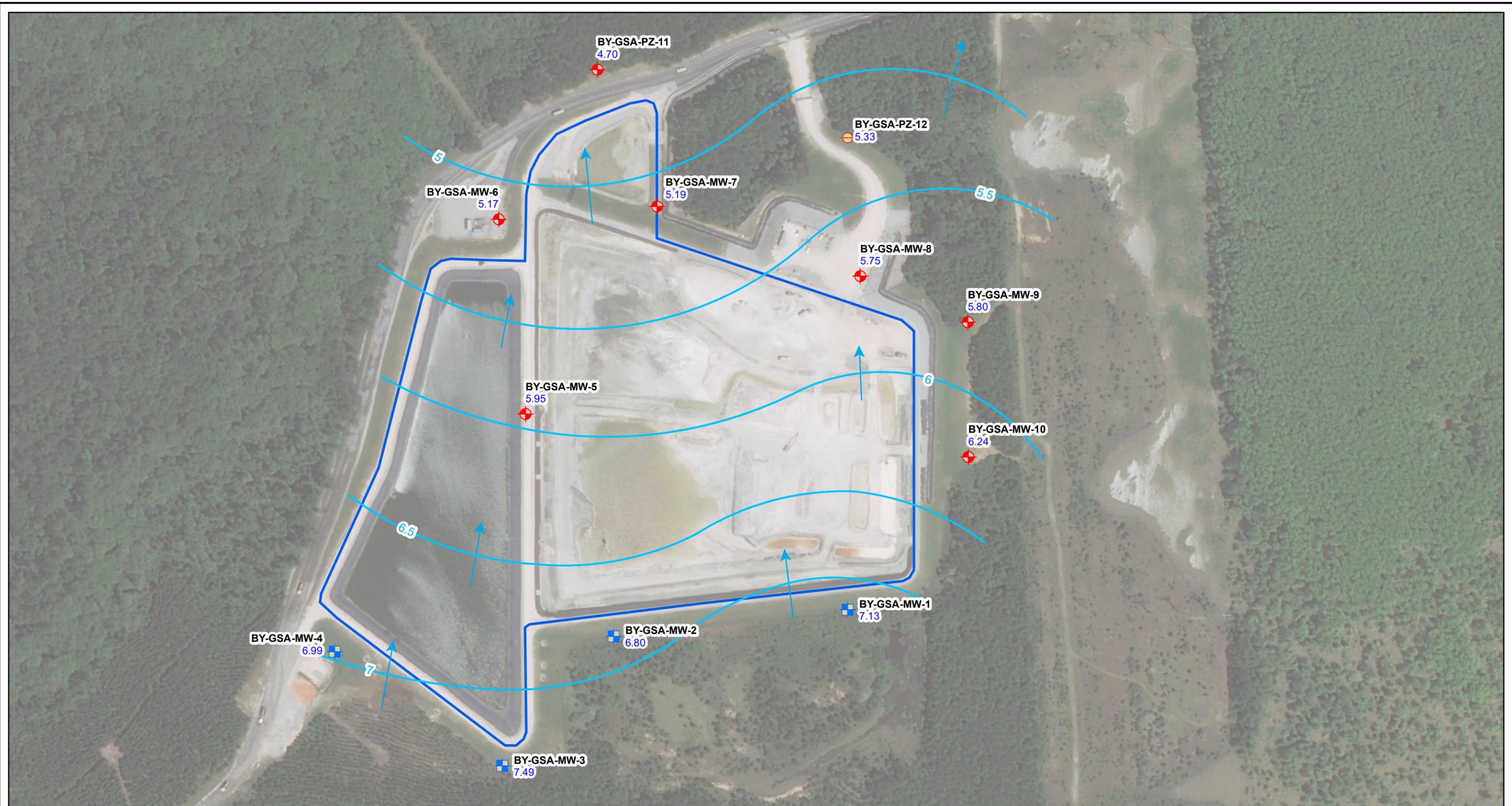
**Legend**

-  Downgradient Monitoring Well
-  Upgradient Monitoring Well
-  Piezometer
-  Gypsum Pond



SCALE	1:3000
DATE	7/26/2021
DRAWN BY	KAR
CHECKED BY	GBD

DRAWING TITLE	
<b>MONITORING WELL LOCATION MAP PLANT BARRY GYPSUM POND</b>	
FIGURE NO	<b>FIGURE 5</b>
	



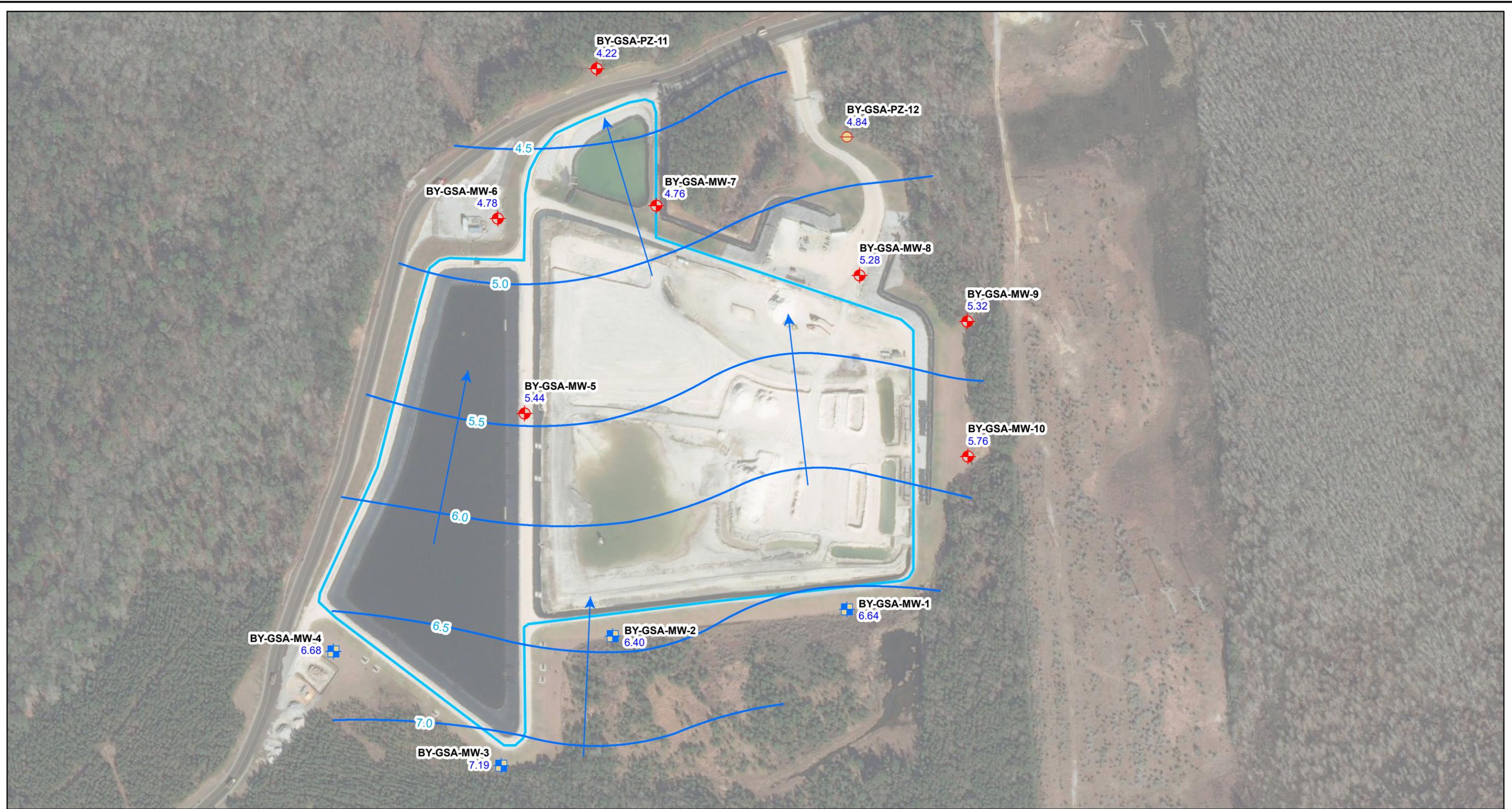
**Legend**

-  Downgradient Monitoring Well
  -  Upgradient Monitoring Well
  -  Piezometer
  -  Potentiometric Surface Contour (ft NAVD)
  -  Groundwater Flow Direction
  -  Gypsum Pond
- BY-GSA-MW-1** Well ID  
7.13 Groundwater Elevation



SCALE	1:3000
DATE	7/26/2021
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP MAY 24, 2021 PLANT BARRY GYPSUM POND	
FIGURE NO	<b>FIGURE 6A</b>
	



**Legend**

-  Downgradient Monitoring Well
  -  Upgradient Monitoring Well
  -  Piezometer
  -  Potentiometric Surface Contour (ft NAVD)
  -  Groundwater Flow Direction
  -  Gypsum Pond
- BY-GSA-MW-1** Well ID  
6.64 Groundwater Elevation



SCALE	1:3000
DATE	12/21/2021
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP OCTOBER 18, 2021 PLANT BARRY GYPSUM POND	
FIGURE NO	<b>FIGURE 6</b>
	

# Tables



**Table 1a. - Compliance Monitoring Well Network Details  
Plant Barry Gypsum Storage Area**

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>											
BY-UP-MW-1	Upgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99445	-88.01134	17.49	20.66	44.4	-13.23	-23.23	10	10/7/2015
BY-UP-MW-2	Upgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99425	-88.01331	17.00	19.95	47.6	-17.23	-27.23	10	10/7/2015
BY-UP-MW-3	Upgradient	Unit 3: Middle Sands (Watercourse Aq)	30.9933	-88.01424	20.15	23.24	48.5	-14.89	-24.89	10	10/7/2015
BY-UP-MW-4	Upgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99413	-88.01566	26.16	29.12	64.1	-24.54	-34.54	10	10/13/2015
BY-GSA-MW-5	Downgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99585	-88.01406	31.21	34.31	69.1	-24.41	-34.41	10	10/8/2015
BY-GSA-MW-6	Downgradient	Unit 3: Upper Sands (Watercourse Aq)	30.99726	-88.0143	18.60	21.68	37.9	-5.80	-15.80	10	10/8/2015
BY-GSA-MW-7	Downgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99736	-88.01296	17.46	20.59	45.5	-14.54	-24.54	10	10/8/2015
BY-GSA-MW-8	Downgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99686	-88.01125	31.51	34.36	68.8	-24.08	-34.08	10	10/8/2015
BY-GSA-MW-9	Downgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99654	-88.01034	10.44	13.32	46.1	-22.42	-32.42	10	10/8/2015
BY-GSA-MW-10	Downgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99556	-88.01032	14.65	17.61	44.7	-16.68	-26.68	10	10/8/2015
BY-GSA-PZ-11	Downgradient	Unit 3: Middle Sands (Watercourse Aq)	30.99835	-88.01347	23.56	25.92	57.9	-21.60	-31.60	10	10/8/2015

**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. - Piezometer Well Network  
Details Plant Barry Gypsum Storage Area**

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>											
BY-GSA-PZ-12	Piezometer	Unit 3: Middle Sands (Watercourse Aq)	30.99787	-88.01136	14.14	17.43	43.5	-15.65	-25.65	10	10/8/2015

**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 Barry Gypsum Storage Area

10/18/2021 - 10/19/2021

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	mg/L
Chloride	SM4500Cl E	1	mg/L
Fluoride	SM4500F G 2017	0.1	mg/L
pH_Field	Field Sampling	NA	SU
Sulfate	SM4500SO4 E 2011	1	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	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  
Plant Barry Gypsum Storage Area  
10/18/2021 - 10/19/2021**

Well Name	Top of Casing Elevation	Groundwater Elevation (ft. MSL)									
		1/21/2018	4/30/2018	8/27/2018	11/26/2018	5/28/2019	10/2/2019	3/30/2020	9/8/2020	5/24/2021	10/18/2021
<b>BY-UP-MW-1</b>	20.66	4.75	6.83	5.22	5.84	6.60	4.78	8.38	5.31	7.13	6.64
<b>BY-UP-MW-2</b>	19.95	4.68	6.66	5.06	5.73	6.32	4.71	8.05	5.16	6.80	6.4
<b>BY-UP-MW-3</b>	23.24	5.46	7.19	5.76	6.40	7.02	5.37	8.54	5.83	7.49	7.19
<b>BY-UP-MW-4</b>	29.12	5.18	6.99	5.47	6.13	6.57	5.16	8.20	5.53	6.99	6.68
<b>BY-GSA-MW-5</b>	34.31	4.18	6.42	4.61	5.30	5.62	4.35	7.44	4.55	5.95	5.44
<b>BY-GSA-MW-6</b>	21.68	3.56	6.02	4.07	4.72	4.74	3.85	6.91	4.00	5.17	4.78
<b>BY-GSA-MW-7</b>	20.59	3.47	6.00	3.99	4.77	4.84	3.84	6.86	3.91	5.19	4.76
<b>BY-GSA-MW-8</b>	34.36	3.82	6.28	4.34	5.15	5.36	4.07	7.21	4.31	5.75	5.28
<b>BY-GSA-MW-9</b>	13.32	3.72	6.10	4.26	5.07	5.29	3.91	7.17	4.34	5.80	5.32
<b>BY-GSA-MW-10</b>	17.61	4.15	6.41	4.69	5.41	5.85	4.31	7.48	4.63	6.24	5.76
<b>BY-GSA-PZ-11</b>	25.92	3.15	5.96	3.79	4.46	4.41	3.68	6.70	3.54	4.70	4.22
<b>BY-GSA-PZ-12</b>	17.43	3.52	6.18	4.12	4.97	4.98	3.87	6.98	4.00	5.33	4.84

Notes:

1. ft. MSL = feet mean sea level
2. -- = Not Measured



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

Plant Barry Gypsum Storage Area

10/18/2021 - 10/18/2021

BY-GSA-MW-7				
Sample Date = 10/18/2021				
Analyte	Units	Original Result	Duplicate Result	RPD (%)
Calcium	mg/L	1.53	1.56	1.94%
Chloride	mg/L	16.8	16.7	0.60%
Sulfate	mg/L	2.54	2.5	1.59%
TDS	mg/L	42.7	42.7	0.00%
Arsenic	mg/L	0.00023	0.00031	27.73%
Barium	mg/L	0.0859	0.0871	1.39%
Chromium	mg/L	0.00131	0.00134	2.26%
Cobalt	mg/L	0.00164	0.00167	1.81%
BY-UP-MW-3				
Sample Date = 10/18/2021				
Analyte	Units	Original Result	Duplicate Result	RPD (%)
Calcium	mg/L	2.1	2.09	0.48%
Chloride	mg/L	3.45	3.41	1.17%
Sulfate	mg/L	7.36	7.07	4.02%
TDS	mg/L	36	54	40.00%
Barium	mg/L	0.0935	0.0982	4.90%
Chromium	mg/L	0.0013	0.00135	3.77%
Cobalt	mg/L	0.00146	0.00156	6.62%

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 Barry Gypsum Storage Area  
10/19/2021 - 10/19/2021

Parameters Detected Above MDL					
Sample Date	QC Location	Parameter	Blank Concentration	Units	MDL
10/19/2021	EB-1	Arsenic	9E-05 J	mg/L	7E-05
10/19/2021	EB-1	Chromium	0.00024 J	mg/L	0.0002
10/19/2021	FB-1	Chromium	0.00039 J	mg/L	0.0002

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 Barry Gypsum Storage Area  
10/19/2021 - 10/19/2021

List of Compliance Sample Concentrations < 5x Blank Concentrations							
Sample Date	QC Sample	Parameter	QC Sample Result (5x)	Sample Location	Result	Units	Validation Flag
10/19/2021	EB-1	Arsenic	0.00047	BY-GSA-MW-10	0.00013 J	mg/L	+(U)*
10/19/2021	EB-1	Chromium	0.00122	BY-GSA-MW-10	0.00079 J	mg/L	+(U)*
10/19/2021	FB-1	Chromium	0.00194	BY-GSA-MW-10	0.00079 J	mg/L	+(U)*
10/19/2021	EB-1	Arsenic	0.00047	BY-GSA-MW-5	0.0002 J	mg/L	+(U)*
10/19/2021	EB-1	Arsenic	0.00047	BY-GSA-MW-8	0.00016 J	mg/L	+(U)*
10/19/2021	EB-1	Chromium	0.00122	BY-GSA-MW-9	0.00081 J	mg/L	+(U)*
10/19/2021	FB-1	Chromium	0.00194	BY-GSA-MW-9	0.00081 J	mg/L	+(U)*
10/19/2021	EB-1	Arsenic	0.00047	BY-GSA-PZ-11	0.00013 J	mg/L	+(U)*
10/19/2021	EB-1	Arsenic	0.00047	BY-UP-MW-1	0.00035 v	mg/L	+(U)*
10/19/2021	EB-1	Chromium	0.00122	BY-UP-MW-1	0.0003 J	mg/L	+(U)*
10/19/2021	FB-1	Chromium	0.00194	BY-UP-MW-1	0.0003 J	mg/L	+(U)*
10/19/2021	EB-1	Arsenic	0.00047	BY-UP-MW-2	0.00012 J	mg/L	+(U)*
10/19/2021	FB-1	Chromium	0.00194	BY-UP-MW-2	0.00135 v	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 Barry Gypsum Storage Area

Analyte	Units	Background	GWPS
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.0622	2
Beryllium	mg/L	0.003	0.004
Cadmium	mg/L	0.001	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.005	0.0157
Combined Radium 226 + 228	pCi/L	2.36	5
Fluoride	mg/L	0.111	4
Lead	mg/L	0.005	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.01	0.1
Selenium	mg/L	0.01	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 Table**

Plant Barry Gypsum Storage Area

(05/11/2021 - 05/12/2021)

Analyte	Units	GROUNDWATER MONITORING WELLS										
		BY-UP-MW-1	BY-UP-MW-2	BY-UP-MW-3	BY-UP-MW-4	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-MW-10	BY-GSA-PZ-11
		05/12/2021	05/11/2021	05/11/2021	05/11/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021
<b>Field Parameters</b>												
DO	mg/L	0.16	6.67	6.17	6.53	5.04	4.08	3.17	0.66	1.33	4.43	5.66
ORP	mV	130.44	278.42	246.66	225.88	303.44	215.19	278.85	246.43	238.61	193.74	265.87
Temperature	C	20.13	19.55	19.82	21	21.85	21.95	21.22	21.32	21.09	20.26	22.39
pH Field	SU	4.74	4.29	4.53	4.67	4.61	5.46	4.84	4.83	4.43	4.4	4.93
Conductivity	uS/cm	65.58	54.05	52.36	52.69	128.16	152.4	75.47	41.93	77.02	55.35	37.44
Turbidity	NTU	2.91	7.37	2.7	9.61	1.47	7.62	2.86	1.62	1.88	5.69	9.38

Notes:

1. mg/L = milligrams per liter
2. mV = millivolts
3. C = degrees celsius
4. uS/cm = microsiemens per centimeter
5. NTU = nephelometric turbidity units



**Table 6. First Semi-Annual Monitoring Event Analytical Summary Table**

Plant Barry Gypsum Storage Area

(05/11/2021 - 05/12/2021)

Analyte	Units	GROUNDWATER MONITORING WELLS										
		BY-UP-MW-1	BY-UP-MW-2	BY-UP-MW-3	BY-UP-MW-4	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-MW-10	BY-GSA-PZ-11
		05/12/2021	05/11/2021	05/11/2021	05/11/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021
<b>Appendix III</b>												
Boron	mg/L	0.0841 J	<0.03	<0.03	<0.03	0.511	0.876	<0.03	<0.03	0.0834 J	0.0423 J	0.0742 J
Calcium	mg/L	1.34	1.39	2.06	1.93	7	13.5	1.63	1.02	1.82	1.06	0.861
Chloride	mg/L	2.18	2.16	3.42	3.33	5.89	7.77	17.2	5.25	8.77	3.94	4.89
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
pH_Field	SU	4.74	4.29	4.53	4.67	4.61	5.46	4.84	4.83	4.43	4.4	4.93
Sulfate	mg/L	16.3	7.92	7.73	6.8	38.2	37.1	3.58	4.7	12.5	11	4.62
TDS	mg/L	40.7	35.3	44	46.7	85.3	98.7	52.7	40	50.7	42.7	40
<b>Appendix IV</b>												
Antimony	mg/L	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507	<0.000507
Arsenic	mg/L	0.000336	0.000136 J	<6.8e-005	0.000217	0.000501	0.000821	0.000177 J	<6.8e-005	0.000173 J	0.000129 J	0.000111 J
Barium	mg/L	0.123	0.165	0.0981	0.125	0.106	0.159	0.1	0.0488	0.184	0.121	0.0597
Beryllium	mg/L	0.000694 J	<0.000406	<0.000406	<0.000406	0.000575 J	0.000763 J	0.000464 J	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	8.67e-005 J	0.000154 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000296 J	0.00136	0.00146	0.00159	0.00232	0.0034	0.00139	0.00218	0.000783 J	0.000695 J	0.00281
Cobalt	mg/L	0.00611	0.00194	0.00142	0.00137	0.0046	0.0054	0.00192	0.000437	0.00177	0.00237	0.00101
Combined Radium 226 + 228	pCi/L	0.639 U	0.945 U	0.521 U	0.969 U	0.465 U	2.47	1.09	1.29	1.94	2.02	0.515 U
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Lead	mg/L	9.79e-005 J	0.000118 J	<6.8e-005	0.000159 J	9.94e-005 J	0.000213	7.98e-005 J	<6.8e-005	0.000288	0.000113 J	0.000208
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<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
Molybdenum	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
Selenium	mg/L	<0.000507	0.000602 J	<0.000507	<0.000507	0.0163	0.0123	<0.000507	<0.000507	0.00128	0.000778 J	0.00111
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

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantita



**Table 7. Second Semi-Annual Monitoring Event Analytical Summary Table**  
**Plant Barry Gypsum Storage Area**  
**(10/18/2021 - 10/19/2021)**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		BY-UP-MW-1	BY-UP-MW-2	BY-UP-MW-3	BY-UP-MW-4	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-MW-10	BY-GSA-PZ-11
		05/12/2021	05/11/2021	05/11/2021	05/11/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021	05/12/2021
<b>Field Parameters</b>												
DO	mg/L	0.18	6.46	5.79	6.31	5.2	4.25	2.82	0.82	2.13	4.26	5.33
ORP	mV	129.97	139.74	146.39	147.61	94.65	93.84	92.01	127.15	97.16	99.19	89.52
Temperature	C	20.76	19.82	20.14	21.67	22.67	22.81	21.48	21.38	21.53	21.07	21.89
pH Field	SU	4.67	4.6	4.55	4.38	4.79	5.28	5.05	4.77	4.34	4.48	4.8
Conductivity	uS/cm	72.16	63.52	62.97	64.28	63.85	120.21	71.5	50.91	71.42	55.57	40.75
Turbidity	NTU	1.45	6.48	1.92	4.19	9.96	2.64	2.67	0.89	2.03	3.53	7.4

- Notes:
1. mg/L = milligrams per liter
  2. mV = millivolts
  3. C = degrees celsius
  4. uS/cm = microsiemens per centimeter
  5. NTU = nephelometric turbidity units



**Table 7. Second Semi-Annual Monitoring Event Analytical Summary Table**

Plant Barry Gypsum Storage Area

(10/18/2021 - 10/19/2021)

Analyte	Units	GROUNDWATER MONITORING WELLS										
		BY-UP-MW-1	BY-UP-MW-2	BY-UP-MW-3	BY-UP-MW-4	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-MW-10	BY-GSA-PZ-11
		10/19/2021	10/19/2021	10/18/2021	10/18/2021	10/19/2021	10/18/2021	10/18/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
<b>Appendix III</b>												
Boron	mg/L	0.0708 J	<0.03	<0.03	<0.03	0.243	0.987	<0.03	0.0303 J	0.0966 J	0.0444 J	0.0551 J
Calcium	mg/L	1.17	1.32	2.09	2.01	2.75	9.06	1.53	1.01	1.75	0.977	0.941
Chloride	mg/L	2.37	2.08	3.45	3.32	4.81	10	16.7	5.34	6.33	3.79	5.02
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
pH_Field	SU	4.67	4.6	4.55	4.38	4.79	5.28	5.05	4.77	4.34	4.48	4.8
Sulfate	mg/L	15.5	7.48	7.07	6.58	12.3	24.7	2.5	4.2	12.6	10.1	4.92
TDS	mg/L	40	36	36	36	48.7	77.3	42.7	33.3	48	39.3	37.3
<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
Arsenic	mg/L	0.000346	0.000122 J	<6.8e-005	0.000193 J	0.000199 J	0.000317	0.000233	0.000164 J	<6.8e-005	0.000128 J	0.000126 J
Barium	mg/L	0.103	0.145	0.0982	0.124	0.0998	0.146	0.0871	0.0452	0.151	0.115	0.0599
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
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000137 J	0.000111 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000301 J	0.00135	0.00135	0.00146	0.00268	0.00335	0.00131	0.00246	0.000812 J	0.000793 J	0.00336
Cobalt	mg/L	0.00517	0.00192	0.00146	0.00139	0.00217	0.00552	0.00167	0.000495	0.00156	0.00238	0.00117
Combined Radium 226 + 228	pCi/L	1.77	1.85	1.75	2.19	0.719 U	2.03	0.69 U	1.54	3.15	1.6	0.87 U
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Lead	mg/L	0.000115 J	0.0001 J	<6.8e-005	0.00012 J	0.00026	0.000112 J	7.62e-005 J	<6.8e-005	0.000253	9.96e-005 J	0.000138 J
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<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
Molybdenum	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000105 J	<6.8e-005	<6.8e-005	7.96e-005 J	<6.8e-005	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	0.0029	0.00672	0.000572 J	0.000523 J	0.00118	0.000832 J	0.00114
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

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantita

# Appendix A



**Appendix A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-UP-MW-1																			
		Date	02/23/2016	04/19/2016	06/06/2016	08/30/2016	10/18/2016	01/31/2017	03/20/2017	05/02/2017	06/06/2017	09/13/2017	01/23/2018	05/02/2018	11/27/2018	05/29/2019	10/02/2019	03/31/2020	09/09/2020	05/12/2021	10/19/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.0212 J	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.02	--	0.0362 J	0.11	0.188	0.097 J	0.157	0.0999 J	0.0841 J	0.0708 J	
Calcium	mg/L	1.28	1.19	1.19	1.11	1.04	1.19	--	1.05	0.978	1.14	--	1.64	2.01	1.85	1.55	1.96	1.43	1.34	1.17	
Chloride	mg/L	3.59	2.89	3.12	3.91	3.9	--	3.5	3.5	3.1	4	--	9.9	4.7	5.48	3.65	3.17	2.92	2.18	2.37	
Fluoride	mg/L	0.03 J	0.023 J	0.062 J	0.053 J	0.042 J	--	<0.032	0.04 J	<0.032	0.04 J	<0.032	0.04 J	<0.032	0.0502 J	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.62	4.74	4.65	4.64	4.74	4.54	4.67	4.79	4.76	4.81	4.79	4.62	4.73	4.65	4.57	4.64	4.65	4.74	4.67	
Sulfate	mg/L	8.59	8.27	8.66	9.74	10.2	--	8.3	6.6	7.6	8.4	--	5.9	22	23.3	17.5	24.3	16.5	16.3	15.5	
TDS	mg/L	26.7	--	32.7	33.3	27.3	32	--	31.3	35.3	36.7	--	34	50.7	58	46	53.3	42	40.7	40	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000925 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	0.000336	0.000346	
Barium	mg/L	0.117	0.099	0.107	0.106	0.102	0.0944	--	0.0868	0.0799	--	0.0884	0.137	0.157	0.166	0.129	0.176	0.124	0.123	0.103	
Beryllium	mg/L	<0.0006	<0.0006	0.000612 J	<0.0006	<0.0006	<0.0006	--	0.00069 J	<0.0006	--	<0.0006	<0.0006	0.000856 J	<0.0006	<0.0006	<0.0006	<0.0006	0.000694 J	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	<0.002	<0.002	<0.002	<0.002	0.000296 J	0.000301 J	
Cobalt	mg/L	0.0035 J	0.0038 J	0.00427 J	0.00348 J	0.00338 J	0.00308 J	--	0.00314 J	0.0036 J	--	0.00586 J	0.00702 J	0.0157	0.0109	0.0129	0.0123	0.00697	0.00611	0.00517	
Combined Radium 226 +	pCi/L	2.8971 U	1 U	0.841	1.74	1.47	0.952	--	0.768	1.04	--	0.513 U	0.916	1.37	1.57	0.905	1.77	1.77	0.639 U	1.77	
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	<0.001	<0.001	<0.001	<0.001	9.79e-005 J	0.000115 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	<0.01	<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	--	<0.00025	<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	<0.002	<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	<0.002	<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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-UP-MW-2																			
		Date	02/23/2016	04/19/2016	06/07/2016	08/30/2016	10/18/2016	01/31/2017	03/20/2017	05/02/2017	06/06/2017	09/13/2017	01/23/2018	05/01/2018	11/27/2018	05/29/2019	10/02/2019	03/31/2020	09/09/2020	05/11/2021	10/19/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.0252 J	<0.02	0.0202 J	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.02	--	<0.02	0.0207 J	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	1.11	1.09	1.16	1.08	1.03	1.23	--	1.28	1.25	1.6	--	1.58	1.49	1.59	1.7	1.43	1.5	1.39	1.32	
Chloride	mg/L	3.99	4.08	4.28	4.26	4.26	--	4.1	5	3.9	4.3	--	3.7	3.2	2.93	2.75	2.72	2.32	2.16	2.08	
Fluoride	mg/L	0.02 J	0.021 J	0.06 J	0.05 J	0.04 J	--	<0.032	0.04 J	0.04 J	0.043 J	0.04 J	0.04 J	<0.032	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.79	4.84	4.81	4.76	4.84	4.6	4.71	4.8	4.72	4.71	4.67	4.61	4.72	4.58	4.43	4.6	4.67	4.29	4.6	
Sulfate	mg/L	7.2	7.22	7.92	8.17	7.99	--	6.1	5	5.3	4.9 J	--	4.2 J	3.7 J	5.94	6.04	6.83	6.08	7.92	7.48	
TDS	mg/L	30.7	--	35.3	27.3	--	32.7	--	30.7	34.7	39.3	--	42	31.3	40	41.3	40	40.7	35.3	36	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000898 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	0.000136 J	0.000122 J	
Barium	mg/L	0.111	0.0875	0.0979	0.108	0.103	0.109	--	0.125	0.108	--	0.153	0.167	0.158	0.172	0.183	0.171	0.172	0.165	0.145	
Beryllium	mg/L	<0.0006	<0.0006	0.00093 J	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	--	<0.0006	<0.0006	0.000801 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	--	0.00596 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00136	0.00135	
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	0.0021 J	<0.002	0.00209 J	0.00248 J	0.00244 J	0.00224 J	0.00219 J	0.00194	0.00192	
Combined Radium 226 +	pCi/L	1 U	1 U	0.652	0.411 U	1	0.398 U	--	0.66	0.639	--	0.669 U	1.06	0.636	0.579 U	1.33	0.814	0.653 U	0.945 U	1.85	
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	<0.001	<0.001	<0.001	<0.001	0.000118 J	0.0001 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	<0.01	<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	--	<0.00025	<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	<0.002	<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	<0.002	<0.002	<0.002	<0.002	0.000602 J	<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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-UP-MW-3																			
		Date	02/23/2016	04/19/2016	06/07/2016	08/30/2016	10/18/2016	01/31/2017	03/20/2017	05/02/2017	06/06/2017	09/13/2017	01/23/2018	05/01/2018	11/27/2018	05/29/2019	10/02/2019	03/31/2020	09/09/2020	05/11/2021	10/18/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	<0.02	<0.02	<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	<0.03	<0.03
Calcium	mg/L	1.77	1.68	1.68	1.62	1.53	1.65	--	1.58	1.55	1.71	--	1.76	1.69	1.74	1.86	1.92	1.97	2.06	2.09	
Chloride	mg/L	3.68	3.72	3.66	3.7	3.77	--	3.7	4.6	3.4	3.9	--	4.1	3.5	3.58	3.64	3.47	3.47	3.42	3.41	
Fluoride	mg/L	0.02 J	0.016 J	0.052 J	0.038 J	0.03 J	--	<0.032	<0.032	0.1	<0.032	<0.032	<0.032	<0.032	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.96	4.94	4.96	4.92	4.98	4.74	4.9	4.98	4.94	4.93	4.91	4.87	4.94	4.8	4.52	4.4	4.76	4.53	4.55	
Sulfate	mg/L	7.44	7.66	8.16	8.43	8.47	--	7.4	6.3	7.1	7.3	--	6.9	6.5	7.81	7.62	7.98	7.13	7.73	7.07	
TDS	mg/L	40	32	38.7	31.3	26.7	30	--	30.7	32.7	38	--	35.3	36	37.3	36.7	39.3	42.7	44	54	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000911 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	<6.8e-005	8.69e-005 J	
Barium	mg/L	0.0862	0.0718	0.0754	0.0768	0.0727	0.0698	--	0.0723	0.07	--	0.0747	0.0877	0.0804	0.0831	0.089	0.0927	0.0919	0.0981	0.0935	
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	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	--	0.00229 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00146	0.0013	
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	<0.002	<0.002	<0.002	<0.002	0.00142	0.00146	
Combined Radium 226 +	pCi/L	1 U	1 U	0.342 U	0.702	0.791	0.0613 U	--	0.974	0.748	--	0.558 U	0.296 U	0.357 U	0.275 U	0.458 U	0.941	1.05	0.521 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	<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	<0.01	<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	--	<0.00025	<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	<0.002	<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	<0.002	<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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-UP-MW-4																			
		Date	02/23/2016	04/19/2016	06/06/2016	08/30/2016	10/18/2016	01/31/2017	03/20/2017	05/02/2017	06/06/2017	09/12/2017	01/23/2018	05/01/2018	11/26/2018	05/28/2019	10/02/2019	03/31/2020	09/08/2020	05/11/2021	10/18/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.0257 J	<0.02	<0.02	<0.02	0.022 J	<0.02	--	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	1.42	1.31	1.35	1.31	1.22	1.36	--	1.24	1.28	1.47	--	1.47	1.52	1.6	1.7	1.78	1.94	1.93	2.01	
Chloride	mg/L	3.5	3.63	3.6	3.54	3.68	--	4.6	3.9	3.4	4.3	--	3.8	3.6	3.6	3.5	3.34	3.29	3.33	3.32	
Fluoride	mg/L	0.02 J	0.015 J	0.05 J	0.036 J	0.025 J	--	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.74	4.86	4.88	4.91	4.95	4.71	4.83	4.93	4.9	4.82	4.85	4.8	4.88	4.73	4.67	4.51	4.75	4.67	4.38	
Sulfate	mg/L	7.04	6.74	7.04	7.57	6.62	--	7	5.6	6.6	7.2	--	5.9	5.1	7.1	6.88	10.8	6.52	6.8	6.58	
TDS	mg/L	--	--	28.7	25.3	--	26	--	--	42.7	26.7	--	34.7	32.7	31.3	36	36.7	39.3	46.7	36	
<b>Appendix IV</b>																					
Antimony	mg/L	0.000606 J	<0.0006	<0.0006	<0.0006	<0.0006	0.000928 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	0.0017 J	<0.001	0.000217	0.000193 J	
Barium	mg/L	0.0973	0.0802	0.0862	0.0841	0.0715	0.0825	--	0.0777	0.078	--	0.0825	0.102	0.0994	0.102	0.111	0.129	0.125	0.125	0.124	
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	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	<0.002	<0.002	0.00604 J	<0.002	0.00159	0.00146	
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	<0.002	<0.002	<0.002	<0.002	0.00137	0.00139	
Combined Radium 226 +	pCi/L	2.1138	1 U	0.757	0.992	0.905	1.08	--	1.18	1.1	--	1.32 U	1.19	0.863	0.474 U	0.624 U	1.09	1.27	0.969 U	2.19	
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	<0.001	<0.001	0.00126 J	<0.001	0.000159 J	0.00012 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	<0.01	<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	--	<0.00025	<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	<0.002	<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	<0.002	<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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-GSA-MW-5																			
		Date	02/23/2016	04/18/2016	06/07/2016	08/30/2016	10/18/2016	01/31/2017	03/21/2017	05/02/2017	06/06/2017	09/13/2017	01/24/2018	05/02/2018	11/27/2018	05/28/2019	10/02/2019	03/30/2020	09/08/2020	05/12/2021	10/19/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.163	0.361	0.169	0.0858 J	0.0778 J	0.077 J	--	0.0602 J	0.0442 J	0.0411 J	--	0.0334 J	0.0265 J	<0.03	<0.03	<0.03	0.521	0.511	0.243	
Calcium	mg/L	2.42	4.65	3.1	2.19	1.97	1.73	--	1.74	1.66	1.61	--	1.44	1.3	1.25	1.33	1.26	3.24	7	2.75	
Chloride	mg/L	3.86	4.46	3.74	3.5	3.5	--	2.8	3.9	3.4	3.9	--	3.5	3.7	3.69	3.49	3.45	6.23	5.89	4.81	
Fluoride	mg/L	0.02 J	0.04 J	0.066 J	0.046 J	0.034 J	--	<0.032	0.1	0.1	<0.032	<0.032	<0.032	<0.032	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.76	4.75	4.77	4.82	4.82	4.8	4.86	4.89	4.86	4.89	4.86	4.87	4.92	4.8	4.44	4.83	4.77	4.61	4.79	
Sulfate	mg/L	12.5	28.6	18.7	13.8	12.2	--	8.6	8	8.6	7.6	--	6	5.5	6.5	6.55	6.34	15.1	38.2	12.3	
TDS	mg/L	38	62	51.3	38	28.7	34	--	37.3	36.7	37.3	--	30.7	--	26	34.7	32	55.3	85.3	48.7	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000866 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	0.000501	0.000199 J	
Barium	mg/L	0.109	0.135	0.0892	0.083	0.0859	0.0779	--	0.0799	0.0788	--	0.0746	0.085	0.072	0.0684	0.0728	0.0718	0.181	0.106	0.0998	
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	<0.0006	<0.0006	<0.0006	<0.0006	0.000575 J	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	8.67e-005 J	0.000137 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	<0.002	<0.002	<0.002	0.00221 J	0.00232	0.00268	
Cobalt	mg/L	<0.002	0.00278 J	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00227 J	0.0046	0.00217	
Combined Radium 226 +	pCi/L	1 U	1 U	1.03	0.696	0.966	0.724	--	0.587	0.591	--	0.566 U	0.401	0.611	0.391 U	0.954	0.525	0.845	0.465 U	0.719 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	<0.001	<0.001	<0.001	<0.001	9.94e-005 J	0.00026	
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	<0.01	<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	--	<0.00025	<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	<0.002	<0.002	<0.002	<0.002	<6.8e-005	0.000105 J	
Selenium	mg/L	0.00572 J	0.0141	0.00698 J	0.0042 J	0.00386 J	0.00247 J	--	0.00284 J	0.003 J	--	0.00201 J	<0.002	<0.002	<0.002	<0.002	<0.002	0.0052 J	0.0163	0.0029	
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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-GSA-MW-6																			
		Date	02/23/2016	04/18/2016	06/06/2016	08/30/2016	10/18/2016	01/31/2017	03/21/2017	05/02/2017	06/06/2017	09/12/2017	01/22/2018	05/01/2018	11/26/2018	05/28/2019	10/02/2019	03/30/2020	09/08/2020	05/12/2021	10/18/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.638	0.908	0.733	0.448	0.249	0.121	--	0.0695 J	0.0509 J	0.0709 J	--	0.0365 J	0.0836 J	0.556	0.186	0.304	0.362	0.876	0.987	
Calcium	mg/L	18.3	23.2	19.7	10.9	8.74	7.89	--	5.81	4.72	4.39	--	4.66	3.41	10	4.94	7.56	6.38	13.5	9.06	
Chloride	mg/L	6.06	6.13	5.52	5.35	4.55	--	3.5	4.8	3.6	4.3	--	3.8	3.5	6.26	4.13	4.95	5.71	7.77	10	
Fluoride	mg/L	0.06 J	0.138 J	0.148 J	0.072 J	0.049 J	--	<0.032	0.1	0.1	<0.032	<0.032	<0.032	<0.032	0.0591 J	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	6.59	6.21	5.97	5.99	5.94	5.92	5.74	5.82	5.77	5.64	5.66	5.71	5.58	5.21	5.4	5.51	5.15	5.46	5.28	
Sulfate	mg/L	36.5	80.2	0.498 J	27.8	22.5	--	15	11	10	7.5	--	8.5	7.4	32.7	15.9	21.8	17.7	37.1	24.7	
TDS	mg/L	128	166	131	86.7	67.3	60.7	--	50	47.3	42.7	--	44	38	77.3	50.7	58	59.3	98.7	77.3	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	0.000633 J	<0.0006	<0.0006	0.000926 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	0.000821	0.000317	
Barium	mg/L	0.237	0.263	0.206	0.165	0.148	0.123	--	0.098	0.0844	--	0.0593	0.081	0.0657	0.17	0.0985	0.142	0.0981	0.159	0.146	
Beryllium	mg/L	<0.0006	0.000681 J	<0.0006	<0.0006	<0.0006	<0.0006	--	0.000704 J	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000763 J	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.000154 J	0.000111 J	
Chromium	mg/L	0.00209 J	0.00324 J	0.0031 J	0.00227 J	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00223 J	<0.002	0.00273 J	0.00237 J	0.0034	0.00335	
Cobalt	mg/L	<0.002	0.00338 J	0.00361 J	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00301 J	<0.002	0.0031 J	0.00296 J	0.0054	0.00552	
Combined Radium 226 +	pCi/L	1.2261 U	1.92151 U	1.47	1.91	0.966	1.01	--	1.41	0.476	--	0.814 U	0.931	0.815	2.08	0.836	1.54	0.402 U	2.47	2.03	
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	<0.001	<0.001	<0.001	<0.001	0.000213	0.000112 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	<0.01	<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	--	<0.00025	<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	<0.002	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	
Selenium	mg/L	0.0266	0.0529	0.0382	0.014	0.0105	0.0104	--	0.00778 J	0.00576 J	--	0.00287 J	0.00367 J	0.00286 J	0.0089 J	0.00472 J	0.00658 J	0.0052 J	0.0123	0.00672	
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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-GSA-MW-7																			
		Date	02/23/2016	04/18/2016	06/06/2016	08/30/2016	10/18/2016	01/30/2017	03/21/2017	05/02/2017	06/07/2017	09/12/2017	01/22/2018	05/01/2018	11/27/2018	05/28/2019	10/02/2019	03/30/2020	09/08/2020	05/12/2021	10/18/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.0314 J	<0.02	<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	<0.03	<0.03
Calcium	mg/L	1.4	1.2	1.48	1.13	1.45	1.95	--	0.908	1.29	1.44	--	0.695	0.798	0.973	0.929	1.32	1.12	1.63	1.53	
Chloride	mg/L	4.08	4.14	4.09	4.6	8.32	--	5.6	4.8	6.3	8.5	--	4	4.3	4.63	5.02	10.5	8.74	17.2	16.8	
Fluoride	mg/L	0.02 J	0.018 J	0.051 J	0.039 J	0.025 J	--	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	5.12	5.11	5.14	5.06	5.01	4.74	5.04	5.08	5.07	5.03	5.06	4.89	5.05	4.83	5.04	4.91	4.39	4.84	5.05	
Sulfate	mg/L	3.82	3.48	3.76	3.62	2.58	--	3.3 J	2.5 J	3.1 J	3 J	--	1.6 J	1.9 J	4.86	4.6	4.29	3.59	3.58	2.54	
TDS	mg/L	--	--	32.7	25.3	28	45.3	--	26.7	28	35.3	--	30.7	30.7	33.3	30.7	39.3	42	52.7	42.7	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00119 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	0.000177 J	0.000233	
Barium	mg/L	0.0546	0.0421	0.0457	0.0469	0.0611	0.0801	--	0.0388	0.0437	--	0.0399	0.04	0.0427	0.0524	0.0492	0.0788	0.0615	0.1	0.0859	
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	<0.0006	<0.0006	<0.0006	<0.0006	0.000464 J	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	<0.002	<0.002	<0.002	<0.002	0.00139	0.00134	
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	<0.002	<0.002	<0.002	<0.002	0.00192	0.00164	
Combined Radium 226 +	pCi/L	1 U	1 U	0.427	0.869	0.927	0.649	--	0.804	0.136 U	--	0.726 U	0.63	0.109 U	-0.428 U	0.43 U	0.939	1.13	1.09	0.69 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	<0.001	<0.001	<0.001	<0.001	7.98e-005 J	7.62e-005 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	<0.01	<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	--	<0.00025	<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	<0.002	<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	<0.002	<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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-GSA-MW-8																			
		Date	02/23/2016	04/18/2016	06/07/2016	08/30/2016	10/18/2016	01/31/2017	03/21/2017	05/02/2017	06/07/2017	09/13/2017	01/24/2018	05/02/2018	11/27/2018	05/28/2019	10/02/2019	03/30/2020	09/08/2020	05/12/2021	10/19/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	<0.02	<0.02	<0.02	<0.02	0.0207 J	<0.02	--	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.0303 J
Calcium	mg/L	0.618	0.505	0.587	0.495 J	0.503	0.554	--	0.548	0.545	0.723	--	0.751	0.743	0.789	0.882	0.841	0.981	1.02	1.01	
Chloride	mg/L	4.47	4.74	4.52	4.71	4.73	--	4.9	5.7	4.1	4.9	--	4.1	4.9	4.43	4.32	4.38	4.61	5.25	5.34	
Fluoride	mg/L	0.02 J	0.019 J	0.053 J	0.038 J	0.028 J	--	<0.032	0.1	<0.032	<0.032	<0.032	<0.032	<0.032	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.92	5.16	5.11	5.14	5.09	5.01	5.07	5.13	5.05	5.06	5.02	4.99	5.06	4.92	4.86	4.92	4.35	4.83	4.77	
Sulfate	mg/L	3.33	3.78	4.44	4.29	4.27	--	3.6 J	2.9 J	2.9 J	3.2 J	--	2.6 J	2.8 J	4.46	4.96	4.84	4.56	4.7	4.2	
TDS	mg/L	30	27.3	32	--	28	26	--	25.3	--	31.3	--	30.7	35.3	28.7	37.3	30	38	40	33.3	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000885 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	<6.8e-005	0.000164 J	
Barium	mg/L	0.0352	0.0251	0.0299	0.0287	0.0309	0.0282	--	0.0309	0.0287	--	0.0351	0.0398	0.0388	0.0412	0.0453	0.0444	0.0494	0.0488	0.0452	
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	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	0.00201 J	<0.002	0.00205 J	0.00218 J	<0.002	--	0.00208 J	0.0022 J	--	0.00258 J	0.00202 J	<0.002	0.00209 J	0.00223 J	0.00275 J	0.00224 J	0.00218	0.00246	
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	<0.002	<0.002	<0.002	<0.002	0.000437	0.000495	
Combined Radium 226 +	pCi/L	1 U	1 U	0.69	0.687	0.62	0.266 U	--	0.853	0.477	--	0.411 U	0.718	0.691	0.311 U	0.969	0.397 U	0.0249 U	1.29	1.54	
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	<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	<0.01	<0.01	<0.01	<0.01	<0.007105	<0.007105	
Mercury	mg/L	<0.00025	<0.00025	0.00031 J	<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	<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	<0.002	<0.002	<0.002	<0.002	<6.8e-005	7.96e-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	<0.002	<0.002	<0.002	<0.002	<0.000507	0.000523 J	
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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-GSA-MW-9																			
		Date	02/23/2016	04/19/2016	06/07/2016	08/30/2016	10/18/2016	01/30/2017	03/21/2017	05/02/2017	06/07/2017	09/13/2017	01/23/2018	05/01/2018	11/26/2018	05/29/2019	10/02/2019	03/31/2020	09/09/2020	05/12/2021	10/19/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.0297 J	0.0269 J	0.0271 J	0.0272 J	<0.02	0.0269 J	--	0.027 J	<0.02	0.032 J	--	0.0302 J	0.139	0.141	0.116	0.112	0.0873 J	0.0834 J	0.0966 J	
Calcium	mg/L	1.15	1.04	1.22	1.18	1.12	1.23	--	1.2	1.17	1.25	--	1.25	1.61	1.8	1.85	1.67	1.79	1.82	1.75	
Chloride	mg/L	4.1	3.11	3.72	4.8	4.71	--	5.3	6.6	5.2	6.5	--	5.7	11	8.56	8.48	6.87	7.94	8.77	6.33	
Fluoride	mg/L	0.05 J	0.039 J	0.085 J	0.078 J	0.071 J	--	0.05 J	0.06 J	0.07 J	0.08 J	0.07 J	0.07 J	0.07 J	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.56	4.62	4.64	4.58	4.58	4.44	4.57	4.64	4.58	4.54	4.53	4.46	4.5	4.45	4.49	4.45	4.46	4.43	4.34	
Sulfate	mg/L	7.71	7.85	7.76	8.22	9.29	--	7.1	5.7	7.1	7.3	--	7.1	7.3	12.3	11.6	12.5	10.7	12.5	12.6	
TDS	mg/L	25.3	28	34.7	26.7	32	32.7	--	30.7	--	37.3	--	39.3	48	60	46.7	37.3	50.7	50.7	48	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000859 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	0.000173 J	<6.8e-005	
Barium	mg/L	0.121	0.0926	0.0998	0.106	0.106	0.111	--	0.111	0.107	--	0.122	0.139	0.152	0.155	0.16	0.165	0.17	0.184	0.151	
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	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	<0.002	<0.002	<0.002	<0.002	0.000783 J	0.000812 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	<0.002	<0.002	<0.002	<0.002	0.00177	0.00156	
Combined Radium 226 +	pCi/L	1 U	3.81872	0.941	0.98	1.06	1.15	--	1.31	1.12	--	1.16 U	0.961	1.72	2.2	2	1.88	2.11	1.94	3.15	
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	<0.001	<0.001	<0.001	<0.001	0.000288	0.000253	
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	<0.01	<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	--	<0.00025	<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	<0.002	<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	<0.002	<0.002	<0.002	<0.002	0.00128	0.00118	
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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-GSA-MW-10																			
		Date	02/23/2016	04/19/2016	06/07/2016	08/30/2016	10/18/2016	01/30/2017	03/21/2017	05/02/2017	06/07/2017	09/13/2017	01/23/2018	05/01/2018	11/26/2018	05/29/2019	10/02/2019	03/31/2020	09/09/2020	05/12/2021	10/19/2021
<b>Appendix III</b>	<b>Units</b>																				
Boron	mg/L	0.0294 J	0.0257 J	0.0257 J	0.0317 J	<0.02	0.0243 J	--	0.0259 J	<0.02	0.0394 J	--	0.0338 J	0.0484 J	0.0669 J	0.0671 J	0.0442 J	0.0509 J	0.0423 J	0.0444 J	
Calcium	mg/L	0.795	0.761	0.799	0.788	0.788	0.755	--	0.763	0.706	0.873	--	1.05	0.922	1.07	1.32	0.98	1.1	1.06	0.977	
Chloride	mg/L	3.57	3.12	3.14	2.93	2.96	--	4.4	3.7	3.3	5.1	--	4	3.8	4.34	4.34	3.89	4.11	3.94	3.79	
Fluoride	mg/L	0.05 J	0.05 J	0.098 J	0.089 J	0.092 J	--	0.06 J	0.07 J	0.07 J	0.08 J	0.08 J	0.09 J	0.08 J	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	
pH_Field	SU	4.67	4.79	4.73	4.68	4.75	4.65	4.68	4.75	4.7	4.71	4.6	4.61	4.65	4.54	4.6	4.55	4.58	4.4	4.48	
Sulfate	mg/L	9.29	9.92	10	11.1	11.7	--	9	7.9	8.4	8.7	--	10	8.3	11.1	13.2	11.1	9.28	11	10.1	
TDS	mg/L	37.3	34	38.7	34	31.3	--	--	29.3	36	35.3	--	32	31.3	43.3	36	33.3	39.3	42.7	39.3	
<b>Appendix IV</b>																					
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.000838 J	--	<0.0006	<0.0006	--	<0.0006	<0.0006	<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	<0.001	<0.001	<0.001	<0.001	0.000129 J	0.000128 J	
Barium	mg/L	0.134	0.114	0.118	0.126	0.127	0.1	--	0.114	0.0991	--	0.119	0.132	0.112	0.125	0.136	0.122	0.125	0.121	0.115	
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	<0.0006	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	
Cadmium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<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	<0.002	<0.002	<0.002	<0.002	0.000695 J	0.000793 J	
Cobalt	mg/L	0.00247 J	0.00241 J	0.00247 J	0.00251 J	0.00272 J	<0.002	--	0.00205 J	0.00201 J	--	0.00229 J	0.00216 J	0.00205 J	0.00261 J	0.00262 J	0.00238 J	0.00241 J	0.00237	0.00238	
Combined Radium 226 +	pCi/L	1 U	1 U	1.03	1.05	1.36	0.847	--	0.649	1.4	--	1.36 U	1.03	1.04	0.548 U	2.19	1.01	1.32	2.02	1.6	
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	<0.001	<0.001	<0.001	<0.001	0.000113 J	9.96e-005 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	<0.01	<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	--	<0.00025	<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	<0.002	<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	<0.002	<0.002	<0.002	<0.002	0.000778 J	0.000832 J	
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	<0.0002	<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 A.  
Historical Analytical Data  
Barry Gypsum Pond  
2016-Present**

Analytes	Wells	BY-GSA-PZ-11			
		Date	03/31/2020	09/08/2020	05/12/2021
<b>Appendix III</b>	<b>Units</b>				
Boron	mg/L	0.0864 J	0.0638 J	0.0742 J	0.0551 J
Calcium	mg/L	0.663	0.724	0.861	0.941
Chloride	mg/L	4.13	3.96	4.89	5.02
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06
pH_Field	SU	4.91	4.12	4.93	4.8
Sulfate	mg/L	3.16	3.61	4.62	4.92
TDS	mg/L	--	29.3	40	37.3
<b>Appendix IV</b>					
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	<0.001	<0.001	0.000111 J	0.000126 J
Barium	mg/L	0.0499	0.05	0.0597	0.0599
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	0.00249 J	0.00253 J	0.00281	0.00336
Cobalt	mg/L	<0.002	<0.002	0.00101	0.00117
Combined Radium 226 +	pCi/L	0.968	0.468 U	0.515 U	0.87 U
Lead	mg/L	<0.001	<0.001	0.000208	0.000138 J
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<6.8e-005	<6.8e-005
Selenium	mg/L	<0.002	<0.002	0.00111	0.00114
Thallium	mg/L	<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



**Appendix B. Historical Groundwater Elevations Summary  
Plant Barry Gypsum Storage Area**

Well Name	Top of Casing Elevation	Groundwater Elevation (ft. MSL)																				
		2/22/2016	4/18/2016	6/7/2016	8/29/2016	10/17/2016	1/30/2017	3/20/2017	5/1/2017	6/5/2017	9/12/2017	11/15/2017	1/21/2018	4/30/2018	8/27/2018	11/26/2018	5/28/2019	10/2/2019	3/30/2020	9/8/2020	5/24/2021	10/18/2021
BY-GSA-MW-1	20.66	7.73	7.92	5.81	5.13	4.59	6.94	5.42	5.51	6.64	5.45	5.43	4.75	6.83	5.22	5.84	6.60	4.78	8.38	5.31	7.13	6.64
BY-GSA-MW-2	19.95	7.55	7.77	5.75	5.04	4.50	6.82	5.30	5.48	6.45	5.30	5.28	4.68	6.66	5.06	5.73	6.32	4.71	8.05	5.16	6.80	6.40
BY-GSA-MW-3	23.24	8.19	8.45	6.52	5.78	5.19	7.55	6.04	6.16	7.39	6.16	6.08	5.46	7.19	5.76	6.40	7.02	5.37	8.54	5.83	7.49	7.19
BY-GSA-MW-4	29.12	7.83	8.13	6.21	5.47	4.93	7.25	5.71	5.98	6.87	5.74	5.69	5.18	6.99	5.47	6.13	6.57	5.16	8.20	5.53	6.99	6.68
BY-GSA-MW-5	34.31	7.08	7.41	5.28	4.61	4.09	6.52	4.78	5.17	5.77	8.59	4.67	4.18	6.42	4.61	5.30	5.62	4.35	7.44	4.55	5.95	5.44
BY-GSA-MW-6	21.68	6.49	6.96	4.63	4.02	3.47	6.14	4.08	4.73	5.06	3.87	3.93	3.56	6.02	4.07	4.72	4.74	3.85	6.91	4.00	5.17	4.78
BY-GSA-MW-7	20.59	6.57	6.97	4.63	4.02	3.47	6.16	4.10	4.64	5.08	3.80	3.92	3.47	6.00	3.99	4.77	4.84	3.84	6.86	3.91	5.19	4.76
BY-GSA-MW-8	34.36	6.97	7.21	4.98	4.26	3.79	6.36	4.52	4.90	5.48	4.22	4.36	3.82	6.28	4.34	5.15	5.36	4.07	7.21	4.31	5.75	5.28
BY-GSA-MW-9	13.32	6.68	7.02	4.81	4.14	3.65	6.23	4.37	4.75	5.48	4.17	4.25	3.72	6.10	4.26	5.07	5.29	3.91	7.17	4.34	5.80	5.32
BY-GSA-MW-10	17.61	7.08	7.40	5.22	4.55	4.05	6.57	4.82	5.04	5.96	4.69	4.76	4.15	6.41	4.69	5.41	5.85	4.31	7.48	4.63	6.24	5.76
BY-GSA-PZ-11	25.92	6.20	6.71	4.30	3.63	3.00	5.95	3.71	4.42	4.74	NM	3.46	3.15	5.96	3.79	4.46	4.41	3.68	6.70	3.54	4.70	4.22
BY-GSA-PZ-12	17.43	6.68	7.08	4.74	4.05	3.51	6.29	4.19	4.71	5.20	3.82	3.97	3.52	6.18	4.12	4.97	4.98	3.87	6.98	4.00	5.33	4.84

Notes:  
 1. ft. MSL - feet mean sea level  
 2. -- Not Measured

# Appendix C



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

# *Analytical Report*



**Sample Group :** WMWBARG\_1321

**Project/Site :** Barry Gypsum  
Bucks, AL 36512

**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

June 09, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on May 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, 2021

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=lbrmidkif@southemco.com, c=US  
Date: 2021.06.09 14:00:17 -05'00'

Supervision: **T. Durant Maske**  
Digitally signed by T. Durant Maske  
DN: cn=T. Durant Maske, o=Alabama  
Power Company, ou=Environmental  
Affairs, email=tdmaske@southemco.com,  
c=US  
Date: 2021.06.09 15:54:16 -05'00'



### REPORT OF LABORATORY ANALYSIS

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



Total Metals ICP

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698950	WMWBARG_1321
BB08947	698950	WMWBARG_1321
BB08948	698950	WMWBARG_1321
BB08949	698950	WMWBARG_1321
BB08950	698950	WMWBARG_1321
BB08951	698950	WMWBARG_1321
BB08952	698950	WMWBARG_1321
BB08953	698950	WMWBARG_1321
BB08954	698950	WMWBARG_1321
BB08955	698950	WMWBARG_1321

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

Dissolved Metals ICP

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698936	WMWBARG_1321
BB08947	698936	WMWBARG_1321
BB08949	698936	WMWBARG_1321
BB08950	698936	WMWBARG_1321
BB08952	698936	WMWBARG_1321
BB08953	698936	WMWBARG_1321
BB08954	698936	WMWBARG_1321
BB08955	698936	WMWBARG_1321

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

Total Metals ICPMS

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698789	WMWBARG_1321
BB08947	698789	WMWBARG_1321
BB08948	698789	WMWBARG_1321
BB08949	698789	WMWBARG_1321
BB08950	698789	WMWBARG_1321
BB08951	698789	WMWBARG_1321
BB08952	698789	WMWBARG_1321
BB08953	698789	WMWBARG_1321
BB08954	698789	WMWBARG_1321
BB08955	698789	WMWBARG_1321

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.

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

## Dissolved Metals ICPMS

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698763	WMWBARG_1321
BB08947	698763	WMWBARG_1321
BB08949	698763	WMWBARG_1321
BB08950	698763	WMWBARG_1321
BB08952	698763	WMWBARG_1321
BB08953	698763	WMWBARG_1321
BB08954	698763	WMWBARG_1321
BB08955	698763	WMWBARG_1321

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.

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

Mercury

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698557	WMWBARG_1321
BB08947	698557	WMWBARG_1321
BB08948	698557	WMWBARG_1321
BB08949	698557	WMWBARG_1321
BB08950	698557	WMWBARG_1321
BB08951	698557	WMWBARG_1321
BB08952	698557	WMWBARG_1321
BB08953	698557	WMWBARG_1321
BB08954	698557	WMWBARG_1321
BB08955	698557	WMWBARG_1321

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

TDS

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698532	WMWBARG_1321
BB08947	698532	WMWBARG_1321
BB08948	698532	WMWBARG_1321
BB08949	698532	WMWBARG_1321
BB08950	698532	WMWBARG_1321
BB08951	698532	WMWBARG_1321
BB08952	698532	WMWBARG_1321
BB08953	698532	WMWBARG_1321
BB08954	698532	WMWBARG_1321
BB08955	698532	WMWBARG_1321

4. All of the above samples were analyzed by Standard Method 2540C.
5. All samples were 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:
  - BB08948
  - BB08951

Anions

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698493, 698497, & 698615	WMWBARG_1321
BB08947	698493, 698497, & 698615	WMWBARG_1321
BB08948	698493, 698497, & 698615	WMWBARG_1321
BB08949	698493, 698497, & 698615	WMWBARG_1321
BB08950	698493, 698497, & 698615	WMWBARG_1321
BB08951	698493, 698497, & 698615	WMWBARG_1321
BB08952	698493, 698497, & 698615	WMWBARG_1321
BB08953	698493, 698497, & 698615	WMWBARG_1321
BB08954	698493, 698497, & 698615	WMWBARG_1321
BB08955	698493, 698497, & 698615	WMWBARG_1321

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.
7. All samples were analyzed without dilution.

## Case Narrative

Alkalinity

Barry Gypsum

WMWBARG\_1321

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>
BB08946	698976 & 698977	WMWBARG_1321
BB08947	698976 & 698977	WMWBARG_1321
BB08949	698976 & 698977	WMWBARG_1321
BB08950	698976 & 698977	WMWBARG_1321
BB08952	698976 & 698977	WMWBARG_1321
BB08953	698976 & 698977	WMWBARG_1321
BB08954	698976 & 698977	WMWBARG_1321
BB08955	698976 & 698977	WMWBARG_1321

4. All of the above samples were analyzed by Standard Method 2320B.
5. All samples were 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:** Barry Gypsum - PZ-11

**Location Code:** WMWBARG  
**Collected:** 5/12/21 09:36  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:05

**Laboratory ID Number:** BB08946

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	5/24/21 09:00	5/25/21 11:31		1.015	0.0742	mg/L	0.030000	0.1015	J
* Calcium, Total	5/24/21 09:00	5/25/21 11:31		1.015	0.861	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 11:31		1.015	0.116	mg/L	0.008120	0.0406	
* Lithium, Total	5/24/21 09:00	5/25/21 11:31		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:31		1.015	0.965	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 11:31		1.015	2.70	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	5/24/21 09:00	5/25/21 13:02		1.015	0.0628	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	5/18/21 11:00	5/18/21 16:51		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 16:51		1.015	0.000111	mg/L	0.000068	0.000203	J
* Barium, Total	5/18/21 11:00	5/18/21 16:51		1.015	0.0597	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 16:51		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:00	5/18/21 16:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 16:51		1.015	0.00281	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:00	5/18/21 16:51		1.015	0.00101	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 16:51		1.015	0.000208	mg/L	0.000068	0.000203	
* Molybdenum, Total	5/18/21 11:00	5/18/21 16:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 16:51		1.015	1.26	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 16:51		1.015	0.00949	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 16:51		1.015	0.00111	mg/L	0.000507	0.001015	
* Thallium, Total	5/18/21 11:00	5/18/21 16:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	5/18/21 13:18	5/18/21 15:13		1.015	0.00944	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:01		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	5/17/21 11:25	5/17/21 11:50		1	1.48	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	40.0	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - PZ-11

**Location Code:** WMWBARG  
**Collected:** 5/12/21 09:36  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:05

**Laboratory ID Number:** BB08946

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.)	5/17/21 11:25	5/17/21 11:50		1	1.48	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:41	5/17/21 10:41		1	4.89	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:47	5/17/21 12:47		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:16	5/19/21 15:16		1	4.62	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	5/12/21 09:33	5/12/21 09:33			37.44	uS/cm			FA
pH	5/12/21 09:33	5/12/21 09:33			4.93	SU			FA
Temperature	5/12/21 09:33	5/12/21 09:33			22.39	C			FA
Turbidity	5/12/21 09:33	5/12/21 09:33			9.38	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 09:36  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:05

**Description:** Barry Gypsum - PZ-11

**Laboratory ID Number:** BB08946

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 09:36  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:05

**Description:** Barry Gypsum - PZ-11

**Laboratory ID Number:** BB08946

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0			7.33	10.0
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-5

**Location Code:** WMWBARG  
**Collected:** 5/12/21 10:42  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:05

**Laboratory ID Number:** BB08947

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	5/24/21 09:00	5/25/21 11:34		1.015	0.511	mg/L	0.030000	0.1015	
* Calcium, Total	5/24/21 09:00	5/25/21 11:34		1.015	7.00	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 11:34		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	5/24/21 09:00	5/25/21 11:34		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:34		1.015	6.46	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 11:34		1.015	3.45	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	5/24/21 09:00	5/25/21 13:06		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	5/18/21 11:00	5/18/21 16:54		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.000501	mg/L	0.000068	0.000203	
* Barium, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.106	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.000575	mg/L	0.000406	0.001015	J
* Cadmium, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.0000867	mg/L	0.000068	0.000203	J
* Chromium, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.00232	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.00460	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.0000994	mg/L	0.000068	0.000203	J
* Molybdenum, Total	5/18/21 11:00	5/18/21 16:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 16:54		1.015	1.62	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.0521	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 16:54		1.015	0.0163	mg/L	0.000507	0.001015	
* Thallium, Total	5/18/21 11:00	5/18/21 16:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	5/18/21 13:18	5/18/21 15:17		1.015	0.0520	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:04		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	5/17/21 11:25	5/17/21 11:50		1	0.12	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	85.3	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-5

**Location Code:** WMWBARG  
**Collected:** 5/12/21 10:42  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:05

**Laboratory ID Number:** BB08947

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.)	5/17/21 11:25	5/17/21 11:50		1	0.12	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:42	5/17/21 10:42		1	5.89	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:49	5/17/21 12:49		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:17	5/19/21 15:17		1	38.2	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	5/12/21 10:39	5/12/21 10:39			128.16	uS/cm			FA
pH	5/12/21 10:39	5/12/21 10:39			4.61	SU			FA
Temperature	5/12/21 10:39	5/12/21 10:39			21.85	C			FA
Turbidity	5/12/21 10:39	5/12/21 10:39			1.47	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 10:42  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:05

**Description:** Barry Gypsum - MW-5

**Laboratory ID Number:** BB08947

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 10:42  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:05

**Description:** Barry Gypsum - MW-5

**Laboratory ID Number:** BB08947

Sample	Analysis	Units	MB	MB			Sample		Standard		Rec			Prec Limit	
				Limit	Spike	MS	Duplicate	Standard	Limit	Rec	Limit	Prec			
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75		96.8	80.0 to 120		0.00	20.0
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0		93.0	80.0 to 120		6.58	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0					3.49	5.00
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0					7.33	10.0
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0		102	80.0 to 120		2.51	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum Field Blank-1

**Location Code:** WMWBARGFB  
**Collected:** 5/12/21 11:05  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:05

**Laboratory ID Number:** BB08948

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	5/24/21 09:00	5/25/21 11:38		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 11:38		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	5/24/21 09:00	5/25/21 11:38		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	5/24/21 09:00	5/25/21 11:38		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:38		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	5/24/21 09:00	5/25/21 11:38		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	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	5/18/21 11:00	5/18/21 16:58		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:00	5/18/21 16:58		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	5/19/21 10:43	5/19/21 15:06		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	5/17/21 10:43	5/17/21 10:43		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	5/17/21 12:50	5/17/21 12:50		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>			<b>Analyst: JCC</b>						
* Sulfate	5/19/21 15:18	5/19/21 15:18		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:** WMWBARGFB

**Sample Date:** 5/12/21 11:05

**Customer ID:**

**Delivery Date:** 5/13/21 14:05

**Description:** Barry Gypsum Field Blank-1

**Laboratory ID Number:** BB08948

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0	
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0	
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0	
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0	
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0	
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0	
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0	
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0	
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0	
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0	
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0	
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0	
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0	
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0	
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0	
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0	
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0	
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0	
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0	
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0	

**Comments:**

## Batch QC Summary

**Customer Account:** WMWBARGFB

**Sample Date:** 5/12/21 11:05

**Customer ID:**

**Delivery Date:** 5/13/21 14:05

**Description:** Barry Gypsum Field Blank-1

**Laboratory ID Number:** BB08948

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0

**Comments:**

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-7

**Location Code:** WMWBARG  
**Collected:** 5/12/21 12:23  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08949

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	5/24/21 09:00	5/25/21 11:41		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 11:41		1.015	1.63	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 11:41		1.015	0.0256	mg/L	0.008120	0.0406	J
* Lithium, Total	5/24/21 09:00	5/25/21 11:41		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:41		1.015	1.73	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 11:41		1.015	7.45	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	5/24/21 09:00	5/25/21 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	5/18/21 11:00	5/18/21 17:02		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 17:02		1.015	0.000177	mg/L	0.000068	0.000203	J
* Barium, Total	5/18/21 11:00	5/18/21 17:02		1.015	0.100	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 17:02		1.015	0.000464	mg/L	0.000406	0.001015	J
* Cadmium, Total	5/18/21 11:00	5/18/21 17:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 17:02		1.015	0.00139	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:00	5/18/21 17:02		1.015	0.00192	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 17:02		1.015	0.0000798	mg/L	0.000068	0.000203	J
* Molybdenum, Total	5/18/21 11:00	5/18/21 17:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 17:02		1.015	1.14	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 17:02		1.015	0.0189	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 17:02		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:00	5/18/21 17:02		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	5/18/21 13:18	5/18/21 15:21		1.015	0.0198	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	5/19/21 10:43	5/19/21 15:08		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	5/17/21 11:25	5/17/21 11:50		1	0.72	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>			<b>Preparation Method: EPA 1638</b>				
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	52.7	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-7

**Location Code:** WMWBARG  
**Collected:** 5/12/21 12:23  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08949

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.)	5/17/21 11:25	5/17/21 11:50		1	0.72	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:44	5/17/21 10:44		1	17.2	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:51	5/17/21 12:51		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:19	5/19/21 15:19		1	3.58	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	5/12/21 12:20	5/12/21 12:20			75.47	uS/cm			FA
pH	5/12/21 12:20	5/12/21 12:20			4.84	SU			FA
Temperature	5/12/21 12:20	5/12/21 12:20			21.22	C			FA
Turbidity	5/12/21 12:20	5/12/21 12:20			2.86	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 12:23  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-7

**Laboratory ID Number:** BB08949

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 12:23  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-7

**Laboratory ID Number:** BB08949

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0			7.33	10.0
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-6

**Location Code:** WMWBARG  
**Collected:** 5/12/21 13:51  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08950

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	5/24/21 09:00	5/25/21 11:45		1.015	0.876	mg/L	0.030000	0.1015	
* Calcium, Total	5/24/21 09:00	5/25/21 11:45		1.015	13.5	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 11:45		1.015	0.0829	mg/L	0.008120	0.0406	
* Lithium, Total	5/24/21 09:00	5/25/21 11:45		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:45		1.015	5.46	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 11:45		1.015	4.22	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	5/24/21 09:00	5/25/21 13:12		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	5/18/21 11:00	5/18/21 17:05		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.000821	mg/L	0.000068	0.000203	
* Barium, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.159	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.000763	mg/L	0.000406	0.001015	J
* Cadmium, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.000154	mg/L	0.000068	0.000203	J
* Chromium, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.00340	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.00540	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.000213	mg/L	0.000068	0.000203	
* Molybdenum, Total	5/18/21 11:00	5/18/21 17:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 17:05		1.015	1.66	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.0668	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 17:05		1.015	0.0123	mg/L	0.000507	0.001015	
* Thallium, Total	5/18/21 11:00	5/18/21 17:05		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	5/18/21 13:18	5/18/21 15:24		1.015	0.0530	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	5/19/21 10:43	5/19/21 15:11		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	5/17/21 11:25	5/17/21 11:50		1	10.4	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>			<b>Preparation Method: EPA 1638</b>				
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	98.7	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-6

**Location Code:** WMWBARG  
**Collected:** 5/12/21 13:51  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08950

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.)	5/17/21 11:25	5/17/21 11:50		1	10.4	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:45	5/17/21 10:45		1	7.77	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:52	5/17/21 12:52		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:21	5/19/21 15:21		1	37.1	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	5/12/21 13:48	5/12/21 13:48			152.40	uS/cm			FA
pH	5/12/21 13:48	5/12/21 13:48			5.46	SU			FA
Temperature	5/12/21 13:48	5/12/21 13:48			21.95	C			FA
Turbidity	5/12/21 13:48	5/12/21 13:48			7.62	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 13:51  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-6

**Laboratory ID Number:** BB08950

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 13:51  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-6

**Laboratory ID Number:** BB08950

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0			7.33	10.0
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum Equipment Blank-1

**Location Code:** WMWBARGEB  
**Collected:** 5/12/21 14:10  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08951

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	5/24/21 09:00	5/25/21 11:48		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 11:48		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	5/24/21 09:00	5/25/21 11:48		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	5/24/21 09:00	5/25/21 11:48		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:48		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	5/24/21 09:00	5/25/21 11:48		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	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:00	5/18/21 17:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>			<b>Analyst: CRB</b>						
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:13		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	5/17/21 10:47	5/17/21 10:47		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	5/17/21 12:53	5/17/21 12:53		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>			<b>Analyst: JCC</b>						
* Sulfate	5/19/21 15:22	5/19/21 15:22		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:** WMWBARGEB

**Sample Date:** 5/12/21 14:10

**Customer ID:**

**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum Equipment Blank-1

**Laboratory ID Number:** BB08951

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWBARGE8

**Sample Date:** 5/12/21 14:10

**Customer ID:**

**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum Equipment Blank-1

**Laboratory ID Number:** BB08951

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00

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**Comments:**

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-10

**Location Code:** WMWBARG  
**Collected:** 5/12/21 10:50  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08952

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	5/24/21 09:00	5/25/21 11:51		1.015	0.0423	mg/L	0.030000	0.1015	J
* Calcium, Total	5/24/21 09:00	5/25/21 11:51		1.015	1.06	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 11:51		1.015	0.0853	mg/L	0.008120	0.0406	
* Lithium, Total	5/24/21 09:00	5/25/21 11:51		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:51		1.015	2.38	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 11:51		1.015	2.64	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	5/24/21 09:00	5/25/21 13:16		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	5/18/21 11:00	5/18/21 17:12		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.000129	mg/L	0.000068	0.000203	J
* Barium, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.121	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 17:12		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:00	5/18/21 17:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.000695	mg/L	0.000203	0.001015	J
* Cobalt, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.00237	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.000113	mg/L	0.000068	0.000203	J
* Molybdenum, Total	5/18/21 11:00	5/18/21 17:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.868	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.0334	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 17:12		1.015	0.000778	mg/L	0.000507	0.001015	J
* Thallium, Total	5/18/21 11:00	5/18/21 17:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	5/18/21 13:18	5/18/21 15:28		1.015	0.0337	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:15		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	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L		0.1	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	42.7	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-10

**Location Code:** WMWBARG  
**Collected:** 5/12/21 10:50  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08952

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.)	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:48	5/17/21 10:48		1	3.94	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:55	5/17/21 12:55		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:23	5/19/21 15:23		1	11.0	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/12/21 10:45	5/12/21 10:45			55.35	uS/cm			FA
pH	5/12/21 10:45	5/12/21 10:45			4.40	SU			FA
Temperature	5/12/21 10:45	5/12/21 10:45			20.26	C			FA
Turbidity	5/12/21 10:45	5/12/21 10:45			5.69	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 10:50  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-10

**Laboratory ID Number:** BB08952

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 10:50  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-10

**Laboratory ID Number:** BB08952

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0			7.33	10.0
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-10 DUP

**Location Code:** WMWBARG  
**Collected:** 5/12/21 10:50  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08953

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	5/24/21 09:00	5/25/21 11:55		1.015	0.0405	mg/L	0.030000	0.1015	J
* Calcium, Total	5/24/21 09:00	5/25/21 11:55		1.015	1.04	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 11:55		1.015	0.0815	mg/L	0.008120	0.0406	
* Lithium, Total	5/24/21 09:00	5/25/21 11:55		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:55		1.015	2.34	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 11:55		1.015	2.62	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	5/24/21 09:00	5/25/21 13:19		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	5/18/21 11:00	5/18/21 17:16		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.000121	mg/L	0.000068	0.000203	J
* Barium, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.126	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 17:16		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:00	5/18/21 17:16		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.000717	mg/L	0.000203	0.001015	J
* Cobalt, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.00244	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.000112	mg/L	0.000068	0.000203	J
* Molybdenum, Total	5/18/21 11:00	5/18/21 17:16		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.875	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.0339	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 17:16		1.015	0.000661	mg/L	0.000507	0.001015	J
* Thallium, Total	5/18/21 11:00	5/18/21 17:16		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	5/18/21 13:18	5/18/21 15:31		1.015	0.0337	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:18		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	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L		0.1	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	42.7	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-10 DUP

**Location Code:** WMWBARG  
**Collected:** 5/12/21 10:50  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08953

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.)	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:49	5/17/21 10:49		1	4.07	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:56	5/17/21 12:56		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:24	5/19/21 15:24		1	11.2	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/12/21 10:45	5/12/21 10:45			55.35	uS/cm			FA
pH	5/12/21 10:45	5/12/21 10:45			4.40	SU			FA
Temperature	5/12/21 10:45	5/12/21 10:45			20.26	C			FA
Turbidity	5/12/21 10:45	5/12/21 10:45			5.69	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 10:50  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-10 DUP

**Laboratory ID Number:** BB08953

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 10:50  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-10 DUP

**Laboratory ID Number:** BB08953

Sample	Analysis	Units	MB	MB			Sample		Standard		Rec			Prec Limit
				Limit	Spike	MS	Duplicate	Standard	Limit	Rec	Limit	Prec		
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0	
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0	
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0			7.33	10.0	
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0	
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00	

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-9

**Location Code:** WMWBARG  
**Collected:** 5/12/21 11:50  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08954

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	5/24/21 09:00	5/25/21 11:58		1.015	0.0834	mg/L	0.030000	0.1015	J
* Calcium, Total	5/24/21 09:00	5/25/21 11:58		1.015	1.82	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 11:58		1.015	0.0300	mg/L	0.008120	0.0406	J
* Lithium, Total	5/24/21 09:00	5/25/21 11:58		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 11:58		1.015	3.30	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 11:58		1.015	3.21	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	5/24/21 09:00	5/25/21 13:23		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	5/18/21 11:00	5/18/21 17:20		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 17:20		1.015	0.000173	mg/L	0.000068	0.000203	J
* Barium, Total	5/18/21 11:00	5/18/21 17:20		1.015	0.184	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 17:20		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:00	5/18/21 17:20		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 17:20		1.015	0.000783	mg/L	0.000203	0.001015	J
* Cobalt, Total	5/18/21 11:00	5/18/21 17:20		1.015	0.00177	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 17:20		1.015	0.000288	mg/L	0.000068	0.000203	
* Molybdenum, Total	5/18/21 11:00	5/18/21 17:20		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 17:20		1.015	1.23	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 17:20		1.015	0.0453	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 17:20		1.015	0.00128	mg/L	0.000507	0.001015	
* Thallium, Total	5/18/21 11:00	5/18/21 17:20		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	5/18/21 13:18	5/18/21 15:35		1.015	0.0466	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:20		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	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L		0.1	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	50.7	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-9

**Location Code:** WMWBARG  
**Collected:** 5/12/21 11:50  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08954

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.)	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	Not Detected	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:50	5/17/21 10:50		1	8.77	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:57	5/17/21 12:57		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:25	5/19/21 15:25		1	12.5	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/12/21 11:48	5/12/21 11:48			77.02	uS/cm			FA
pH	5/12/21 11:48	5/12/21 11:48			4.43	SU			FA
Temperature	5/12/21 11:48	5/12/21 11:48			21.09	C			FA
Turbidity	5/12/21 11:48	5/12/21 11:48			1.88	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 11:50  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-9

**Laboratory ID Number:** BB08954

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 11:50  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-9

**Laboratory ID Number:** BB08954

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0			7.33	10.0
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-8

**Location Code:** WMWBARG  
**Collected:** 5/12/21 13:00  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08955

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	5/24/21 09:00	5/25/21 12:01		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 12:01		1.015	1.02	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 12:01		1.015	0.0168	mg/L	0.008120	0.0406	J
* Lithium, Total	5/24/21 09:00	5/25/21 12:01		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:01		1.015	1.16	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 12:01		1.015	3.93	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	5/24/21 09:00	5/25/21 13:26		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	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	5/18/21 11:00	5/18/21 17:23		1.015	0.0488	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:00	5/18/21 17:23		1.015	0.00218	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:00	5/18/21 17:23		1.015	0.000437	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:00	5/18/21 17:23		1.015	0.922	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:00	5/18/21 17:23		1.015	0.0139	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:00	5/18/21 17:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	5/18/21 13:18	5/18/21 15:39		1.015	0.0137	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:23		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	5/17/21 11:25	5/17/21 11:50		1	3.68	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/18/21 16:40	5/19/21 16:30		1	40.0	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-8

**Location Code:** WMWBARG  
**Collected:** 5/12/21 13:00  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:06

**Laboratory ID Number:** BB08955

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.)	5/17/21 11:25	5/17/21 11:50		1	3.68	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:25	5/17/21 11:50		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 10:51	5/17/21 10:51		1	5.25	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 12:58	5/17/21 12:58		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:27	5/19/21 15:27		1	4.70	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/12/21 12:57	5/12/21 12:57			41.93	uS/cm			FA
pH	5/12/21 12:57	5/12/21 12:57			4.83	SU			FA
Temperature	5/12/21 12:57	5/12/21 12:57			21.32	C			FA
Turbidity	5/12/21 12:57	5/12/21 12:57			1.62	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 13:00  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-8

**Laboratory ID Number:** BB08955

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08955	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.199	0.197	0.170 to 0.230	99.7	70.0 to 130	0.00501	20.0
BB08955	Chromium, Total	mg/L	0.0000327	0.000440	0.10	0.105	0.103	0.100	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BB08955	Calcium, Total	mg/L	-0.00843	0.152	5.00	6.25	6.34	5.17	4.25 to 5.75	104	70.0 to 130	1.48	20.0
BB08955	Manganese, Total	mg/L	0.0000165	0.000147	0.10	0.117	0.116	0.100	0.0850 to 0.115	103	70.0 to 130	0.858	20.0
BB08955	Cobalt, Total	mg/L	-0.0000073	0.000147	0.10	0.104	0.103	0.101	0.0850 to 0.115	104	70.0 to 130	0.966	20.0
BB08955	Mercury, Total by CVAA	mg/L	0.0000489	0.000500	0.004	0.00433	0.00432	0.00414	0.00340 to 0.00460	108	70.0 to 130	0.231	20.0
BB08955	Potassium, Total	mg/L	0.0511	0.367	10.0	11.8	11.4	10.6	8.50 to 11.5	109	70.0 to 130	3.45	20.0
BB08955	Antimony, Total	mg/L	0.000134	0.00100	0.10	0.0963	0.0966	0.0955	0.0850 to 0.115	96.3	70.0 to 130	0.311	20.0
BB08955	Arsenic, Total	mg/L	0.0000145	0.000147	0.10	0.103	0.103	0.105	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BB08955	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.03	1.04	1.00	0.850 to 1.15	103	70.0 to 130	0.613	20.0
BB08955	Thallium, Total	mg/L	-0.0000020	0.000147	0.10	0.100	0.0979	0.0954	0.0850 to 0.115	100	70.0 to 130	2.12	20.0
BB08955	Barium, Total	mg/L	-0.0000300	0.000200	0.10	0.152	0.150	0.0996	0.0850 to 0.115	103	70.0 to 130	1.32	20.0
BB08955	Manganese, Dissolved	mg/L	0.0000088	0.000147	0.10	0.114	0.114	0.102	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BB08955	Molybdenum, Total	mg/L	-0.0000093	0.000147	0.10	0.0962	0.0973	0.0979	0.0850 to 0.115	96.2	70.0 to 130	1.14	20.0
BB08955	Selenium, Total	mg/L	0.0000177	0.00100	0.10	0.0979	0.0997	0.0997	0.0850 to 0.115	97.9	70.0 to 130	1.82	20.0
BB08955	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0985	0.0971	0.0981	0.0850 to 0.115	98.5	70.0 to 130	1.43	20.0
BB08955	Iron, Total	mg/L	0.000168	0.0176	0.2	0.244	0.246	0.203	0.170 to 0.230	114	70.0 to 130	1.01	20.0
BB08955	Magnesium, Total	mg/L	0.000629	0.0462	5.00	6.26	6.30	5.03	4.25 to 5.75	102	70.0 to 130	0.706	20.0
BB08955	Sodium, Total	mg/L	-0.000422	0.0660	5.00	8.73	8.66	4.68	4.25 to 5.75	95.8	70.0 to 130	0.804	20.0
BB08955	Lead, Total	mg/L	0.0000072	0.000147	0.10	0.103	0.101	0.0985	0.0850 to 0.115	103	70.0 to 130	1.96	20.0
BB08955	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.0979	0.0998	0.0975	0.0850 to 0.115	97.9	70.0 to 130	1.92	20.0
BB08955	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	0.209	0.210	0.211	0.170 to 0.230	104	70.0 to 130	0.740	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARG  
**Sample Date:** 5/12/21 13:00  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:06

**Description:** Barry Gypsum - MW-8

**Laboratory ID Number:** BB08955

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08955	Sulfate	mg/L	-0.0572	1.00	20.0	23.3	5.02	20.2	18.0 to 22.0	93.0	80.0 to 120	6.58	20.0
BB08955	Chloride	mg/L	0.153	1.00	10.0	15.5	5.12	9.77	9.00 to 11.0	102	80.0 to 120	2.51	20.0
BB08955	Solids, Dissolved	mg/L	2.00	25.0			37.3	57.0	40.0 to 60.0			3.49	5.00
BB08955	Fluoride	mg/L	0.0269	0.100	2.50	2.42	0.0202	2.51	2.25 to 2.75	96.8	80.0 to 120	0.00	20.0
BB08955	Alkalinity, Total as CaCO3	mg/L					3.96	51.7	45.0 to 55.0			7.33	10.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Definitions

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.
J	Reported value is an estimate because concentration is less than reporting limit.
U	Compound was analyzed, but not detected.









June 29, 2021

Laura Midkiff  
Alabama Power  
744 Highway 87  
GSC #8  
Calera, AL 35040

RE: Project: BARRY GYPSUM WMWBARG\_1321  
Pace Project No.: 92540464

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 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,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Brooke Caton, Alabama Power  
Renee Jernigan, Alabama Power



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BARRY GYPSUM WMWBARG\_1321  
Pace Project No.: 92540464

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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: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92540464001	BB08956 PZ-11	Water	05/12/21 09:36	05/18/21 10:00
92540464002	BB08957 MW-5	Water	05/12/21 10:42	05/18/21 10:00
92540464003	BB08957 MW-5 MS	Water	05/12/21 10:42	05/18/21 10:00
92540464004	BB08957 MW-5 MSD	Water	05/12/21 10:42	05/18/21 10:00
92540464005	BB08958 FB-1	Water	05/12/21 11:05	05/18/21 10:00
92540464006	BB08959 MW-7	Water	05/12/21 12:23	05/18/21 10:00
92540464007	BB08960 MW-6	Water	05/12/21 13:51	05/18/21 10:00
92540464008	BB08961 EB-1	Water	05/12/21 14:10	05/18/21 10:00
92540464009	BB08962 MW-10	Water	05/12/21 10:50	05/18/21 10:00
92540464010	BB08963 MW-10 DUP	Water	05/12/21 10:50	05/18/21 10:00
92540464011	BB08964 MW-9	Water	05/12/21 11:50	05/18/21 10:00
92540464012	BB08965 MW-8	Water	05/12/21 13:00	05/18/21 10:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BARRY GYPSUM WMWBARG\_1321  
Pace Project No.: 92540464

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92540464001	BB08956 PZ-11	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540464002	BB08957 MW-5	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540464003	BB08957 MW-5 MS	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92540464004	BB08957 MW-5 MSD	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92540464005	BB08958 FB-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540464006	BB08959 MW-7	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540464007	BB08960 MW-6	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540464008	BB08961 EB-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540464009	BB08962 MW-10	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92540464010	BB08963 MW-10 DUP	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540464011	BB08964 MW-9	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92540464012	BB08965 MW-8	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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## PROJECT NARRATIVE

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

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**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** June 29, 2021

**General Information:**

12 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: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

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**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** June 29, 2021

**General Information:**

12 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: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

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**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** June 29, 2021

**General Information:**

10 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: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08956 PZ-11**      **Lab ID: 92540464001**      Collected: 05/12/21 09:36      Received: 05/18/21 10:00      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>0.222U ± 0.208 (0.387)</b> <b>C:96% T:NA</b>	pCi/L	06/16/21 17:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.293U ± 0.309 (0.640)</b> <b>C:78% T:87%</b>	pCi/L	06/21/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.515U ± 0.517 (1.03)</b>	pCi/L	06/23/21 15:21	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08957 MW-5**      **Lab ID: 92540464002**      Collected: 05/12/21 10:42      Received: 05/18/21 10:00      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>0.257U ± 0.269 (0.541)</b> <b>C:89% T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.208U ± 0.323 (0.698)</b> <b>C:76% T:81%</b>	pCi/L	06/21/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.465U ± 0.592 (1.24)</b>	pCi/L	06/23/21 15:21	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08957 MW-5 MS**      **Lab ID: 92540464003**      Collected: 05/12/21 10:42      Received: 05/18/21 10:00      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>96.03 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>97.19 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/21/21 10:56	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08957 MW-5 MSD**      **Lab ID: 92540464004**      Collected: 05/12/21 10:42      Received: 05/18/21 10:00      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>109.95 %REC 13.51RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>90.65 %REC 6.96 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/21/21 10:56	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08958 FB-1**      **Lab ID: 92540464005**      Collected: 05/12/21 11:05      Received: 05/18/21 10:00      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>0.0688U ± 0.142 (0.330)</b> <b>C:91% T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.749 ± 0.361 (0.604)</b> <b>C:77% T:87%</b>	pCi/L	06/21/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.818U ± 0.503 (0.934)</b>	pCi/L	06/23/21 15:21	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08959 MW-7**      **Lab ID: 92540464006**      Collected: 05/12/21 12:23      Received: 05/18/21 10:00      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>0.485 ± 0.289 (0.438)</b> <b>C:91% T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.602 ± 0.323 (0.558)</b> <b>C:78% T:89%</b>	pCi/L	06/21/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.09 ± 0.612 (0.996)</b>	pCi/L	06/23/21 15:21	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08960 MW-6**      **Lab ID: 92540464007**      Collected: 05/12/21 13:51      Received: 05/18/21 10:00      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>0.755 ± 0.354 (0.450)</b> <b>C:85% T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.71 ± 0.520 (0.613)</b> <b>C:77% T:85%</b>	pCi/L	06/21/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.47 ± 0.874 (1.06)</b>	pCi/L	06/23/21 15:21	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321  
Pace Project No.: 92540464

**Sample: BB08961 EB-1**      **Lab ID: 92540464008**      Collected: 05/12/21 14:10      Received: 05/18/21 10:00      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>-0.0678U ± 0.108 (0.394)</b> <b>C:91% T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.0000280U ± 0.255 (0.600)</b> <b>C:78% T:91%</b>	pCi/L	06/21/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.000U ± 0.363 (0.994)</b>	pCi/L	06/23/21 15:21	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08962 MW-10**      **Lab ID: 92540464009**      Collected: 05/12/21 10:50      Received: 05/18/21 10:00      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>0.563 ± 0.307 (0.441)</b> <b>C:92% T:NA</b>	pCi/L	06/16/21 17:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>1.46 ± 0.552 (0.814)</b> <b>C:69% T:79%</b>	pCi/L	06/24/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>2.02 ± 0.859 (1.26)</b>	pCi/L	06/25/21 07:23	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08963 MW-10 DUP**      **Lab ID: 92540464010**      Collected: 05/12/21 10:50      Received: 05/18/21 10:00      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>0.632 ± 0.306 (0.356)</b> <b>C:89% T:NA</b>	pCi/L	06/16/21 17:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.394U ± 0.347 (0.700)</b> <b>C:78% T:84%</b>	pCi/L	06/21/21 10:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.03U ± 0.653 (1.06)</b>	pCi/L	06/23/21 15:21	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08964 MW-9**      **Lab ID: 92540464011**      Collected: 05/12/21 11:50      Received: 05/18/21 10:00      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>1.23 ± 0.436 (0.417)</b> <b>C:89% T:NA</b>	pCi/L	06/16/21 17:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.706U ± 0.424 (0.763)</b> <b>C:68% T:74%</b>	pCi/L	06/24/21 10:56	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.94 ± 0.860 (1.18)</b>	pCi/L	06/25/21 07:23	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

**Sample: BB08965 MW-8**      **Lab ID: 92540464012**      Collected: 05/12/21 13:00      Received: 05/18/21 10:00      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>0.449 ± 0.255 (0.321)</b> <b>C:91% T:NA</b>	pCi/L	06/16/21 17:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.841 ± 0.449 (0.805)</b> <b>C:75% T:82%</b>	pCi/L	06/21/21 10:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.29 ± 0.704 (1.13)</b>	pCi/L	06/23/21 15:21	7440-14-4	

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## QUALIFIERS

Project: BARRY GYPSUM WMWBARG\_1321

Pace Project No.: 92540464

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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.

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: BARRY GYPSUM WMWBARG\_1321  
Pace Project No.: 92540464

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92540464001	BB08956 PZ-11	EPA 9315	449545		
92540464002	BB08957 MW-5	EPA 9315	449545		
92540464003	BB08957 MW-5 MS	EPA 9315	449545		
92540464004	BB08957 MW-5 MSD	EPA 9315	449545		
92540464005	BB08958 FB-1	EPA 9315	449545		
92540464006	BB08959 MW-7	EPA 9315	449545		
92540464007	BB08960 MW-6	EPA 9315	449545		
92540464008	BB08961 EB-1	EPA 9315	449545		
92540464009	BB08962 MW-10	EPA 9315	449545		
92540464010	BB08963 MW-10 DUP	EPA 9315	449545		
92540464011	BB08964 MW-9	EPA 9315	449545		
92540464012	BB08965 MW-8	EPA 9315	449545		
92540464001	BB08956 PZ-11	EPA 9320	449720		
92540464002	BB08957 MW-5	EPA 9320	449720		
92540464003	BB08957 MW-5 MS	EPA 9320	449720		
92540464004	BB08957 MW-5 MSD	EPA 9320	449720		
92540464005	BB08958 FB-1	EPA 9320	449720		
92540464006	BB08959 MW-7	EPA 9320	449720		
92540464007	BB08960 MW-6	EPA 9320	449720		
92540464008	BB08961 EB-1	EPA 9320	449720		
92540464009	BB08962 MW-10	EPA 9320	449720		
92540464010	BB08963 MW-10 DUP	EPA 9320	449720		
92540464011	BB08964 MW-9	EPA 9320	449720		
92540464012	BB08965 MW-8	EPA 9320	449720		
92540464001	BB08956 PZ-11	Total Radium Calculation	453810		
92540464002	BB08957 MW-5	Total Radium Calculation	453810		
92540464005	BB08958 FB-1	Total Radium Calculation	453810		
92540464006	BB08959 MW-7	Total Radium Calculation	453810		
92540464007	BB08960 MW-6	Total Radium Calculation	453810		
92540464008	BB08961 EB-1	Total Radium Calculation	453810		
92540464009	BB08962 MW-10	Total Radium Calculation	454012		
92540464010	BB08963 MW-10 DUP	Total Radium Calculation	453810		
92540464011	BB08964 MW-9	Total Radium Calculation	454012		
92540464012	BB08965 MW-8	Total Radium Calculation	453810		

**REPORT OF LABORATORY ANALYSIS**

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

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Alabama Power Co P

WO#: 92540464



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: 955106701180

Label \_\_\_\_\_  
LIMS Login \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Thermometer Used N/A    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>05/24/21 AF</u>
	Yes	No	N/A	
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:	/			2.
Chain of Custody Relinquished:	/			3.
Sampler Name & Signature on COC:		/		4.
Sample Labels match COC:	/			5.
-Includes date/time/ID      Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8. <u>Low Volume per each container, LV</u>
Sufficient Volume:		/		9. <u>Also written on containers.</u>
Correct Containers Used:	/			10.
-Pace Containers Used:	/			
Containers Intact:	/			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/	15.
All containers have been checked for preservation.	/			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix				<u>pkc</u>
All containers meet method preservation requirements.	/			Initial when completed: <u>AF</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			/	17.
Trip Blank Present:		/		18.
Trip Blank Custody Seals Present		/		
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed: <u>AF</u> Date: <u>5/24/21</u> Survey Meter SN: <u>1563</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.





# Quality Control Sample Performance Assessment



Test: Ra-226  
Analyst: CLA  
Date: 5/26/2021  
Worklist: 60743  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2169351
MB concentration:	0.106
M/B Counting Uncertainty:	0.145
MB MDC:	0.301
MB Numerical Performance Indicator:	1.43
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		
LCS#	Y or N?	N
LCS60743	6/16/2021	LCS60743
Count Date:	19-033	
Spike I.D.:	24.037	
Decay Corrected Spike Concentration (pCi/mL):	0.10	
Volume Used (mL):	0.202	
Aliquot Volume (L, g, F):	11.926	
Target Conc. (pCi/L, g, F):	0.143	
Uncertainty (Calculated):	12.211	
Result (pCi/L, g, F):	1.182	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.47	
Numerical Performance Indicator:	102.39%	
Percent Recovery:	N/A	
Status vs Numerical Indicator:	Pass	
Status vs Recovery:	125%	
Upper % Recovery Limits:	75%	
Lower % Recovery Limits:		

Duplicate Sample Assessment	
Sample I.D.:	See Below #
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Duplicate Result (pCi/L, g, F):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Duplicate Duplicate Result (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:

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/12/2021	5/12/2021	5/12/2021
Sample I.D.:	92540464002	92540467005	92540467005
Sample MS I.D.:	92540464003	92540467006	92540467006
Sample MSD I.D.:	92540464004	92540467007	92540467007
Spike I.D.:	19-033	19-033	19-033
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.038	24.038	24.038
Spike Volume Used in MS (mL):	0.20	0.20	0.20
MS Aliquot (L, g, F):	0.206	0.202	0.202
MS Target Conc. (pCi/L, g, F):	23.287	23.827	23.827
MSD Aliquot (L, g, F):	0.206	0.207	0.207
MSD Target Conc. (pCi/L, g, F):	23.307	23.239	23.239
MS Spike Uncertainty (calculated):	0.279	0.286	0.286
MSD Spike Uncertainty (calculated):	0.280	0.279	0.279
Sample Result Counting Uncertainty (pCi/L, g, F):	0.257	0.261	0.261
Sample Matrix Spike Result:	0.266	0.259	0.259
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	22.620	27.077	27.077
Sample Matrix Spike Duplicate Result:	1.576	1.897	1.897
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	25.882	23.946	23.946
MS Numerical Performance Indicator:	1.692	1.651	1.651
MS Percent Recovery:	-1.116	2.925	2.925
MSD Numerical Performance Indicator:	96.03%	112.12%	112.12%
MSD Percent Recovery:	109.95%	101.49%	101.49%
MS Status vs Numerical Indicator:	N/A	N/A	N/A
MSD Status vs Numerical Indicator:	N/A	N/A	N/A
MS Status vs Recovery:	Pass	Pass	Pass
MSD Status vs Recovery:	Pass	Pass	Pass
MS/MSD Upper % Recovery Limits:	125%	125%	125%
MS/MSD Lower % Recovery Limits:	75%	75%	75%

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.:	92540464002	92540467005
Sample MS I.D.:	92540464003	92540467006
Sample MSD I.D.:	92540464004	92540467007
Spike I.D.:	19-033	19-033
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	22.620	27.077
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.576	1.897
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	25.882	23.946
Duplicate Numerical Performance Indicator:	1.692	1.651
Duplicate Numerical Performance Indicator:	-2.765	2.441
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	13.51%	9.96%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A	N/A
MS/MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	25%	25%

Handwritten signature: V. J. ...

Handwritten signature: VAM 6/17/21

# Quality Control Sample Performance Assessment



Test: Ra-228  
Analyst: JC2  
Date: 6/14/2021  
Worklist: 60774  
Matrix: WT

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Method Blank Assessment	
MB Sample ID	2170098
MB concentration:	0.125
M/B 2 Sigma CSU:	0.247
MB MDC:	0.546
MB Numerical Performance Indicator:	0.99
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?		N
	LCS60774	LCS60774	
Count Date:	6/21/2021		
Spike I.D.:	21-003		
Decay Corrected Spike Concentration (pCi/mL):	37.234		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.806		
Target Conc. (pCi/L, g, F):	4.622		
Uncertainty (Calculated):	0.226		
Result (pCi/L, g, F):	3.238		
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.792		
Numerical Performance Indicator:	-3.29		
Percent Recovery:	70.05%		
Status vs Numerical Indicator:	N/A		
Upper % Recovery Limits:	Pass		
Lower % Recovery Limits:	135%		
	60%		

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Are sample and/or duplicate results below RL?	
Duplicate Numerical Performance Indicator:	
Duplicate RPD:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status vs RPD:	
% RPD Limit:	

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

Comments:

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/12/2021	5/12/2021
Sample I.D.:	92540464002	92540467005
Sample MS I.D.:	92540464003	92540467006
Sample MSD I.D.:	92540464004	92540467007
Spike I.D.:	21-003	21-003
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	37.729	37.729
Spike Volume Used in MS (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.820	0.811
MS Target Conc. (pCi/L, g, F):	9.202	9.304
MSD Aliquot (L, g, F):	0.811	0.812
MSD Target Conc. (pCi/L, g, F):	9.306	9.291
MS Spike Uncertainty (calculated):	0.451	0.456
MSD Spike Uncertainty (calculated):	0.456	0.455
Sample Result:	0.208	0.278
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.323	0.345
Sample Matrix Spike Result:	9.151	9.539
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.826	1.909
Sample Matrix Spike Duplicate Result:	8.644	8.609
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.732	1.747
MS Numerical Performance Indicator:	-0.266	-0.043
MSD Numerical Performance Indicator:	-0.937	-1.024
MS Percent Recovery:	97.19%	99.53%
MSD Percent Recovery:	90.65%	89.66%
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 1	MS/MSD 2
Sample I.D.:	92540464002	92540467005
Sample MS I.D.:	92540464003	92540467006
Sample MSD I.D.:	92540464004	92540467007
Spike I.D.:	21-003	21-003
Matrix Spike Result:	9.151	9.539
Matrix Spike Duplicate Result:	8.644	8.609
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.732	1.747
Duplicate Numerical Performance Indicator:	0.395	0.705
Duplicate Numerical Performance Indicator (Based on the Percent Recoveries) MS/MSD Duplicate RPD:	6.96%	10.43%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

*June 22/21*

*WT*

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

# ***Analytical Report***



**Sample Group :** WMWBARPU\_1322

**Project/Site :** Barry Pooled Upgradient  
Bucks, AL 36512

**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

June 08, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on May 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, 2021

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: 2021.06.09 10:40:57 -0500

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: 2021.06.09 15:37:45 -0500



### 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

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698958	WMWBARPU_1322
BB08967	698958	WMWBARPU_1322
BB08968	698958	WMWBARPU_1322
BB08969	698958	WMWBARPU_1322
BB08970	698958	WMWBARPU_1322
BB08971	698958	WMWBARPU_1322
BB08972	698958	WMWBARPU_1322

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 sample was 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>
BB08970	Iron	10.15

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

Dissolved Metals ICP

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698939	WMWBARPU_1322
BB08967	698939	WMWBARPU_1322
BB08968	698939	WMWBARPU_1322
BB08969	698939	WMWBARPU_1322
BB08970	698939	WMWBARPU_1322

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.
  - A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.
7. The following sample was 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>
BB08970	Iron	10.15

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

Total Metals ICPMS

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698833	WMWBARPU_1322
BB08967	698833	WMWBARPU_1322
BB08968	698833	WMWBARPU_1322
BB08969	698833	WMWBARPU_1322
BB08970	698833	WMWBARPU_1322
BB08971	698833	WMWBARPU_1322
BB08972	698833	WMWBARPU_1322

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.

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

Dissolved Metals ICPMS

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698774	WMWBARPU_1322
BB08967	698774	WMWBARPU_1322
BB08968	698774	WMWBARPU_1322
BB08969	698774	WMWBARPU_1322
BB08970	698774	WMWBARPU_1322

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.

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

## Mercury

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698558	WMWBARPU_1322
BB08967	698558	WMWBARPU_1322
BB08968	698558	WMWBARPU_1322
BB08969	698558	WMWBARPU_1322
BB08970	698558	WMWBARPU_1322
BB08971	698558	WMWBARPU_1322
BB08972	698558	WMWBARPU_1322

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

TDS

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698158	WMWBARPU_1322
BB08967	698158	WMWBARPU_1322
BB08968	698158	WMWBARPU_1322
BB08969	698158	WMWBARPU_1322
BB08970	698158	WMWBARPU_1322
BB08971	698158	WMWBARPU_1322
BB08972	698158	WMWBARPU_1322

4. All of the above samples were analyzed by Standard Method 2540C.
5. All samples were 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:
  - BB08971
  - BB08972

## Anions

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698494, 698498, & 698616	WMWBARPU_1322
BB08967	698494, 698498, & 698616	WMWBARPU_1322
BB08968	698494, 698498, & 698616	WMWBARPU_1322
BB08969	698494, 698498, & 698616	WMWBARPU_1322
BB08970	698494, 698498, & 698616	WMWBARPU_1322
BB08971	698494, 698498, & 698616	WMWBARPU_1322
BB08972	698494, 698498, & 698616	WMWBARPU_1322

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.

7. All samples were analyzed without dilution.

## Alkalinity

Barry Pooled Upgradient

WMWBARPU\_1322

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>
BB08966	698959 & 698960	WMWBARPU_1322
BB08967	698959 & 698960	WMWBARPU_1322
BB08968	698959 & 698960	WMWBARPU_1322
BB08969	698959 & 698960	WMWBARPU_1322
BB08970	698959 & 698960	WMWBARPU_1322

4. All of the above samples were analyzed by Standard Method 2320B.
5. All samples were 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:** Barry Pooled Upgradient - MW-4

**Location Code:** WMWBARPU  
**Collected:** 5/11/21 09:00  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08966

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	5/24/21 09:00	5/25/21 12:18		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 12:18		1.015	1.93	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 12:18		1.015	0.140	mg/L	0.008120	0.0406	
* Lithium, Total	5/24/21 09:00	5/25/21 12:18		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:18		1.015	2.12	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 12:18		1.015	2.46	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	5/24/21 09:00	5/25/21 13:43		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	5/18/21 11:35	5/18/21 17:52		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:35	5/18/21 17:52		1.015	0.000217	mg/L	0.000068	0.000203	
* Barium, Total	5/18/21 11:35	5/18/21 17:52		1.015	0.125	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:35	5/18/21 17:52		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:35	5/18/21 17:52		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:35	5/18/21 17:52		1.015	0.00159	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:35	5/18/21 17:52		1.015	0.00137	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:35	5/18/21 17:52		1.015	0.000159	mg/L	0.000068	0.000203	J
* Molybdenum, Total	5/18/21 11:35	5/18/21 17:52		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:35	5/18/21 17:52		1.015	1.09	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:35	5/18/21 17:52		1.015	0.0170	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:35	5/18/21 17:52		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:35	5/18/21 17:52		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	5/18/21 13:41	5/18/21 16:08		1.015	0.0157	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	5/19/21 10:43	5/19/21 15:39		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	5/17/21 11:55	5/17/21 12:10		1	1.84	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>		<b>Preparation Method: EPA 1638</b>				
* Solids, Dissolved	5/14/21 15:15	5/19/21 13:20		1	46.7	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-4

**Location Code:** WMWBARPU  
**Collected:** 5/11/21 09:00  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08966

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.)	5/17/21 11:55	5/17/21 12:10		1	1.84	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:55	5/17/21 12:10		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 11:05	5/17/21 11:05		1	3.33	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 13:14	5/17/21 13:14		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:38	5/19/21 15:38		1	6.80	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/11/21 08:55	5/11/21 08:55			52.69	uS/cm			FA
pH	5/11/21 08:55	5/11/21 08:55			4.67	SU			FA
Temperature	5/11/21 08:55	5/11/21 08:55			21.00	C			FA
Turbidity	5/11/21 08:55	5/11/21 08:55			9.61	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/11/21 09:00  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-4

**Laboratory ID Number:** BB08966

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08972	Sodium, Total	mg/L	-0.000422	0.0660	5.00	4.65	4.75	4.68	4.25 to 5.75	93.0	70.0 to 130	2.04	20.0
BB08972	Iron, Total	mg/L	0.000168	0.0176	0.2	0.204	0.206	0.203	0.170 to 0.230	102	70.0 to 130	0.829	20.0
BB08972	Potassium, Total	mg/L	0.0528	0.367	10.0	10.7	10.8	10.5	8.50 to 11.5	107	70.0 to 130	0.573	20.0
BB08970	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	4.86	4.93	0.211	0.170 to 0.230	75.0	70.0 to 130	1.54	20.0
BB08972	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.00	1.03	1.00	0.850 to 1.15	100	70.0 to 130	2.76	20.0
BB08972	Calcium, Total	mg/L	-0.00843	0.152	5.00	5.21	5.24	5.17	4.25 to 5.75	104	70.0 to 130	0.618	20.0
BB08972	Cobalt, Total	mg/L	-0.0000046	0.000147	0.10	0.103	0.108	0.101	0.0850 to 0.115	103	70.0 to 130	4.73	20.0
BB08972	Mercury, Total by CVAA	mg/L	0.0000493	0.000500	0.004	0.00428	0.00427	0.00425	0.00340 to 0.00460	107	70.0 to 130	0.266	20.0
BB08972	Lead, Total	mg/L	0.0000021	0.000147	0.10	0.0985	0.0981	0.0974	0.0850 to 0.115	98.5	70.0 to 130	0.393	20.0
BB08972	Arsenic, Total	mg/L	0.0000624	0.000147	0.10	0.105	0.106	0.104	0.0850 to 0.115	105	70.0 to 130	0.864	20.0
BB08972	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.102	0.0961	0.0943	0.0850 to 0.115	102	70.0 to 130	5.91	20.0
BB08972	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0999	0.101	0.0954	0.0850 to 0.115	99.9	70.0 to 130	0.846	20.0
BB08972	Molybdenum, Total	mg/L	-0.0000042	0.000147	0.10	0.0997	0.0999	0.0955	0.0850 to 0.115	99.7	70.0 to 130	0.248	20.0
BB08972	Antimony, Total	mg/L	0.000158	0.00100	0.10	0.0987	0.0987	0.0927	0.0850 to 0.115	98.7	70.0 to 130	0.0144	20.0
BB08972	Thallium, Total	mg/L	0.0000029	0.000147	0.10	0.0956	0.0954	0.0954	0.0850 to 0.115	95.6	70.0 to 130	0.215	20.0
BB08972	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.202	0.197	0.170 to 0.230	99.3	70.0 to 130	1.77	20.0
BB08972	Selenium, Total	mg/L	-0.0000859	0.00100	0.10	0.100	0.0996	0.100	0.0850 to 0.115	100	70.0 to 130	0.394	20.0
BB08970	Manganese, Dissolved	mg/L	0.0000239	0.000147	0.10	0.271	0.285	0.105	0.0850 to 0.115	92.0	70.0 to 130	5.04	20.0
BB08972	Manganese, Total	mg/L	0.0000090	0.000147	0.10	0.102	0.107	0.102	0.0850 to 0.115	102	70.0 to 130	4.79	20.0
BB08972	Barium, Total	mg/L	-0.0000135	0.000200	0.10	0.106	0.0997	0.0990	0.0850 to 0.115	106	70.0 to 130	6.10	20.0
BB08972	Chromium, Total	mg/L	0.0000142	0.000440	0.10	0.102	0.107	0.100	0.0850 to 0.115	102	70.0 to 130	4.95	20.0
BB08972	Magnesium, Total	mg/L	0.000629	0.0462	5.00	5.07	5.16	5.03	4.25 to 5.75	101	70.0 to 130	1.71	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/11/21 09:00  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-4

**Laboratory ID Number:** BB08966

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08972	Sulfate	mg/L	-0.205	1.00	20.0	19.1	-0.429	19.8	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB08972	Fluoride	mg/L	0.0202	0.100	2.50	2.52	0.0235	2.55	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB08972	Chloride	mg/L	-0.0646	1.00	10.0	9.71	0.212	9.71	9.00 to 11.0	97.1	80.0 to 120	0.00	20.0
BB08970	Alkalinity, Total as CaCO3	mg/L					5.80	51.0	45.0 to 55.0			9.21	10.0
BB08970	Solids, Dissolved	mg/L	1.00	25.0			43.3	56.0	40.0 to 60.0			3.10	5.00

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-3

**Location Code:** WMWBARPU  
**Collected:** 5/11/21 10:10  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08967

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	5/24/21 09:00	5/25/21 12:22		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 12:22		1.015	2.06	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 12:22		1.015	0.0305	mg/L	0.008120	0.0406	J
* Lithium, Total	5/24/21 09:00	5/25/21 12:22		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:22		1.015	2.02	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 12:22		1.015	2.64	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	5/24/21 09:00	5/25/21 13:46		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	5/18/21 11:35	5/18/21 17:56		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:35	5/18/21 17:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	5/18/21 11:35	5/18/21 17:56		1.015	0.0981	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:35	5/18/21 17:56		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:35	5/18/21 17:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:35	5/18/21 17:56		1.015	0.00146	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:35	5/18/21 17:56		1.015	0.00142	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:35	5/18/21 17:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	5/18/21 11:35	5/18/21 17:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:35	5/18/21 17:56		1.015	1.11	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:35	5/18/21 17:56		1.015	0.0194	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:35	5/18/21 17:56		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:35	5/18/21 17:56		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	5/18/21 13:41	5/18/21 16:11		1.015	0.0189	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	5/19/21 10:43	5/19/21 15:42		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	5/17/21 11:55	5/17/21 12:10		1	3.60	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>			<b>Preparation Method: EPA 1638</b>				
* Solids, Dissolved	5/14/21 15:15	5/19/21 13:20		1	44.0	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-3

**Location Code:** WMWBARPU  
**Collected:** 5/11/21 10:10  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08967

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.)	5/17/21 11:55	5/17/21 12:10		1	3.60	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:55	5/17/21 12:10		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 11:07	5/17/21 11:07		1	3.42	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 13:15	5/17/21 13:15		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:40	5/19/21 15:40		1	7.73	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/11/21 10:07	5/11/21 10:07			52.36	uS/cm			FA
pH	5/11/21 10:07	5/11/21 10:07			4.53	SU			FA
Temperature	5/11/21 10:07	5/11/21 10:07			19.82	C			FA
Turbidity	5/11/21 10:07	5/11/21 10:07			2.7	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/11/21 10:10  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-3

**Laboratory ID Number:** BB08967

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BB08972	Sodium, Total	mg/L	-0.000422	0.0660	5.00	4.65	4.75	4.68	4.25 to 5.75	93.0	70.0 to 130	2.04	20.0
BB08970	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	4.86	4.93	0.211	0.170 to 0.230	75.0	70.0 to 130	1.54	20.0
BB08972	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.00	1.03	1.00	0.850 to 1.15	100	70.0 to 130	2.76	20.0
BB08972	Barium, Total	mg/L	-0.0000135	0.000200	0.10	0.106	0.0997	0.0990	0.0850 to 0.115	106	70.0 to 130	6.10	20.0
BB08972	Chromium, Total	mg/L	0.0000142	0.000440	0.10	0.102	0.107	0.100	0.0850 to 0.115	102	70.0 to 130	4.95	20.0
BB08972	Magnesium, Total	mg/L	0.000629	0.0462	5.00	5.07	5.16	5.03	4.25 to 5.75	101	70.0 to 130	1.71	20.0
BB08972	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.202	0.197	0.170 to 0.230	99.3	70.0 to 130	1.77	20.0
BB08972	Selenium, Total	mg/L	-0.0000859	0.00100	0.10	0.100	0.0996	0.100	0.0850 to 0.115	100	70.0 to 130	0.394	20.0
BB08970	Manganese, Dissolved	mg/L	0.0000239	0.000147	0.10	0.271	0.285	0.105	0.0850 to 0.115	92.0	70.0 to 130	5.04	20.0
BB08972	Manganese, Total	mg/L	0.0000090	0.000147	0.10	0.102	0.107	0.102	0.0850 to 0.115	102	70.0 to 130	4.79	20.0
BB08972	Calcium, Total	mg/L	-0.00843	0.152	5.00	5.21	5.24	5.17	4.25 to 5.75	104	70.0 to 130	0.618	20.0
BB08972	Cobalt, Total	mg/L	-0.0000046	0.000147	0.10	0.103	0.108	0.101	0.0850 to 0.115	103	70.0 to 130	4.73	20.0
BB08972	Mercury, Total by CVAA	mg/L	0.0000493	0.000500	0.004	0.00428	0.00427	0.00425	0.00340 to 0.00460	107	70.0 to 130	0.266	20.0
BB08972	Lead, Total	mg/L	0.0000021	0.000147	0.10	0.0985	0.0981	0.0974	0.0850 to 0.115	98.5	70.0 to 130	0.393	20.0
BB08972	Arsenic, Total	mg/L	0.0000624	0.000147	0.10	0.105	0.106	0.104	0.0850 to 0.115	105	70.0 to 130	0.864	20.0
BB08972	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.102	0.0961	0.0943	0.0850 to 0.115	102	70.0 to 130	5.91	20.0
BB08972	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0999	0.101	0.0954	0.0850 to 0.115	99.9	70.0 to 130	0.846	20.0
BB08972	Molybdenum, Total	mg/L	-0.0000042	0.000147	0.10	0.0997	0.0999	0.0955	0.0850 to 0.115	99.7	70.0 to 130	0.248	20.0
BB08972	Antimony, Total	mg/L	0.000158	0.00100	0.10	0.0987	0.0987	0.0927	0.0850 to 0.115	98.7	70.0 to 130	0.0144	20.0
BB08972	Thallium, Total	mg/L	0.0000029	0.000147	0.10	0.0956	0.0954	0.0954	0.0850 to 0.115	95.6	70.0 to 130	0.215	20.0
BB08972	Iron, Total	mg/L	0.000168	0.0176	0.2	0.204	0.206	0.203	0.170 to 0.230	102	70.0 to 130	0.829	20.0
BB08972	Potassium, Total	mg/L	0.0528	0.367	10.0	10.7	10.8	10.5	8.50 to 11.5	107	70.0 to 130	0.573	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/11/21 10:10  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-3

**Laboratory ID Number:** BB08967

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
BB08972	Sulfate	mg/L	-0.205	1.00	20.0	19.1	-0.429	19.8	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB08972	Chloride	mg/L	-0.0646	1.00	10.0	9.71	0.212	9.71	9.00 to 11.0	97.1	80.0 to 120	0.00	20.0
BB08972	Fluoride	mg/L	0.0202	0.100	2.50	2.52	0.0235	2.55	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB08970	Alkalinity, Total as CaCO3	mg/L					5.80	51.0	45.0 to 55.0			9.21	10.0
BB08970	Solids, Dissolved	mg/L	1.00	25.0			43.3	56.0	40.0 to 60.0			3.10	5.00

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-3 DUP

**Location Code:** WMWBARPU  
**Collected:** 5/11/21 10:10  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08968

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	5/24/21 09:00	5/25/21 12:25		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 12:25		1.015	2.08	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 12:25		1.015	0.0280	mg/L	0.008120	0.0406	J
* Lithium, Total	5/24/21 09:00	5/25/21 12:25		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:25		1.015	2.03	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 12:25		1.015	2.65	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	5/24/21 09:00	5/25/21 13:50		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	5/18/21 11:35	5/18/21 17:59		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:35	5/18/21 17:59		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	5/18/21 11:35	5/18/21 17:59		1.015	0.0937	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:35	5/18/21 17:59		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:35	5/18/21 17:59		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:35	5/18/21 17:59		1.015	0.00140	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:35	5/18/21 17:59		1.015	0.00144	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:35	5/18/21 17:59		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	5/18/21 11:35	5/18/21 17:59		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:35	5/18/21 17:59		1.015	1.09	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:35	5/18/21 17:59		1.015	0.0195	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:35	5/18/21 17:59		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:35	5/18/21 17:59		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	5/18/21 13:41	5/18/21 16:15		1.015	0.0189	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	5/19/21 10:43	5/19/21 15:44		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	5/17/21 11:55	5/17/21 12:10		1	1.36	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>			<b>Preparation Method: EPA 1638</b>				
* Solids, Dissolved	5/14/21 15:15	5/19/21 13:20		1	40.0	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-3 DUP

**Location Code:** WMWBARPU  
**Collected:** 5/11/21 10:10  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08968

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.)	5/17/21 11:55	5/17/21 12:10		1	1.36	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:55	5/17/21 12:10		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 11:08	5/17/21 11:08		1	3.49	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 13:16	5/17/21 13:16		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:41	5/19/21 15:41		1	7.65	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/11/21 10:07	5/11/21 10:07			52.36	uS/cm			FA
pH	5/11/21 10:07	5/11/21 10:07			4.53	SU			FA
Temperature	5/11/21 10:07	5/11/21 10:07			19.82	C			FA
Turbidity	5/11/21 10:07	5/11/21 10:07			2.7	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARPU

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

**Customer ID:**

**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-3 DUP

**Laboratory ID Number:** BB08968

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BB08972	Barium, Total	mg/L	-0.000135	0.000200	0.10	0.106	0.0997	0.0990	0.0850 to 0.115	106	70.0 to 130	6.10	20.0
BB08972	Chromium, Total	mg/L	0.0000142	0.000440	0.10	0.102	0.107	0.100	0.0850 to 0.115	102	70.0 to 130	4.95	20.0
BB08972	Magnesium, Total	mg/L	0.000629	0.0462	5.00	5.07	5.16	5.03	4.25 to 5.75	101	70.0 to 130	1.71	20.0
BB08970	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	4.86	4.93	0.211	0.170 to 0.230	75.0	70.0 to 130	1.54	20.0
BB08972	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.00	1.03	1.00	0.850 to 1.15	100	70.0 to 130	2.76	20.0
BB08972	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.202	0.197	0.170 to 0.230	99.3	70.0 to 130	1.77	20.0
BB08972	Selenium, Total	mg/L	-0.0000859	0.00100	0.10	0.100	0.0996	0.100	0.0850 to 0.115	100	70.0 to 130	0.394	20.0
BB08972	Arsenic, Total	mg/L	0.0000624	0.000147	0.10	0.105	0.106	0.104	0.0850 to 0.115	105	70.0 to 130	0.864	20.0
BB08972	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.102	0.0961	0.0943	0.0850 to 0.115	102	70.0 to 130	5.91	20.0
BB08972	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0999	0.101	0.0954	0.0850 to 0.115	99.9	70.0 to 130	0.846	20.0
BB08972	Molybdenum, Total	mg/L	-0.0000042	0.000147	0.10	0.0997	0.0999	0.0955	0.0850 to 0.115	99.7	70.0 to 130	0.248	20.0
BB08972	Antimony, Total	mg/L	0.000158	0.00100	0.10	0.0987	0.0987	0.0927	0.0850 to 0.115	98.7	70.0 to 130	0.0144	20.0
BB08972	Thallium, Total	mg/L	0.0000029	0.000147	0.10	0.0956	0.0954	0.0954	0.0850 to 0.115	95.6	70.0 to 130	0.215	20.0
BB08972	Iron, Total	mg/L	0.000168	0.0176	0.2	0.204	0.206	0.203	0.170 to 0.230	102	70.0 to 130	0.829	20.0
BB08972	Potassium, Total	mg/L	0.0528	0.367	10.0	10.7	10.8	10.5	8.50 to 11.5	107	70.0 to 130	0.573	20.0
BB08972	Calcium, Total	mg/L	-0.00843	0.152	5.00	5.21	5.24	5.17	4.25 to 5.75	104	70.0 to 130	0.618	20.0
BB08972	Cobalt, Total	mg/L	-0.0000046	0.000147	0.10	0.103	0.108	0.101	0.0850 to 0.115	103	70.0 to 130	4.73	20.0
BB08972	Mercury, Total by CVAA	mg/L	0.0000493	0.000500	0.004	0.00428	0.00427	0.00425	0.00340 to 0.00460	107	70.0 to 130	0.266	20.0
BB08972	Lead, Total	mg/L	0.0000021	0.000147	0.10	0.0985	0.0981	0.0974	0.0850 to 0.115	98.5	70.0 to 130	0.393	20.0
BB08970	Manganese, Dissolved	mg/L	0.0000239	0.000147	0.10	0.271	0.285	0.105	0.0850 to 0.115	92.0	70.0 to 130	5.04	20.0
BB08972	Manganese, Total	mg/L	0.0000090	0.000147	0.10	0.102	0.107	0.102	0.0850 to 0.115	102	70.0 to 130	4.79	20.0
BB08972	Sodium, Total	mg/L	-0.000422	0.0660	5.00	4.65	4.75	4.68	4.25 to 5.75	93.0	70.0 to 130	2.04	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/11/21 10:10  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-3 DUP

**Laboratory ID Number:** BB08968

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08972	Sulfate	mg/L	-0.205	1.00	20.0	19.1	-0.429	19.8	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB08972	Chloride	mg/L	-0.0646	1.00	10.0	9.71	0.212	9.71	9.00 to 11.0	97.1	80.0 to 120	0.00	20.0
BB08970	Alkalinity, Total as CaCO3	mg/L					5.80	51.0	45.0 to 55.0			9.21	10.0
BB08970	Solids, Dissolved	mg/L	1.00	25.0			43.3	56.0	40.0 to 60.0			3.10	5.00
BB08972	Fluoride	mg/L	0.0202	0.100	2.50	2.52	0.0235	2.55	2.25 to 2.75	101	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-2

**Location Code:** WMWBARPU  
**Collected:** 5/11/21 11:28  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08969

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	5/24/21 09:00	5/25/21 12:29		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 12:29		1.015	1.39	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 12:29		1.015	0.156	mg/L	0.008120	0.0406	
* Lithium, Total	5/24/21 09:00	5/25/21 12:29		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:29		1.015	2.66	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 12:29		1.015	2.14	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	5/24/21 09:00	5/25/21 13:53		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	5/18/21 11:35	5/18/21 18:03		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:35	5/18/21 18:03		1.015	0.000136	mg/L	0.000068	0.000203	J
* Barium, Total	5/18/21 11:35	5/18/21 18:03		1.015	0.165	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:35	5/18/21 18:03		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:35	5/18/21 18:03		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:35	5/18/21 18:03		1.015	0.00136	mg/L	0.000203	0.001015	
* Cobalt, Total	5/18/21 11:35	5/18/21 18:03		1.015	0.00194	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:35	5/18/21 18:03		1.015	0.000118	mg/L	0.000068	0.000203	J
* Molybdenum, Total	5/18/21 11:35	5/18/21 18:03		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:35	5/18/21 18:03		1.015	1.07	mg/L	0.169505	0.5075	
* Manganese, Total	5/18/21 11:35	5/18/21 18:03		1.015	0.0262	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:35	5/18/21 18:03		1.015	0.000602	mg/L	0.000507	0.001015	J
* Thallium, Total	5/18/21 11:35	5/18/21 18:03		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	5/18/21 13:41	5/18/21 16:18		1.015	0.0256	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	5/19/21 10:43	5/19/21 15:46		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	5/17/21 11:55	5/17/21 12:10		1	2.04	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>			<b>Preparation Method: EPA 1638</b>				
* Solids, Dissolved	5/14/21 15:15	5/19/21 13:20		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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-2

**Location Code:** WMWBARPU

**Collected:** 5/11/21 11:28

**Customer ID:**

**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08969

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.)	5/17/21 11:55	5/17/21 12:10		1	2.04	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:55	5/17/21 12:10		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 11:09	5/17/21 11:09		1	2.16	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 13:17	5/17/21 13:17		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:42	5/19/21 15:42		1	7.92	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/11/21 11:25	5/11/21 11:25			54.05	uS/cm			FA
pH	5/11/21 11:25	5/11/21 11:25			4.29	SU			FA
Temperature	5/11/21 11:25	5/11/21 11:25			19.55	C			FA
Turbidity	5/11/21 11:25	5/11/21 11:25			7.37	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/11/21 11:28  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-2

**Laboratory ID Number:** BB08969

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08970	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	4.86	4.93	0.211	0.170 to 0.230	75.0	70.0 to 130	1.54	20.0
BB08972	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.00	1.03	1.00	0.850 to 1.15	100	70.0 to 130	2.76	20.0
BB08972	Barium, Total	mg/L	-0.0000135	0.000200	0.10	0.106	0.0997	0.0990	0.0850 to 0.115	106	70.0 to 130	6.10	20.0
BB08972	Chromium, Total	mg/L	0.0000142	0.000440	0.10	0.102	0.107	0.100	0.0850 to 0.115	102	70.0 to 130	4.95	20.0
BB08972	Magnesium, Total	mg/L	0.000629	0.0462	5.00	5.07	5.16	5.03	4.25 to 5.75	101	70.0 to 130	1.71	20.0
BB08972	Iron, Total	mg/L	0.000168	0.0176	0.2	0.204	0.206	0.203	0.170 to 0.230	102	70.0 to 130	0.829	20.0
BB08972	Potassium, Total	mg/L	0.0528	0.367	10.0	10.7	10.8	10.5	8.50 to 11.5	107	70.0 to 130	0.573	20.0
BB08970	Manganese, Dissolved	mg/L	0.0000239	0.000147	0.10	0.271	0.285	0.105	0.0850 to 0.115	92.0	70.0 to 130	5.04	20.0
BB08972	Manganese, Total	mg/L	0.0000090	0.000147	0.10	0.102	0.107	0.102	0.0850 to 0.115	102	70.0 to 130	4.79	20.0
BB08972	Arsenic, Total	mg/L	0.0000624	0.000147	0.10	0.105	0.106	0.104	0.0850 to 0.115	105	70.0 to 130	0.864	20.0
BB08972	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.102	0.0961	0.0943	0.0850 to 0.115	102	70.0 to 130	5.91	20.0
BB08972	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0999	0.101	0.0954	0.0850 to 0.115	99.9	70.0 to 130	0.846	20.0
BB08972	Molybdenum, Total	mg/L	-0.0000042	0.000147	0.10	0.0997	0.0999	0.0955	0.0850 to 0.115	99.7	70.0 to 130	0.248	20.0
BB08972	Antimony, Total	mg/L	0.000158	0.00100	0.10	0.0987	0.0987	0.0927	0.0850 to 0.115	98.7	70.0 to 130	0.0144	20.0
BB08972	Thallium, Total	mg/L	0.0000029	0.000147	0.10	0.0956	0.0954	0.0954	0.0850 to 0.115	95.6	70.0 to 130	0.215	20.0
BB08972	Calcium, Total	mg/L	-0.00843	0.152	5.00	5.21	5.24	5.17	4.25 to 5.75	104	70.0 to 130	0.618	20.0
BB08972	Cobalt, Total	mg/L	-0.0000046	0.000147	0.10	0.103	0.108	0.101	0.0850 to 0.115	103	70.0 to 130	4.73	20.0
BB08972	Mercury, Total by CVAA	mg/L	0.0000493	0.000500	0.004	0.00428	0.00427	0.00425	0.00340 to 0.00460	107	70.0 to 130	0.266	20.0
BB08972	Lead, Total	mg/L	0.0000021	0.000147	0.10	0.0985	0.0981	0.0974	0.0850 to 0.115	98.5	70.0 to 130	0.393	20.0
BB08972	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.202	0.197	0.170 to 0.230	99.3	70.0 to 130	1.77	20.0
BB08972	Selenium, Total	mg/L	-0.0000859	0.00100	0.10	0.100	0.0996	0.100	0.0850 to 0.115	100	70.0 to 130	0.394	20.0
BB08972	Sodium, Total	mg/L	-0.000422	0.0660	5.00	4.65	4.75	4.68	4.25 to 5.75	93.0	70.0 to 130	2.04	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/11/21 11:28  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-2

**Laboratory ID Number:** BB08969

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08972	Sulfate	mg/L	-0.205	1.00	20.0	19.1	-0.429	19.8	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB08972	Chloride	mg/L	-0.0646	1.00	10.0	9.71	0.212	9.71	9.00 to 11.0	97.1	80.0 to 120	0.00	20.0
BB08972	Fluoride	mg/L	0.0202	0.100	2.50	2.52	0.0235	2.55	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB08970	Alkalinity, Total as CaCO3	mg/L					5.80	51.0	45.0 to 55.0			9.21	10.0
BB08970	Solids, Dissolved	mg/L	1.00	25.0			43.3	56.0	40.0 to 60.0			3.10	5.00

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-1

**Location Code:** WMWBARPU  
**Collected:** 5/12/21 09:00  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08970

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	5/24/21 09:00	5/25/21 12:32		1.015	0.0841	mg/L	0.030000	0.1015	J
* Calcium, Total	5/24/21 09:00	5/25/21 12:32		1.015	1.34	mg/L	0.070035	0.406	
* Iron, Total	5/24/21 09:00	5/25/21 14:14		10.15	5.14	mg/L	0.08120	0.406	
* Lithium, Total	5/24/21 09:00	5/25/21 12:32		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:32		1.015	2.39	mg/L	0.021315	0.406	
* Sodium, Total	5/24/21 09:00	5/25/21 12:32		1.015	2.28	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: RDA</b>							
* Iron, Dissolved	5/24/21 09:00	5/25/21 14:18		10.15	4.71	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	5/18/21 11:35	5/18/21 18:06		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.000336	mg/L	0.000068	0.000203	
* Barium, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.123	mg/L	0.000101	0.000203	
* Beryllium, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.000694	mg/L	0.000406	0.001015	J
* Cadmium, Total	5/18/21 11:35	5/18/21 18:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.000296	mg/L	0.000203	0.001015	J
* Cobalt, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.00611	mg/L	0.000068	0.000203	
* Lead, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.0000979	mg/L	0.000068	0.000203	J
* Molybdenum, Total	5/18/21 11:35	5/18/21 18:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.484	mg/L	0.169505	0.5075	J
* Manganese, Total	5/18/21 11:35	5/18/21 18:06		1.015	0.179	mg/L	0.000068	0.000203	
* Selenium, Total	5/18/21 11:35	5/18/21 18:06		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:35	5/18/21 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	5/18/21 13:41	5/18/21 16:22		1.015	0.179	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	5/19/21 10:43	5/19/21 15:49		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	5/17/21 11:55	5/17/21 12:10		1	6.36	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/14/21 15:15	5/19/21 13:20		1	40.7	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.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient - MW-1

**Location Code:** WMWBARPU  
**Collected:** 5/12/21 09:00  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08970

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.)	5/17/21 11:55	5/17/21 12:10		1	6.36	mg/L			
Carbonate Alkalinity, (calc.)	5/17/21 11:55	5/17/21 12:10		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 11:10	5/17/21 11:10		1	2.18	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 13:19	5/17/21 13:19		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:43	5/19/21 15:43		1	16.3	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	5/12/21 08:58	5/12/21 08:58			65.58	uS/cm			FA
pH	5/12/21 08:58	5/12/21 08:58			4.74	SU			FA
Temperature	5/12/21 08:58	5/12/21 08:58			20.13	C			FA
Turbidity	5/12/21 08:58	5/12/21 08:58			2.91	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.  
 LBM 6/8/21

# Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/12/21 09:00  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-1

**Laboratory ID Number:** BB08970

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08970	Iron, Dissolved	mg/L	0.0000185	0.0176	0.2	4.86	4.93	0.211	0.170 to 0.230	75.0	70.0 to 130	1.54	20.0
BB08972	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.00	1.03	1.00	0.850 to 1.15	100	70.0 to 130	2.76	20.0
BB08972	Barium, Total	mg/L	-0.0000135	0.000200	0.10	0.106	0.0997	0.0990	0.0850 to 0.115	106	70.0 to 130	6.10	20.0
BB08972	Chromium, Total	mg/L	0.0000142	0.000440	0.10	0.102	0.107	0.100	0.0850 to 0.115	102	70.0 to 130	4.95	20.0
BB08972	Magnesium, Total	mg/L	0.000629	0.0462	5.00	5.07	5.16	5.03	4.25 to 5.75	101	70.0 to 130	1.71	20.0
BB08970	Manganese, Dissolved	mg/L	0.0000239	0.000147	0.10	0.271	0.285	0.105	0.0850 to 0.115	92.0	70.0 to 130	5.04	20.0
BB08972	Manganese, Total	mg/L	0.0000090	0.000147	0.10	0.102	0.107	0.102	0.0850 to 0.115	102	70.0 to 130	4.79	20.0
BB08972	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.202	0.197	0.170 to 0.230	99.3	70.0 to 130	1.77	20.0
BB08972	Selenium, Total	mg/L	-0.0000859	0.00100	0.10	0.100	0.0996	0.100	0.0850 to 0.115	100	70.0 to 130	0.394	20.0
BB08972	Calcium, Total	mg/L	-0.00843	0.152	5.00	5.21	5.24	5.17	4.25 to 5.75	104	70.0 to 130	0.618	20.0
BB08972	Cobalt, Total	mg/L	-0.0000046	0.000147	0.10	0.103	0.108	0.101	0.0850 to 0.115	103	70.0 to 130	4.73	20.0
BB08972	Mercury, Total by CVAA	mg/L	0.0000493	0.000500	0.004	0.00428	0.00427	0.00425	0.00340 to 0.00460	107	70.0 to 130	0.266	20.0
BB08972	Lead, Total	mg/L	0.0000021	0.000147	0.10	0.0985	0.0981	0.0974	0.0850 to 0.115	98.5	70.0 to 130	0.393	20.0
BB08972	Arsenic, Total	mg/L	0.0000624	0.000147	0.10	0.105	0.106	0.104	0.0850 to 0.115	105	70.0 to 130	0.864	20.0
BB08972	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.102	0.0961	0.0943	0.0850 to 0.115	102	70.0 to 130	5.91	20.0
BB08972	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0999	0.101	0.0954	0.0850 to 0.115	99.9	70.0 to 130	0.846	20.0
BB08972	Molybdenum, Total	mg/L	-0.0000042	0.000147	0.10	0.0997	0.0999	0.0955	0.0850 to 0.115	99.7	70.0 to 130	0.248	20.0
BB08972	Antimony, Total	mg/L	0.000158	0.00100	0.10	0.0987	0.0987	0.0927	0.0850 to 0.115	98.7	70.0 to 130	0.0144	20.0
BB08972	Thallium, Total	mg/L	0.0000029	0.000147	0.10	0.0956	0.0954	0.0954	0.0850 to 0.115	95.6	70.0 to 130	0.215	20.0
BB08972	Sodium, Total	mg/L	-0.000422	0.0660	5.00	4.65	4.75	4.68	4.25 to 5.75	93.0	70.0 to 130	2.04	20.0
BB08972	Iron, Total	mg/L	0.000168	0.0176	0.2	0.204	0.206	0.203	0.170 to 0.230	102	70.0 to 130	0.829	20.0
BB08972	Potassium, Total	mg/L	0.0528	0.367	10.0	10.7	10.8	10.5	8.50 to 11.5	107	70.0 to 130	0.573	20.0

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

## Batch QC Summary

**Customer Account:** WMWBARPU  
**Sample Date:** 5/12/21 09:00  
**Customer ID:**  
**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient - MW-1

**Laboratory ID Number:** BB08970

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08972	Sulfate	mg/L	-0.205	1.00	20.0	19.1	-0.429	19.8	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB08972	Fluoride	mg/L	0.0202	0.100	2.50	2.52	0.0235	2.55	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB08972	Chloride	mg/L	-0.0646	1.00	10.0	9.71	0.212	9.71	9.00 to 11.0	97.1	80.0 to 120	0.00	20.0
BB08970	Alkalinity, Total as CaCO3	mg/L					5.80	51.0	45.0 to 55.0			9.21	10.0
BB08970	Solids, Dissolved	mg/L	1.00	25.0			43.3	56.0	40.0 to 60.0			3.10	5.00

**Comments:** The client submitted filtered samples for dissolved analysis, but no MB or LCS were submitted. Therefore, dissolved data is qualified.  
 LBM 6/8/21

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient Field Blank-1

**Location Code:** WMWBARPUFB  
**Collected:** 5/12/21 09:45  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08971

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	5/24/21 09:00	5/25/21 12:35		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 12:35		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	5/24/21 09:00	5/25/21 12:35		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	5/24/21 09:00	5/25/21 12:35		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:35		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	5/24/21 09:00	5/25/21 12:35		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	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	5/18/21 11:35	5/18/21 18:10		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:35	5/18/21 18:10		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	5/19/21 10:43	5/19/21 15:51		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>			<b>Analyst: TJW</b>						
* Solids, Dissolved	5/14/21 15:15	5/19/21 13:20		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>			<b>Analyst: JCC</b>						
* Chloride	5/17/21 11:11	5/17/21 11:11		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>			<b>Analyst: JCC</b>						
* Fluoride	5/17/21 13:20	5/17/21 13:20		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>			<b>Analyst: JCC</b>						
* Sulfate	5/19/21 15:44	5/19/21 15:44		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:** WMWBARPUFB

**Sample Date:** 5/12/21 09:45

**Customer ID:**

**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient Field Blank-1

**Laboratory ID Number:** BB08971

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec
				Limit					Standard	Limit	Rec	Limit	
BB08972	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.00	1.03	1.00	0.850 to 1.15	100	70.0 to 130	2.76	20.0
BB08972	Sodium, Total	mg/L	-0.000422	0.0660	5.00	4.65	4.75	4.68	4.25 to 5.75	93.0	70.0 to 130	2.04	20.0
BB08972	Barium, Total	mg/L	-0.0000135	0.000200	0.10	0.106	0.0997	0.0990	0.0850 to 0.115	106	70.0 to 130	6.10	20.0
BB08972	Chromium, Total	mg/L	0.0000142	0.000440	0.10	0.102	0.107	0.100	0.0850 to 0.115	102	70.0 to 130	4.95	20.0
BB08972	Magnesium, Total	mg/L	0.000629	0.0462	5.00	5.07	5.16	5.03	4.25 to 5.75	101	70.0 to 130	1.71	20.0
BB08972	Arsenic, Total	mg/L	0.0000624	0.000147	0.10	0.105	0.106	0.104	0.0850 to 0.115	105	70.0 to 130	0.864	20.0
BB08972	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.102	0.0961	0.0943	0.0850 to 0.115	102	70.0 to 130	5.91	20.0
BB08972	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0999	0.101	0.0954	0.0850 to 0.115	99.9	70.0 to 130	0.846	20.0
BB08972	Molybdenum, Total	mg/L	-0.0000042	0.000147	0.10	0.0997	0.0999	0.0955	0.0850 to 0.115	99.7	70.0 to 130	0.248	20.0
BB08972	Antimony, Total	mg/L	0.000158	0.00100	0.10	0.0987	0.0987	0.0927	0.0850 to 0.115	98.7	70.0 to 130	0.0144	20.0
BB08972	Thallium, Total	mg/L	0.0000029	0.000147	0.10	0.0956	0.0954	0.0954	0.0850 to 0.115	95.6	70.0 to 130	0.215	20.0
BB08972	Calcium, Total	mg/L	-0.00843	0.152	5.00	5.21	5.24	5.17	4.25 to 5.75	104	70.0 to 130	0.618	20.0
BB08972	Cobalt, Total	mg/L	-0.0000046	0.000147	0.10	0.103	0.108	0.101	0.0850 to 0.115	103	70.0 to 130	4.73	20.0
BB08972	Mercury, Total by CVAA	mg/L	0.0000493	0.000500	0.004	0.00428	0.00427	0.00425	0.00340 to 0.00460	107	70.0 to 130	0.266	20.0
BB08972	Lead, Total	mg/L	0.0000021	0.000147	0.10	0.0985	0.0981	0.0974	0.0850 to 0.115	98.5	70.0 to 130	0.393	20.0
BB08972	Manganese, Total	mg/L	0.0000090	0.000147	0.10	0.102	0.107	0.102	0.0850 to 0.115	102	70.0 to 130	4.79	20.0
BB08972	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.202	0.197	0.170 to 0.230	99.3	70.0 to 130	1.77	20.0
BB08972	Selenium, Total	mg/L	-0.0000859	0.00100	0.10	0.100	0.0996	0.100	0.0850 to 0.115	100	70.0 to 130	0.394	20.0
BB08972	Iron, Total	mg/L	0.000168	0.0176	0.2	0.204	0.206	0.203	0.170 to 0.230	102	70.0 to 130	0.829	20.0
BB08972	Potassium, Total	mg/L	0.0528	0.367	10.0	10.7	10.8	10.5	8.50 to 11.5	107	70.0 to 130	0.573	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWBARPUFB

**Sample Date:** 5/12/21 09:45

**Customer ID:**

**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient Field Blank-1

**Laboratory ID Number:** BB08971

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08972	Sulfate	mg/L	-0.205	1.00	20.0	19.1	-0.429	19.8	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB08970	Solids, Dissolved	mg/L	1.00	25.0			43.3	56.0	40.0 to 60.0			3.10	5.00
BB08972	Fluoride	mg/L	0.0202	0.100	2.50	2.52	0.0235	2.55	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB08972	Chloride	mg/L	-0.0646	1.00	10.0	9.71	0.212	9.71	9.00 to 11.0	97.1	80.0 to 120	0.00	20.0

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**Comments:**

# Certificate Of Analysis

**Description:** Barry Pooled Upgradient Equipment Blank-1

**Location Code:** WMWBARPUEB  
**Collected:** 5/12/21 10:00  
**Customer ID:**  
**Submittal Date:** 5/13/21 14:16

**Laboratory ID Number:** BB08972

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	5/24/21 09:00	5/25/21 12:39		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	5/24/21 09:00	5/25/21 12:39		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	5/24/21 09:00	5/25/21 12:39		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	5/24/21 09:00	5/25/21 12:39		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	5/24/21 09:00	5/25/21 12:39		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	5/24/21 09:00	5/25/21 12:39		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	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Arsenic, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000101	0.000203	U
* Beryllium, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	5/18/21 11:35	5/18/21 18:14		1.015	Not Detected	mg/L	0.000507	0.001015	U
* Thallium, Total	5/18/21 11:35	5/18/21 18:14		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	5/19/21 10:43	5/19/21 15:53		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: TJW</b>							
* Solids, Dissolved	5/14/21 15:15	5/19/21 13:20		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	5/17/21 11:13	5/17/21 11:13		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	5/17/21 13:21	5/17/21 13:21		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	5/19/21 15:46	5/19/21 15:46		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:** WMWBARPUEB

**Sample Date:** 5/12/21 10:00

**Customer ID:**

**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient Equipment Blank-1

**Laboratory ID Number:** BB08972

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB08972	Boron, Total	mg/L	-0.00400	0.0650	1.00	1.00	1.03	1.00	0.850 to 1.15	100	70.0 to 130	2.76	20.0
BB08972	Sodium, Total	mg/L	-0.000422	0.0660	5.00	4.65	4.75	4.68	4.25 to 5.75	93.0	70.0 to 130	2.04	20.0
BB08972	Barium, Total	mg/L	-0.0000135	0.000200	0.10	0.106	0.0997	0.0990	0.0850 to 0.115	106	70.0 to 130	6.10	20.0
BB08972	Chromium, Total	mg/L	0.0000142	0.000440	0.10	0.102	0.107	0.100	0.0850 to 0.115	102	70.0 to 130	4.95	20.0
BB08972	Magnesium, Total	mg/L	0.000629	0.0462	5.00	5.07	5.16	5.03	4.25 to 5.75	101	70.0 to 130	1.71	20.0
BB08972	Calcium, Total	mg/L	-0.00843	0.152	5.00	5.21	5.24	5.17	4.25 to 5.75	104	70.0 to 130	0.618	20.0
BB08972	Cobalt, Total	mg/L	-0.0000046	0.000147	0.10	0.103	0.108	0.101	0.0850 to 0.115	103	70.0 to 130	4.73	20.0
BB08972	Mercury, Total by CVAA	mg/L	0.0000493	0.000500	0.004	0.00428	0.00427	0.00425	0.00340 to 0.00460	107	70.0 to 130	0.266	20.0
BB08972	Lead, Total	mg/L	0.0000021	0.000147	0.10	0.0985	0.0981	0.0974	0.0850 to 0.115	98.5	70.0 to 130	0.393	20.0
BB08972	Iron, Total	mg/L	0.000168	0.0176	0.2	0.204	0.206	0.203	0.170 to 0.230	102	70.0 to 130	0.829	20.0
BB08972	Potassium, Total	mg/L	0.0528	0.367	10.0	10.7	10.8	10.5	8.50 to 11.5	107	70.0 to 130	0.573	20.0
BB08972	Lithium, Total	mg/L	0.0000462	0.0154	0.20	0.199	0.202	0.197	0.170 to 0.230	99.3	70.0 to 130	1.77	20.0
BB08972	Selenium, Total	mg/L	-0.0000859	0.00100	0.10	0.100	0.0996	0.100	0.0850 to 0.115	100	70.0 to 130	0.394	20.0
BB08972	Manganese, Total	mg/L	0.0000090	0.000147	0.10	0.102	0.107	0.102	0.0850 to 0.115	102	70.0 to 130	4.79	20.0
BB08972	Arsenic, Total	mg/L	0.0000624	0.000147	0.10	0.105	0.106	0.104	0.0850 to 0.115	105	70.0 to 130	0.864	20.0
BB08972	Beryllium, Total	mg/L	0.0000000	0.000880	0.10	0.102	0.0961	0.0943	0.0850 to 0.115	102	70.0 to 130	5.91	20.0
BB08972	Cadmium, Total	mg/L	-0.0000098	0.000147	0.10	0.0999	0.101	0.0954	0.0850 to 0.115	99.9	70.0 to 130	0.846	20.0
BB08972	Molybdenum, Total	mg/L	-0.0000042	0.000147	0.10	0.0997	0.0999	0.0955	0.0850 to 0.115	99.7	70.0 to 130	0.248	20.0
BB08972	Antimony, Total	mg/L	0.000158	0.00100	0.10	0.0987	0.0987	0.0927	0.0850 to 0.115	98.7	70.0 to 130	0.0144	20.0
BB08972	Thallium, Total	mg/L	0.0000029	0.000147	0.10	0.0956	0.0954	0.0954	0.0850 to 0.115	95.6	70.0 to 130	0.215	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWBARPUEB

**Sample Date:** 5/12/21 10:00

**Customer ID:**

**Delivery Date:** 5/13/21 14:16

**Description:** Barry Pooled Upgradient Equipment Blank-1

**Laboratory ID Number:** BB08972

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB08972	Sulfate	mg/L	-0.205	1.00	20.0	19.1	-0.429	19.8	18.0 to 22.0	95.5	80.0 to 120	0.00	20.0
BB08970	Solids, Dissolved	mg/L	1.00	25.0			43.3	56.0	40.0 to 60.0			3.10	5.00
BB08972	Fluoride	mg/L	0.0202	0.100	2.50	2.52	0.0235	2.55	2.25 to 2.75	101	80.0 to 120	0.00	20.0
BB08972	Chloride	mg/L	-0.0646	1.00	10.0	9.71	0.212	9.71	9.00 to 11.0	97.1	80.0 to 120	0.00	20.0

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**Comments:**

## Definitions

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.
J	Reported value is an estimate because concentration is less than reporting limit.
U	Compound was analyzed, but not detected.





June 22, 2021

Laura Midkiff  
Alabama Power  
744 Highway 87  
GSC #8  
Calera, AL 35040

RE: Project: BARRY POOLED WMWBARPU\_1322  
Pace Project No.: 92540467

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 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,



Kevin Herring  
kevin.herring@pacelabs.com  
1(704)875-9092  
HORIZON Database Administrator

Enclosures

cc: Brooke Caton, Alabama Power  
Renee Jernigan, Alabama Power



## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: BARRY POOLED WMWBARPU\_1322  
Pace Project No.: 92540467

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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: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92540467001	BB08973 MW-4	Water	05/11/21 09:00	05/18/21 10:00
92540467002	BB08974 MW-3	Water	05/11/21 10:10	05/18/21 10:00
92540467003	BB08975 MW-3 DUP	Water	05/11/21 10:10	05/18/21 10:00
92540467004	BB08976 MW-2	Water	05/11/21 11:28	05/18/21 10:00
92540467005	BB08977 MW-1	Water	05/12/21 09:00	05/18/21 10:00
92540467006	BB08977 MW-1 MS	Water	05/12/21 09:00	05/18/21 10:00
92540467007	BB08977 MW-1 MSD	Water	05/12/21 09:00	05/18/21 10:00
92540467008	BB08978 FB-1	Water	05/12/21 09:45	05/18/21 10:00
92540467009	BB08979 EB-1	Water	05/12/21 10:00	05/18/21 10:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BARRY POOLED WMWBARPU\_1322  
Pace Project No.: 92540467

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92540467001	BB08973 MW-4	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540467002	BB08974 MW-3	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540467003	BB08975 MW-3 DUP	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540467004	BB08976 MW-2	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540467005	BB08977 MW-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540467006	BB08977 MW-1 MS	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92540467007	BB08977 MW-1 MSD	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
92540467008	BB08978 FB-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92540467009	BB08979 EB-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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## PROJECT NARRATIVE

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

---

**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** June 22, 2021

**General Information:**

9 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: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

---

**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** June 22, 2021

**General Information:**

9 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:**

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## PROJECT NARRATIVE

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

---

**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** June 22, 2021

**General Information:**

7 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: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08973 MW-4**      **Lab ID: 92540467001**      Collected: 05/11/21 09:00      Received: 05/18/21 10:00      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>0.398 ± 0.260 (0.370)</b> <b>C:88% T:NA</b>	pCi/L	06/16/21 17:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.571U ± 0.378 (0.716)</b> <b>C:75% T:85%</b>	pCi/L	06/21/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.969U ± 0.638 (1.09)</b>	pCi/L	06/22/21 15:45	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08974 MW-3**      **Lab ID: 92540467002**      Collected: 05/11/21 10:10      Received: 05/18/21 10:00      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>0.293U ± 0.229 (0.375)</b> <b>C:89% T:NA</b>	pCi/L	06/16/21 17:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.228U ± 0.324 (0.696)</b> <b>C:75% T:86%</b>	pCi/L	06/21/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.521U ± 0.553 (1.07)</b>	pCi/L	06/22/21 15:45	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08975 MW-3 DUP**      **Lab ID: 92540467003**      Collected: 05/11/21 10:10      Received: 05/18/21 10:00      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>0.630 ± 0.301 (0.327)</b> <b>C:90% T:NA</b>	pCi/L	06/16/21 17:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.481U ± 0.298 (0.549)</b> <b>C:80% T:96%</b>	pCi/L	06/21/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.11 ± 0.599 (0.876)</b>	pCi/L	06/22/21 15:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08976 MW-2**      **Lab ID: 92540467004**      Collected: 05/11/21 11:28      Received: 05/18/21 10:00      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>0.718 ± 0.342 (0.415)</b> <b>C:82% T:NA</b>	pCi/L	06/16/21 17:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.227U ± 0.321 (0.688)</b> <b>C:75% T:90%</b>	pCi/L	06/21/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.945U ± 0.663 (1.10)</b>	pCi/L	06/22/21 15:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08977 MW-1**      **Lab ID: 92540467005**      Collected: 05/12/21 09:00      Received: 05/18/21 10:00      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>0.361U ± 0.264 (0.425)</b> <b>C:80% T:NA</b>	pCi/L	06/16/21 17:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.278U ± 0.345 (0.731)</b> <b>C:75% T:87%</b>	pCi/L	06/21/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.639U ± 0.609 (1.16)</b>	pCi/L	06/22/21 15:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08977 MW-1 MS**      **Lab ID: 92540467006**      Collected: 05/12/21 09:00      Received: 05/18/21 10:00      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>112.12 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/16/21 17:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>99.53 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/21/21 11:00	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08977 MW-1 MSD**      **Lab ID: 92540467007**      Collected: 05/12/21 09:00      Received: 05/18/21 10:00      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>101.49 %REC 9.96RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/16/21 17:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>89.66 %REC 10.43 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	06/21/21 11:00	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08978 FB-1**      **Lab ID: 92540467008**      Collected: 05/12/21 09:45      Received: 05/18/21 10:00      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>0.0477U ± 0.169 (0.426)</b> <b>C:88% T:NA</b>	pCi/L	06/16/21 17:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.215U ± 0.279 (0.592)</b> <b>C:76% T:97%</b>	pCi/L	06/21/21 11:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.263U ± 0.448 (1.02)</b>	pCi/L	06/22/21 15:45	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

**Sample: BB08979 EB-1**      **Lab ID: 92540467009**      Collected: 05/12/21 10:00      Received: 05/18/21 10:00      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>0.0200U ± 0.185 (0.503)</b> <b>C:91% T:NA</b>	pCi/L	06/16/21 17:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.430U ± 0.323 (0.632)</b> <b>C:81% T:98%</b>	pCi/L	06/21/21 14:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.450U ± 0.508 (1.14)</b>	pCi/L	06/22/21 15:45	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

QC Batch: 449722

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92540467009

METHOD BLANK: 2170101

Matrix: Water

Associated Lab Samples: 92540467009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.526 ± 0.309 (0.561) C:82% T:99%	pCi/L	06/21/21 14:04	

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

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

QC Batch: 449720

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92540467001, 92540467002, 92540467003, 92540467004, 92540467005, 92540467006, 92540467007, 92540467008

METHOD BLANK: 2170098

Matrix: Water

Associated Lab Samples: 92540467001, 92540467002, 92540467003, 92540467004, 92540467005, 92540467006, 92540467007, 92540467008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.125 ± 0.247 (0.546) C:78% T:90%	pCi/L	06/21/21 10:56	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

QC Batch: 449549

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92540467009

METHOD BLANK: 2169369

Matrix: Water

Associated Lab Samples: 92540467009

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.109 ± 0.188 (0.423) C:91% T:NA	pCi/L	06/16/21 17:49	

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## QUALIFIERS

Project: BARRY POOLED WMWBARPU\_1322

Pace Project No.: 92540467

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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.

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: BARRY POOLED WMWBARPU\_1322  
Pace Project No.: 92540467

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92540467001	BB08973 MW-4	EPA 9315	449545		
92540467002	BB08974 MW-3	EPA 9315	449545		
92540467003	BB08975 MW-3 DUP	EPA 9315	449545		
92540467004	BB08976 MW-2	EPA 9315	449545		
92540467005	BB08977 MW-1	EPA 9315	449545		
92540467006	BB08977 MW-1 MS	EPA 9315	449545		
92540467007	BB08977 MW-1 MSD	EPA 9315	449545		
92540467008	BB08978 FB-1	EPA 9315	449545		
92540467009	BB08979 EB-1	EPA 9315	449549		
92540467001	BB08973 MW-4	EPA 9320	449720		
92540467002	BB08974 MW-3	EPA 9320	449720		
92540467003	BB08975 MW-3 DUP	EPA 9320	449720		
92540467004	BB08976 MW-2	EPA 9320	449720		
92540467005	BB08977 MW-1	EPA 9320	449720		
92540467006	BB08977 MW-1 MS	EPA 9320	449720		
92540467007	BB08977 MW-1 MSD	EPA 9320	449720		
92540467008	BB08978 FB-1	EPA 9320	449720		
92540467009	BB08979 EB-1	EPA 9320	449722		
92540467001	BB08973 MW-4	Total Radium Calculation	453575		
92540467002	BB08974 MW-3	Total Radium Calculation	453575		
92540467003	BB08975 MW-3 DUP	Total Radium Calculation	453575		
92540467004	BB08976 MW-2	Total Radium Calculation	453575		
92540467005	BB08977 MW-1	Total Radium Calculation	453575		
92540467008	BB08978 FB-1	Total Radium Calculation	453575		
92540467009	BB08979 EB-1	Total Radium Calculation	453575		

### REPORT OF LABORATORY ANALYSIS

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Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Alabama Power Co

WO#: 92540467



92540467

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 955106701180

LIMS Login

Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  no

Thermometer Used N/A 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:	/			1003801	05/24/21 AF
Chain of Custody Filled Out:	/				
Chain of Custody Relinquished:	/				
Sampler Name & Signature on COC:		/			
Sample Labels match COC:	/				
-Includes date/time/ID Matrix: <u>WT</u>					
Samples Arrived within Hold Time:	/				
Short Hold Time Analysis (<72hr remaining):		/			
Rush Turn Around Time Requested:		/			
Sufficient Volume:		/			9. Low Volume per each container, LV also
Correct Containers Used:	/				10. written on containers.
-Pace Containers Used:	/				
Containers Intact:	/				
Orthophosphate field filtered			/		
Hex Cr Aqueous sample field filtered			/		
Organic Samples checked for dechlorination:			/		
Filtered volume received for Dissolved tests			/		
All containers have been checked for preservation.	/				
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix					pH < 2
All containers meet method preservation requirements.	/			Initial when completed: AF	Date/time of preservation
				Lot # of added preservative	
Headspace in VOA Vials (>6mm):			/		
Trip Blank Present:		/			
Trip Blank Custody Seals Present			/		
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed: AF	Date: 5/24/21 Survey Meter SN: 1563

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.



# Quality Control Sample Performance Assessment



Test: Ra-226  
Analyst: CLA  
Date: 5/26/2021  
Worklist: 60743  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2169351
MB concentration:	0.106
M/B Counting Uncertainty:	0.145
MB MDC:	0.301
MB Numerical Performance Indicator:	1.43
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD60743	LCSD60743
Count Date:	6/16/2021
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.037
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.202
Target Conc. (pCi/L, g, F):	11.926
Uncertainty (Calculated):	0.143
Result (pCi/L, g, F):	12.211
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.182
Numerical Performance Indicator:	0.47
Percent Recovery:	102.39%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	See Below ##
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate Result Counting Uncertainty (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:

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/12/2021	5/12/2021	5/12/2021
Sample I.D.:	92540464002	92540467005	92540467005
Sample MS I.D.:	92540464003	92540467006	92540467006
Sample MSD I.D.:	92540464004	92540467007	92540467007
Spike I.D.:	19-033	19-033	19-033
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.038	24.038	24.038
Spike Volume Used in MS (mL):	0.20	0.20	0.20
MS Aliquot (L, g, F):	0.206	0.202	0.202
MS Target Conc. (pCi/L, g, F):	23.287	23.827	23.827
MSD Aliquot (L, g, F):	0.206	0.207	0.207
MSD Target Conc. (pCi/L, g, F):	23.307	23.239	23.239
MSD Spike Uncertainty (calculated):	0.279	0.286	0.286
MSD Spike Uncertainty (numerical):	0.280	0.279	0.279
Sample Result Counting Uncertainty (pCi/L, g, F):	0.257	0.261	0.261
Sample Matrix Spike Result:	0.266	0.259	0.259
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	22.620	27.077	27.077
Sample Matrix Spike Duplicate Result:	1.576	1.897	1.897
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	25.882	23.946	23.946
MS Numerical Performance Indicator:	1.692	1.651	1.651
MS Percent Recovery:	-1.116	0.400	0.400
MSD Numerical Performance Indicator:	96.03%	112.12%	112.12%
MSD Percent Recovery:	109.95%	101.49%	101.49%
MS Status vs Numerical Indicator:	N/A	N/A	N/A
MSD Status vs Numerical Indicator:	N/A	N/A	N/A
MS Status vs Recovery:	Pass	Pass	Pass
MSD Status vs Recovery:	Pass	Pass	Pass
MS/MSD Upper % Recovery Limits:	125%	125%	125%
MS/MSD Lower % Recovery Limits:	75%	75%	75%

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92540464002
Sample MS I.D.:	92540464003
Sample MSD I.D.:	92540464004
Sample Matrix Spike Result:	22.620
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.576
Sample Matrix Spike Duplicate Result:	25.882
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.692
Duplicate Numerical Performance Indicator:	-2.765
Duplicate Numerical Performance Indicator (Based on the Percent Recoveries):	13.51%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Handwritten signature: *W. M. ...*

Handwritten signature: *W. M. ...*

# Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226  
Analyst: CLA  
Date: 5/26/2021  
Worklist: 60745  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2169369
MB concentration:	0.109
MB Counting Uncertainty:	0.188
MB MDC:	0.423
MB Numerical Performance Indicator:	1.14
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS D (Y or N)?	Y
Count Date:		LCS60745	6/16/2021
Spike I.D.:	19-033		19-033
Decay Corrected Spike Concentration (pCi/mL):	24.037		24.037
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.210		0.209
Target Conc. (pCi/L, g, F):	11.433		11.520
Uncertainty (Calculated):	0.137		0.138
Result (pCi/L, g, F):	12.378		12.389
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.184		1.168
Numerical Performance Indicator:	1.55		1.45
Percent Recovery:	108.26%		107.55%
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		LCS D (Y or N)?	Y
Sample I.D.:		LCS60745	92540467009
Duplicate Sample I.D.:	12.378		92540467009DUP
Sample Result (pCi/L, g, F):	1.184		0.020
Sample Result Counting Uncertainty (pCi/L, g, F):	12.389		0.185
Sample Duplicate Result (pCi/L, g, F):	1.168		-0.029
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	NO		0.174
Are sample and/or duplicate results below RL?	-0.014		See Below #
Duplicate Numerical Performance Indicator:	0.66%		0.376
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	N/A		-1115.42%
Duplicate Status vs Numerical Indicator:	Pass		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:

OK  
6/17/21  
LAM 6/17/21

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

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

# Quality Control Sample Performance Assessment



Test: Ra-228  
 Analyst: JC2  
 Date: 6/14/2021  
 Worklist: 60774  
 Matrix: WT

**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Method Blank Assessment	
MB Sample ID	2170098
MB concentration:	0.125
M/B 2 Sigma CSU:	0.247
MB MDC:	0.546
MB Numerical Performance Indicator:	0.99
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS60774	N
Count Date:	6/21/2021	LCS60774
Spike I.D.:	21-003	
Decay Corrected Spike Concentration (pCi/mL):	37.234	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.806	
Target Conc. (pCi/L, g, F):	4.622	
Uncertainty (Calculated):	0.226	
Result (pCi/L, g, F):	3.238	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.792	
Numerical Performance Indicator:	-3.29	
Percent Recovery:	70.05%	
Status vs Numerical Indicator:	N/A	
Upper % Recovery Limits:	Pass	
Lower % Recovery Limits:	135%	
	60%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	See 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:	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/12/2021	5/12/2021
Sample I.D.:	92540464002	92540467005
Sample MS I.D.:	92540464003	92540467006
Sample MSD I.D.:	92540464004	92540467007
Spike I.D.:	21-003	21-003
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	37.729	37.729
Spike Volume Used in MS (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.820	0.811
MS Target Conc. (pCi/L, g, F):	9.202	9.304
MSD Aliquot (L, g, F):	0.811	0.812
MSD Target Conc. (pCi/L, g, F):	9.306	9.291
MS Spike Uncertainty (calculated):	0.451	0.456
MSD Spike Uncertainty (calculated):	0.456	0.455
Sample Result:	0.208	0.278
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.323	0.345
Sample Matrix Spike Result:	9.151	9.539
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.826	1.909
Sample Matrix Spike Duplicate Result:	8.644	8.609
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.732	1.747
MS Numerical Performance Indicator:	-0.266	-0.043
MSD Numerical Performance Indicator:	-0.937	-1.024
MS Percent Recovery:	97.19%	99.53%
MSD Percent Recovery:	90.65%	89.66%
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 1	MS/MSD 2
Sample I.D.:	92540464002	92540467005
Sample MS I.D.:	92540464003	92540467006
Sample MSD I.D.:	92540464004	92540467007
Spike I.D.:	21-003	21-003
Matrix Spike Result:	9.151	9.539
Sample Matrix Spike Duplicate Result:	1.826	1.909
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	8.644	8.609
Duplicate Numerical Performance Indicator:	1.732	1.747
Duplicate Numerical Performance Indicator:	0.395	0.705
MS/MSD Duplicate RPD:	6.96%	10.43%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

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

Comments:

*June 22/21*

*WT*

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 6/15/2021  
Worklist: 60775  
Matrix: WT

**Method Blank Assessment**

MB Sample ID	2170101
MB concentration:	0.526
MB 2 Sigma CSU:	0.309
MB MDC:	0.561
MB Numerical Performance Indicator:	3.34
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

**Laboratory Control Sample Assessment**

	LCSD (Y or N)?	
	LCSD60775	LCSD60775
Count Date:	6/21/2021	6/21/2021
Spike I.D.:	21-003	21-003
Decay Corrected Spike Concentration (pCi/mL):	37.233	37.233
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.821	0.810
Target Conc. (pCi/L, g, F):	4.533	4.594
Uncertainty (Calculated):	0.222	0.225
Result (pCi/L, g, F):	3.945	3.791
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.895	0.902
Numerical Performance Indicator:	-1.25	-1.69
Percent Recovery:	87.03%	82.51%
Status vs Numerical Indicator:	N/A	N/A
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

**Duplicate Sample Assessment**

Sample I.D.:	LCSD60775	LCSD60775
Duplicate Sample I.D.:	3.945	3.945
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.895	0.895
Sample Duplicate Result (pCi/L, g, F):	3.791	0.902
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	NO	NO
Are sample and/or duplicate results below RL?	NO	NO
Duplicate Numerical Performance Indicator:	0.238	0.238
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.33%	5.33%
Duplicate Status vs Numerical Indicator:	Pass	Pass
Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

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

**Comments:**

\*If the lowest activity sample in this batch is greater than 10 times the blank value, the blank is acceptable; otherwise, this batch must be re-prepped.

*MB activity ~ MDC, PASS*  
*6/22/21*

**Sample Matrix Spike Control Assessment**

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

**Matrix Spike/Matrix Spike Duplicate Sample Assessment**

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

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-1	5/12/2021 8:43	Conductivity	66.22	uS/cm
BY-GSA-MW-1	5/12/2021 8:43	DO	0.21	mg/L
BY-GSA-MW-1	5/12/2021 8:43	Depth to Water Detail	13.16	ft
BY-GSA-MW-1	5/12/2021 8:43	Oxidation Reduction Potention	121.18	mv
BY-GSA-MW-1	5/12/2021 8:43	pH	4.76	SU
BY-GSA-MW-1	5/12/2021 8:43	Temperature	20.1	C
BY-GSA-MW-1	5/12/2021 8:43	Turbidity	3.72	NTU
BY-GSA-MW-1	5/12/2021 8:48	Conductivity	65.93	uS/cm
BY-GSA-MW-1	5/12/2021 8:48	DO	0.18	mg/L
BY-GSA-MW-1	5/12/2021 8:48	Depth to Water Detail	13.18	ft
BY-GSA-MW-1	5/12/2021 8:48	Oxidation Reduction Potention	134.15	mv
BY-GSA-MW-1	5/12/2021 8:48	pH	4.56	SU
BY-GSA-MW-1	5/12/2021 8:48	Temperature	20.11	C
BY-GSA-MW-1	5/12/2021 8:48	Turbidity	2.11	NTU
BY-GSA-MW-1	5/12/2021 8:53	Conductivity	65.75	uS/cm
BY-GSA-MW-1	5/12/2021 8:53	DO	0.17	mg/L
BY-GSA-MW-1	5/12/2021 8:53	Depth to Water Detail	13.22	ft
BY-GSA-MW-1	5/12/2021 8:53	Oxidation Reduction Potention	132.14	mv
BY-GSA-MW-1	5/12/2021 8:53	pH	4.68	SU
BY-GSA-MW-1	5/12/2021 8:53	Temperature	20.18	C
BY-GSA-MW-1	5/12/2021 8:53	Turbidity	2.04	NTU
BY-GSA-MW-1	5/12/2021 8:58	Conductivity	65.58	uS/cm
BY-GSA-MW-1	5/12/2021 8:58	DO	0.16	mg/L
BY-GSA-MW-1	5/12/2021 8:58	Depth to Water Detail	13.22	ft
BY-GSA-MW-1	5/12/2021 8:58	Oxidation Reduction Potention	130.44	mv
BY-GSA-MW-1	5/12/2021 8:58	pH	4.74	SU
BY-GSA-MW-1	5/12/2021 8:58	Temperature	20.13	C
BY-GSA-MW-1	5/12/2021 8:58	Turbidity	2.91	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-2	5/11/2021 11:10	Conductivity	55.41	uS/cm
BY-GSA-MW-2	5/11/2021 11:10	DO	6.88	mg/L
BY-GSA-MW-2	5/11/2021 11:10	Depth to Water Detail	12.72	ft
BY-GSA-MW-2	5/11/2021 11:10	Oxidation Reduction Potention	258.56	mv
BY-GSA-MW-2	5/11/2021 11:10	pH	4.02	SU
BY-GSA-MW-2	5/11/2021 11:10	Temperature	19.58	C
BY-GSA-MW-2	5/11/2021 11:10	Turbidity	11.3	NTU
BY-GSA-MW-2	5/11/2021 11:15	Conductivity	54.58	uS/cm
BY-GSA-MW-2	5/11/2021 11:15	DO	6.75	mg/L
BY-GSA-MW-2	5/11/2021 11:15	Depth to Water Detail	12.72	ft
BY-GSA-MW-2	5/11/2021 11:15	Oxidation Reduction Potention	268.26	mv
BY-GSA-MW-2	5/11/2021 11:15	pH	4.12	SU
BY-GSA-MW-2	5/11/2021 11:15	Temperature	19.6	C
BY-GSA-MW-2	5/11/2021 11:15	Turbidity	12.48	NTU
BY-GSA-MW-2	5/11/2021 11:20	Conductivity	54.28	uS/cm
BY-GSA-MW-2	5/11/2021 11:20	DO	6.66	mg/L
BY-GSA-MW-2	5/11/2021 11:20	Depth to Water Detail	12.72	ft
BY-GSA-MW-2	5/11/2021 11:20	Oxidation Reduction Potention	275.99	mv
BY-GSA-MW-2	5/11/2021 11:20	pH	4.18	SU
BY-GSA-MW-2	5/11/2021 11:20	Temperature	19.62	C
BY-GSA-MW-2	5/11/2021 11:20	Turbidity	9.89	NTU
BY-GSA-MW-2	5/11/2021 11:25	Conductivity	54.05	uS/cm
BY-GSA-MW-2	5/11/2021 11:25	DO	6.67	mg/L
BY-GSA-MW-2	5/11/2021 11:25	Depth to Water Detail	12.72	ft
BY-GSA-MW-2	5/11/2021 11:25	Oxidation Reduction Potention	278.42	mv
BY-GSA-MW-2	5/11/2021 11:25	pH	4.29	SU
BY-GSA-MW-2	5/11/2021 11:25	Temperature	19.55	C
BY-GSA-MW-2	5/11/2021 11:25	Turbidity	7.37	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-3	5/11/2021 9:52	Conductivity	52.8	uS/cm
BY-GSA-MW-3	5/11/2021 9:52	DO	6.22	mg/L
BY-GSA-MW-3	5/11/2021 9:52	Depth to Water Detail	15.42	ft
BY-GSA-MW-3	5/11/2021 9:52	Oxidation Reduction Potention	234.48	mv
BY-GSA-MW-3	5/11/2021 9:52	pH	4.34	SU
BY-GSA-MW-3	5/11/2021 9:52	Temperature	19.81	C
BY-GSA-MW-3	5/11/2021 9:52	Turbidity	9.37	NTU
BY-GSA-MW-3	5/11/2021 9:57	Conductivity	52.61	uS/cm
BY-GSA-MW-3	5/11/2021 9:57	DO	6.22	mg/L
BY-GSA-MW-3	5/11/2021 9:57	Depth to Water Detail	15.42	ft
BY-GSA-MW-3	5/11/2021 9:57	Oxidation Reduction Potention	235.52	mv
BY-GSA-MW-3	5/11/2021 9:57	pH	4.51	SU
BY-GSA-MW-3	5/11/2021 9:57	Temperature	19.84	C
BY-GSA-MW-3	5/11/2021 9:57	Turbidity	6.79	NTU
BY-GSA-MW-3	5/11/2021 10:02	Conductivity	52.54	uS/cm
BY-GSA-MW-3	5/11/2021 10:02	DO	6.19	mg/L
BY-GSA-MW-3	5/11/2021 10:02	Depth to Water Detail	15.42	ft
BY-GSA-MW-3	5/11/2021 10:02	Oxidation Reduction Potention	235.27	mv
BY-GSA-MW-3	5/11/2021 10:02	pH	4.62	SU
BY-GSA-MW-3	5/11/2021 10:02	Temperature	19.86	C
BY-GSA-MW-3	5/11/2021 10:02	Turbidity	3.93	NTU
BY-GSA-MW-3	5/11/2021 10:07	Conductivity	52.36	uS/cm
BY-GSA-MW-3	5/11/2021 10:07	DO	6.17	mg/L
BY-GSA-MW-3	5/11/2021 10:07	Depth to Water Detail	15.42	ft
BY-GSA-MW-3	5/11/2021 10:07	Oxidation Reduction Potention	246.66	mv
BY-GSA-MW-3	5/11/2021 10:07	pH	4.53	SU
BY-GSA-MW-3	5/11/2021 10:07	Temperature	19.82	C
BY-GSA-MW-3	5/11/2021 10:07	Turbidity	2.7	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-4	5/11/2021 8:30	Conductivity	55.05	uS/cm
BY-GSA-MW-4	5/11/2021 8:30	DO	6.73	mg/L
BY-GSA-MW-4	5/11/2021 8:30	Depth to Water Detail	54.21	ft
BY-GSA-MW-4	5/11/2021 8:30	Oxidation Reduction Potention	206.76	mv
BY-GSA-MW-4	5/11/2021 8:30	pH	4.67	SU
BY-GSA-MW-4	5/11/2021 8:30	Temperature	20.99	C
BY-GSA-MW-4	5/11/2021 8:30	Turbidity	12.03	NTU
BY-GSA-MW-4	5/11/2021 8:35	Conductivity	54.67	uS/cm
BY-GSA-MW-4	5/11/2021 8:35	DO	6.69	mg/L
BY-GSA-MW-4	5/11/2021 8:35	Depth to Water Detail	54.21	ft
BY-GSA-MW-4	5/11/2021 8:35	Oxidation Reduction Potention	210.72	mv
BY-GSA-MW-4	5/11/2021 8:35	pH	4.71	SU
BY-GSA-MW-4	5/11/2021 8:35	Temperature	21.01	C
BY-GSA-MW-4	5/11/2021 8:35	Turbidity	11.9	NTU
BY-GSA-MW-4	5/11/2021 8:40	Conductivity	54.62	uS/cm
BY-GSA-MW-4	5/11/2021 8:40	DO	6.65	mg/L
BY-GSA-MW-4	5/11/2021 8:40	Depth to Water Detail	54.21	ft
BY-GSA-MW-4	5/11/2021 8:40	Oxidation Reduction Potention	214.12	mv
BY-GSA-MW-4	5/11/2021 8:40	pH	4.73	SU
BY-GSA-MW-4	5/11/2021 8:40	Temperature	21.02	C
BY-GSA-MW-4	5/11/2021 8:40	Turbidity	10.17	NTU
BY-GSA-MW-4	5/11/2021 8:45	Conductivity	53.75	uS/cm
BY-GSA-MW-4	5/11/2021 8:45	DO	6.62	mg/L
BY-GSA-MW-4	5/11/2021 8:45	Depth to Water Detail	54.21	ft
BY-GSA-MW-4	5/11/2021 8:45	Oxidation Reduction Potention	227.64	mv
BY-GSA-MW-4	5/11/2021 8:45	pH	4.55	SU
BY-GSA-MW-4	5/11/2021 8:45	Temperature	21.01	C
BY-GSA-MW-4	5/11/2021 8:45	Turbidity	11.79	NTU
BY-GSA-MW-4	5/11/2021 8:50	Conductivity	53.35	uS/cm
BY-GSA-MW-4	5/11/2021 8:50	DO	6.57	mg/L
BY-GSA-MW-4	5/11/2021 8:50	Depth to Water Detail	54.21	ft
BY-GSA-MW-4	5/11/2021 8:50	Oxidation Reduction Potention	227.28	mv
BY-GSA-MW-4	5/11/2021 8:50	pH	4.57	SU
BY-GSA-MW-4	5/11/2021 8:50	Temperature	21.02	C
BY-GSA-MW-4	5/11/2021 8:50	Turbidity	10.35	NTU
BY-GSA-MW-4	5/11/2021 8:55	Conductivity	52.69	uS/cm
BY-GSA-MW-4	5/11/2021 8:55	DO	6.53	mg/L
BY-GSA-MW-4	5/11/2021 8:55	Depth to Water Detail	54.21	ft
BY-GSA-MW-4	5/11/2021 8:55	Oxidation Reduction Potention	225.88	mv
BY-GSA-MW-4	5/11/2021 8:55	pH	4.67	SU
BY-GSA-MW-4	5/11/2021 8:55	Temperature	21	C
BY-GSA-MW-4	5/11/2021 8:55	Turbidity	9.61	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-5	5/12/2021 10:14	Conductivity	127.47	uS/cm
BY-GSA-MW-5	5/12/2021 10:14	DO	5.08	mg/L
BY-GSA-MW-5	5/12/2021 10:14	Depth to Water Detail	27.22	ft
BY-GSA-MW-5	5/12/2021 10:14	Oxidation Reduction Potention	284.51	mv
BY-GSA-MW-5	5/12/2021 10:14	pH	4.42	SU
BY-GSA-MW-5	5/12/2021 10:14	Temperature	21.9	C
BY-GSA-MW-5	5/12/2021 10:14	Turbidity	2.04	NTU
BY-GSA-MW-5	5/12/2021 10:19	Conductivity	125.92	uS/cm
BY-GSA-MW-5	5/12/2021 10:19	DO	5.07	mg/L
BY-GSA-MW-5	5/12/2021 10:19	Depth to Water Detail	27.22	ft
BY-GSA-MW-5	5/12/2021 10:19	Oxidation Reduction Potention	293.34	mv
BY-GSA-MW-5	5/12/2021 10:19	pH	4.47	SU
BY-GSA-MW-5	5/12/2021 10:19	Temperature	21.89	C
BY-GSA-MW-5	5/12/2021 10:19	Turbidity	2.08	NTU
BY-GSA-MW-5	5/12/2021 10:24	Conductivity	130.69	uS/cm
BY-GSA-MW-5	5/12/2021 10:24	DO	5.04	mg/L
BY-GSA-MW-5	5/12/2021 10:24	Depth to Water Detail	27.22	ft
BY-GSA-MW-5	5/12/2021 10:24	Oxidation Reduction Potention	298.46	mv
BY-GSA-MW-5	5/12/2021 10:24	pH	4.51	SU
BY-GSA-MW-5	5/12/2021 10:24	Temperature	21.94	C
BY-GSA-MW-5	5/12/2021 10:24	Turbidity	1.44	NTU
BY-GSA-MW-5	5/12/2021 10:29	Conductivity	123.56	uS/cm
BY-GSA-MW-5	5/12/2021 10:29	DO	5.05	mg/L
BY-GSA-MW-5	5/12/2021 10:29	Depth to Water Detail	27.22	ft
BY-GSA-MW-5	5/12/2021 10:29	Oxidation Reduction Potention	297.84	mv
BY-GSA-MW-5	5/12/2021 10:29	pH	4.58	SU
BY-GSA-MW-5	5/12/2021 10:29	Temperature	21.88	C
BY-GSA-MW-5	5/12/2021 10:29	Turbidity	1.69	NTU
BY-GSA-MW-5	5/12/2021 10:34	Conductivity	124.34	uS/cm
BY-GSA-MW-5	5/12/2021 10:34	DO	5.05	mg/L
BY-GSA-MW-5	5/12/2021 10:34	Depth to Water Detail	27.22	ft
BY-GSA-MW-5	5/12/2021 10:34	Oxidation Reduction Potention	301.01	mv
BY-GSA-MW-5	5/12/2021 10:34	pH	4.6	SU
BY-GSA-MW-5	5/12/2021 10:34	Temperature	21.87	C
BY-GSA-MW-5	5/12/2021 10:34	Turbidity	1.33	NTU
BY-GSA-MW-5	5/12/2021 10:39	Conductivity	128.16	uS/cm
BY-GSA-MW-5	5/12/2021 10:39	DO	5.04	mg/L
BY-GSA-MW-5	5/12/2021 10:39	Depth to Water Detail	27.22	ft
BY-GSA-MW-5	5/12/2021 10:39	Oxidation Reduction Potention	303.44	mv
BY-GSA-MW-5	5/12/2021 10:39	pH	4.61	SU
BY-GSA-MW-5	5/12/2021 10:39	Temperature	21.85	C
BY-GSA-MW-5	5/12/2021 10:39	Turbidity	1.47	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-6	5/12/2021 13:23	Conductivity	175.42	uS/cm
BY-GSA-MW-6	5/12/2021 13:23	DO	3.8	mg/L
BY-GSA-MW-6	5/12/2021 13:23	Depth to Water Detail	14.72	ft
BY-GSA-MW-6	5/12/2021 13:23	Oxidation Reduction Potention	188.12	mv
BY-GSA-MW-6	5/12/2021 13:23	pH	5.45	SU
BY-GSA-MW-6	5/12/2021 13:23	Temperature	21.81	C
BY-GSA-MW-6	5/12/2021 13:23	Turbidity	2.86	NTU
BY-GSA-MW-6	5/12/2021 13:28	Conductivity	167.79	uS/cm
BY-GSA-MW-6	5/12/2021 13:28	DO	3.87	mg/L
BY-GSA-MW-6	5/12/2021 13:28	Depth to Water Detail	14.72	ft
BY-GSA-MW-6	5/12/2021 13:28	Oxidation Reduction Potention	202.47	mv
BY-GSA-MW-6	5/12/2021 13:28	pH	5.37	SU
BY-GSA-MW-6	5/12/2021 13:28	Temperature	21.92	C
BY-GSA-MW-6	5/12/2021 13:28	Turbidity	5.63	NTU
BY-GSA-MW-6	5/12/2021 13:33	Conductivity	161.96	uS/cm
BY-GSA-MW-6	5/12/2021 13:33	DO	3.94	mg/L
BY-GSA-MW-6	5/12/2021 13:33	Depth to Water Detail	14.72	ft
BY-GSA-MW-6	5/12/2021 13:33	Oxidation Reduction Potention	208.76	mv
BY-GSA-MW-6	5/12/2021 13:33	pH	5.38	SU
BY-GSA-MW-6	5/12/2021 13:33	Temperature	22.02	C
BY-GSA-MW-6	5/12/2021 13:33	Turbidity	6.01	NTU
BY-GSA-MW-6	5/12/2021 13:38	Conductivity	157.44	uS/cm
BY-GSA-MW-6	5/12/2021 13:38	DO	3.98	mg/L
BY-GSA-MW-6	5/12/2021 13:38	Depth to Water Detail	14.72	ft
BY-GSA-MW-6	5/12/2021 13:38	Oxidation Reduction Potention	209.9	mv
BY-GSA-MW-6	5/12/2021 13:38	pH	5.43	SU
BY-GSA-MW-6	5/12/2021 13:38	Temperature	21.97	C
BY-GSA-MW-6	5/12/2021 13:38	Turbidity	7.01	NTU
BY-GSA-MW-6	5/12/2021 13:43	Conductivity	152.68	uS/cm
BY-GSA-MW-6	5/12/2021 13:43	DO	4.08	mg/L
BY-GSA-MW-6	5/12/2021 13:43	Depth to Water Detail	14.72	ft
BY-GSA-MW-6	5/12/2021 13:43	Oxidation Reduction Potention	215.04	mv
BY-GSA-MW-6	5/12/2021 13:43	pH	5.4	SU
BY-GSA-MW-6	5/12/2021 13:43	Temperature	21.95	C
BY-GSA-MW-6	5/12/2021 13:43	Turbidity	8.08	NTU
BY-GSA-MW-6	5/12/2021 13:48	Conductivity	152.4	uS/cm
BY-GSA-MW-6	5/12/2021 13:48	DO	4.08	mg/L
BY-GSA-MW-6	5/12/2021 13:48	Depth to Water Detail	14.72	ft
BY-GSA-MW-6	5/12/2021 13:48	Oxidation Reduction Potention	215.19	mv
BY-GSA-MW-6	5/12/2021 13:48	pH	5.46	SU
BY-GSA-MW-6	5/12/2021 13:48	Temperature	21.95	C
BY-GSA-MW-6	5/12/2021 13:48	Turbidity	7.62	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-7	5/12/2021 11:30	Conductivity	49.07	uS/cm
BY-GSA-MW-7	5/12/2021 11:30	DO	3.62	mg/L
BY-GSA-MW-7	5/12/2021 11:30	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 11:30	Oxidation Reduction Potention	242.84	mv
BY-GSA-MW-7	5/12/2021 11:30	pH	4.64	SU
BY-GSA-MW-7	5/12/2021 11:30	Temperature	21.07	C
BY-GSA-MW-7	5/12/2021 11:30	Turbidity	13.3	NTU
BY-GSA-MW-7	5/12/2021 11:35	Conductivity	52.34	uS/cm
BY-GSA-MW-7	5/12/2021 11:35	DO	3.57	mg/L
BY-GSA-MW-7	5/12/2021 11:35	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 11:35	Oxidation Reduction Potention	254.34	mv
BY-GSA-MW-7	5/12/2021 11:35	pH	4.72	SU
BY-GSA-MW-7	5/12/2021 11:35	Temperature	21.12	C
BY-GSA-MW-7	5/12/2021 11:35	Turbidity	15.7	NTU
BY-GSA-MW-7	5/12/2021 11:40	Conductivity	54.66	uS/cm
BY-GSA-MW-7	5/12/2021 11:40	DO	3.51	mg/L
BY-GSA-MW-7	5/12/2021 11:40	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 11:40	Oxidation Reduction Potention	254.64	mv
BY-GSA-MW-7	5/12/2021 11:40	pH	4.82	SU
BY-GSA-MW-7	5/12/2021 11:40	Temperature	21.11	C
BY-GSA-MW-7	5/12/2021 11:40	Turbidity	15	NTU
BY-GSA-MW-7	5/12/2021 11:45	Conductivity	56.75	uS/cm
BY-GSA-MW-7	5/12/2021 11:45	DO	3.47	mg/L
BY-GSA-MW-7	5/12/2021 11:45	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 11:45	Oxidation Reduction Potention	253.73	mv
BY-GSA-MW-7	5/12/2021 11:45	pH	4.88	SU
BY-GSA-MW-7	5/12/2021 11:45	Temperature	21.23	C
BY-GSA-MW-7	5/12/2021 11:45	Turbidity	12.9	NTU
BY-GSA-MW-7	5/12/2021 11:50	Conductivity	61.67	uS/cm
BY-GSA-MW-7	5/12/2021 11:50	DO	3.38	mg/L
BY-GSA-MW-7	5/12/2021 11:50	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 11:50	Oxidation Reduction Potention	255.46	mv
BY-GSA-MW-7	5/12/2021 11:50	pH	4.9	SU
BY-GSA-MW-7	5/12/2021 11:50	Temperature	21.17	C
BY-GSA-MW-7	5/12/2021 11:50	Turbidity	10.44	NTU
BY-GSA-MW-7	5/12/2021 11:55	Conductivity	65.78	uS/cm
BY-GSA-MW-7	5/12/2021 11:55	DO	3.32	mg/L
BY-GSA-MW-7	5/12/2021 11:55	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 11:55	Oxidation Reduction Potention	261.77	mv
BY-GSA-MW-7	5/12/2021 11:55	pH	4.83	SU
BY-GSA-MW-7	5/12/2021 11:55	Temperature	21.12	C
BY-GSA-MW-7	5/12/2021 11:55	Turbidity	9.04	NTU
BY-GSA-MW-7	5/12/2021 12:00	Conductivity	68.38	uS/cm
BY-GSA-MW-7	5/12/2021 12:00	DO	3.3	mg/L

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-7	5/12/2021 12:00	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 12:00	Oxidation Reduction Potention	265.47	mv
BY-GSA-MW-7	5/12/2021 12:00	pH	4.85	SU
BY-GSA-MW-7	5/12/2021 12:00	Temperature	21.01	C
BY-GSA-MW-7	5/12/2021 12:00	Turbidity	6.24	NTU
BY-GSA-MW-7	5/12/2021 12:05	Conductivity	70.16	uS/cm
BY-GSA-MW-7	5/12/2021 12:05	DO	3.26	mg/L
BY-GSA-MW-7	5/12/2021 12:05	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 12:05	Oxidation Reduction Potention	270.1	mv
BY-GSA-MW-7	5/12/2021 12:05	pH	4.85	SU
BY-GSA-MW-7	5/12/2021 12:05	Temperature	21.06	C
BY-GSA-MW-7	5/12/2021 12:05	Turbidity	4.85	NTU
BY-GSA-MW-7	5/12/2021 12:10	Conductivity	72.89	uS/cm
BY-GSA-MW-7	5/12/2021 12:10	DO	3.22	mg/L
BY-GSA-MW-7	5/12/2021 12:10	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 12:10	Oxidation Reduction Potention	273.07	mv
BY-GSA-MW-7	5/12/2021 12:10	pH	4.87	SU
BY-GSA-MW-7	5/12/2021 12:10	Temperature	21.18	C
BY-GSA-MW-7	5/12/2021 12:10	Turbidity	3.75	NTU
BY-GSA-MW-7	5/12/2021 12:15	Conductivity	74.27	uS/cm
BY-GSA-MW-7	5/12/2021 12:15	DO	3.2	mg/L
BY-GSA-MW-7	5/12/2021 12:15	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 12:15	Oxidation Reduction Potention	278.88	mv
BY-GSA-MW-7	5/12/2021 12:15	pH	4.82	SU
BY-GSA-MW-7	5/12/2021 12:15	Temperature	21.22	C
BY-GSA-MW-7	5/12/2021 12:15	Turbidity	2.95	NTU
BY-GSA-MW-7	5/12/2021 12:20	Conductivity	75.47	uS/cm
BY-GSA-MW-7	5/12/2021 12:20	DO	3.17	mg/L
BY-GSA-MW-7	5/12/2021 12:20	Depth to Water Detail	13.86	ft
BY-GSA-MW-7	5/12/2021 12:20	Oxidation Reduction Potention	278.85	mv
BY-GSA-MW-7	5/12/2021 12:20	pH	4.84	SU
BY-GSA-MW-7	5/12/2021 12:20	Temperature	21.22	C
BY-GSA-MW-7	5/12/2021 12:20	Turbidity	2.86	NTU

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WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-PZ-11	5/12/2021 8:48	Conductivity	36.04	uS/cm
BY-GSA-PZ-11	5/12/2021 8:48	DO	5.75	mg/L
BY-GSA-PZ-11	5/12/2021 8:48	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 8:48	Oxidation Reduction Potention	219.26	mv
BY-GSA-PZ-11	5/12/2021 8:48	pH	4.94	SU
BY-GSA-PZ-11	5/12/2021 8:48	Temperature	22.22	C
BY-GSA-PZ-11	5/12/2021 8:48	Turbidity	142	NTU
BY-GSA-PZ-11	5/12/2021 8:53	Conductivity	37.69	uS/cm
BY-GSA-PZ-11	5/12/2021 8:53	DO	5.68	mg/L
BY-GSA-PZ-11	5/12/2021 8:53	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 8:53	Oxidation Reduction Potention	254.13	mv
BY-GSA-PZ-11	5/12/2021 8:53	pH	4.86	SU
BY-GSA-PZ-11	5/12/2021 8:53	Temperature	22.31	C
BY-GSA-PZ-11	5/12/2021 8:53	Turbidity	98.9	NTU
BY-GSA-PZ-11	5/12/2021 8:58	Conductivity	36.71	uS/cm
BY-GSA-PZ-11	5/12/2021 8:58	DO	5.67	mg/L
BY-GSA-PZ-11	5/12/2021 8:58	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 8:58	Oxidation Reduction Potention	266.52	mv
BY-GSA-PZ-11	5/12/2021 8:58	pH	4.86	SU
BY-GSA-PZ-11	5/12/2021 8:58	Temperature	22.24	C
BY-GSA-PZ-11	5/12/2021 8:58	Turbidity	55.1	NTU
BY-GSA-PZ-11	5/12/2021 9:03	Conductivity	38.06	uS/cm
BY-GSA-PZ-11	5/12/2021 9:03	DO	5.66	mg/L
BY-GSA-PZ-11	5/12/2021 9:03	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 9:03	Oxidation Reduction Potention	262.38	mv
BY-GSA-PZ-11	5/12/2021 9:03	pH	4.9	SU
BY-GSA-PZ-11	5/12/2021 9:03	Temperature	22.23	C
BY-GSA-PZ-11	5/12/2021 9:03	Turbidity	37.7	NTU
BY-GSA-PZ-11	5/12/2021 9:08	Conductivity	38.11	uS/cm
BY-GSA-PZ-11	5/12/2021 9:08	DO	5.65	mg/L
BY-GSA-PZ-11	5/12/2021 9:08	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 9:08	Oxidation Reduction Potention	255.17	mv
BY-GSA-PZ-11	5/12/2021 9:08	pH	4.92	SU
BY-GSA-PZ-11	5/12/2021 9:08	Temperature	22.25	C
BY-GSA-PZ-11	5/12/2021 9:08	Turbidity	25.9	NTU
BY-GSA-PZ-11	5/12/2021 9:13	Conductivity	37.82	uS/cm
BY-GSA-PZ-11	5/12/2021 9:13	DO	5.66	mg/L
BY-GSA-PZ-11	5/12/2021 9:13	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 9:13	Oxidation Reduction Potention	257.58	mv
BY-GSA-PZ-11	5/12/2021 9:13	pH	4.91	SU
BY-GSA-PZ-11	5/12/2021 9:13	Temperature	22.28	C
BY-GSA-PZ-11	5/12/2021 9:13	Turbidity	19.9	NTU
BY-GSA-PZ-11	5/12/2021 9:18	Conductivity	37.6	uS/cm
BY-GSA-PZ-11	5/12/2021 9:18	DO	5.65	mg/L

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-PZ-11	5/12/2021 9:18	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 9:18	Oxidation Reduction Potention	262.94	mv
BY-GSA-PZ-11	5/12/2021 9:18	pH	4.84	SU
BY-GSA-PZ-11	5/12/2021 9:18	Temperature	22.31	C
BY-GSA-PZ-11	5/12/2021 9:18	Turbidity	14.2	NTU
BY-GSA-PZ-11	5/12/2021 9:23	Conductivity	37.58	uS/cm
BY-GSA-PZ-11	5/12/2021 9:23	DO	5.65	mg/L
BY-GSA-PZ-11	5/12/2021 9:23	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 9:23	Oxidation Reduction Potention	262.08	mv
BY-GSA-PZ-11	5/12/2021 9:23	pH	4.88	SU
BY-GSA-PZ-11	5/12/2021 9:23	Temperature	22.33	C
BY-GSA-PZ-11	5/12/2021 9:23	Turbidity	11.7	NTU
BY-GSA-PZ-11	5/12/2021 9:28	Conductivity	37.51	uS/cm
BY-GSA-PZ-11	5/12/2021 9:28	DO	5.66	mg/L
BY-GSA-PZ-11	5/12/2021 9:28	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 9:28	Oxidation Reduction Potention	263.72	mv
BY-GSA-PZ-11	5/12/2021 9:28	pH	4.92	SU
BY-GSA-PZ-11	5/12/2021 9:28	Temperature	22.36	C
BY-GSA-PZ-11	5/12/2021 9:28	Turbidity	10.04	NTU
BY-GSA-PZ-11	5/12/2021 9:33	Conductivity	37.44	uS/cm
BY-GSA-PZ-11	5/12/2021 9:33	DO	5.66	mg/L
BY-GSA-PZ-11	5/12/2021 9:33	Depth to Water Detail	19.21	ft
BY-GSA-PZ-11	5/12/2021 9:33	Oxidation Reduction Potention	265.87	mv
BY-GSA-PZ-11	5/12/2021 9:33	pH	4.93	SU
BY-GSA-PZ-11	5/12/2021 9:33	Temperature	22.39	C
BY-GSA-PZ-11	5/12/2021 9:33	Turbidity	9.38	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-8	5/12/2021 12:42	Conductivity	42.06	uS/cm
BY-GSA-MW-8	5/12/2021 12:42	DO	0.74	mg/L
BY-GSA-MW-8	5/12/2021 12:42	Depth to Water Detail	27.52	ft
BY-GSA-MW-8	5/12/2021 12:42	Oxidation Reduction Potention	239.88	mv
BY-GSA-MW-8	5/12/2021 12:42	pH	4.67	SU
BY-GSA-MW-8	5/12/2021 12:42	Temperature	21.45	C
BY-GSA-MW-8	5/12/2021 12:42	Turbidity	3.13	NTU
BY-GSA-MW-8	5/12/2021 12:47	Conductivity	41.93	uS/cm
BY-GSA-MW-8	5/12/2021 12:47	DO	0.69	mg/L
BY-GSA-MW-8	5/12/2021 12:47	Depth to Water Detail	27.52	ft
BY-GSA-MW-8	5/12/2021 12:47	Oxidation Reduction Potention	235.63	mv
BY-GSA-MW-8	5/12/2021 12:47	pH	4.84	SU
BY-GSA-MW-8	5/12/2021 12:47	Temperature	21.45	C
BY-GSA-MW-8	5/12/2021 12:47	Turbidity	2.55	NTU
BY-GSA-MW-8	5/12/2021 12:52	Conductivity	41.85	uS/cm
BY-GSA-MW-8	5/12/2021 12:52	DO	0.66	mg/L
BY-GSA-MW-8	5/12/2021 12:52	Depth to Water Detail	27.52	ft
BY-GSA-MW-8	5/12/2021 12:52	Oxidation Reduction Potention	244.77	mv
BY-GSA-MW-8	5/12/2021 12:52	pH	4.77	SU
BY-GSA-MW-8	5/12/2021 12:52	Temperature	21.4	C
BY-GSA-MW-8	5/12/2021 12:52	Turbidity	2.52	NTU
BY-GSA-MW-8	5/12/2021 12:57	Conductivity	41.93	uS/cm
BY-GSA-MW-8	5/12/2021 12:57	DO	0.66	mg/L
BY-GSA-MW-8	5/12/2021 12:57	Depth to Water Detail	27.52	ft
BY-GSA-MW-8	5/12/2021 12:57	Oxidation Reduction Potention	246.43	mv
BY-GSA-MW-8	5/12/2021 12:57	pH	4.83	SU
BY-GSA-MW-8	5/12/2021 12:57	Temperature	21.32	C
BY-GSA-MW-8	5/12/2021 12:57	Turbidity	1.62	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>READING TIME</b>	<b>DESCRIPTION</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-9	5/12/2021 11:33	Conductivity	78.08	uS/cm
BY-GSA-MW-9	5/12/2021 11:33	DO	1.12	mg/L
BY-GSA-MW-9	5/12/2021 11:33	Depth to Water Detail	6.53	ft
BY-GSA-MW-9	5/12/2021 11:33	Oxidation Reduction Potention	237.1	mv
BY-GSA-MW-9	5/12/2021 11:33	pH	4.17	SU
BY-GSA-MW-9	5/12/2021 11:33	Temperature	21.02	C
BY-GSA-MW-9	5/12/2021 11:33	Turbidity	5.07	NTU
BY-GSA-MW-9	5/12/2021 11:38	Conductivity	77.69	uS/cm
BY-GSA-MW-9	5/12/2021 11:38	DO	1.22	mg/L
BY-GSA-MW-9	5/12/2021 11:38	Depth to Water Detail	6.53	ft
BY-GSA-MW-9	5/12/2021 11:38	Oxidation Reduction Potention	239.11	mv
BY-GSA-MW-9	5/12/2021 11:38	pH	4.24	SU
BY-GSA-MW-9	5/12/2021 11:38	Temperature	21.1	C
BY-GSA-MW-9	5/12/2021 11:38	Turbidity	3.74	NTU
BY-GSA-MW-9	5/12/2021 11:43	Conductivity	77.26	uS/cm
BY-GSA-MW-9	5/12/2021 11:43	DO	1.26	mg/L
BY-GSA-MW-9	5/12/2021 11:43	Depth to Water Detail	6.53	ft
BY-GSA-MW-9	5/12/2021 11:43	Oxidation Reduction Potention	239.47	mv
BY-GSA-MW-9	5/12/2021 11:43	pH	4.33	SU
BY-GSA-MW-9	5/12/2021 11:43	Temperature	21.12	C
BY-GSA-MW-9	5/12/2021 11:43	Turbidity	2.96	NTU
BY-GSA-MW-9	5/12/2021 11:48	Conductivity	77.02	uS/cm
BY-GSA-MW-9	5/12/2021 11:48	DO	1.33	mg/L
BY-GSA-MW-9	5/12/2021 11:48	Depth to Water Detail	6.53	ft
BY-GSA-MW-9	5/12/2021 11:48	Oxidation Reduction Potention	238.61	mv
BY-GSA-MW-9	5/12/2021 11:48	pH	4.43	SU
BY-GSA-MW-9	5/12/2021 11:48	Temperature	21.09	C
BY-GSA-MW-9	5/12/2021 11:48	Turbidity	1.88	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-10	5/12/2021 10:25	Conductivity	56.64	uS/cm
BY-GSA-MW-10	5/12/2021 10:25	DO	4.41	mg/L
BY-GSA-MW-10	5/12/2021 10:25	Depth to Water Detail	10.72	ft
BY-GSA-MW-10	5/12/2021 10:25	Oxidation Reduction Potention	191.04	mv
BY-GSA-MW-10	5/12/2021 10:25	pH	4.03	SU
BY-GSA-MW-10	5/12/2021 10:25	Temperature	20.32	C
BY-GSA-MW-10	5/12/2021 10:25	Turbidity	11.7	NTU
BY-GSA-MW-10	5/12/2021 10:30	Conductivity	55.62	uS/cm
BY-GSA-MW-10	5/12/2021 10:30	DO	4.45	mg/L
BY-GSA-MW-10	5/12/2021 10:30	Depth to Water Detail	10.73	ft
BY-GSA-MW-10	5/12/2021 10:30	Oxidation Reduction Potention	187.96	mv
BY-GSA-MW-10	5/12/2021 10:30	pH	4.22	SU
BY-GSA-MW-10	5/12/2021 10:30	Temperature	20.3	C
BY-GSA-MW-10	5/12/2021 10:30	Turbidity	11.26	NTU
BY-GSA-MW-10	5/12/2021 10:35	Conductivity	55.47	uS/cm
BY-GSA-MW-10	5/12/2021 10:35	DO	4.45	mg/L
BY-GSA-MW-10	5/12/2021 10:35	Depth to Water Detail	10.73	ft
BY-GSA-MW-10	5/12/2021 10:35	Oxidation Reduction Potention	185.88	mv
BY-GSA-MW-10	5/12/2021 10:35	pH	4.36	SU
BY-GSA-MW-10	5/12/2021 10:35	Temperature	20.29	C
BY-GSA-MW-10	5/12/2021 10:35	Turbidity	8.59	NTU
BY-GSA-MW-10	5/12/2021 10:40	Conductivity	55.39	uS/cm
BY-GSA-MW-10	5/12/2021 10:40	DO	4.45	mg/L
BY-GSA-MW-10	5/12/2021 10:40	Depth to Water Detail	10.73	ft
BY-GSA-MW-10	5/12/2021 10:40	Oxidation Reduction Potention	185.74	mv
BY-GSA-MW-10	5/12/2021 10:40	pH	4.45	SU
BY-GSA-MW-10	5/12/2021 10:40	Temperature	20.29	C
BY-GSA-MW-10	5/12/2021 10:40	Turbidity	8.45	NTU
BY-GSA-MW-10	5/12/2021 10:45	Conductivity	55.35	uS/cm
BY-GSA-MW-10	5/12/2021 10:45	DO	4.43	mg/L
BY-GSA-MW-10	5/12/2021 10:45	Depth to Water Detail	10.73	ft
BY-GSA-MW-10	5/12/2021 10:45	Oxidation Reduction Potention	193.74	mv
BY-GSA-MW-10	5/12/2021 10:45	pH	4.4	SU
BY-GSA-MW-10	5/12/2021 10:45	Temperature	20.26	C
BY-GSA-MW-10	5/12/2021 10:45	Turbidity	5.69	NTU



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

# *Analytical Report*



**Sample Group :** WMWBARG\_1344

**Project/Site :** Barry Gypsum  
Bucks, AL 36512

**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

December 01, 2021

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 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: 2021.12.01 15:36:17 -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: 2021.12.02 11:25:37 -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

Barry Gypsum

WMWBARG\_1344

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>
BB19322	711023	WMWBARG_1344
BB19323	711023	WMWBARG_1344
BB19324	711023	WMWBARG_1344
BB19325	711023	WMWBARG_1344
BB19326	711023	WMWBARG_1344
BB19327	711023	WMWBARG_1344
BB19328	711023	WMWBARG_1344
BB19329	711023	WMWBARG_1344
BB19330	711023	WMWBARG_1344
BB19344	711023	WMWBARG_1344

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

Dissolved Metals ICP

Barry Gypsum

WMWBARG\_1344

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>
BB19322	710940	WMWBARG_1344
BB19323	710940	WMWBARG_1344
BB19324	710940	WMWBARG_1344
BB19325	710940	WMWBARG_1344
BB19326	710940	WMWBARG_1344
BB19327	710940	WMWBARG_1344
BB19329	710940	WMWBARG_1344
BB19344	710940	WMWBARG_1344

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

Total Metals ICPMS

Barry Gypsum

WMWBARG\_1344

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>
BB19322	711395	WMWBARG_1344
BB19323	711395	WMWBARG_1344
BB19324	711395	WMWBARG_1344
BB19325	711395	WMWBARG_1344
BB19326	711395	WMWBARG_1344
BB19327	711395	WMWBARG_1344
BB19328	711395	WMWBARG_1344
BB19329	711395	WMWBARG_1344
BB19330	711395	WMWBARG_1344
BB19344	711395	WMWBARG_1344

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

## Dissolved Metals ICPMS

Barry Gypsum

WMWBARG\_1344

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>
BB19322	711376	WMWBARG_1344
BB19323	711376	WMWBARG_1344
BB19324	711376	WMWBARG_1344
BB19325	711376	WMWBARG_1344
BB19326	711376	WMWBARG_1344
BB19327	711376	WMWBARG_1344
BB19329	711376	WMWBARG_1344
BB19344	711376	WMWBARG_1344

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

Mercury

Barry Gypsum

WMWBARG\_1344

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>
BB19322	711410	WMWBARG_1344
BB19323	711410	WMWBARG_1344
BB19324	711410	WMWBARG_1344
BB19325	711410	WMWBARG_1344
BB19326	711410	WMWBARG_1344
BB19327	711410	WMWBARG_1344
BB19328	711410	WMWBARG_1344
BB19329	711410	WMWBARG_1344
BB19330	711410	WMWBARG_1344
BB19344	711410	WMWBARG_1344

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

TDS

Barry Gypsum

WMWBARG\_1344

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>
BB19322	710963	WMWBARG_1344
BB19323	710963	WMWBARG_1344
BB19324	710963	WMWBARG_1344
BB19325	710963	WMWBARG_1344
BB19326	710963	WMWBARG_1344
BB19327	710963	WMWBARG_1344
BB19328	710963	WMWBARG_1344
BB19329	710963	WMWBARG_1344
BB19330	710963	WMWBARG_1344
BB19344	710963	WMWBARG_1344

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

#### General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch. 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:
  - BB19328
  - BB19330

Anions

Barry Gypsum

WMWBARG\_1344

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>
BB19322	711053, 711055, & 711500	WMWBARG_1344
BB19323	711053, 711055, & 711500	WMWBARG_1344
BB19324	711053, 711055, & 711500	WMWBARG_1344
BB19325	711053, 711055, & 711500	WMWBARG_1344
BB19326	711053, 711055, & 711500	WMWBARG_1344
BB19327	711053, 711055, & 711500	WMWBARG_1344
BB19328	711053, 711055, & 711500	WMWBARG_1344
BB19329	711053, 711055, & 711500	WMWBARG_1344
BB19330	711053, 711055, & 711500	WMWBARG_1344
BB19344	711053, 711055, & 711500	WMWBARG_1344

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F G, & 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.

7. All samples were analyzed without dilution.

Alkalinity

Barry Gypsum

WMWBARG\_1344

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>
BB19322	711620 & 711621	WMWBARG_1344
BB19323	711620 & 711621	WMWBARG_1344
BB19324	711620 & 711621	WMWBARG_1344
BB19325	711620 & 711621	WMWBARG_1344
BB19326	711620 & 711621	WMWBARG_1344
BB19327	711620 & 711621	WMWBARG_1344
BB19329	711620 & 711621	WMWBARG_1344
BB19344	711620 & 711621	WMWBARG_1344

4. All of the above samples were prepared and analyzed by Standard Method 2320B.
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:** Barry Gypsum - MW-7

**Location Code:** WMWBARG  
**Collected:** 10/18/21 14:55  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19322

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 12:03		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/21/21 12:00	10/22/21 12:03		1.015	1.53	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:03		1.015	0.0625	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 12:03		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:03		1.015	1.65	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:03		1.015	7.94	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 11:46		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	10/20/21 14:31	10/22/21 13:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:11		1.015	0.000233	mg/L	0.000068	0.000203	
* Barium, Total	10/20/21 14:31	10/22/21 13:11		1.015	0.0859	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/20/21 14:31	10/22/21 13:11		1.015	0.00131	mg/L	0.000203	0.001015	
* Cobalt, Total	10/20/21 14:31	10/22/21 13:11		1.015	0.00164	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:11		1.015	0.0000762	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/20/21 14:31	10/22/21 13:11		1.015	1.08	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:11		1.015	0.0173	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/20/21 14:31	10/22/21 13:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/20/21 16:19		1.015	0.0185	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 20:34		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	10/26/21 10:55	10/26/21 11:33		1	2.32	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	42.7	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:** Barry Gypsum - MW-7

**Location Code:** WMWBARG  
**Collected:** 10/18/21 14:55  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19322

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.)	10/26/21 10:55	10/26/21 11:33		1	2.32	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 09:52	10/21/21 09:52		1	16.8	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:33	10/21/21 11:33		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:31	10/26/21 13:31		1	2.54	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/18/21 14:54	10/18/21 14:54			71.50	uS/cm			FA
pH	10/18/21 14:54	10/18/21 14:54			5.05	SU			FA
Temperature	10/18/21 14:54	10/18/21 14:54			21.48	C			FA
Turbidity	10/18/21 14:54	10/18/21 14:54			2.67	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:** WMWBARG  
**Sample Date:** 10/18/21 14:55  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-7

**Laboratory ID Number:** BB19322

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	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:** WMWBARG  
**Sample Date:** 10/18/21 14:55  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-7

**Laboratory ID Number:** BB19322

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	10.0
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	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:** Barry Gypsum - MW-7 DUP

**Location Code:** WMWBARG  
**Collected:** 10/18/21 14:55  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19323

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 12:06		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/21/21 12:00	10/22/21 12:06		1.015	1.56	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:06		1.015	0.0720	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 12:06		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:06		1.015	1.67	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:06		1.015	8.07	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 11:49		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	10/20/21 14:31	10/22/21 13:14		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:14		1.015	0.000308	mg/L	0.000068	0.000203	
* Barium, Total	10/20/21 14:31	10/22/21 13:14		1.015	0.0871	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:14		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/20/21 14:31	10/22/21 13:14		1.015	0.00134	mg/L	0.000203	0.001015	
* Cobalt, Total	10/20/21 14:31	10/22/21 13:14		1.015	0.00167	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:14		1.015	0.0000743	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/20/21 14:31	10/22/21 13:14		1.015	1.08	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:14		1.015	0.0175	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:14		1.015	0.000572	mg/L	0.000508	0.001015	J
* Thallium, Total	10/20/21 14:31	10/22/21 13:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/20/21 16:22		1.015	0.0190	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 20:37		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	10/26/21 10:55	10/26/21 11:33		1	1.60	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	42.7	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:** Barry Gypsum - MW-7 DUP

**Location Code:** WMWBARG  
**Collected:** 10/18/21 14:55  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19323

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.)	10/26/21 10:55	10/26/21 11:33		1	1.60	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 09:53	10/21/21 09:53		1	16.7	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:34	10/21/21 11:34		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:33	10/26/21 13:33		1	2.50	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/18/21 14:54	10/18/21 14:54			71.50	uS/cm			FA
pH	10/18/21 14:54	10/18/21 14:54			5.05	SU			FA
Temperature	10/18/21 14:54	10/18/21 14:54			21.48	C			FA
Turbidity	10/18/21 14:54	10/18/21 14:54			2.67	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:** WMWBARG  
**Sample Date:** 10/18/21 14:55  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-7 DUP

**Laboratory ID Number:** BB19323

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	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:** WMWBARG  
**Sample Date:** 10/18/21 14:55  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-7 DUP

**Laboratory ID Number:** BB19323

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	10.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	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:** Barry Gypsum - MW-6

**Location Code:** WMWBARG  
**Collected:** 10/18/21 15:50  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19324

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 12:09		1.015	0.987	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 12:09		1.015	9.06	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:09		1.015	0.0882	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 12:09		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:09		1.015	4.26	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:09		1.015	4.46	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 11:53		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	10/20/21 14:31	10/22/21 13:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.000317	mg/L	0.000068	0.000203	
* Barium, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.146	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.000111	mg/L	0.000068	0.000203	J
* Chromium, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.00335	mg/L	0.000203	0.001015	
* Cobalt, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.00552	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.000112	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/20/21 14:31	10/22/21 13:18		1.015	2.09	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.0596	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:18		1.015	0.00672	mg/L	0.000508	0.001015	
* Thallium, Total	10/20/21 14:31	10/22/21 13:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/20/21 16:26		1.015	0.0505	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 20:41		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	10/26/21 10:55	10/26/21 11:33		1	3.36	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	77.3	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:** Barry Gypsum - MW-6

**Location Code:** WMWBARG  
**Collected:** 10/18/21 15:50  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19324

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.)	10/26/21 10:55	10/26/21 11:33		1	3.36	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 09:55	10/21/21 09:55		1	10.0	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:36	10/21/21 11:36		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:34	10/26/21 13:34		1	24.7	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/18/21 15:48	10/18/21 15:48			120.21	uS/cm			FA
pH	10/18/21 15:48	10/18/21 15:48			5.28	SU			FA
Temperature	10/18/21 15:48	10/18/21 15:48			22.81	C			FA
Turbidity	10/18/21 15:48	10/18/21 15:48			2.64	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:** WMWBARG  
**Sample Date:** 10/18/21 15:50  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-6

**Laboratory ID Number:** BB19324

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	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:** WMWBARG  
**Sample Date:** 10/18/21 15:50  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-6

**Laboratory ID Number:** BB19324

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	10.0
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	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:** Barry Gypsum - MW-9

**Location Code:** WMWBARG  
**Collected:** 10/19/21 08:35  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19325

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 12:13		1.015	0.0966	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 12:13		1.015	1.75	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:13		1.015	0.0321	mg/L	0.008120	0.0406	J
* Lithium, Total	10/21/21 12:00	10/22/21 12:13		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:13		1.015	3.02	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:13		1.015	2.96	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 11:56		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	10/20/21 14:31	10/22/21 13:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	10/20/21 14:31	10/22/21 13:22		1.015	0.151	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/20/21 14:31	10/22/21 13:22		1.015	0.000812	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/20/21 14:31	10/22/21 13:22		1.015	0.00156	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:22		1.015	0.000253	mg/L	0.000068	0.000203	
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/20/21 14:31	10/22/21 13:22		1.015	1.07	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:22		1.015	0.0445	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:22		1.015	0.00118	mg/L	0.000508	0.001015	
* Thallium, Total	10/20/21 14:31	10/22/21 13:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/20/21 16:29		1.015	0.0458	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 20:45		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	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L		0.1	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	48.0	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:** Barry Gypsum - MW-9

**Location Code:** WMWBARG  
**Collected:** 10/19/21 08:35  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19325

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.)	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 09:56	10/21/21 09:56		1	6.33	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:37	10/21/21 11:37		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:35	10/26/21 13:35		1	12.6	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/19/21 08:32	10/19/21 08:32			71.42	uS/cm			FA
pH	10/19/21 08:32	10/19/21 08:32			4.34	SU			FA
Temperature	10/19/21 08:32	10/19/21 08:32			21.53	C			FA
Turbidity	10/19/21 08:32	10/19/21 08:32			2.03	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:** WMWBARG  
**Sample Date:** 10/19/21 08:35  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-9

**Laboratory ID Number:** BB19325

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	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:** WMWBARG  
**Sample Date:** 10/19/21 08:35  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-9

**Laboratory ID Number:** BB19325

Sample	Analysis	Units	MB	MB			Sample		Standard		Rec			Prec Limit
				Limit	Spike	MS	Duplicate	Standard	Limit	Rec	Limit	Prec		
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0	
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0	
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0	
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	10.0	
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	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:** Barry Gypsum - MW-10

**Location Code:** WMWBARG  
**Collected:** 10/19/21 09:22  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19326

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 12:16		1.015	0.0444	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 12:16		1.015	0.977	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:16		1.015	0.0877	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 12:16		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:16		1.015	2.44	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:16		1.015	2.64	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 11:59		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	10/20/21 14:31	10/22/21 13:25		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.000128	mg/L	0.000068	0.000203	J
* Barium, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.115	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:25		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.000793	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.00238	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.0000996	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.795	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.0338	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:25		1.015	0.000832	mg/L	0.000508	0.001015	J
* Thallium, Total	10/20/21 14:31	10/22/21 13:25		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/20/21 16:33		1.015	0.0356	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 20:49		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	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L		0.1	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	39.3	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:** Barry Gypsum - MW-10

**Location Code:** WMWBARG  
**Collected:** 10/19/21 09:22  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19326

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.)	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 09:57	10/21/21 09:57		1	3.79	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:38	10/21/21 11:38		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:36	10/26/21 13:36		1	10.1	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/19/21 09:19	10/19/21 09:19			55.57	uS/cm			FA
pH	10/19/21 09:19	10/19/21 09:19			4.48	SU			FA
Temperature	10/19/21 09:19	10/19/21 09:19			21.07	C			FA
Turbidity	10/19/21 09:19	10/19/21 09:19			3.53	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:** WMWBARG  
**Sample Date:** 10/19/21 09:22  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-10

**Laboratory ID Number:** BB19326

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	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:** WMWBARG  
**Sample Date:** 10/19/21 09:22  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-10

**Laboratory ID Number:** BB19326

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	10.0
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	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:** Barry Gypsum - PZ-11

**Location Code:** WMWBARG  
**Collected:** 10/19/21 10:14  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19327

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 12:20		1.015	0.0551	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 12:20		1.015	0.941	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:20		1.015	0.144	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 12:20		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:20		1.015	1.09	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:20		1.015	3.15	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 12:03		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	10/20/21 14:31	10/22/21 13:29		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:29		1.015	0.000126	mg/L	0.000068	0.000203	J
* Barium, Total	10/20/21 14:31	10/22/21 13:29		1.015	0.0599	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:29		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/20/21 14:31	10/22/21 13:29		1.015	0.00336	mg/L	0.000203	0.001015	
* Cobalt, Total	10/20/21 14:31	10/22/21 13:29		1.015	0.00117	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:29		1.015	0.000138	mg/L	0.000068	0.000203	J
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/20/21 14:31	10/22/21 13:29		1.015	1.17	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:29		1.015	0.0102	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:29		1.015	0.00114	mg/L	0.000508	0.001015	
* Thallium, Total	10/20/21 14:31	10/22/21 13:29		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/20/21 16:37		1.015	0.0104	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 20:53		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	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L		0.1	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	37.3	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:** Barry Gypsum - PZ-11

**Location Code:** WMWBARG  
**Collected:** 10/19/21 10:14  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19327

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.)	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	Not Detected	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 09:58	10/21/21 09:58		1	5.02	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:39	10/21/21 11:39		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:37	10/26/21 13:37		1	4.92	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/19/21 10:11	10/19/21 10:11			40.75	uS/cm			FA
pH	10/19/21 10:11	10/19/21 10:11			4.80	SU			FA
Temperature	10/19/21 10:11	10/19/21 10:11			21.89	C			FA
Turbidity	10/19/21 10:11	10/19/21 10:11			7.4	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:** WMWBARG  
**Sample Date:** 10/19/21 10:14  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - PZ-11

**Laboratory ID Number:** BB19327

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	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:** WMWBARG  
**Sample Date:** 10/19/21 10:14  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - PZ-11

**Laboratory ID Number:** BB19327

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	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:** Barry Gypsum Field Blank-1

**Location Code:** WMWBARGFB  
**Collected:** 10/19/21 10:55  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19328

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 12:23		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/21/21 12:00	10/22/21 12:23		1.015	Not Detected	mg/L	0.070035	0.406	U
* Iron, Total	10/21/21 12:00	10/22/21 12:23		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	10/21/21 12:00	10/22/21 12:23		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:23		1.015	Not Detected	mg/L	0.021315	0.406	U
* Sodium, Total	10/21/21 12:00	10/22/21 12:23		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	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Barium, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Beryllium, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/20/21 14:31	10/22/21 13:32		1.015	0.000387	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Potassium, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.169505	0.5075	U
* Selenium, Total	10/20/21 14:31	10/22/21 13:32		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/20/21 14:31	10/22/21 13:32		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	10/26/21 16:36	10/26/21 20:57		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	Not Detected	mg/L		25	U
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 09:59	10/21/21 09:59		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:40	10/21/21 11:40		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:39	10/26/21 13:39		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:** WMWBARGFB  
**Sample Date:** 10/19/21 10:55  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum Field Blank-1

**Laboratory ID Number:** BB19328

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWBARGFB

**Sample Date:** 10/19/21 10:55

**Customer ID:**

**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum Field Blank-1

**Laboratory ID Number:** BB19328

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0

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**Comments:**

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-5

**Location Code:** WMWBARG  
**Collected:** 10/19/21 11:20  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19329

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 12:26		1.015	0.243	mg/L	0.030000	0.1015	
* Calcium, Total	10/21/21 12:00	10/22/21 12:26		1.015	2.75	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:26		1.015	0.164	mg/L	0.008120	0.0406	
* Lithium, Total	10/21/21 12:00	10/22/21 12:26		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:26		1.015	2.49	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:26		1.015	3.14	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 12:06		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	10/20/21 14:31	10/22/21 13:36		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.000199	mg/L	0.000068	0.000203	J
* Barium, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.0998	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:36		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.000137	mg/L	0.000068	0.000203	J
* Chromium, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.00268	mg/L	0.000203	0.001015	
* Cobalt, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.00217	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.000260	mg/L	0.000068	0.000203	
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.000105	mg/L	0.000068	0.000203	J
* Potassium, Total	10/20/21 14:31	10/22/21 13:36		1.015	1.11	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.0221	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:36		1.015	0.00290	mg/L	0.000508	0.001015	
* Thallium, Total	10/20/21 14:31	10/22/21 13:36		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/20/21 16:40		1.015	0.0192	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 21:01		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	10/26/21 10:55	10/26/21 11:33		1	1.56	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	48.7	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:** Barry Gypsum - MW-5

**Location Code:** WMWBARG  
**Collected:** 10/19/21 11:20  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19329

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.)	10/26/21 10:55	10/26/21 11:33		1	1.56	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	0.00	mg/L			
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 10:01	10/21/21 10:01		1	4.81	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:42	10/21/21 11:42		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:40	10/26/21 13:40		1	12.3	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/19/21 11:17	10/19/21 11:17			63.85	uS/cm			FA
pH	10/19/21 11:17	10/19/21 11:17			4.79	SU			FA
Temperature	10/19/21 11:17	10/19/21 11:17			22.67	C			FA
Turbidity	10/19/21 11:17	10/19/21 11:17			9.96	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:** WMWBARG  
**Sample Date:** 10/19/21 11:20  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-5

**Laboratory ID Number:** BB19329

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	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:** WMWBARG  
**Sample Date:** 10/19/21 11:20  
**Customer ID:**  
**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum - MW-5

**Laboratory ID Number:** BB19329

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	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:** Barry Gypsum Equipment Blank-1

**Location Code:** WMWBARGEB  
**Collected:** 10/19/21 11:48  
**Customer ID:**  
**Submittal Date:** 10/20/21 10:38

**Laboratory ID Number:** BB19330

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 12:30		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/21/21 12:00	10/22/21 12:30		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	10/21/21 12:00	10/22/21 12:30		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/21/21 12:00	10/22/21 12:30		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/21/21 12:00	10/22/21 12:30		1.015	Not Detected	mg/L	0.021315	0.406	U	
* Sodium, Total	10/21/21 12:00	10/22/21 12:30		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	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Arsenic, Total	10/20/21 14:31	10/22/21 13:39		1.015	0.0000938	mg/L	0.000068	0.000203	J	
* Barium, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/20/21 14:31	10/22/21 13:39		1.015	0.000243	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Potassium, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	10/20/21 14:31	10/22/21 13:39		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/20/21 14:31	10/22/21 13:39		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	10/26/21 16:36	10/26/21 21:05		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	Not Detected	mg/L		25	U	
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>								
* Chloride	10/21/21 10:02	10/21/21 10:02		1	Not Detected	mg/L	0.50	1	U	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>								
* Fluoride	10/21/21 11:43	10/21/21 11:43		1	Not Detected	mg/L	0.06	0.1	U	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>								
* Sulfate	10/26/21 13:41	10/26/21 13:41		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:** WMWBARGE8

**Sample Date:** 10/19/21 11:48

**Customer ID:**

**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum Equipment Blank-1

**Laboratory ID Number:** BB19330

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWBARGE8

**Sample Date:** 10/19/21 11:48

**Customer ID:**

**Delivery Date:** 10/20/21 10:38

**Description:** Barry Gypsum Equipment Blank-1

**Laboratory ID Number:** BB19330

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0

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**Comments:**

# Certificate Of Analysis

**Description:** Barry Gypsum - MW-8

**Location Code:** WMWBARG  
**Collected:** 10/19/21 11:20  
**Customer ID:**  
**Submittal Date:** 10/20/21 12:17

**Laboratory ID Number:** BB19344

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 12:33		1.015	0.0303	mg/L	0.030000	0.1015	J
* Calcium, Total	10/21/21 12:00	10/22/21 12:33		1.015	1.01	mg/L	0.070035	0.406	
* Iron, Total	10/21/21 12:00	10/22/21 12:33		1.015	0.0133	mg/L	0.008120	0.0406	J
* Lithium, Total	10/21/21 12:00	10/22/21 12:33		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/21/21 12:00	10/22/21 12:33		1.015	1.17	mg/L	0.021315	0.406	
* Sodium, Total	10/21/21 12:00	10/22/21 12:33		1.015	4.50	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 12:10		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	10/20/21 14:31	10/22/21 13:43		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Arsenic, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.000164	mg/L	0.000068	0.000203	J
* Barium, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.0452	mg/L	0.000102	0.000203	
* Beryllium, Total	10/20/21 14:31	10/22/21 13:43		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/20/21 14:31	10/22/21 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.00246	mg/L	0.000203	0.001015	
* Cobalt, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.000495	mg/L	0.000068	0.000203	
* Lead, Total	10/20/21 14:31	10/22/21 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Molybdenum, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.0000796	mg/L	0.000068	0.000203	J
* Potassium, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.849	mg/L	0.169505	0.5075	
* Manganese, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.0160	mg/L	0.000068	0.000203	
* Selenium, Total	10/20/21 14:31	10/22/21 13:43		1.015	0.000523	mg/L	0.000508	0.001015	J
* Thallium, Total	10/20/21 14:31	10/22/21 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Manganese, Dissolved	10/20/21 13:50	10/22/21 12:49		1.015	0.0141	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	10/26/21 16:36	10/26/21 21:09		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	10/26/21 10:55	10/26/21 11:33		1	5.16	mg/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/20/21 14:37	10/25/21 12:31		1	33.3	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:** Barry Gypsum - MW-8

**Location Code:** WMWBARG  
**Collected:** 10/19/21 11:20  
**Customer ID:**  
**Submittal Date:** 10/20/21 12:17

**Laboratory ID Number:** BB19344

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.)	10/26/21 10:55	10/26/21 11:33		1	5.16	mg/L			
Carbonate Alkalinity, (calc.)	10/26/21 10:55	10/26/21 11:33		1	0.00	mg/L			
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/21/21 10:03	10/21/21 10:03		1	5.34	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/21/21 11:44	10/21/21 11:44		1	Not Detected	mg/L	0.06	0.1	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	10/26/21 13:42	10/26/21 13:42		1	4.20	mg/L	0.50	1	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/19/21 11:18	10/19/21 11:18			50.91	uS/cm			FA
pH	10/19/21 11:18	10/19/21 11:18			4.77	SU			FA
Temperature	10/19/21 11:18	10/19/21 11:18			21.38	C			FA
Turbidity	10/19/21 11:18	10/19/21 11:18			0.89	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:** WMWBARG  
**Sample Date:** 10/19/21 11:20  
**Customer ID:**  
**Delivery Date:** 10/20/21 12:17

**Description:** Barry Gypsum - MW-8

**Laboratory ID Number:** BB19344

Sample	Analysis	Units	MB				Standard		Rec		Prec	Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec			Limit
BB19344	Antimony, Total	mg/L	0.0000836	0.00100	0.100	0.0944	0.0956	0.0938	0.0850 to 0.115	94.4	70.0 to 130	1.26	20.0
BB19344	Sodium, Total	mg/L	0.000254	0.0660	5.00	9.70	9.75	5.08	4.25 to 5.75	104	70.0 to 130	0.514	20.0
BB19344	Barium, Total	mg/L	-0.0000332	0.000200	0.100	0.139	0.141	0.0961	0.0850 to 0.115	93.8	70.0 to 130	1.43	20.0
BB19344	Beryllium, Total	mg/L	0.0000044	0.000880	0.100	0.0946	0.0921	0.0915	0.0850 to 0.115	94.6	70.0 to 130	2.68	20.0
BB19344	Lithium, Total	mg/L	-3.240E-05	0.0154	0.200	0.204	0.204	0.201	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Arsenic, Total	mg/L	0.0000369	0.000147	0.100	0.0974	0.0997	0.0994	0.0850 to 0.115	97.2	70.0 to 130	2.33	20.0
BB19344	Iron, Dissolved	mg/L	-2.780E-05	0.0176	0.2	0.204	0.204	0.205	0.170 to 0.230	102	70.0 to 130	0.00	20.0
BB19344	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00414	0.00402	0.00403	0.00340 to 0.00460	104	70.0 to 130	2.94	20.0
BB19344	Magnesium, Total	mg/L	0.000272	0.0462	5.00	6.35	6.39	5.22	4.25 to 5.75	104	70.0 to 130	0.628	20.0
BB19344	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0988	0.0960	0.0970	0.0850 to 0.115	98.8	70.0 to 130	2.87	20.0
BB19344	Selenium, Total	mg/L	-0.0000204	0.00100	0.100	0.0995	0.101	0.0998	0.0850 to 0.115	99.0	70.0 to 130	1.50	20.0
BB19344	Thallium, Total	mg/L	0.0000055	0.000147	0.100	0.0938	0.0959	0.0931	0.0850 to 0.115	93.8	70.0 to 130	2.21	20.0
BB19344	Potassium, Total	mg/L	-0.0312	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	97.5	70.0 to 130	1.87	20.0
BB19344	Manganese, Total	mg/L	0.0000028	0.000147	0.100	0.113	0.116	0.101	0.0850 to 0.115	97.0	70.0 to 130	2.62	20.0
BB19344	Calcium, Total	mg/L	0.00139	0.152	5.00	6.12	6.17	5.13	4.25 to 5.75	102	70.0 to 130	0.814	20.0
BB19344	Molybdenum, Total	mg/L	0.0000437	0.000147	0.100	0.0982	0.0949	0.0972	0.0850 to 0.115	98.1	70.0 to 130	3.42	20.0
BB19344	Iron, Total	mg/L	0.000116	0.0176	0.2	0.219	0.223	0.205	0.170 to 0.230	103	70.0 to 130	1.81	20.0
BB19344	Chromium, Total	mg/L	0.0000224	0.000440	0.100	0.0999	0.102	0.100	0.0850 to 0.115	97.4	70.0 to 130	2.08	20.0
BB19344	Lead, Total	mg/L	-0.0000020	0.000147	0.100	0.101	0.102	0.0986	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BB19344	Manganese, Dissolved	mg/L	0.0000084	0.000147	0.100	0.121	0.121	0.0995	0.0850 to 0.115	107	70.0 to 130	0.00	20.0
BB19344	Boron, Total	mg/L	0.00153	0.0650	1.00	1.04	1.05	1.02	0.850 to 1.15	101	70.0 to 130	0.957	20.0
BB19344	Cobalt, Total	mg/L	-0.0000069	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	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:** WMWBARG  
**Sample Date:** 10/19/21 11:20  
**Customer ID:**  
**Delivery Date:** 10/20/21 12:17

**Description:** Barry Gypsum - MW-8

**Laboratory ID Number:** BB19344

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BB19344	Chloride	mg/L	0.030	1.00	10.0	15.1	5.49	10.0	9.00 to 11.0	97.6	80.0 to 120	2.77	20.0
BB19344	Fluoride	mg/L	0.0484	0.100	2.50	2.49	0.034	2.57	2.25 to 2.75	99.6	80.0 to 120	0.00	20.0
BB19344	Sulfate	mg/L	-0.276	1.00	20.0	24.7	4.18	20.2	18.0 to 22.0	102	80.0 to 120	0.477	20.0
BB19344	Alkalinity, Total as CaCO3	mg/L					5.00	49.7	45.0 to 55.0			3.15	10.0
BB19324	Solids, Dissolved	mg/L	1.00	25.0			76.7	49.0	40.0 to 60.0			0.390	10.0

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

# Definitions

**Project Number:** WMWBARG\_1344

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.
U	Compound was analyzed, but not detected.







# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer	
	Collector: Anthony Goggins		Requested By	Greg Dyer
			Location	Barry Gypsum

Bottles	1 Radium	1 L	3 N/A	N/A	5 N/A	N/A	7 N/A	N/A
	2 N/A	N/A	4 N/A	N/A	6 N/A	N/A	8 N/A	N/A

Comments: MS/MSD collected @ MW-6

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-7	10/18/2021	14:55	1	Groundwater		BB19331
MW-7 DUP	10/18/2021	14:55	1	Sample Duplicate		BB19332
MW-6	10/18/2021	15:50	3	Groundwater		BB19333
MW-9	10/19/2021	08:35	1	Groundwater		BB19334
MW-10	10/19/2021	09:22	1	Groundwater		BB19335
PZ-11	10/19/2021	10:14	1	Groundwater		BB19336
FB-1	10/19/2021	10:55	1	Field Blank		BB19337
MW-5	10/19/2021	11:20	1	Groundwater		BB19338
EB-1	10/19/2021	11:48	1	Equipment Blank		BB19339

Relinquished By	Received By	Date/Time
<i>Anthony Goggins</i>	<i>Kiana M. Grogan</i>	10/20/2021 09:53

SmarTroll ID	7586-41445-5-4
Turbidity ID	4677-23343-4-2
Sample Event	1344

All metals and radiological bottles have pH < 2

Cooler Temp	N/A
Thermometer ID	N/A
pH Strip ID	8440-53679-10-5

Bottles/Pre-Preserved Bottles are provided by the GTL



December 15, 2021

Laura Midkiff  
Alabama Power  
744 Highway 87  
GSC #8  
Calera, AL 35040

RE: Project: BARRY GYPSUM WMWBARG\_1344  
Pace Project No.: 92569370

Dear Laura Midkiff:

Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 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: BARRY GYPSUM WMWBARG\_1344  
Pace Project No.: 92569370

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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: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92569370001	BB19331 MW-7	Water	10/18/21 14:55	10/26/21 10:00
92569370002	BB19332 MW-7 DUP	Water	10/18/21 14:55	10/26/21 10:00
92569370003	BB19333 MW-6	Water	10/18/21 15:50	10/26/21 10:00
92569370004	BB19333 MW-6 MS	Water	10/18/21 15:50	10/26/21 10:00
92569370005	BB19333 MW-6 MSD	Water	10/18/21 15:50	10/26/21 10:00
92569370006	BB19334 MW-9	Water	10/19/21 08:35	10/26/21 10:00
92569370007	BB19335 MW-10	Water	10/19/21 09:22	10/26/21 10:00
92569370008	BB19336 PZ-11	Water	10/19/21 10:14	10/26/21 10:00
92569370009	BB19337 FB-1	Water	10/19/21 10:55	10/26/21 10:00
92569370010	BB19338 MW-5	Water	10/19/21 11:20	10/26/21 10:00
92569370011	BB19339 EB-1	Water	10/19/21 11:48	10/26/21 10:00
92569370012	BB19345 MW-8	Water	10/19/21 11:20	10/26/21 10:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BARRY GYPSUM WMWBARG\_1344  
Pace Project No.: 92569370

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92569370001	BB19331 MW-7	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370002	BB19332 MW-7 DUP	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370003	BB19333 MW-6	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370004	BB19333 MW-6 MS	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92569370005	BB19333 MW-6 MSD	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92569370006	BB19334 MW-9	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370007	BB19335 MW-10	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370008	BB19336 PZ-11	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370009	BB19337 FB-1	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370010	BB19338 MW-5	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370011	BB19339 EB-1	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92569370012	BB19345 MW-8	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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## PROJECT NARRATIVE

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

---

**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** December 15, 2021

**General Information:**

12 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: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

---

**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** December 15, 2021

**General Information:**

12 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: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

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**Method:** Total Radium Calculation

**Description:** Total Radium 228+226

**Client:** Alabama Power

**Date:** December 15, 2021

**General Information:**

10 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: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19331 MW-7**      **Lab ID: 92569370001**      Collected: 10/18/21 14:55      Received: 10/26/21 10:00      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>0.135U ± 0.198 (0.428)</b> <b>C:88% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.555U ± 0.368 (0.694)</b> <b>C:65% T:94%</b>	pCi/L	12/01/21 14:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.690U ± 0.566 (1.12)</b>	pCi/L	12/08/21 17:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19332 MW-7 DUP**      **Lab ID: 92569370002**      Collected: 10/18/21 14:55      Received: 10/26/21 10:00      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>0.491 ± 0.292 (0.436)</b> <b>C:91% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.201U ± 0.357 (0.761)</b> <b>C:68% T:91%</b>	pCi/L	12/01/21 14:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.692U ± 0.649 (1.20)</b>	pCi/L	12/08/21 17:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19333 MW-6**      **Lab ID: 92569370003**      Collected: 10/18/21 15:50      Received: 10/26/21 10:00      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>1.13 ± 0.443 (0.498)</b> <b>C:86% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.899 ± 0.421 (0.723)</b> <b>C:68% T:94%</b>	pCi/L	12/01/21 14:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>2.03 ± 0.864 (1.22)</b>	pCi/L	12/08/21 17:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19333 MW-6 MS**      **Lab ID: 92569370004**      Collected: 10/18/21 15:50      Received: 10/26/21 10:00      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>110.00 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>105.70 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/01/21 14:25	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19333 MW-6 MSD**      **Lab ID: 92569370005**      Collected: 10/18/21 15:50      Received: 10/26/21 10:00      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>104.21 %REC 5.41RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>107.66 %REC 1.84 RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	12/01/21 14:25	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19334 MW-9**      **Lab ID: 92569370006**      Collected: 10/19/21 08:35      Received: 10/26/21 10:00      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>1.00 ± 0.395 (0.427)</b> <b>C:87% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>2.15 ± 0.602 (0.722)</b> <b>C:62% T:94%</b>	pCi/L	12/01/21 14:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>3.15 ± 0.997 (1.15)</b>	pCi/L	12/08/21 17:15	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19335 MW-10**      **Lab ID: 92569370007**      Collected: 10/19/21 09:22      Received: 10/26/21 10:00      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>0.645 ± 0.360 (0.568)</b> <b>C:84% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.959 ± 0.428 (0.704)</b> <b>C:69% T:94%</b>	pCi/L	12/01/21 14:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.60 ± 0.788 (1.27)</b>	pCi/L	12/08/21 17:15	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19336 PZ-11**      **Lab ID: 92569370008**      Collected: 10/19/21 10:14      Received: 10/26/21 10:00      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>0.411U ± 0.275 (0.441)</b> <b>C:96% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.459U ± 0.388 (0.775)</b> <b>C:66% T:88%</b>	pCi/L	12/01/21 14:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.870U ± 0.663 (1.22)</b>	pCi/L	12/08/21 17:15	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19337 FB-1**      **Lab ID: 92569370009**      Collected: 10/19/21 10:55      Received: 10/26/21 10:00      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>0.115U ± 0.206 (0.467)</b> <b>C:91% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>-0.113U ± 0.325 (0.753)</b> <b>C:64% T:92%</b>	pCi/L	12/01/21 14:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.115U ± 0.531 (1.22)</b>	pCi/L	12/08/21 17:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19338 MW-5**      **Lab ID: 92569370010**      Collected: 10/19/21 11:20      Received: 10/26/21 10:00      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>0.284U ± 0.256 (0.482)</b> <b>C:93% T:NA</b>	pCi/L	12/08/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.435U ± 0.335 (0.658)</b> <b>C:68% T:100%</b>	pCi/L	12/01/21 14:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.719U ± 0.591 (1.14)</b>	pCi/L	12/08/21 17:15	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19339 EB-1**      **Lab ID: 92569370011**      Collected: 10/19/21 11:48      Received: 10/26/21 10:00      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>-0.0140U ± 0.231 (0.611)</b> <b>C:89% T:NA</b>	pCi/L	12/08/21 09:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.145U ± 0.294 (0.650)</b> <b>C:71% T:93%</b>	pCi/L	12/01/21 14:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.145U ± 0.525 (1.26)</b>	pCi/L	12/08/21 17:15	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

**Sample: BB19345 MW-8**      **Lab ID: 92569370012**      Collected: 10/19/21 11:20      Received: 10/26/21 10:00      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>0.605 ± 0.362 (0.601)</b> <b>C:91% T:NA</b>	pCi/L	12/08/21 09:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.936 ± 0.396 (0.616)</b> <b>C:73% T:88%</b>	pCi/L	12/01/21 14:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>1.54 ± 0.758 (1.22)</b>	pCi/L	12/08/21 17:15	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

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QC Batch:	472891	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92569370001, 92569370002, 92569370003, 92569370004, 92569370005, 92569370006, 92569370007, 92569370008, 92569370009, 92569370010, 92569370011, 92569370012

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METHOD BLANK: 2283246 Matrix: Water

Associated Lab Samples: 92569370001, 92569370002, 92569370003, 92569370004, 92569370005, 92569370006, 92569370007, 92569370008, 92569370009, 92569370010, 92569370011, 92569370012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.439 ± 0.302 (0.573) C:69% T:98%	pCi/L	12/01/21 14:25	

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

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## QUALIFIERS

Project: BARRY GYPSUM WMWBARG\_1344

Pace Project No.: 92569370

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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: BARRY GYPSUM WMWBARG\_1344  
Pace Project No.: 92569370

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92569370001	BB19331 MW-7	EPA 9315	472199		
92569370002	BB19332 MW-7 DUP	EPA 9315	472199		
92569370003	BB19333 MW-6	EPA 9315	472199		
92569370004	BB19333 MW-6 MS	EPA 9315	472199		
92569370005	BB19333 MW-6 MSD	EPA 9315	472199		
92569370006	BB19334 MW-9	EPA 9315	472199		
92569370007	BB19335 MW-10	EPA 9315	472199		
92569370008	BB19336 PZ-11	EPA 9315	472199		
92569370009	BB19337 FB-1	EPA 9315	472199		
92569370010	BB19338 MW-5	EPA 9315	472199		
92569370011	BB19339 EB-1	EPA 9315	472199		
92569370012	BB19345 MW-8	EPA 9315	472199		
92569370001	BB19331 MW-7	EPA 9320	472891		
92569370002	BB19332 MW-7 DUP	EPA 9320	472891		
92569370003	BB19333 MW-6	EPA 9320	472891		
92569370004	BB19333 MW-6 MS	EPA 9320	472891		
92569370005	BB19333 MW-6 MSD	EPA 9320	472891		
92569370006	BB19334 MW-9	EPA 9320	472891		
92569370007	BB19335 MW-10	EPA 9320	472891		
92569370008	BB19336 PZ-11	EPA 9320	472891		
92569370009	BB19337 FB-1	EPA 9320	472891		
92569370010	BB19338 MW-5	EPA 9320	472891		
92569370011	BB19339 EB-1	EPA 9320	472891		
92569370012	BB19345 MW-8	EPA 9320	472891		
92569370001	BB19331 MW-7	Total Radium Calculation	475518		
92569370002	BB19332 MW-7 DUP	Total Radium Calculation	475518		
92569370003	BB19333 MW-6	Total Radium Calculation	475518		
92569370006	BB19334 MW-9	Total Radium Calculation	475518		
92569370007	BB19335 MW-10	Total Radium Calculation	475518		
92569370008	BB19336 PZ-11	Total Radium Calculation	475518		
92569370009	BB19337 FB-1	Total Radium Calculation	475518		
92569370010	BB19338 MW-5	Total Radium Calculation	475518		
92569370011	BB19339 EB-1	Total Radium Calculation	475518		
92569370012	BB19345 MW-8	Total Radium Calculation	475518		

### REPORT OF LABORATORY ANALYSIS

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Pittsburgh Lab Sample Condition Upon Receipt



Client Name: Pace NC Proj

WO#: 92569370



Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other

Tracking #: 5320 6279 4916

Label RJm  
LIMS Login UPI

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Thermometer Used N/A Type of Ice: Wet Blue  None

Cooler Temperature Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C

Temp should be above freezing to 8°C

WO#: 30449754

PM: AES Due Date: 11/24/ CLIENT: PACE\_92\_HUNG

Comments:	Yes	No	N/A	pH paper Lot#	Date and Initials of person examining contents:
				<u>1003801</u>	<u>RJm 11-11-21</u>
Chain of Custody Present:	/			1.	
Chain of Custody Filled Out:	/			2.	
Chain of Custody Relinquished:		/		3.	
Sampler Name & Signature on COC:		/		4.	
Sample Labels match COC:	/			5.	
-Includes date/time/ID Matrix: <u>WT</u>					
Samples Arrived within Hold Time:	/			6.	
Short Hold Time Analysis (<72hr remaining):		/		7.	
Rush Turn Around Time Requested:		/		8.	
Sufficient Volume:	/			9.	
Correct Containers Used:	/			10.	
-Pace Containers Used:	/				
Containers Intact:	/			11.	
Orthophosphate field filtered			/	12.	
Hex Cr Aqueous sample field filtered			/	13.	
Organic Samples checked for dechlorination:			/	14.	
Filtered volume received for Dissolved tests			/	15.	
All containers have been checked for preservation.	/			16.	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix					<u>PHC2</u>
All containers meet method preservation requirements.	/			Initial when completed	Date/time of preservation
				Lot # of added preservative	
Headspace in VOA Vials (>6mm):			/	17.	
Trip Blank Present:			/	18.	
Trip Blank Custody Seals Present			/		
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed	Date <u>11-11-21</u> Survey Meter SN: <u>1563</u>

Client Notification/ Resolution: 11-11-21  
 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.





# Quality Control Sample Performance Assessment



*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Test: Ra-226  
Analyst: JJY  
Date: 11/25/2021  
Worklist: 63617  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2279771
MB concentration:	0.217
M/B Counting Uncertainty:	0.325
MB MDC:	0.727
MB Numerical Performance Indicator:	1.31
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS63617	YCS063617
Count Date:	12/8/2021	12/8/2021
Spike I.D.:	21-040	21-040
Decay Corrected Spike Concentration (pCi/mL):	32.437	32.437
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.217	0.217
Target Conc. (pCi/L, g, F):	15.369	14.971
Uncertainty (Calculated):	0.704	0.704
Result (pCi/L, g, F):	12.671	12.030
LCS/ILCSD Counting Uncertainty (pCi/L, g, F):	1.222	1.117
Numerical Performance Indicator:	-3.73	-4.37
Percent Recovery:	82.44%	80.36%
Status vs Numerical Indicator:	N/A	N/A
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS63617
Duplicate Sample I.D.:	LCS063617
Sample Result (pCi/L, g, F):	12.671
Duplicate Result (pCi/L, g, F):	1.222
Sample Result Counting Uncertainty (pCi/L, g, F):	1.117
Duplicate Result Counting Uncertainty (pCi/L, g, F):	NO
Are sample and/or duplicate results below RL?	0.758
Duplicate Numerical Performance Indicator:	2.56%
(Based on the LCS/ILCSD Percent Recoveries) Duplicate RPD:	N/A
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	25%
% RPD Limit:	25%

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

Comments:

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/18/2021	
Sample I.D.:	92569370003	
Sample MS I.D.:	92569370004	
Sample MSD I.D.:	92569370005	
Spike I.D.:	21-040	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.439	
Spike Volume Used in MS (mL):	0.20	
MS Aliquot (L, g, F):	0.203	
MS Target Conc. (pCi/L, g, F):	31.969	
MSD Aliquot (L, g, F):	0.208	
MSD Target Conc. (pCi/L, g, F):	31.155	
MS Spike Uncertainty (calculated):	1.503	
MSD Spike Uncertainty (calculated):	1.464	
Sample Result:	1.133	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.412	
Sample Matrix Spike Result:	27.187	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.845	
Sample Matrix Spike Duplicate Result:	25.186	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.741	
MS Numerical Performance Indicator:	-4.800	
MSD Numerical Performance Indicator:	-6.021	
MS Percent Recovery:	81.50%	
MSD Percent Recovery:	77.20%	
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.:	92569370003
Sample MS I.D.:	92569370004
Sample MSD I.D.:	92569370005
Sample Matrix Spike Result:	27.187
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.845
Sample Matrix Spike Duplicate Result:	25.186
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	1.741
Duplicate Numerical Performance Indicator:	1.546
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	5.41%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

# Quality Control Sample Performance Assessment



www.paceanalytical.com

Test: Ra-228  
Analyst: VAL  
Date: 11/22/2021  
Worklist: 63733  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2283246
MB concentration:	0.439
MB 2 Sigma CSU:	0.302
MB MDC:	0.573
MB Numerical Performance Indicator:	Warning
MB Status vs Numerical Indicator:	2.84
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD63733	LCSD63733
Count Date:	12/17/2021
Spike I.D.:	21-029
Decay Corrected Spike Concentration (pCi/mL):	37.252
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.816
Target Conc. (pCi/L, g, F):	4.567
Uncertainty (Calculated):	0.224
Result (pCi/L, g, F):	5.312
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.130
Numerical Performance Indicator:	1.27
Percent Recovery:	116.32%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	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?	See Below ##
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:

*11/22/2021*

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:		10/18/2021	
Sample I.D.:		92569370003	
Sample MS I.D.:		92569370004	
Sample MSD I.D.:		92569370005	
Spike I.D.:		21-029	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		37.796	
Spike Volume Used in MS (mL):		0.20	
MS Aliquot (L, g, F):		0.808	
MS Target Conc. (pCi/L, g, F):		9.350	
MSD Aliquot (L, g, F):		0.807	
MSD Target Conc. (pCi/L, g, F):		9.362	
MS Spike Uncertainty (calculated):		0.458	
MSD Spike Uncertainty (calculated):		0.459	
Sample Result:		0.899	
Sample Result 2 Sigma CSU (pCi/L, g, F):		0.421	
Sample Matrix Spike Result:		10.782	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		2.117	
Sample Matrix Spike Duplicate Result:		10.979	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		2.159	
MS Numerical Performance Indicator:		0.474	
MSD Numerical Performance Indicator:		0.626	
MS Percent Recovery:		105.70%	
MSD Percent Recovery:		107.66%	
MS Status vs Numerical Indicator:		Pass	
MSD Status vs Numerical Indicator:		Pass	
MS Status vs Recovery:		Pass	
MSD Status vs Recovery:		Pass	
MS/MSD Upper % Recovery Limits:		135%	
MS/MSD Lower % Recovery Limits:		60%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	92569370003
Sample MS I.D.:	92569370004
Sample MSD I.D.:	92569370005
Sample Matrix Spike Result:	10.782
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.117
Sample Matrix Spike Duplicate Result:	10.979
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.159
Duplicate Numerical Performance Indicator:	-0.128
Duplicate Numerical Performance Indicator:	1.84%
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%



**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-8	Conductivity	10/19/2021 11:03	50.83	uS/cm
BY-GSA-MW-8	DO	10/19/2021 11:03	0.84	mg/L
BY-GSA-MW-8	Depth to Water Detail	10/19/2021 11:03	29.23	ft
BY-GSA-MW-8	Oxidation Reduction Potention	10/19/2021 11:03	145.98	mv
BY-GSA-MW-8	pH	10/19/2021 11:03	4.49	SU
BY-GSA-MW-8	Temperature	10/19/2021 11:03	21.36	C
BY-GSA-MW-8	Turbidity	10/19/2021 11:03	1.08	NTU
BY-GSA-MW-8	Conductivity	10/19/2021 11:08	50.93	uS/cm
BY-GSA-MW-8	DO	10/19/2021 11:08	0.83	mg/L
BY-GSA-MW-8	Depth to Water Detail	10/19/2021 11:08	29.23	ft
BY-GSA-MW-8	Oxidation Reduction Potention	10/19/2021 11:08	136.9	mv
BY-GSA-MW-8	pH	10/19/2021 11:08	4.63	SU
BY-GSA-MW-8	Temperature	10/19/2021 11:08	21.35	C
BY-GSA-MW-8	Turbidity	10/19/2021 11:08	1.29	NTU
BY-GSA-MW-8	Conductivity	10/19/2021 11:13	50.76	uS/cm
BY-GSA-MW-8	DO	10/19/2021 11:13	0.82	mg/L
BY-GSA-MW-8	Depth to Water Detail	10/19/2021 11:13	29.23	ft
BY-GSA-MW-8	Oxidation Reduction Potention	10/19/2021 11:13	131.88	mv
BY-GSA-MW-8	pH	10/19/2021 11:13	4.7	SU
BY-GSA-MW-8	Temperature	10/19/2021 11:13	21.4	C
BY-GSA-MW-8	Turbidity	10/19/2021 11:13	1.2	NTU
BY-GSA-MW-8	Conductivity	10/19/2021 11:18	50.91	uS/cm
BY-GSA-MW-8	DO	10/19/2021 11:18	0.82	mg/L
BY-GSA-MW-8	Depth to Water Detail	10/19/2021 11:18	29.23	ft
BY-GSA-MW-8	Oxidation Reduction Potention	10/19/2021 11:18	127.15	mv
BY-GSA-MW-8	pH	10/19/2021 11:18	4.77	SU
BY-GSA-MW-8	Temperature	10/19/2021 11:18	21.38	C
BY-GSA-MW-8	Turbidity	10/19/2021 11:18	0.89	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

WELL ID	DESCRIPTION	TIME OF READING	VALUE	UNIT
BY-GSA-MW-7	Conductivity	10/18/2021 14:09	54.93	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:09	2.99	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:09	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:09	116.19	mv
BY-GSA-MW-7	pH	10/18/2021 14:09	5	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:09	21.65	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:09	11.9	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:14	54.83	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:14	3.03	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:14	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:14	104.54	mv
BY-GSA-MW-7	pH	10/18/2021 14:14	5.07	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:14	21.54	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:14	18.8	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:19	56.81	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:19	2.99	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:19	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:19	96.94	mv
BY-GSA-MW-7	pH	10/18/2021 14:19	5.07	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:19	21.52	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:19	15.8	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:24	58.8	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:24	2.96	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:24	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:24	95.7	mv
BY-GSA-MW-7	pH	10/18/2021 14:24	5.07	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:24	21.49	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:24	11.8	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:29	62.6	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:29	2.92	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:29	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:29	95.19	mv
BY-GSA-MW-7	pH	10/18/2021 14:29	5	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:29	21.54	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:29	9.77	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:34	64.68	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:34	2.89	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:34	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:34	92.9	mv
BY-GSA-MW-7	pH	10/18/2021 14:34	5.03	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:34	21.47	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:34	8.05	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:39	66.69	uS/cm

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-7	DO	10/18/2021 14:39	2.87	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:39	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:39	92.23	mv
BY-GSA-MW-7	pH	10/18/2021 14:39	5.05	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:39	21.46	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:39	6.11	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:44	69.14	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:44	2.85	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:44	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:44	93.37	mv
BY-GSA-MW-7	pH	10/18/2021 14:44	5.03	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:44	21.63	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:44	5.13	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:49	69.87	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:49	2.82	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:49	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:49	93.72	mv
BY-GSA-MW-7	pH	10/18/2021 14:49	5	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:49	21.6	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:49	3.72	NTU
BY-GSA-MW-7	Conductivity	10/18/2021 14:54	71.5	uS/cm
BY-GSA-MW-7	DO	10/18/2021 14:54	2.82	mg/L
BY-GSA-MW-7	Depth to Water Detail	10/18/2021 14:54	15.83	ft
BY-GSA-MW-7	Oxidation Reduction Potention	10/18/2021 14:54	92.01	mv
BY-GSA-MW-7	pH	10/18/2021 14:54	5.05	SU
BY-GSA-MW-7	Temperature	10/18/2021 14:54	21.48	C
BY-GSA-MW-7	Turbidity	10/18/2021 14:54	2.67	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-6	Conductivity	10/18/2021 15:33	123	uS/cm
BY-GSA-MW-6	DO	10/18/2021 15:33	4.24	mg/L
BY-GSA-MW-6	Depth to Water Detail	10/18/2021 15:33	16.9	ft
BY-GSA-MW-6	Oxidation Reduction Potention	10/18/2021 15:33	99.68	mv
BY-GSA-MW-6	pH	10/18/2021 15:33	5.27	SU
BY-GSA-MW-6	Temperature	10/18/2021 15:33	23.17	C
BY-GSA-MW-6	Turbidity	10/18/2021 15:33	2.79	NTU
BY-GSA-MW-6	Conductivity	10/18/2021 15:38	121.87	uS/cm
BY-GSA-MW-6	DO	10/18/2021 15:38	4.26	mg/L
BY-GSA-MW-6	Depth to Water Detail	10/18/2021 15:38	16.9	ft
BY-GSA-MW-6	Oxidation Reduction Potention	10/18/2021 15:38	95.73	mv
BY-GSA-MW-6	pH	10/18/2021 15:38	5.26	SU
BY-GSA-MW-6	Temperature	10/18/2021 15:38	22.83	C
BY-GSA-MW-6	Turbidity	10/18/2021 15:38	2.6	NTU
BY-GSA-MW-6	Conductivity	10/18/2021 15:43	120.52	uS/cm
BY-GSA-MW-6	DO	10/18/2021 15:43	4.26	mg/L
BY-GSA-MW-6	Depth to Water Detail	10/18/2021 15:43	16.9	ft
BY-GSA-MW-6	Oxidation Reduction Potention	10/18/2021 15:43	94.05	mv
BY-GSA-MW-6	pH	10/18/2021 15:43	5.27	SU
BY-GSA-MW-6	Temperature	10/18/2021 15:43	22.8	C
BY-GSA-MW-6	Turbidity	10/18/2021 15:43	5.31	NTU
BY-GSA-MW-6	Conductivity	10/18/2021 15:48	120.21	uS/cm
BY-GSA-MW-6	DO	10/18/2021 15:48	4.25	mg/L
BY-GSA-MW-6	Depth to Water Detail	10/18/2021 15:48	16.9	ft
BY-GSA-MW-6	Oxidation Reduction Potention	10/18/2021 15:48	93.84	mv
BY-GSA-MW-6	pH	10/18/2021 15:48	5.28	SU
BY-GSA-MW-6	Temperature	10/18/2021 15:48	22.81	C
BY-GSA-MW-6	Turbidity	10/18/2021 15:48	2.64	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-9	Conductivity	10/19/2021 8:17	71.81	uS/cm
BY-GSA-MW-9	DO	10/19/2021 8:17	2.25	mg/L
BY-GSA-MW-9	Depth to Water Detail	10/19/2021 8:17	8.03	ft
BY-GSA-MW-9	Oxidation Reduction Potention	10/19/2021 8:17	116.22	mv
BY-GSA-MW-9	pH	10/19/2021 8:17	4.31	SU
BY-GSA-MW-9	Temperature	10/19/2021 8:17	21.56	C
BY-GSA-MW-9	Turbidity	10/19/2021 8:17	9.9	NTU
BY-GSA-MW-9	Conductivity	10/19/2021 8:22	71.66	uS/cm
BY-GSA-MW-9	DO	10/19/2021 8:22	2.17	mg/L
BY-GSA-MW-9	Depth to Water Detail	10/19/2021 8:22	8.03	ft
BY-GSA-MW-9	Oxidation Reduction Potention	10/19/2021 8:22	108.33	mv
BY-GSA-MW-9	pH	10/19/2021 8:22	4.3	SU
BY-GSA-MW-9	Temperature	10/19/2021 8:22	21.67	C
BY-GSA-MW-9	Turbidity	10/19/2021 8:22	4.49	NTU
BY-GSA-MW-9	Conductivity	10/19/2021 8:27	71.42	uS/cm
BY-GSA-MW-9	DO	10/19/2021 8:27	2.15	mg/L
BY-GSA-MW-9	Depth to Water Detail	10/19/2021 8:27	8.03	ft
BY-GSA-MW-9	Oxidation Reduction Potention	10/19/2021 8:27	98.4	mv
BY-GSA-MW-9	pH	10/19/2021 8:27	4.33	SU
BY-GSA-MW-9	Temperature	10/19/2021 8:27	21.55	C
BY-GSA-MW-9	Turbidity	10/19/2021 8:27	3.1	NTU
BY-GSA-MW-9	Conductivity	10/19/2021 8:32	71.42	uS/cm
BY-GSA-MW-9	DO	10/19/2021 8:32	2.13	mg/L
BY-GSA-MW-9	Depth to Water Detail	10/19/2021 8:32	8.03	ft
BY-GSA-MW-9	Oxidation Reduction Potention	10/19/2021 8:32	97.16	mv
BY-GSA-MW-9	pH	10/19/2021 8:32	4.34	SU
BY-GSA-MW-9	Temperature	10/19/2021 8:32	21.53	C
BY-GSA-MW-9	Turbidity	10/19/2021 8:32	2.03	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-MW-10	Conductivity	10/19/2021 9:04	56.63	uS/cm
BY-GSA-MW-10	DO	10/19/2021 9:04	4.36	mg/L
BY-GSA-MW-10	Depth to Water Detail	10/19/2021 9:04	11.92	ft
BY-GSA-MW-10	Oxidation Reduction Potention	10/19/2021 9:04	97.25	mv
BY-GSA-MW-10	pH	10/19/2021 9:04	4.48	SU
BY-GSA-MW-10	Temperature	10/19/2021 9:04	21.1	C
BY-GSA-MW-10	Turbidity	10/19/2021 9:04	7.54	NTU
BY-GSA-MW-10	Conductivity	10/19/2021 9:09	56.04	uS/cm
BY-GSA-MW-10	DO	10/19/2021 9:09	4.31	mg/L
BY-GSA-MW-10	Depth to Water Detail	10/19/2021 9:09	11.92	ft
BY-GSA-MW-10	Oxidation Reduction Potention	10/19/2021 9:09	96.67	mv
BY-GSA-MW-10	pH	10/19/2021 9:09	4.51	SU
BY-GSA-MW-10	Temperature	10/19/2021 9:09	21.08	C
BY-GSA-MW-10	Turbidity	10/19/2021 9:09	5.62	NTU
BY-GSA-MW-10	Conductivity	10/19/2021 9:14	55.78	uS/cm
BY-GSA-MW-10	DO	10/19/2021 9:14	4.29	mg/L
BY-GSA-MW-10	Depth to Water Detail	10/19/2021 9:14	11.92	ft
BY-GSA-MW-10	Oxidation Reduction Potention	10/19/2021 9:14	106.58	mv
BY-GSA-MW-10	pH	10/19/2021 9:14	4.52	SU
BY-GSA-MW-10	Temperature	10/19/2021 9:14	21.12	C
BY-GSA-MW-10	Turbidity	10/19/2021 9:14	4.4	NTU
BY-GSA-MW-10	Conductivity	10/19/2021 9:19	55.57	uS/cm
BY-GSA-MW-10	DO	10/19/2021 9:19	4.26	mg/L
BY-GSA-MW-10	Depth to Water Detail	10/19/2021 9:19	11.92	ft
BY-GSA-MW-10	Oxidation Reduction Potention	10/19/2021 9:19	99.19	mv
BY-GSA-MW-10	pH	10/19/2021 9:19	4.48	SU
BY-GSA-MW-10	Temperature	10/19/2021 9:19	21.07	C
BY-GSA-MW-10	Turbidity	10/19/2021 9:19	3.53	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

<b>WELL ID</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
BY-GSA-PZ-11	Conductivity	10/19/2021 9:56	40.79	uS/cm
BY-GSA-PZ-11	DO	10/19/2021 9:56	5.32	mg/L
BY-GSA-PZ-11	Depth to Water Detail	10/19/2021 9:56	21.86	ft
BY-GSA-PZ-11	Oxidation Reduction Potention	10/19/2021 9:56	90.65	mv
BY-GSA-PZ-11	pH	10/19/2021 9:56	4.83	SU
BY-GSA-PZ-11	Temperature	10/19/2021 9:56	21.94	C
BY-GSA-PZ-11	Turbidity	10/19/2021 9:56	29	NTU
BY-GSA-PZ-11	Conductivity	10/19/2021 10:01	40.91	uS/cm
BY-GSA-PZ-11	DO	10/19/2021 10:01	5.32	mg/L
BY-GSA-PZ-11	Depth to Water Detail	10/19/2021 10:01	21.86	ft
BY-GSA-PZ-11	Oxidation Reduction Potention	10/19/2021 10:01	89.55	mv
BY-GSA-PZ-11	pH	10/19/2021 10:01	4.84	SU
BY-GSA-PZ-11	Temperature	10/19/2021 10:01	21.98	C
BY-GSA-PZ-11	Turbidity	10/19/2021 10:01	16.7	NTU
BY-GSA-PZ-11	Conductivity	10/19/2021 10:06	40.72	uS/cm
BY-GSA-PZ-11	DO	10/19/2021 10:06	5.31	mg/L
BY-GSA-PZ-11	Depth to Water Detail	10/19/2021 10:06	21.86	ft
BY-GSA-PZ-11	Oxidation Reduction Potention	10/19/2021 10:06	90.57	mv
BY-GSA-PZ-11	pH	10/19/2021 10:06	4.81	SU
BY-GSA-PZ-11	Temperature	10/19/2021 10:06	21.95	C
BY-GSA-PZ-11	Turbidity	10/19/2021 10:06	10.62	NTU
BY-GSA-PZ-11	Conductivity	10/19/2021 10:11	40.75	uS/cm
BY-GSA-PZ-11	DO	10/19/2021 10:11	5.33	mg/L
BY-GSA-PZ-11	Depth to Water Detail	10/19/2021 10:11	21.86	ft
BY-GSA-PZ-11	Oxidation Reduction Potention	10/19/2021 10:11	89.52	mv
BY-GSA-PZ-11	pH	10/19/2021 10:11	4.8	SU
BY-GSA-PZ-11	Temperature	10/19/2021 10:11	21.89	C
BY-GSA-PZ-11	Turbidity	10/19/2021 10:11	7.4	NTU

**Alabama Power Company  
Plant Barry Gypsum Pond**

WELL ID	DESCRIPTION	TIME OF READING	VALUE	UNIT
BY-GSA-MW-5	Conductivity	10/19/2021 10:52	54.87	uS/cm
BY-GSA-MW-5	DO	10/19/2021 10:52	5.41	mg/L
BY-GSA-MW-5	Depth to Water Detail	10/19/2021 10:52	28.87	ft
BY-GSA-MW-5	Oxidation Reduction Potention	10/19/2021 10:52	95.07	mv
BY-GSA-MW-5	pH	10/19/2021 10:52	4.82	SU
BY-GSA-MW-5	Temperature	10/19/2021 10:52	22.59	C
BY-GSA-MW-5	Turbidity	10/19/2021 10:52	36.2	NTU
BY-GSA-MW-5	Conductivity	10/19/2021 10:57	57.17	uS/cm
BY-GSA-MW-5	DO	10/19/2021 10:57	5.34	mg/L
BY-GSA-MW-5	Depth to Water Detail	10/19/2021 10:57	28.87	ft
BY-GSA-MW-5	Oxidation Reduction Potention	10/19/2021 10:57	94.56	mv
BY-GSA-MW-5	pH	10/19/2021 10:57	4.81	SU
BY-GSA-MW-5	Temperature	10/19/2021 10:57	22.63	C
BY-GSA-MW-5	Turbidity	10/19/2021 10:57	30.2	NTU
BY-GSA-MW-5	Conductivity	10/19/2021 11:02	59.97	uS/cm
BY-GSA-MW-5	DO	10/19/2021 11:02	5.29	mg/L
BY-GSA-MW-5	Depth to Water Detail	10/19/2021 11:02	28.87	ft
BY-GSA-MW-5	Oxidation Reduction Potention	10/19/2021 11:02	95.47	mv
BY-GSA-MW-5	pH	10/19/2021 11:02	4.8	SU
BY-GSA-MW-5	Temperature	10/19/2021 11:02	22.55	C
BY-GSA-MW-5	Turbidity	10/19/2021 11:02	23.2	NTU
BY-GSA-MW-5	Conductivity	10/19/2021 11:07	63.43	uS/cm
BY-GSA-MW-5	DO	10/19/2021 11:07	5.25	mg/L
BY-GSA-MW-5	Depth to Water Detail	10/19/2021 11:07	28.87	ft
BY-GSA-MW-5	Oxidation Reduction Potention	10/19/2021 11:07	96.14	mv
BY-GSA-MW-5	pH	10/19/2021 11:07	4.79	SU
BY-GSA-MW-5	Temperature	10/19/2021 11:07	22.63	C
BY-GSA-MW-5	Turbidity	10/19/2021 11:07	18.7	NTU
BY-GSA-MW-5	Conductivity	10/19/2021 11:12	62.93	uS/cm
BY-GSA-MW-5	DO	10/19/2021 11:12	5.23	mg/L
BY-GSA-MW-5	Depth to Water Detail	10/19/2021 11:12	28.87	ft
BY-GSA-MW-5	Oxidation Reduction Potention	10/19/2021 11:12	97.76	mv
BY-GSA-MW-5	pH	10/19/2021 11:12	4.79	SU
BY-GSA-MW-5	Temperature	10/19/2021 11:12	22.51	C
BY-GSA-MW-5	Turbidity	10/19/2021 11:12	11.7	NTU
BY-GSA-MW-5	Conductivity	10/19/2021 11:17	63.85	uS/cm
BY-GSA-MW-5	DO	10/19/2021 11:17	5.2	mg/L
BY-GSA-MW-5	Depth to Water Detail	10/19/2021 11:17	28.87	ft
BY-GSA-MW-5	Oxidation Reduction Potention	10/19/2021 11:17	94.65	mv
BY-GSA-MW-5	pH	10/19/2021 11:17	4.79	SU
BY-GSA-MW-5	Temperature	10/19/2021 11:17	22.67	C
BY-GSA-MW-5	Turbidity	10/19/2021 11:17	9.96	NTU

# Appendix D



## Appendix D. Horizontal Groundwater Flow Velocity Calculations

Plant Barry Gypsum Storage Area  
2021 Annual Groundwater Monitoring Event

Source	2021 Monitoring Event	MW-2	MW-7	Distance	Hydraulic Gradient	Hydraulic Conductivity	Effective Porosity	Calculated Groundwater Flow Velocity	Calculated Groundwater Flow Velocity
		h <sub>1</sub> (ft)	h <sub>2</sub> (ft)	Δl (ft)	Δh/Δl (ft/ft)	K (ft/d)	n	(ft/d)	(ft/yr)
Pumping Test	SA01	6.80	5.19	1138.82	0.00141	9.40	0.25	0.053	19.4
	SA02	6.40	4.76	1138.82	0.00144	9.40	0.25	0.054	19.8

Notes:

ft = feet

ft/d = feet per day

ft/ft = feet per foot

ft/yr = feet per year

# Appendix E



## Appendix E. Relative Percent Difference (RPD) Calculations

Plant Barry Gypsum Storage Area

05/11/2021 - 05/12/2021

<b>BY-GSA-MW-3</b>				
<b>Sample Date = 05/11/2021</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Calcium	mg/L	2.06	2.08	1.0%
Chloride	mg/L	3.42	3.49	2.0%
Sulfate	mg/L	7.73	7.65	1.0%
TDS	mg/L	44	40	9.5%
Barium	mg/L	0.0981	0.0937	4.6%
Chromium	mg/L	0.00146	0.0014	4.2%
Cobalt	mg/L	0.00142	0.00144	1.4%
<b>BY-GSA-MW-10 DUP</b>				
<b>Sample Date = 05/12/2021</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Calcium	mg/L	1.06	1.04	1.9%
Chloride	mg/L	3.94	4.07	3.2%
Sulfate	mg/L	11	11.2	1.8%
TDS	mg/L	42.7	42.7	0.0%
Barium	mg/L	0.121	0.126	4.0%
Cobalt	mg/L	0.00237	0.00244	2.9%

Notes:

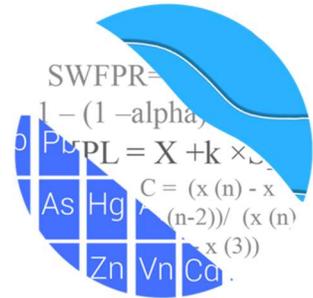
1. The RPD calculations presented are for analyte pairs where original and duplicate results are valid, unqualified detections.
2. RPD calculation results less than or equal to 20% are considered acceptable.
3. Results greater than 20% are given data validation flags to indicate RPD criteria failure.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

# Appendix F

# GROUNDWATER STATS CONSULTING

July 13, 2021

Southern Company Services  
Attn: Mr. Greg Dyer  
3535 Colonnade Parkway  
Birmingham, AL 35243



Re: Plant Barry Gypsum Pond  
1<sup>st</sup> Semi-Annual Analysis – May 2021 Sample Event

Dear Mr. Dyer,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the May 2021 1<sup>st</sup> semi-annual sample event for Alabama Power Company's Plant Barry Gypsum Pond. 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 United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at site for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** BY-GSA-MW-1, BY-GSA-MW-2, BY-GSA-MW-3, and BY-GSA-MW-4
- **Downgradient wells:** BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9, BY-GSA-MW-10, and BY-GSA-PZ-11

Note that BY-GSA-PZ-11 has been converted from a piezometer to a downgradient monitoring well. Data from this well are included on time series and box plots, but there are not currently enough samples for formal statistics.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was prepared according to the Statistical Analysis Plan approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance, and Senior Advisor to Groundwater Stats Consulting. The analysis was reviewed by Kristina Rayner, Founder and Groundwater Statistician of Groundwater Stats Consulting.

The CCR program consists of the following constituents:

**Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS

**Appendix IV** (Assessment Monitoring) - antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient well/constituent pairs with 100% non-detects follows this letter. A substitution of the most recent reporting limit is used for non-detect data.

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): 11
- # Background Samples (Interwell): 64
- # Constituents: 7
- # Downgradient wells: 6

## 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 chloride and sulfate
- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, fluoride, pH, 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 data points 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.

### **Background Update Summary – Conducted in September 2019**

Intrawell prediction limits, which compare the most recent compliance sample from a given well to historical data from the same well, are updated by testing for the appropriateness of consolidating new sampling observations with the screened background data. This process is described below and requires a minimum of four new data points. Historical data were evaluated for updating with newer data through May 2019 through the use of time series graphs to identify potential outliers when necessary, as well as the Mann Whitney test for equality of medians. As discussed in the Statistical Analysis Plan (August 2020), intrawell prediction limits are used to evaluate chloride and sulfate at all wells due to natural spatial variation for these parameters.

Interwell prediction limits, which compare the most recent sample from each downgradient well to statistical limits constructed from pooled upgradient well data, are updated during each sample event. Data from upgradient wells are periodically re-screened for newly developing trends, which may require adjustment of the background period to eliminate the trend, as well as for outliers over the entire record. Interwell prediction limits are used to evaluate boron, calcium, fluoride, pH and TDS.

Prior to performing prediction limits, proposed background data through May 2019 were reviewed to identify any newly suspected outliers at all wells for chloride and sulfate, and at upgradient wells for boron, calcium, fluoride, pH, and TDS. Both Tukey's Test and visual screening are used to identify potential outliers. When identified, values were flagged with "o" and excluded to reduce variation, better represent background conditions, and provide limits that are conservative from a regulatory perspective. Potential outliers that are identified by Tukey's test but are not greatly different from the rest of the data are not flagged. Also, outliers that are not identified as important by Tukey's test may be identified visually. 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. A summary of Tukey's test results for Appendix III parameters was included with the September 2019 screening.

For constituents requiring intrawell prediction limits, the Mann Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through June 2017 to compliance data through May 2019 to evaluate whether the groups are statistically similar at the 99% confidence level, in which case background data may be updated with compliance data. The Mann Whitney test found no statistically significant differences between the two groups. Therefore, all wells were updated with data through May 2019 for construction of intrawell prediction limits for chloride and sulfate.

When the test concludes that the medians of the two groups are significantly different, particularly in the downgradient wells, the background are not updated to include the newer data, but will be reconsidered in the future. A summary of these results was included with the Mann Whitney test section in the September 2019 screening.

The Sen's Slope/Mann Kendall trend test was used to evaluate the entire record of data from upgradient wells for parameters utilizing interwell prediction limits. When statistically significant increasing trends are identified in upgradient wells, the earlier portion of data is deselected prior to construction of interwell statistical limits if the trending data would result in statistical limits that are not conservative from a regulatory perspective. Statistically significant trends were noted in upgradient wells and a summary of the results was included with the September 2019 screening. These trends required no adjustments at this time, however, because the period of record is short and/or the magnitudes of the trends were low relative to the average concentrations in background.

### **Evaluation of Appendix III Parameters – May 2021**

Intrawell prediction limits were constructed for chloride and sulfate using screened background data through May 2019 at each well. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

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. Intrawell prediction limits combined with a 1-of-2 verification strategy were constructed for chloride and sulfate (Figure D). Background data will be re-evaluated when a minimum of 4 compliance samples are available. This was last performed in September 2019, and the report was submitted at that time.

Interwell prediction limits combined with a 1-of-2 verification strategy were constructed for boron, calcium, fluoride, pH, and TDS (Figure E). 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 there are statistically significant increases (SSIs). Note that during this analysis, the reporting limit for boron increased from <0.1 mg/L to <0.1015 mg/L, but this increase did not result in any change to statistical limits.

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 interwell and intrawell prediction limits:

Intrawell:

- Chloride: BY-GSA-MW-5, BY-GSA-MW-6, and BY-GSA-MW-7
- Sulfate: BY-GSA-MW-5 and BY-GSA-MW-9

Interwell:

- Boron: BY-GSA-MW-5 and BY-GSA-MW-6
- Calcium: BY-GSA-MW-5 and BY-GSA-MW-6
- pH: BY-GSA-MW-6, BY-GSA-MW-9, and BY-GSA-MW-10
- TDS: BY-GSA-MW-5 and BY-GSA-MW-6

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:

- Calcium: BY-GSA-MW-2, BY-GSA-MW-3, and BY-GSA-MW-4 (all upgradient)
- Chloride: BY-GSA-MW-7
- TDS: BY-GSA-MW-1, BY-GSA-MW-2 and BY-GSA-MW-4 (all upgradient)

Decreasing:

- Chloride: BY-GSA-MW-2 (upgradient)
- pH: BY-GSA-MW-2 (upgradient), BY-GSA-MW-3 (upgradient), BY-GSA-MW-6, BY-GSA-MW-9, and BY-GSA-MW-10

### **Evaluation of Appendix IV Parameters – May 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, the Groundwater Protections Standards (GWPS) utilized during the 2019 2<sup>nd</sup> semi-annual report were used in the confidence interval analysis for this 2021 1<sup>st</sup> semi-annual report. The GWPS will be updated during the 2021 2<sup>nd</sup> semi-annual statistical analysis. The methodology used to create these GWPS is described below.

First, background limits were determined using tolerance limits constructed from pooled upgradient well data (Figure G). The tolerance limits contain a known fraction (coverage) of the background population with a known level of confidence. When data followed a normal or transformed-normal distribution, parametric tolerance limits were used to calculate background limits for Appendix IV parameters using pooled upgradient well data through October 2019 with a target of 95% confidence and 95% coverage.

Nonparametric tolerance limits, which use the highest value in background as the statistical limit, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. These background limits were then compared to the Maximum Contaminant Levels (MCLs) for each parameter, and the higher of the two was used as the GWPS (Figure H) in the confidence interval comparisons described below. Note that none of the parametric tolerance limits resulted in higher limits than the established MCLs or CCR-Rule Specified Limits. In future UTL calculations, nonparametric tolerance limits will be used exclusively, as requested by ADEM, to eliminate variation among upgradient well data.

Confidence intervals were then constructed on downgradient wells using a maximum of the most recent 8 samples through May 2021 for each of the Appendix IV parameters (Figure 1). These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. As mentioned above, well/constituent pairs with 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. The decision logic, with respect to the use of a parametric or nonparametric confidence intervals, is similar to that used to construct tolerance limits as discussed above. Only when the entire confidence interval is above the GWPS is the well/constituent pair considered to exceed its respective standard.

Note the following reporting limits changed from the previous analysis to this analysis:

- Antimony: <0.003 mg/L to <0.001015 mg/L
- Arsenic: <0.005 mg/L to <0.000203 mg/L
- Beryllium: <0.003 mg/L to <0.001015 mg/L
- Cadmium: <0.001 mg/L to <0.000203 mg/L
- Lead: <0.005 mg/L to <0.000203 mg/L
- Lithium: <0.02 mg/L to <0.01999956 mg/L
- Molybdenum: <0.01 mg/L to <0.000203 mg/L
- Selenium: <0.01 mg/L to <0.001015 mg/L
- Thallium: <0.001 mg/L to <0.000203 mg/L

This resulted in slight changes to the upper and lower confidence limits in some cases. A summary table of these exceedances as well as complete tabular and graphical comparisons of confidence intervals against GWPS for each Appendix IV constituent is included in this report.

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.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Barry Gypsum Pond. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

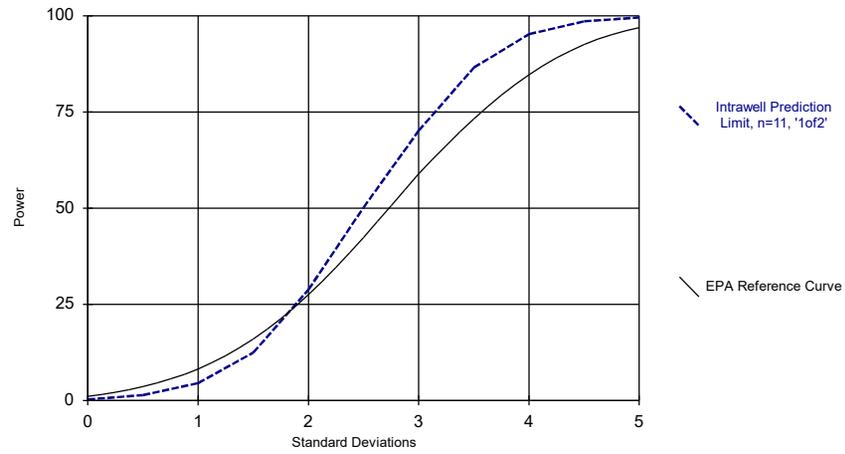
Handwritten signature of Abdul Diane in cursive script.

Abdul Diane  
Groundwater Analyst

Handwritten signature of Andrew T. Collins in cursive script.

Andrew T. Collins  
Project Manager

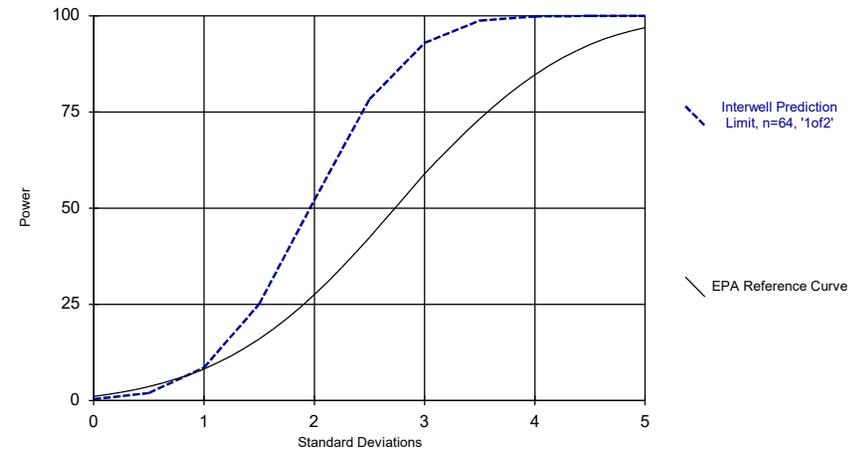
### Intrawell Power Curve



Kappa = 2.467, based on 6 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 7/7/2021 7:02 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Interwell Power Curve



Kappa = 1.876, based on 6 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 7/7/2021 7:03 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# 100% Non-Detects

Analysis Run 7/6/2021 2:25 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

**Antimony (mg/L)**

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9

**Arsenic (mg/L)**

BY-GSA-MW-8

**Beryllium (mg/L)**

BY-GSA-MW-10, BY-GSA-MW-8, BY-GSA-MW-9

**Cadmium (mg/L)**

BY-GSA-MW-10, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9

**Fluoride, total (mg/L)**

BY-GSA-MW-5, BY-GSA-MW-7, BY-GSA-MW-8

**Lead (mg/L)**

BY-GSA-MW-8

**Lithium (mg/L)**

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9

**Mercury (mg/L)**

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9

**Molybdenum (mg/L)**

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9

**Selenium (mg/L)**

BY-GSA-MW-7, BY-GSA-MW-8

**Thallium (mg/L)**

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9

# Appendix III - Intrawell Prediction Limits - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/2/2021, 4:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chloride, Total (mg/L)	BY-GSA-MW-5	4.8	n/a	5/12/2021	5.89	Yes	12	12.37	4.547	8.333	None	x^2	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-6	7.3	n/a	5/12/2021	7.77	Yes	12	4.781	1.063	0	None	No	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-7	9.7	n/a	5/12/2021	17.2	Yes	12	1.627	0.271	0	None	ln(x)	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-5	29	n/a	5/12/2021	38.2	Yes	12	3.268	0.8781	0	None	sqrt(x)	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-9	12	n/a	5/12/2021	12.5	Yes	12	2.798	0.2716	0	None	sqrt(x)	0.001254	Param 1 of 2

# Appendix III - Intrawell Prediction Limits - All Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 7/2/2021, 4:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chloride, Total (mg/L)	BY-GSA-MW-1	9.8	n/a	5/12/2021	2.18	No	12	1.956	0.4939	8.333	None	sqrt(x)	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-10	5.3	n/a	5/12/2021	3.94	No	12	3.697	0.6693	0	None	No	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-2	5.4	n/a	5/11/2021	2.16	No	12	14.81	6.021	8.333	None	x^2	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-3	4.7	n/a	5/11/2021	3.42	No	12	50.05	21.74	8.333	None	x^3	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-4	4.6	n/a	5/11/2021	3.33	No	12	1.938	0.08822	0	None	sqrt(x)	0.001254	Param 1 of 2
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>4.8</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>5.89</b>	<b>Yes</b>	<b>12</b>	<b>12.37</b>	<b>4.547</b>	<b>8.333</b>	<b>None</b>	<b>x^2</b>	<b>0.001254</b>	Param 1 of 2
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>7.3</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>7.77</b>	<b>Yes</b>	<b>12</b>	<b>4.781</b>	<b>1.063</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	Param 1 of 2
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>9.7</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>17.2</b>	<b>Yes</b>	<b>12</b>	<b>1.627</b>	<b>0.271</b>	<b>0</b>	<b>None</b>	<b>ln(x)</b>	<b>0.001254</b>	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-8	5.7	n/a	5/12/2021	5.25	No	12	4.683	0.4261	0	None	No	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-9	11	n/a	5/12/2021	8.77	No	12	5.775	2.196	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-1	23	n/a	5/12/2021	16.3	No	12	n/a	n/a	0	n/a	n/a	0.01077	NP (normality) 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-10	13	n/a	5/12/2021	11	No	12	9.618	1.229	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-2	9.8	n/a	5/11/2021	7.92	No	12	6.137	1.546	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-3	9.1	n/a	5/11/2021	7.73	No	12	7.456	0.6976	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-4	8.4	n/a	5/11/2021	6.8	No	12	6.626	0.7293	0	None	No	0.001254	Param 1 of 2
<b>Sulfate as SO4 (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>29</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>38.2</b>	<b>Yes</b>	<b>12</b>	<b>3.268</b>	<b>0.8781</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.001254</b>	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-6	45	n/a	5/12/2021	37.1	No	11	16.31	11.77	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-7	5.3	n/a	5/12/2021	3.58	No	12	3.127	0.8959	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-8	5.2	n/a	5/12/2021	4.7	No	12	3.548	0.689	0	None	No	0.001254	Param 1 of 2
<b>Sulfate as SO4 (mg/L)</b>	<b>BY-GSA-MW-9</b>	<b>12</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>12.5</b>	<b>Yes</b>	<b>12</b>	<b>2.798</b>	<b>0.2716</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.001254</b>	Param 1 of 2

# Appendix III - Interwell Prediction Limits - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 6:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	BY-GSA-MW-5	0.19	n/a	5/12/2021	0.511	Yes	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-6	0.19	n/a	5/12/2021	0.876	Yes	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-5	2	n/a	5/12/2021	7	Yes	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-6	2	n/a	5/12/2021	13.5	Yes	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-10	5	4.5	5/12/2021	4.4	Yes	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-6	5	4.5	5/12/2021	5.46	Yes	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-9	5	4.5	5/12/2021	4.43	Yes	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-5	58	n/a	5/12/2021	85.3	Yes	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-6	58	n/a	5/12/2021	98.7	Yes	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2

# Appendix III - Interwell Prediction Limits - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 6:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	BY-GSA-MW-10	0.19	n/a	5/12/2021	0.0423J	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
<b>Boron, total (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>0.19</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>0.511</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>79.69</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (NDs) 1 of 2
<b>Boron, total (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>0.19</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>0.876</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>79.69</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-7	0.19	n/a	5/12/2021	0.1015ND	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-8	0.19	n/a	5/12/2021	0.1015ND	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-9	0.19	n/a	5/12/2021	0.0834J	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-10	2	n/a	5/12/2021	1.06	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>2</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>7</b>	<b>Yes</b>	<b>64</b>	<b>1.486</b>	<b>0.2843</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	Param 1 of 2
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>2</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>13.5</b>	<b>Yes</b>	<b>64</b>	<b>1.486</b>	<b>0.2843</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-7	2	n/a	5/12/2021	1.63	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-8	2	n/a	5/12/2021	1.02	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-9	2	n/a	5/12/2021	1.82	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-10	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-5	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-6	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-7	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-8	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-9	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-10</b>	<b>5</b>	<b>4.5</b>	<b>5/12/2021</b>	<b>4.4</b>	<b>Yes</b>	<b>72</b>	<b>4.748</b>	<b>0.1474</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268</b>	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-5	5	4.5	5/12/2021	4.61	No	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>5</b>	<b>4.5</b>	<b>5/12/2021</b>	<b>5.46</b>	<b>Yes</b>	<b>72</b>	<b>4.748</b>	<b>0.1474</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268</b>	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-7	5	4.5	5/12/2021	4.84	No	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-8	5	4.5	5/12/2021	4.83	No	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>5</b>	<b>4.5</b>	<b>5/12/2021</b>	<b>4.43</b>	<b>Yes</b>	<b>72</b>	<b>4.748</b>	<b>0.1474</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268</b>	Param 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-10	58	n/a	5/12/2021	42.7	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>58</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>85.3</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>10.94</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (normality) 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>58</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>98.7</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>10.94</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-7	58	n/a	5/12/2021	52.7	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-8	58	n/a	5/12/2021	40	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-9	58	n/a	5/12/2021	50.7	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2

# Appendix III - Trend Test Summary - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/9/2021, 1:52 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Calcium, total (mg/L)	BY-GSA-MW-2 (bg)	0.1183	62	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-3 (bg)	0.07545	59	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-4 (bg)	0.122	78	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-2 (bg)	-0.4298	-75	-58	Yes	16	6.25	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-7	0.9544	60	58	Yes	16	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-10	-0.04746	-91	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-2 (bg)	-0.06952	-94	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-3 (bg)	-0.0553	-82	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-6	-0.1996	-129	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-9	-0.03571	-89	-68	Yes	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-1 (bg)	5.298	76	58	Yes	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-2 (bg)	2.894	62	58	Yes	16	12.5	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-4 (bg)	4.909	78	58	Yes	16	25	n/a	n/a	0.01	NP

# Appendix III - Trend Test Summary - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/9/2021, 1:52 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron, total (mg/L)	BY-GSA-MW-1 (bg)	0	6	58	No	16	50	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-2 (bg)	0	20	58	No	16	81.25	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-3 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-4 (bg)	0	21	58	No	16	87.5	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-5	-0.01197	-9	-58	No	16	18.75	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-6	-0.03664	-14	-58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-1 (bg)	0.07712	33	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>0.1183</b>	<b>62</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-3 (bg)</b>	<b>0.07545</b>	<b>59</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-4 (bg)</b>	<b>0.122</b>	<b>78</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium, total (mg/L)	BY-GSA-MW-5	-0.2436	-52	-58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-6	-2.496	-44	-58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-1 (bg)	-0.07985	-11	-58	No	16	6.25	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>-0.4298</b>	<b>-75</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>6.25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride, Total (mg/L)	BY-GSA-MW-3 (bg)	-0.05051	-42	-58	No	16	6.25	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-4 (bg)	-0.06007	-40	-58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-5	-0.003309	-5	-58	No	16	6.25	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-6	-0.07987	-5	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>0.9544</b>	<b>60</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (SU)	BY-GSA-MW-1 (bg)	0	4	68	No	18	0	n/a	n/a	0.01	NP
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-10</b>	<b>-0.04746</b>	<b>-91</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>-0.06952</b>	<b>-94</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-3 (bg)</b>	<b>-0.0553</b>	<b>-82</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (SU)	BY-GSA-MW-4 (bg)	-0.03973	-61	-68	No	18	0	n/a	n/a	0.01	NP
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>-0.1996</b>	<b>-129</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>-0.03571</b>	<b>-89</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BY-GSA-MW-1 (bg)	2.216	38	58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-2 (bg)	-0.3035	-23	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-3 (bg)	-0.07291	-12	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-4 (bg)	-0.04665	-13	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-5	-1.674	-43	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-9	0.9151	41	58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-1 (bg)</b>	<b>5.298</b>	<b>76</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>6.25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>2.894</b>	<b>62</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>12.5</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	BY-GSA-MW-3 (bg)	2.208	50	58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-4 (bg)</b>	<b>4.909</b>	<b>78</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	BY-GSA-MW-5	-1.055	-20	-58	No	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-6	-13.34	-40	-58	No	16	0	n/a	n/a	0.01	NP

# Upper Tolerance Limits - Appendix IV

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/24/2020, 8:10 AM

Constituent	Upper Lim.	Lower Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	52	n/a	n/a	90.38	n/a	n/a	0.06944	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Barium (mg/L)	0.183	n/a	52	n/a	n/a	0	n/a	n/a	0.06944	NP Inter(normal...
Beryllium (mg/L)	0.003	n/a	52	n/a	n/a	90.38	n/a	n/a	0.06944	NP Inter(NDs)
Cadmium (mg/L)	0.001	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Chromium (mg/L)	0.01	n/a	52	n/a	n/a	96.15	n/a	n/a	0.06944	NP Inter(NDs)
Cobalt (mg/L)	0.0157	n/a	52	n/a	n/a	67.31	n/a	n/a	0.06944	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	3.202	n/a	52	0.9903	0.2355	0	None	x^(1/3)	0.05	Inter
Fluoride (mg/L)	0.1	n/a	56	n/a	n/a	48.21	n/a	n/a	0.05656	NP Inter(normal...
Lead (mg/L)	0.005	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Lithium (mg/L)	0.02	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Mercury (mg/L)	0.0005	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Selenium (mg/L)	0.01	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)

<b>BARRY GYPSUM POND GWPS</b>			
<b>Analyte</b>	<b>Units</b>	<b>Background</b>	<b>GWPS</b>
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.183	2
Beryllium	mg/L	0.003	0.004
Cadmium	mg/L	0.001	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.0157	0.0157
Combined Radium-226/228	pCi/L	3.202	5
Fluoride	mg/L	0.1	4
Lead	mg/L	0.005	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.01	0.1
Selenium	mg/L	0.01	0.05
Thallium	mg/L	0.001	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 second semi-annual sampling event in 2019.

# Appendix IV - Confidence Intervals - All Results (No Significant)

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 7:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	BY-GSA-MW-10	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-5	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-6	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-7	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-8	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-9	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-10	0.000203	0.000129	0.01	No	8	0.00002616	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-5	0.000501	0.000203	0.01	No	8	0.0001054	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-6	0.000821	0.000203	0.01	No	8	0.0002185	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-7	0.000203	0.000177	0.01	No	8	0.000009192	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.01	No	8	0	100	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-9	0.000203	0.000173	0.01	No	8	0.00001061	87.5	No	0.004	NP (NDs)
Barium (mg/L)	BY-GSA-MW-10	0.1319	0.1161	2	No	8	0.007483	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-5	0.181	0.0684	2	No	8	0.03817	0	No	0.004	NP (normality)
Barium (mg/L)	BY-GSA-MW-6	0.1543	0.06411	2	No	8	0.04254	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-7	0.07961	0.03739	2	No	8	0.02139	0	sqrt(x)	0.01	Param.
Barium (mg/L)	BY-GSA-MW-8	0.04815	0.03755	2	No	8	0.005003	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-9	0.1761	0.1357	2	No	8	0.01904	0	No	0.01	Param.
Beryllium (mg/L)	BY-GSA-MW-10	0.001015	0.001015	0.004	No	8	0	100	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-5	0.001015	0.000575	0.004	No	8	0.0001556	87.5	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-6	0.001015	0.000763	0.004	No	8	0.0000891	87.5	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-7	0.001015	0.000464	0.004	No	8	0.0001948	87.5	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-8	0.001015	0.001015	0.004	No	8	0	100	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-9	0.001015	0.001015	0.004	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-10	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-5	0.000203	0.0000867	0.005	No	8	0.00004112	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-6	0.000203	0.000154	0.005	No	8	0.00001732	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-7	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-9	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-10	0.01	0.000695	0.1	No	8	0.00329	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-5	0.01	0.00221	0.1	No	8	0.003581	75	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-6	0.01	0.00223	0.1	No	8	0.003926	50	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-7	0.01	0.00139	0.1	No	8	0.003044	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-8	0.01	0.00202	0.1	No	8	0.002734	12.5	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-9	0.01	0.000783	0.1	No	8	0.003259	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-10	0.002571	0.002152	0.0157	No	8	0.0001979	0	No	0.01	Param.
Cobalt (mg/L)	BY-GSA-MW-5	0.005	0.00227	0.0157	No	8	0.0009553	75	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-6	0.0054	0.00296	0.0157	No	8	0.001074	50	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-7	0.005	0.00192	0.0157	No	8	0.001089	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-8	0.005	0.000437	0.0157	No	8	0.001613	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-9	0.005	0.00177	0.0157	No	8	0.001142	87.5	No	0.004	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-10	1.896	0.7338	5	No	8	0.5481	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-5	0.8118	0.3777	5	No	8	0.2048	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-6	1.999	0.4726	5	No	8	0.7203	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-7	1.141	0.01514	5	No	8	0.5313	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-8	1.027	0.1764	5	No	8	0.401	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-9	2.224	1.269	5	No	8	0.4502	0	No	0.01	Param.
Fluoride, total (mg/L)	BY-GSA-MW-10	0.1	0.08	4	No	8	0.009161	62.5	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-5	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-6	0.1	0.0591	4	No	8	0.01446	87.5	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-7	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-8	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-9	0.1	0.07	4	No	8	0.01553	62.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-10	0.000203	0.000113	0.015	No	8	0.00003182	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-5	0.000203	0.0000994	0.015	No	8	0.00003663	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-6	0.000213	0.000203	0.015	No	8	0.00003536	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-7	0.000203	0.0000798	0.015	No	8	0.00004356	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.015	No	8	0	100	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-9	0.000288	0.000203	0.015	No	8	0.00003005	87.5	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-10	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-5	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-6	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-7	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-8	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-9	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-10	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-5	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)

# Appendix IV - Confidence Intervals - All Results (No Significant) Page 2

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 7:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Mercury (mg/L)	BY-GSA-MW-6	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-7	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-8	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-9	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-10	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-5	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-6	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-7	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-9	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-10	0.001015	0.000778	0.05	No	8	0.00008379	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-5	0.0163	0.001015	0.05	No	8	0.005342	62.5	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-6	0.009373	0.002402	0.05	No	8	0.003288	0	No	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-7	0.001015	0.001015	0.05	No	8	0	100	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-8	0.001015	0.001015	0.05	No	8	0	100	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-9	0.00128	0.001015	0.05	No	8	0.00009369	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-10	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-5	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-6	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-7	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-9	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)

# Outlier Summary

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/6/2021, 2:06 PM

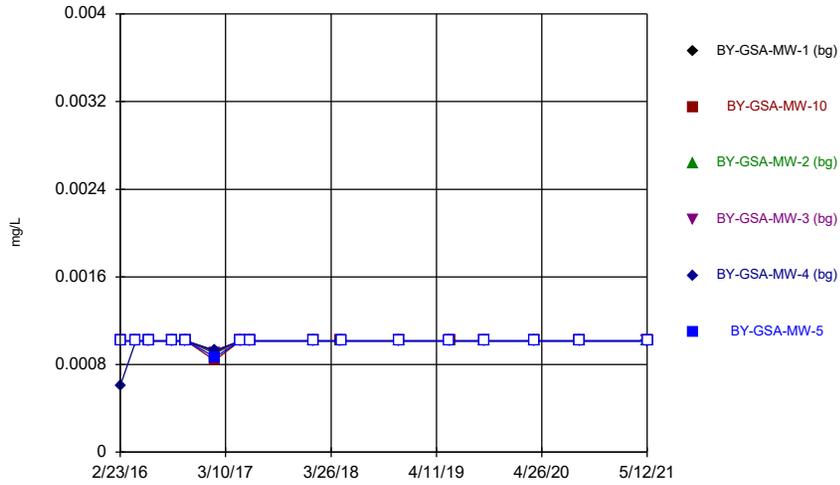
BY-GSA-MW-6 Sulfate as SO<sub>4</sub> (mg/L)

4/18/2016

80.2 (O)

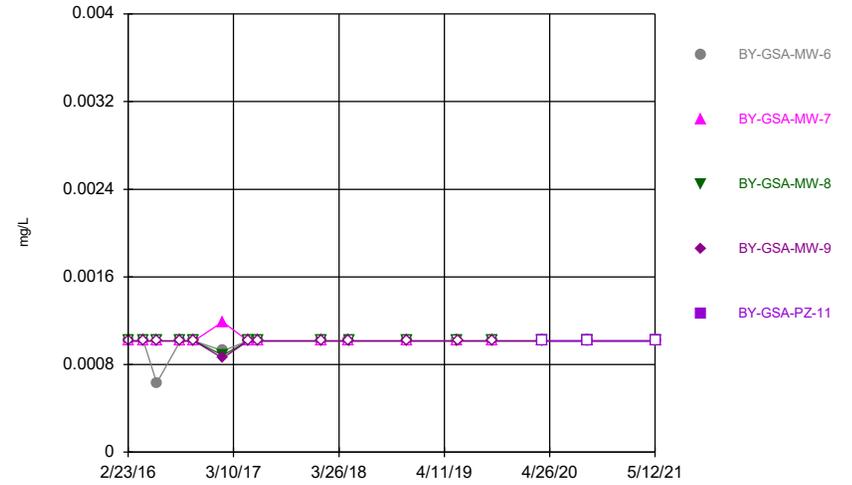
FIGURE A.

Time Series



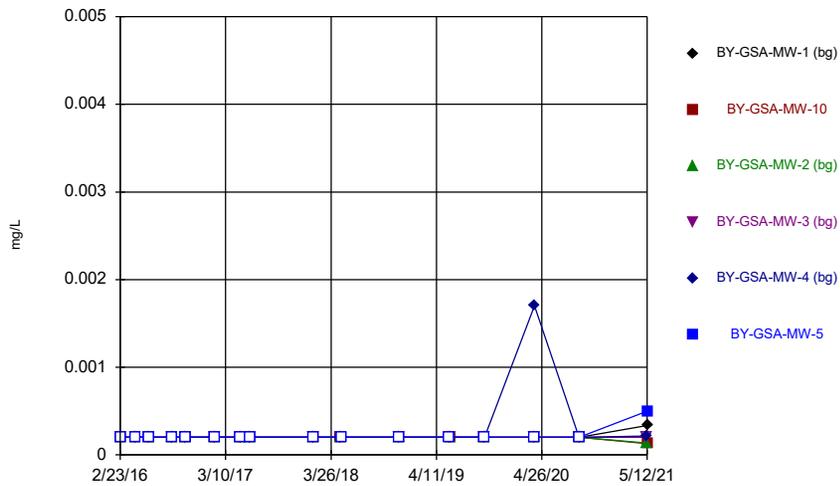
Constituent: Antimony Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



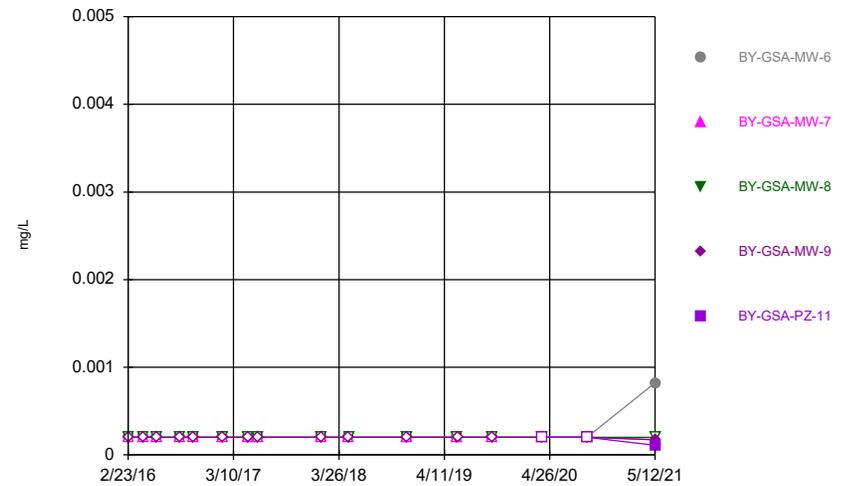
Constituent: Antimony Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



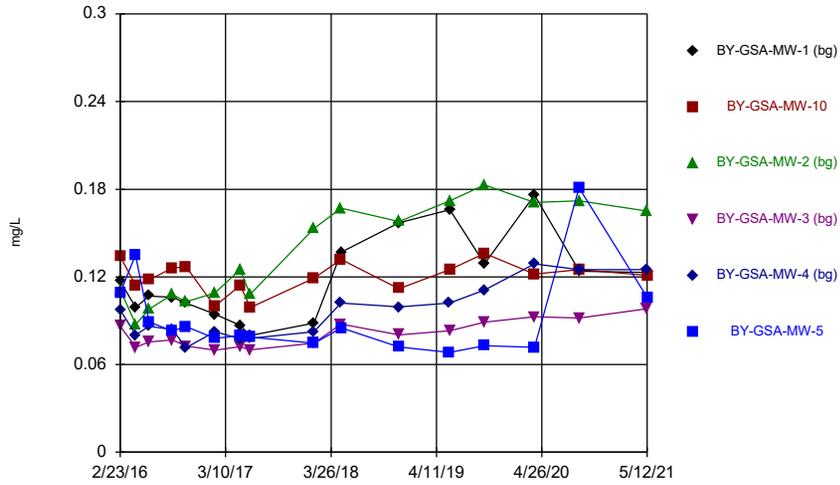
Constituent: Arsenic Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



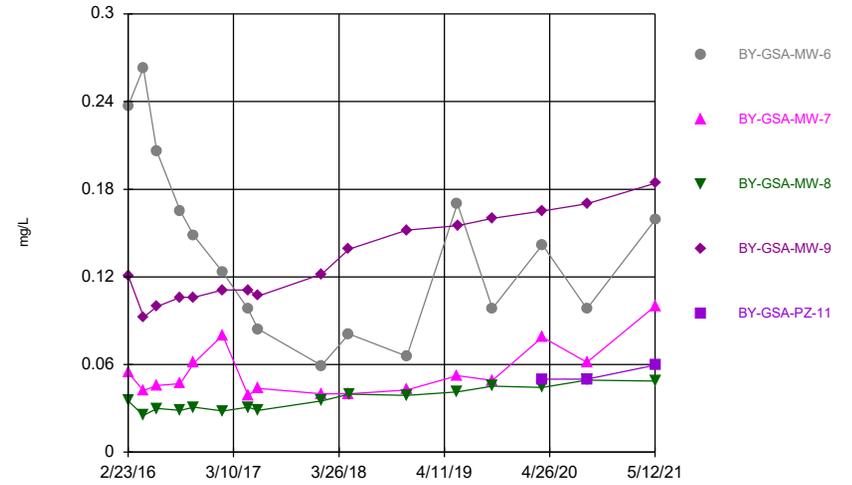
Constituent: Arsenic Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



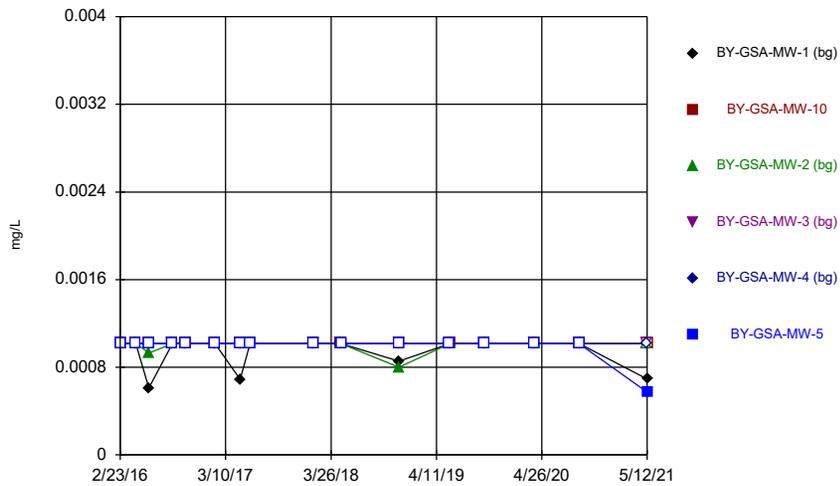
Constituent: Barium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



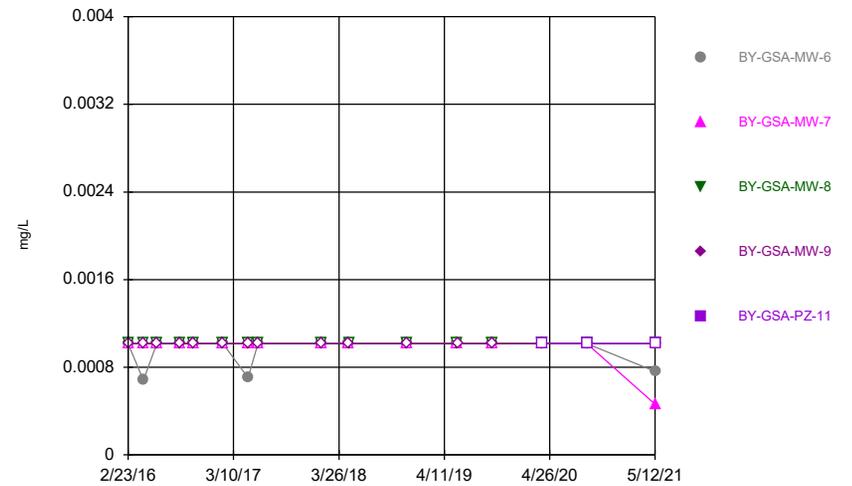
Constituent: Barium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



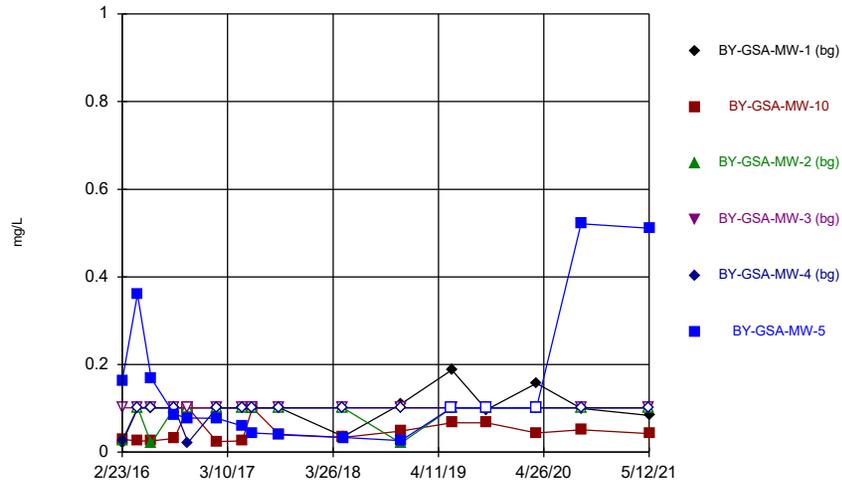
Constituent: Beryllium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



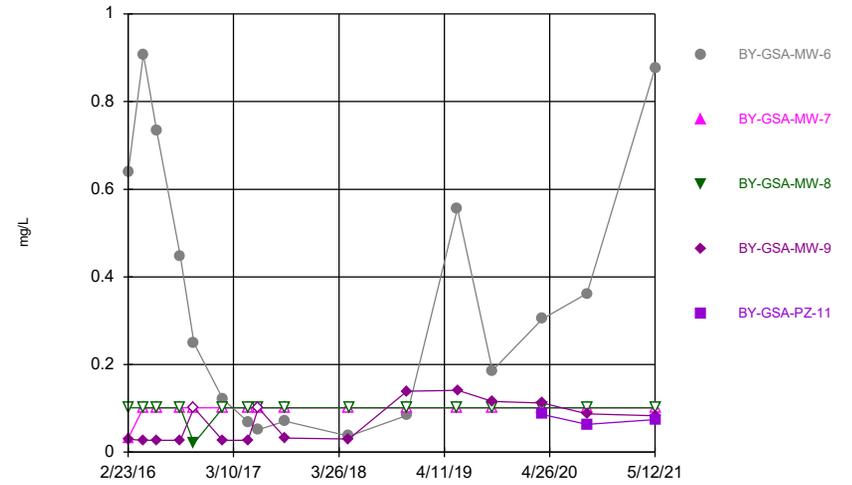
Constituent: Beryllium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



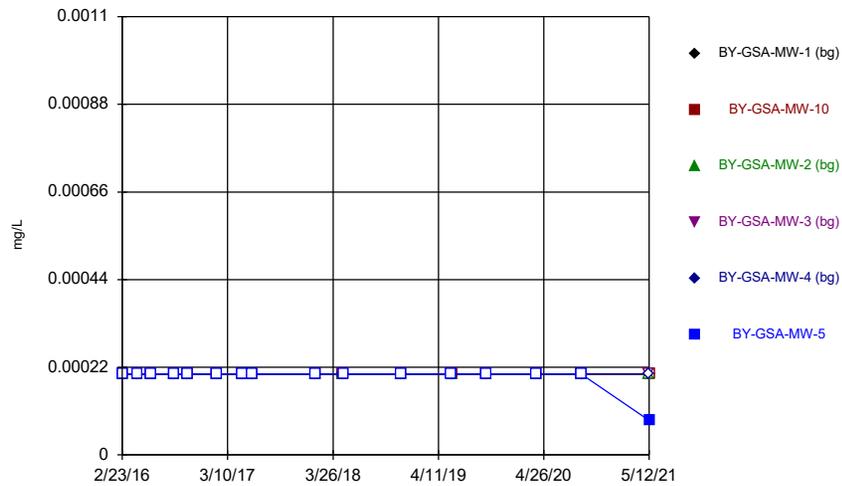
Constituent: Boron, total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



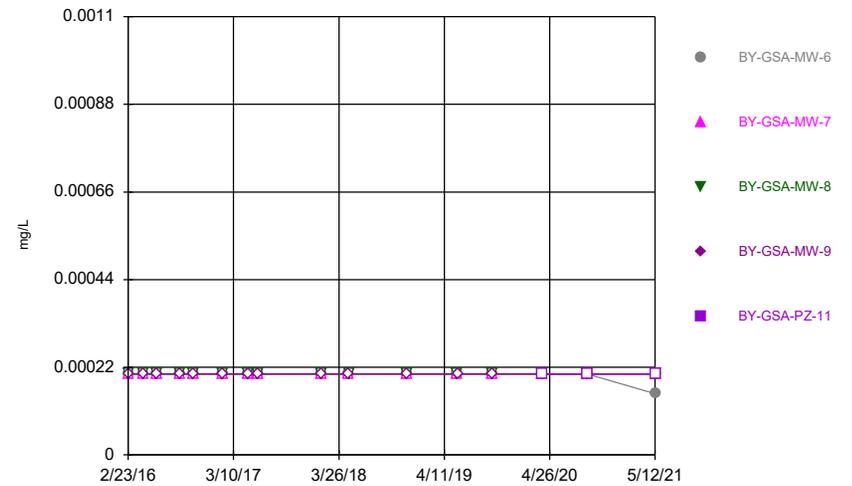
Constituent: Boron, total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



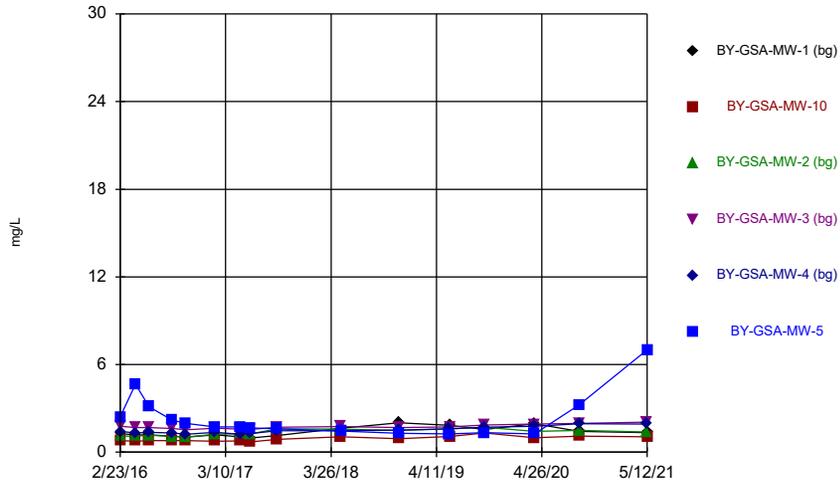
Constituent: Cadmium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



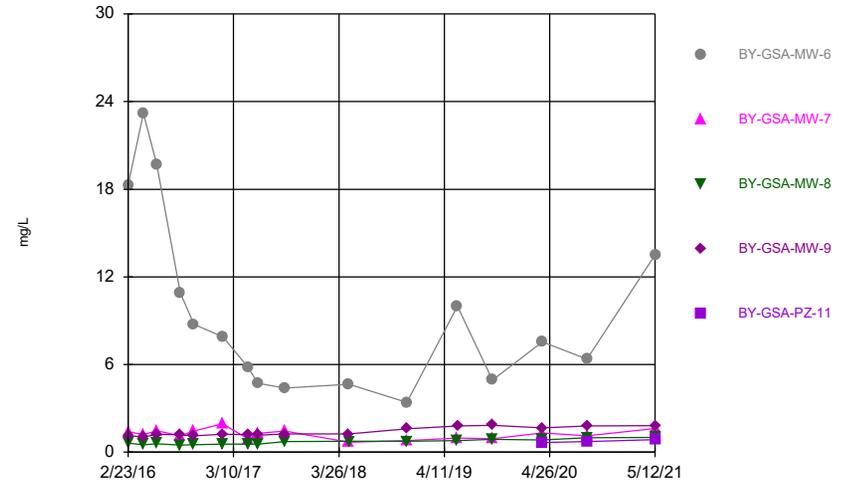
Constituent: Cadmium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



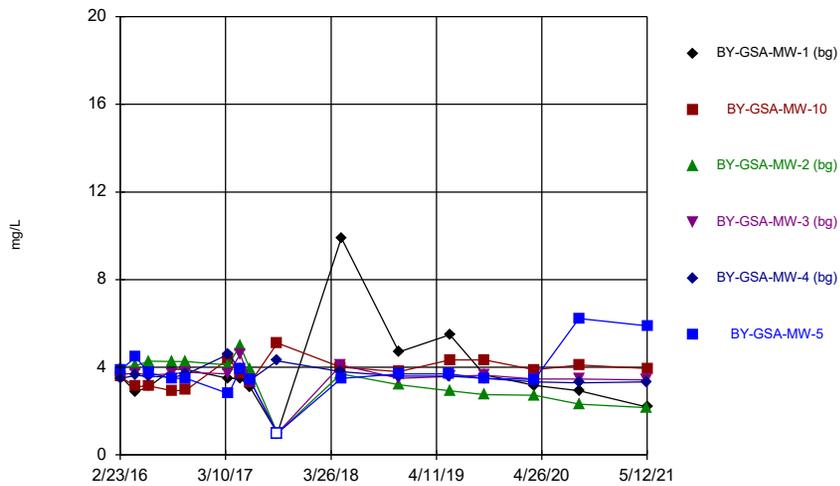
Constituent: Calcium, total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



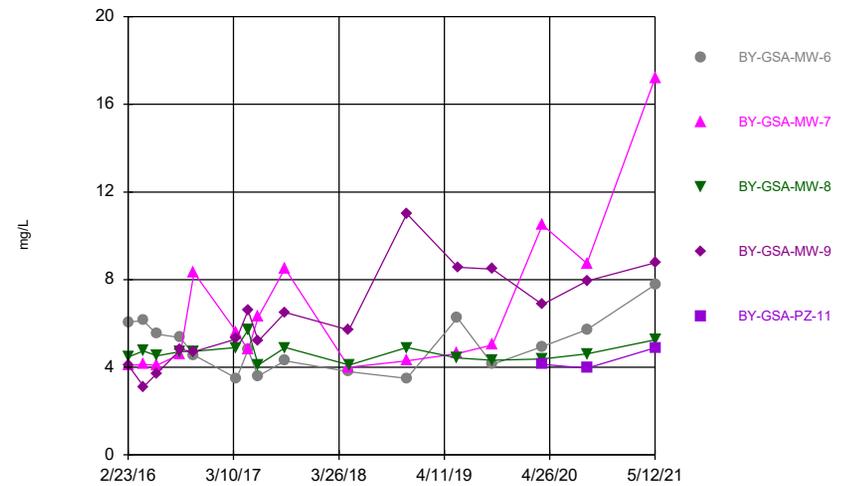
Constituent: Calcium, total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



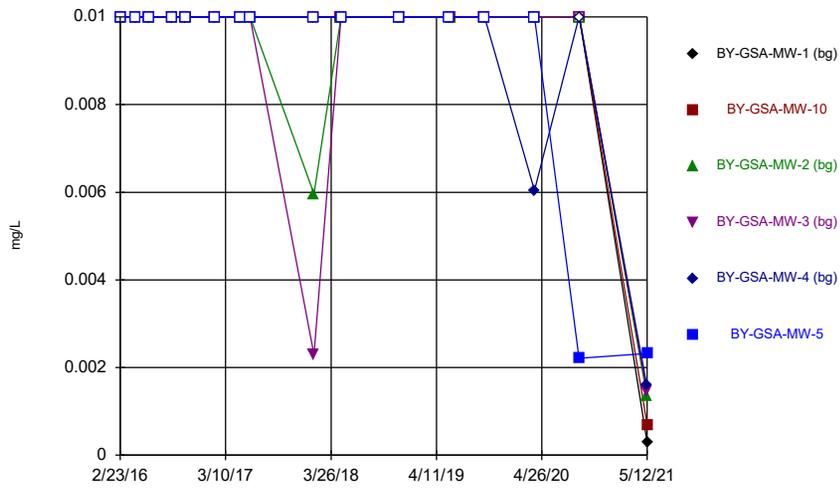
Constituent: Chloride, Total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



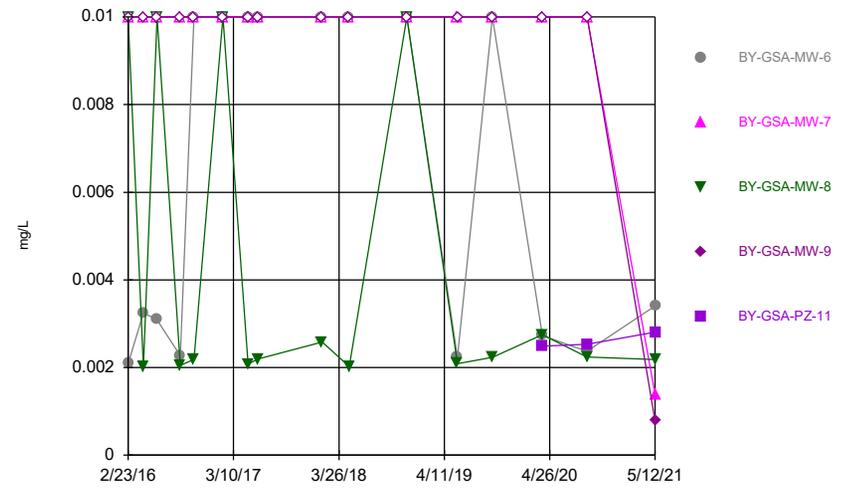
Constituent: Chloride, Total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



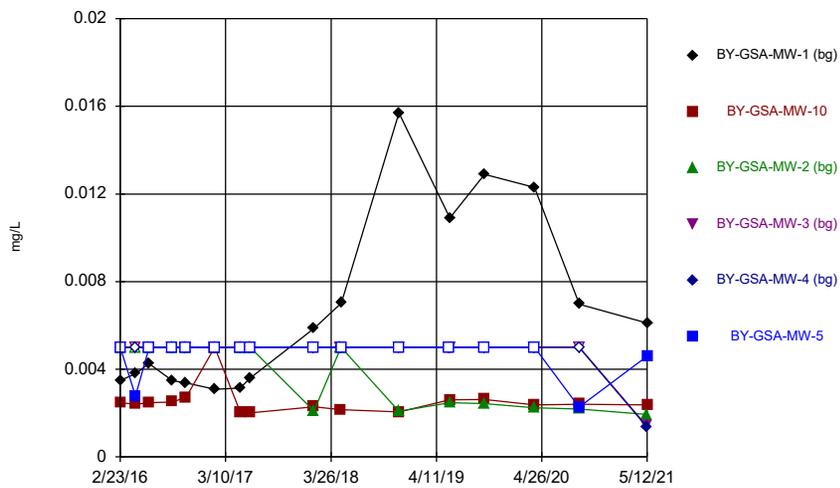
Constituent: Chromium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



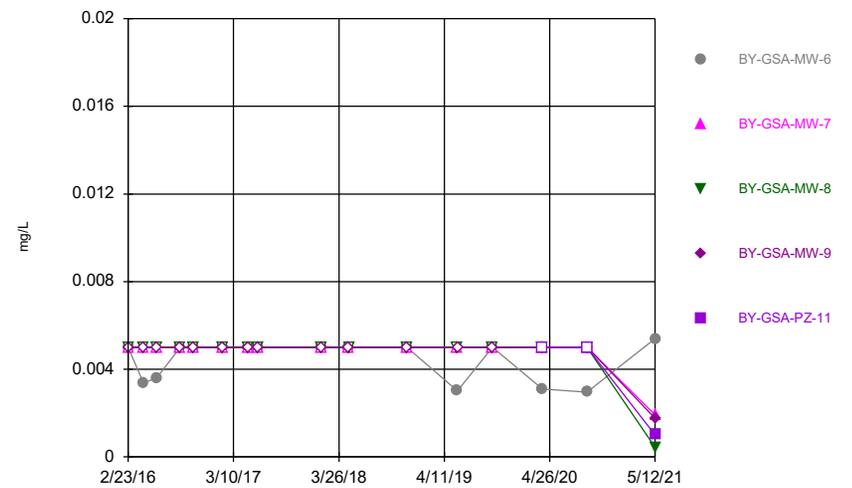
Constituent: Chromium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



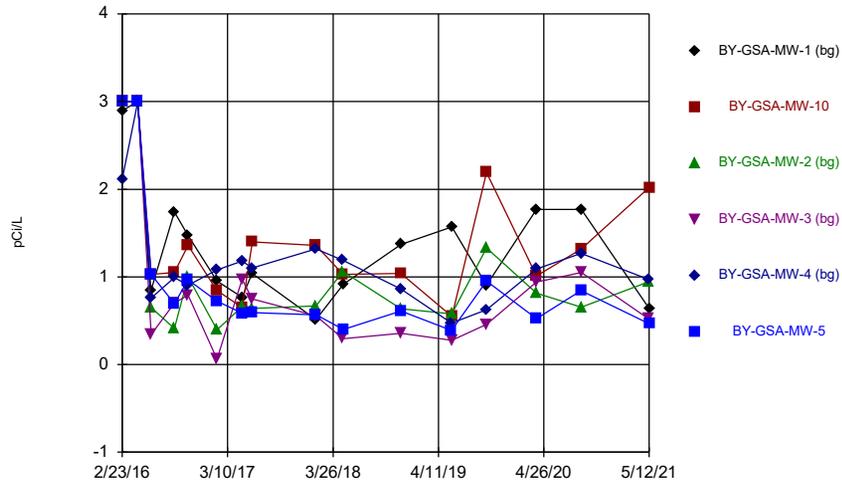
Constituent: Cobalt Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



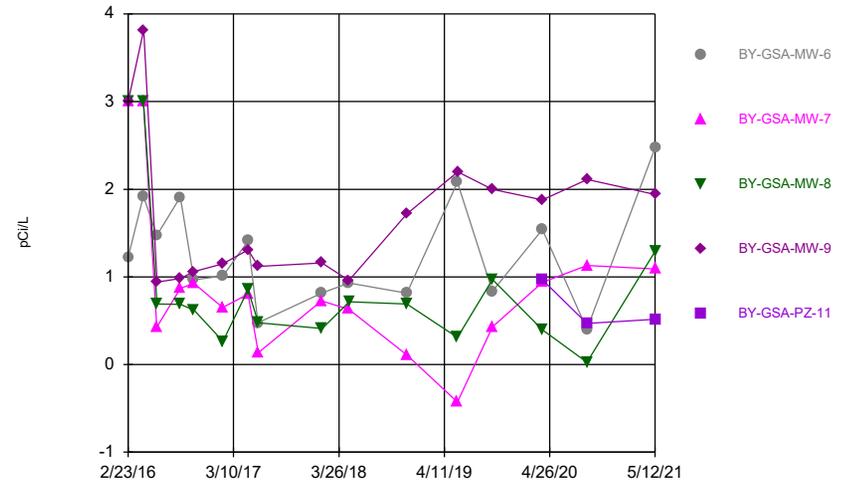
Constituent: Cobalt Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



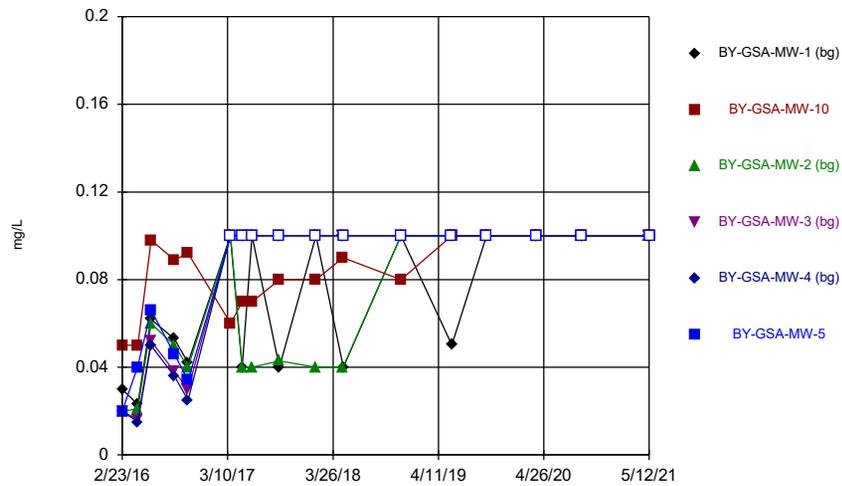
Constituent: Combined Radium 226 + 228 Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



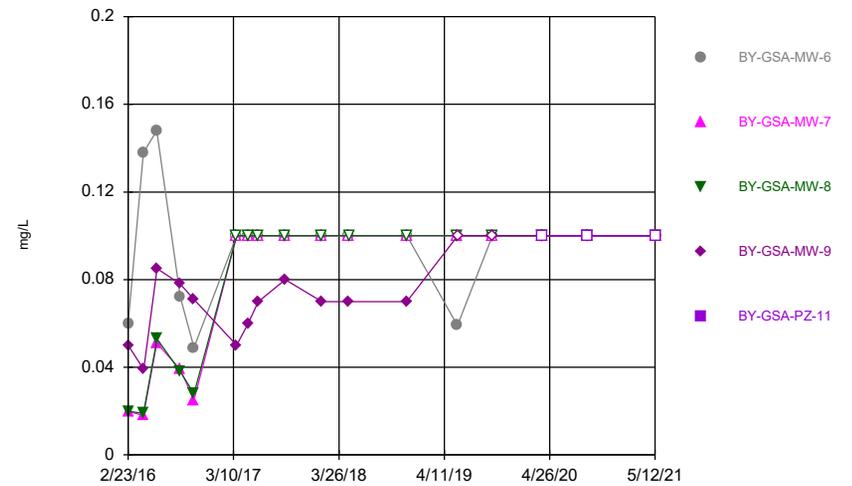
Constituent: Combined Radium 226 + 228 Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



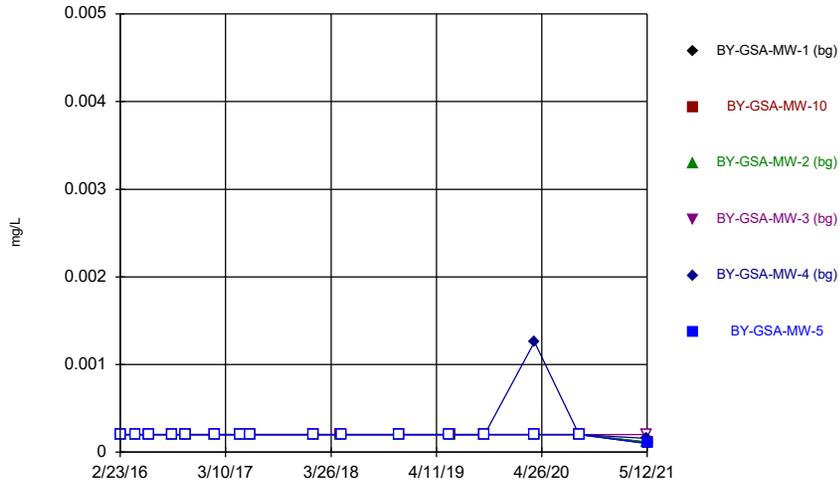
Constituent: Fluoride, total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



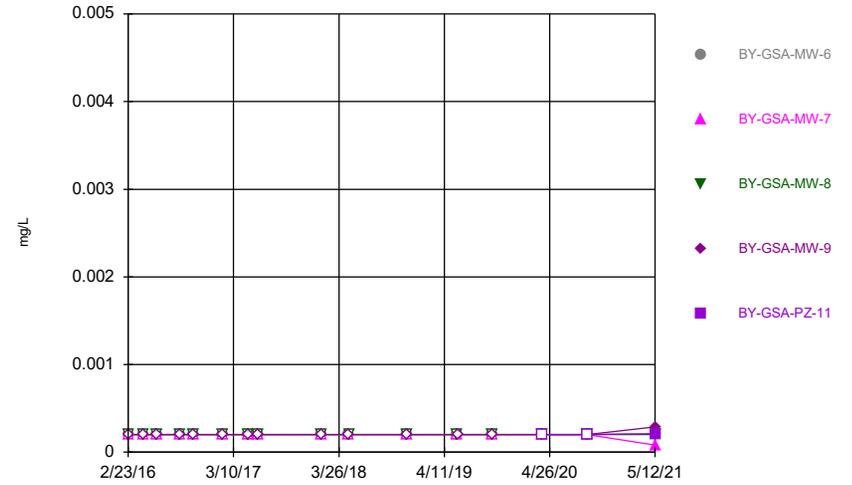
Constituent: Fluoride, total Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



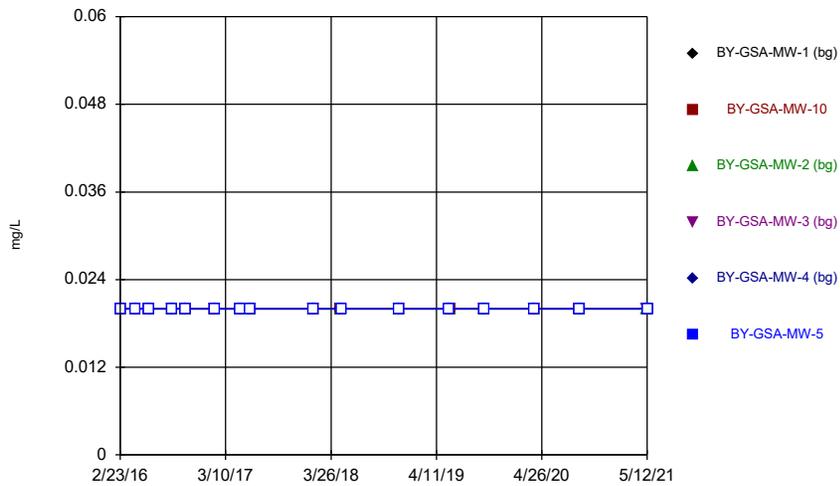
Constituent: Lead Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



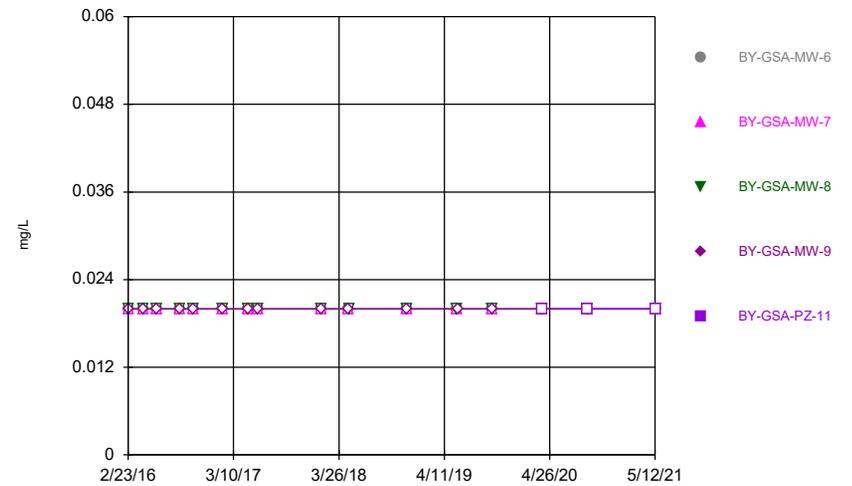
Constituent: Lead Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



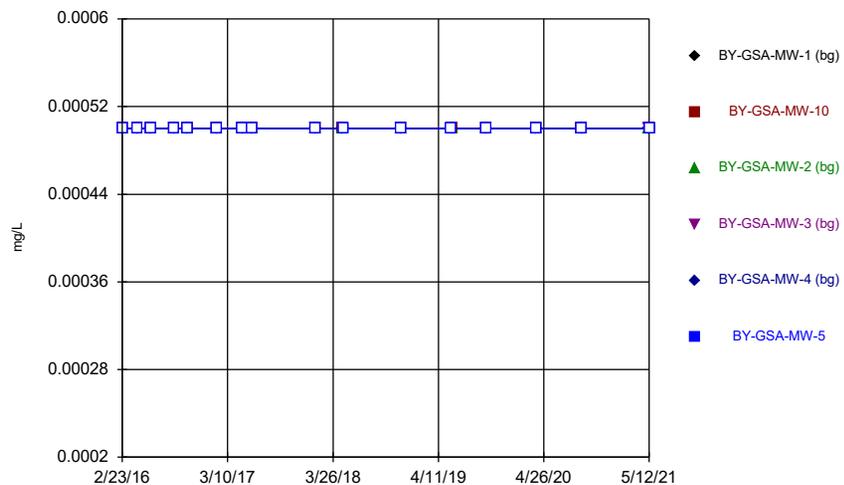
Constituent: Lithium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



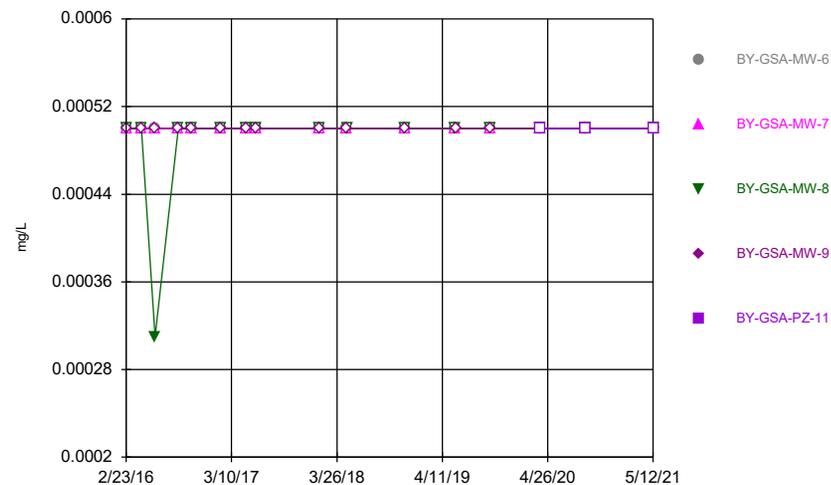
Constituent: Lithium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



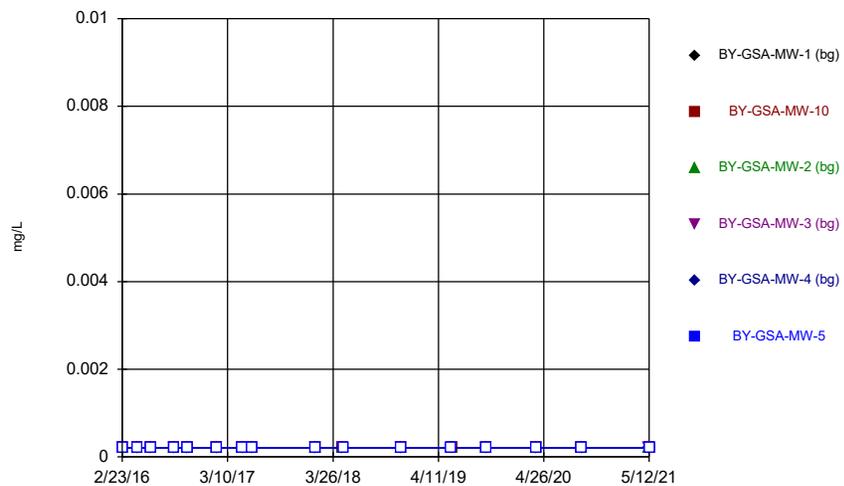
Constituent: Mercury Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



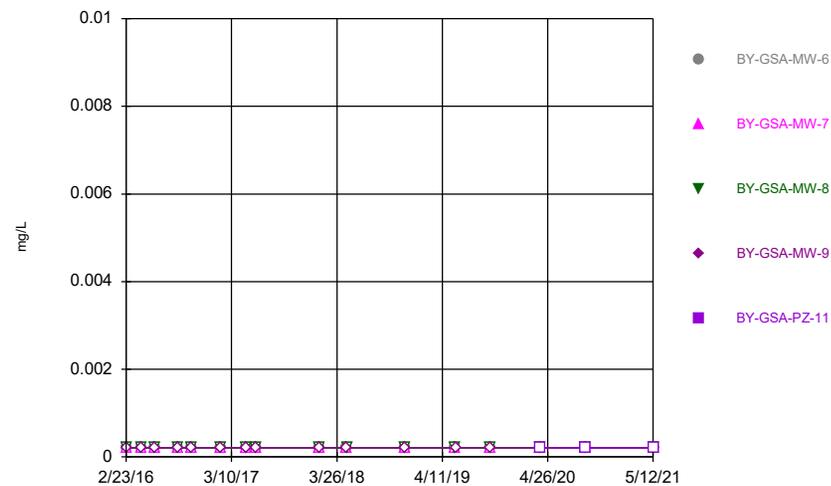
Constituent: Mercury Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



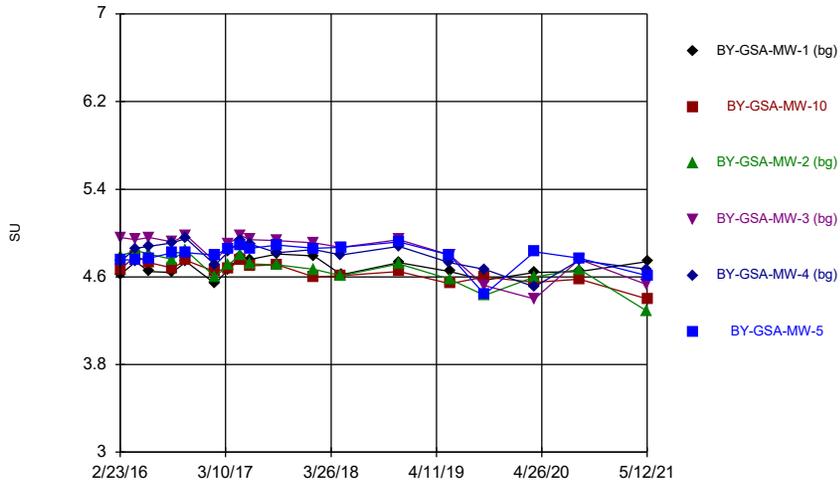
Constituent: Molybdenum Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



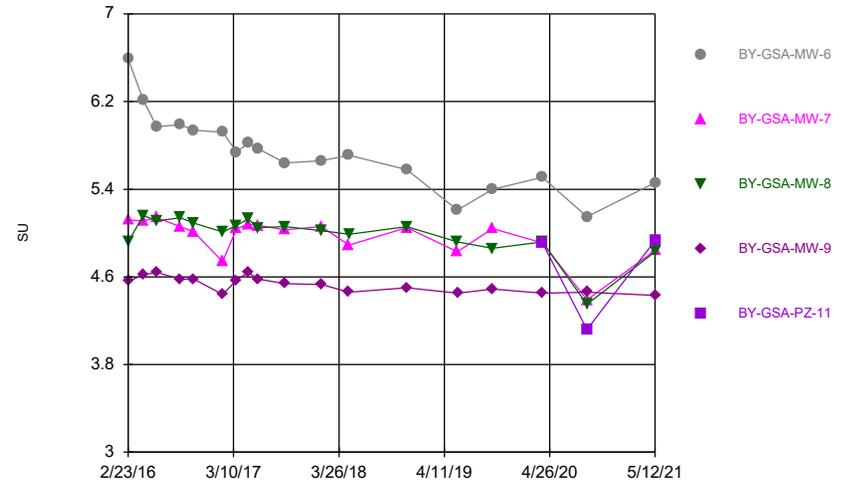
Constituent: Molybdenum Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



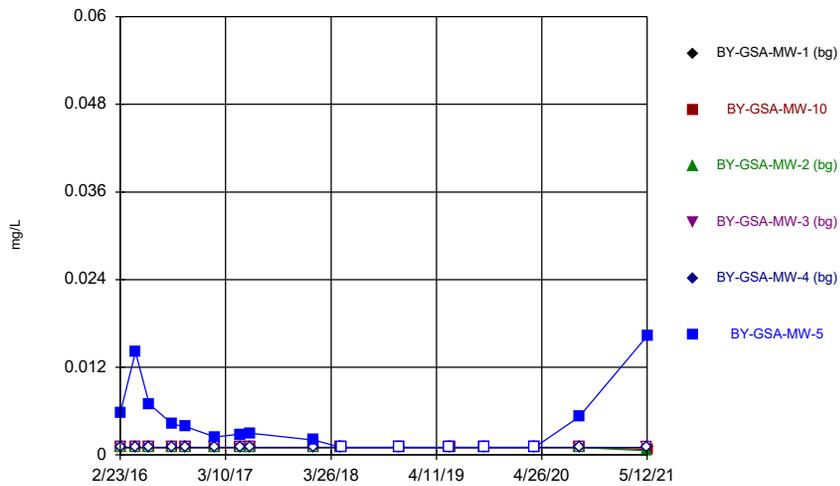
Constituent: pH, Field Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



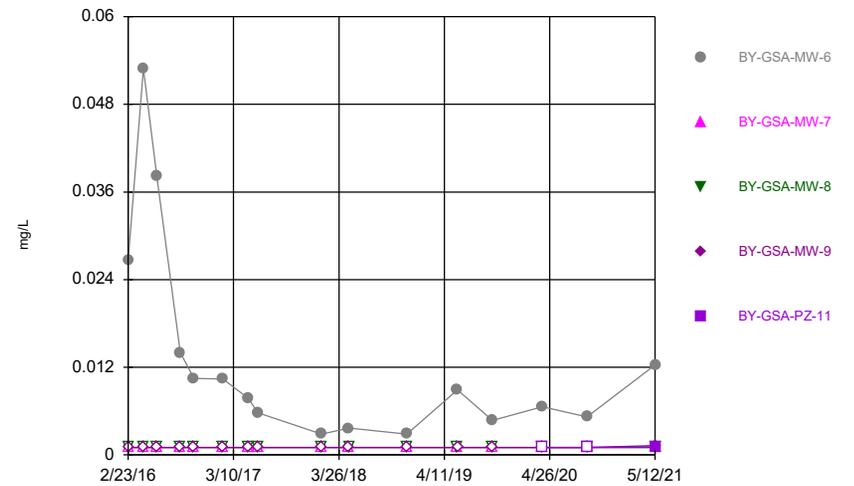
Constituent: pH, Field Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



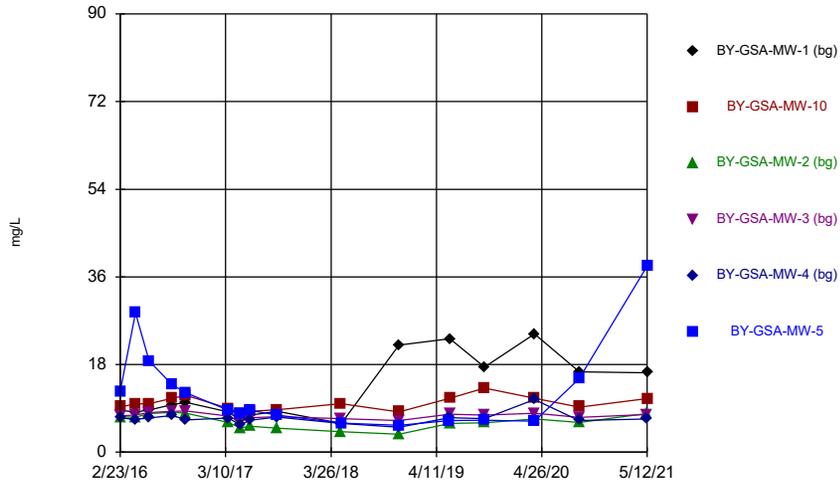
Constituent: Selenium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



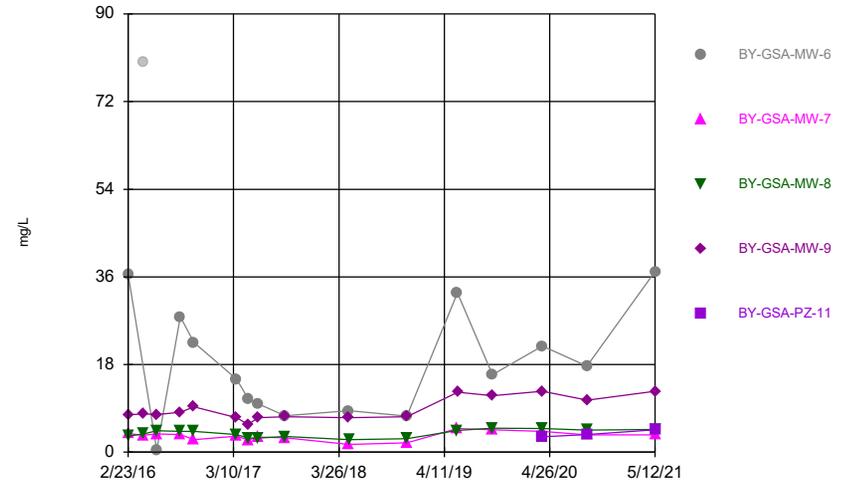
Constituent: Selenium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



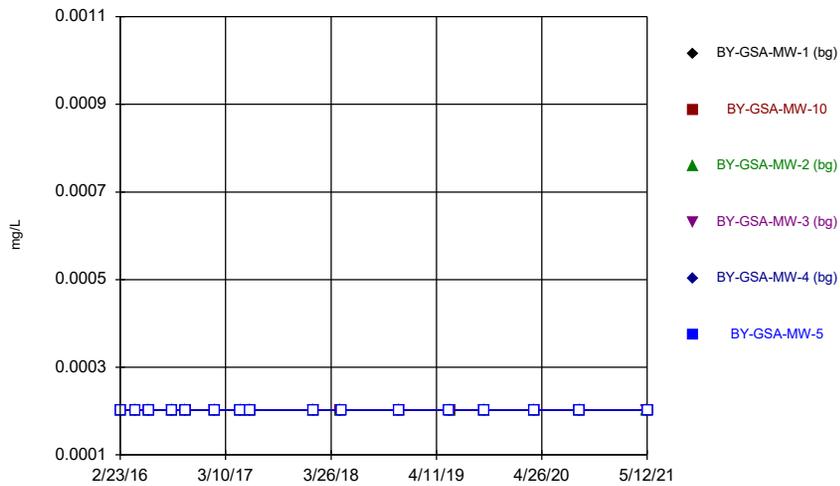
Constituent: Sulfate as SO4 Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



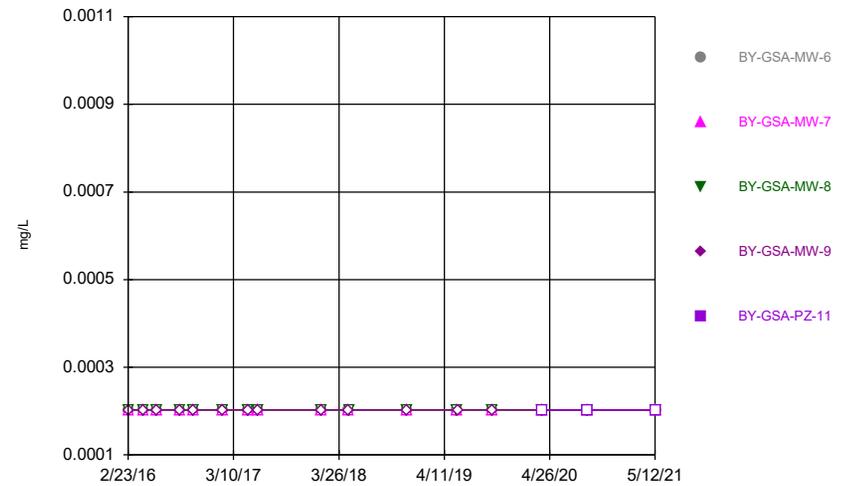
Constituent: Sulfate as SO4 Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



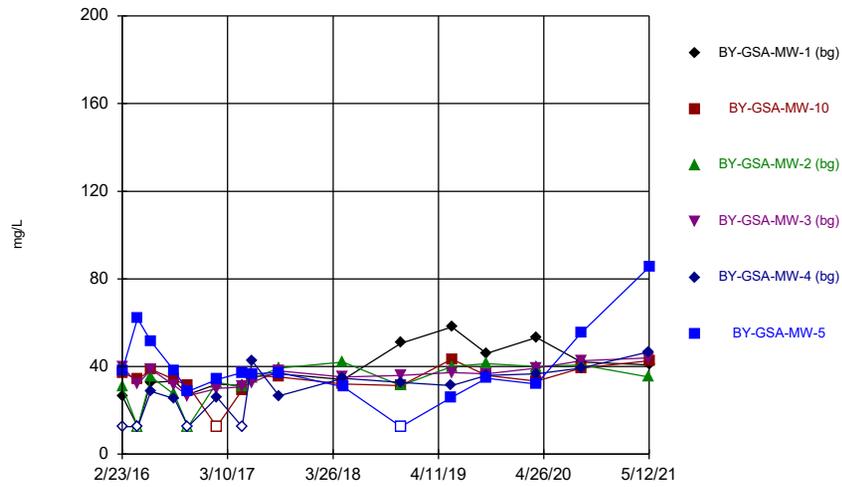
Constituent: Thallium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



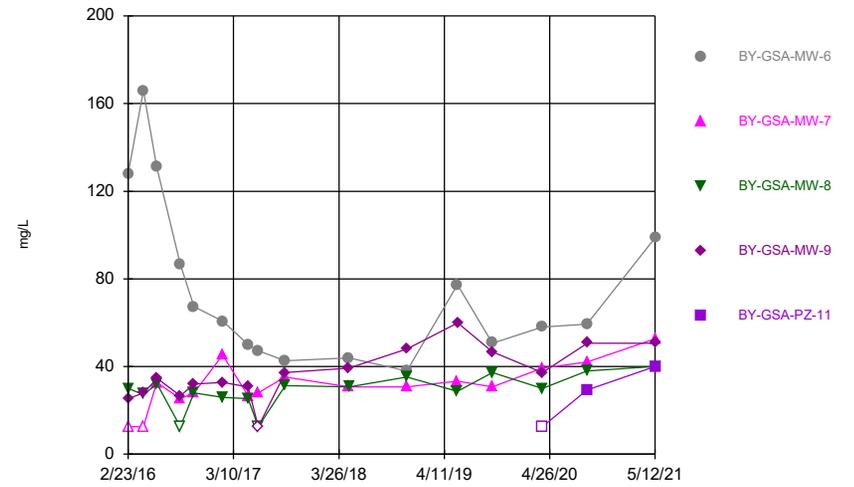
Constituent: Thallium Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



Constituent: Total Dissolved Solids Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



Constituent: Total Dissolved Solids Analysis Run 7/6/2021 3:05 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Time Series

Constituent: Antimony (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.001015	<0.001015	<0.001015	<0.001015	0.000606 (J)	<0.001015
4/18/2016						<0.001015
4/19/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
6/6/2016	<0.001015				<0.001015	
6/7/2016		<0.001015	<0.001015	<0.001015		<0.001015
8/30/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
10/18/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
1/30/2017		0.000838 (J)				
1/31/2017	0.000925 (J)		0.000898 (J)	0.000911 (J)	0.000928 (J)	0.000866 (J)
5/2/2017	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/6/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
6/7/2017		<0.001015				
1/23/2018	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
1/24/2018						<0.001015
5/1/2018		<0.001015	<0.001015	<0.001015	<0.001015	
5/2/2018	<0.001015					<0.001015
11/26/2018		<0.001015			<0.001015	
11/27/2018	<0.001015		<0.001015	<0.001015		<0.001015
5/28/2019					<0.001015	<0.001015
5/29/2019	<0.001015	<0.001015	<0.001015	<0.001015		
10/2/2019	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
3/30/2020						<0.001015
3/31/2020	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
9/8/2020					<0.001015	<0.001015
9/9/2020	<0.001015	<0.001015	<0.001015	<0.001015		
5/11/2021			<0.001015	<0.001015	<0.001015	
5/12/2021	<0.001015	<0.001015				<0.001015

# Time Series

Constituent: Antimony (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.001015	<0.001015	<0.001015	<0.001015	
4/18/2016	<0.001015	<0.001015	<0.001015		
4/19/2016				<0.001015	
6/6/2016	0.000633 (J)	<0.001015			
6/7/2016			<0.001015	<0.001015	
8/30/2016	<0.001015	<0.001015	<0.001015	<0.001015	
10/18/2016	<0.001015	<0.001015	<0.001015	<0.001015	
1/30/2017		0.00119 (J)		0.000859 (J)	
1/31/2017	0.000926 (J)		0.000885 (J)		
5/2/2017	<0.001015	<0.001015	<0.001015	<0.001015	
6/6/2017	<0.001015				
6/7/2017		<0.001015	<0.001015	<0.001015	
1/22/2018	<0.001015	<0.001015			
1/23/2018				<0.001015	
1/24/2018			<0.001015		
5/1/2018	<0.001015	<0.001015		<0.001015	
5/2/2018			<0.001015		
11/26/2018	<0.001015			<0.001015	
11/27/2018		<0.001015	<0.001015		
5/28/2019	<0.001015	<0.001015	<0.001015		
5/29/2019				<0.001015	
10/2/2019	<0.001015	<0.001015	<0.001015	<0.001015	
3/30/2020	<0.001015	<0.001015	<0.001015		
3/31/2020				<0.001015	<0.001015
9/8/2020	<0.001015	<0.001015	<0.001015		<0.001015
9/9/2020				<0.001015	
5/12/2021	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
4/18/2016						<0.000203
4/19/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2016	<0.000203				<0.000203	
6/7/2016		<0.000203	<0.000203	<0.000203		<0.000203
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
1/30/2017		<0.000203				
1/31/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/6/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
6/7/2017		<0.000203				
1/23/2018	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
1/24/2018						<0.000203
5/1/2018		<0.000203	<0.000203	<0.000203	<0.000203	
5/2/2018	<0.000203					<0.000203
11/26/2018		<0.000203			<0.000203	
11/27/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/28/2019					<0.000203	<0.000203
5/29/2019	<0.000203	<0.000203	<0.000203	<0.000203		
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020						<0.000203
3/31/2020	<0.000203	<0.000203	<0.000203	<0.000203	0.0017 (J)	
9/8/2020					<0.000203	<0.000203
9/9/2020	<0.000203	<0.000203	<0.000203	<0.000203		
5/11/2021			0.000136 (J)	<0.000203	0.000217	
5/12/2021	0.000336	0.000129 (J)				0.000501

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	
4/18/2016	<0.000203	<0.000203	<0.000203		
4/19/2016				<0.000203	
6/6/2016	<0.000203	<0.000203			
6/7/2016			<0.000203	<0.000203	
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	
1/30/2017		<0.000203		<0.000203	
1/31/2017	<0.000203		<0.000203		
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2017	<0.000203				
6/7/2017		<0.000203	<0.000203	<0.000203	
1/22/2018	<0.000203	<0.000203			
1/23/2018				<0.000203	
1/24/2018			<0.000203		
5/1/2018	<0.000203	<0.000203		<0.000203	
5/2/2018			<0.000203		
11/26/2018	<0.000203			<0.000203	
11/27/2018		<0.000203	<0.000203		
5/28/2019	<0.000203	<0.000203	<0.000203		
5/29/2019				<0.000203	
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	
3/30/2020	<0.000203	<0.000203	<0.000203		
3/31/2020				<0.000203	<0.000203
9/8/2020	<0.000203	<0.000203	<0.000203		<0.000203
9/9/2020				<0.000203	
5/12/2021	0.000821	0.000177 (J)	<0.000203	0.000173 (J)	0.000111 (J)

# Time Series

Constituent: Barium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	0.117	0.134	0.111	0.0862	0.0973	0.109
4/18/2016						0.135
4/19/2016	0.099	0.114	0.0875	0.0718	0.0802	
6/6/2016	0.107				0.0862	
6/7/2016		0.118	0.0979	0.0754		0.0892
8/30/2016	0.106	0.126	0.108	0.0768	0.0841	0.083
10/18/2016	0.102	0.127	0.103	0.0727	0.0715	0.0859
1/30/2017		0.1				
1/31/2017	0.0944		0.109	0.0698	0.0825	0.0779
5/2/2017	0.0868	0.114	0.125	0.0723	0.0777	0.0799
6/6/2017	0.0799		0.108	0.07	0.078	0.0788
6/7/2017		0.0991				
1/23/2018	0.0884	0.119	0.153	0.0747	0.0825	
1/24/2018						0.0746
5/1/2018		0.132	0.167	0.0877	0.102	
5/2/2018	0.137					0.085
11/26/2018		0.112			0.0994	
11/27/2018	0.157		0.158	0.0804		0.072
5/28/2019					0.102	0.0684
5/29/2019	0.166	0.125	0.172	0.0831		
10/2/2019	0.129	0.136	0.183	0.089	0.111	0.0728
3/30/2020						0.0718
3/31/2020	0.176	0.122	0.171	0.0927	0.129	
9/8/2020					0.125	0.181
9/9/2020	0.124	0.125	0.172	0.0919		
5/11/2021			0.165	0.0981	0.125	
5/12/2021	0.123	0.121				0.106

# Time Series

Constituent: Barium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	0.237	0.0546	0.0352	0.121	
4/18/2016	0.263	0.0421	0.0251		
4/19/2016				0.0926	
6/6/2016	0.206	0.0457			
6/7/2016			0.0299	0.0998	
8/30/2016	0.165	0.0469	0.0287	0.106	
10/18/2016	0.148	0.0611	0.0309	0.106	
1/30/2017		0.0801		0.111	
1/31/2017	0.123		0.0282		
5/2/2017	0.098	0.0388	0.0309	0.111	
6/6/2017	0.0844				
6/7/2017		0.0437	0.0287	0.107	
1/22/2018	0.0593	0.0399			
1/23/2018				0.122	
1/24/2018			0.0351		
5/1/2018	0.081	0.04		0.139	
5/2/2018			0.0398		
11/26/2018	0.0657			0.152	
11/27/2018		0.0427	0.0388		
5/28/2019	0.17	0.0524	0.0412		
5/29/2019				0.155	
10/2/2019	0.0985	0.0492	0.0453	0.16	
3/30/2020	0.142	0.0788	0.0444		
3/31/2020				0.165	0.0499
9/8/2020	0.0981	0.0615	0.0494		0.05
9/9/2020				0.17	
5/12/2021	0.159	0.1	0.0488	0.184	0.0597

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
4/18/2016						<0.001015
4/19/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
6/6/2016	0.000612 (J)				<0.001015	
6/7/2016		<0.001015	0.00093 (J)	<0.001015		<0.001015
8/30/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
10/18/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
1/30/2017		<0.001015				
1/31/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
5/2/2017	0.00069 (J)	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/6/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
6/7/2017		<0.001015				
1/23/2018	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
1/24/2018						<0.001015
5/1/2018		<0.001015	<0.001015	<0.001015	<0.001015	
5/2/2018	<0.001015					<0.001015
11/26/2018		<0.001015			<0.001015	
11/27/2018	0.000856 (J)		0.000801 (J)	<0.001015		<0.001015
5/28/2019					<0.001015	<0.001015
5/29/2019	<0.001015	<0.001015	<0.001015	<0.001015		
10/2/2019	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
3/30/2020						<0.001015
3/31/2020	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
9/8/2020					<0.001015	<0.001015
9/9/2020	<0.001015	<0.001015	<0.001015	<0.001015		
5/11/2021			<0.001015	<0.001015	<0.001015	
5/12/2021	0.000694 (J)	<0.001015				0.000575 (J)

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.001015	<0.001015	<0.001015	<0.001015	
4/18/2016	0.000681 (J)	<0.001015	<0.001015		
4/19/2016				<0.001015	
6/6/2016	<0.001015	<0.001015			
6/7/2016			<0.001015	<0.001015	
8/30/2016	<0.001015	<0.001015	<0.001015	<0.001015	
10/18/2016	<0.001015	<0.001015	<0.001015	<0.001015	
1/30/2017		<0.001015		<0.001015	
1/31/2017	<0.001015		<0.001015		
5/2/2017	0.000704 (J)	<0.001015	<0.001015	<0.001015	
6/6/2017	<0.001015				
6/7/2017		<0.001015	<0.001015	<0.001015	
1/22/2018	<0.001015	<0.001015			
1/23/2018				<0.001015	
1/24/2018			<0.001015		
5/1/2018	<0.001015	<0.001015		<0.001015	
5/2/2018			<0.001015		
11/26/2018	<0.001015			<0.001015	
11/27/2018		<0.001015	<0.001015		
5/28/2019	<0.001015	<0.001015	<0.001015		
5/29/2019				<0.001015	
10/2/2019	<0.001015	<0.001015	<0.001015	<0.001015	
3/30/2020	<0.001015	<0.001015	<0.001015		
3/31/2020				<0.001015	<0.001015
9/8/2020	<0.001015	<0.001015	<0.001015		<0.001015
9/9/2020				<0.001015	
5/12/2021	0.000763 (J)	0.000464 (J)	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Boron, total (mg/L)    Analysis Run 7/6/2021 3:07 PM    View: Constituent View

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	0.0212 (J)	0.0294 (J)	0.0252 (J)	<0.1015	0.0257 (J)	0.163
4/18/2016						0.361
4/19/2016	<0.1015	0.0257 (J)	<0.1015	<0.1015	<0.1015	
6/6/2016	<0.1015				<0.1015	
6/7/2016		0.0257 (J)	0.0202 (J)	<0.1015		0.169
8/30/2016	<0.1015	0.0317 (J)	<0.1015	<0.1015	<0.1015	0.0858 (J)
10/18/2016	<0.1015	<0.1015	<0.1015	<0.1015	0.022 (J)	0.0778 (J)
1/30/2017		0.0243 (J)				
1/31/2017	<0.1015		<0.1015	<0.1015	<0.1015	0.077 (J)
5/2/2017	<0.1015	0.0259 (J)	<0.1015	<0.1015	<0.1015	0.0602 (J)
6/6/2017	<0.1015		<0.1015	<0.1015	<0.1015	0.0442 (J)
6/7/2017		<0.1015				
9/12/2017					<0.1015	
9/13/2017	<0.1015	0.0394 (J)	<0.1015	<0.1015		0.0411 (J)
5/1/2018		0.0338 (J)	<0.1015	<0.1015	<0.1015	
5/2/2018	0.0362 (J)					0.0334 (J)
11/26/2018		0.0484 (J)			<0.1015	
11/27/2018	0.11		0.0207 (J)	<0.1015		0.0265 (J)
5/28/2019					<0.1015	<0.1015
5/29/2019	0.188	0.0669 (J)	<0.1015	<0.1015		
10/2/2019	0.097 (J)	0.0671 (J)	<0.1015	<0.1015	<0.1015	<0.1015
3/30/2020						<0.1015
3/31/2020	0.157	0.0442 (J)	<0.1015	<0.1015	<0.1015	
9/8/2020					<0.1015	0.521
9/9/2020	0.0999 (J)	0.0509 (J)	<0.1015	<0.1015		
5/11/2021			<0.1015	<0.1015	<0.1015	
5/12/2021	0.0841 (J)	0.0423 (J)				0.511

# Time Series

Constituent: Boron, total (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	0.638	0.0314 (J)	<0.1015	0.0297 (J)	
4/18/2016	0.908	<0.1015	<0.1015		
4/19/2016				0.0269 (J)	
6/6/2016	0.733	<0.1015			
6/7/2016			<0.1015	0.0271 (J)	
8/30/2016	0.448	<0.1015	<0.1015	0.0272 (J)	
10/18/2016	0.249	<0.1015	0.0207 (J)	<0.1015	
1/30/2017		<0.1015		0.0269 (J)	
1/31/2017	0.121		<0.1015		
5/2/2017	0.0695 (J)	<0.1015	<0.1015	0.027 (J)	
6/6/2017	0.0509 (J)				
6/7/2017		<0.1015	<0.1015	<0.1015	
9/12/2017	0.0709 (J)	<0.1015			
9/13/2017			<0.1015	0.032 (J)	
5/1/2018	0.0365 (J)	<0.1015		0.0302 (J)	
5/2/2018			<0.1015		
11/26/2018	0.0836 (J)			0.139	
11/27/2018		<0.1015	<0.1015		
5/28/2019	0.556	<0.1015	<0.1015		
5/29/2019				0.141	
10/2/2019	0.186	<0.1015	<0.1015	0.116	
3/30/2020	0.304	<0.1015	<0.1015		
3/31/2020				0.112	0.0864 (J)
9/8/2020	0.362	<0.1015	<0.1015		0.0638 (J)
9/9/2020				0.0873 (J)	
5/12/2021	0.876	<0.1015	<0.1015	0.0834 (J)	0.0742 (J)

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
4/18/2016						<0.000203
4/19/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2016	<0.000203				<0.000203	
6/7/2016		<0.000203	<0.000203	<0.000203		<0.000203
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
1/30/2017		<0.000203				
1/31/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/6/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
6/7/2017		<0.000203				
1/23/2018	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
1/24/2018						<0.000203
5/1/2018		<0.000203	<0.000203	<0.000203	<0.000203	
5/2/2018	<0.000203					<0.000203
11/26/2018		<0.000203			<0.000203	
11/27/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/28/2019					<0.000203	<0.000203
5/29/2019	<0.000203	<0.000203	<0.000203	<0.000203		
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020						<0.000203
3/31/2020	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
9/8/2020					<0.000203	<0.000203
9/9/2020	<0.000203	<0.000203	<0.000203	<0.000203		
5/11/2021			<0.000203	<0.000203	<0.000203	
5/12/2021	<0.000203	<0.000203				8.67E-05 (J)

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	
4/18/2016	<0.000203	<0.000203	<0.000203		
4/19/2016				<0.000203	
6/6/2016	<0.000203	<0.000203			
6/7/2016			<0.000203	<0.000203	
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	
1/30/2017		<0.000203		<0.000203	
1/31/2017	<0.000203		<0.000203		
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2017	<0.000203				
6/7/2017		<0.000203	<0.000203	<0.000203	
1/22/2018	<0.000203	<0.000203			
1/23/2018				<0.000203	
1/24/2018			<0.000203		
5/1/2018	<0.000203	<0.000203		<0.000203	
5/2/2018			<0.000203		
11/26/2018	<0.000203			<0.000203	
11/27/2018		<0.000203	<0.000203		
5/28/2019	<0.000203	<0.000203	<0.000203		
5/29/2019				<0.000203	
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	
3/30/2020	<0.000203	<0.000203	<0.000203		
3/31/2020				<0.000203	<0.000203
9/8/2020	<0.000203	<0.000203	<0.000203		<0.000203
9/9/2020				<0.000203	
5/12/2021	0.000154 (J)	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Calcium, total (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	1.28	0.795	1.11	1.77	1.42	2.42
4/18/2016						4.65
4/19/2016	1.19	0.761	1.09	1.68	1.31	
6/6/2016	1.19				1.35	
6/7/2016		0.799	1.16	1.68		3.1
8/30/2016	1.11	0.788	1.08	1.62	1.31	2.19
10/18/2016	1.04	0.788	1.03	1.53	1.22	1.97
1/30/2017		0.755				
1/31/2017	1.19		1.23	1.65	1.36	1.73
5/2/2017	1.05	0.763	1.28	1.58	1.24	1.74
6/6/2017	0.978		1.25	1.55	1.28	1.66
6/7/2017		0.706				
9/12/2017					1.47	
9/13/2017	1.14	0.873	1.6	1.71		1.61
5/1/2018		1.05	1.58	1.76	1.47	
5/2/2018	1.64					1.44
11/26/2018		0.922			1.52	
11/27/2018	2.01		1.49	1.69		1.3
5/28/2019					1.6	1.25
5/29/2019	1.85	1.07	1.59	1.74		
10/2/2019	1.55	1.32	1.7	1.86	1.7	1.33
3/30/2020						1.26
3/31/2020	1.96	0.98	1.43	1.92	1.78	
9/8/2020					1.94	3.24
9/9/2020	1.43	1.1	1.5	1.97		
5/11/2021			1.39	2.06	1.93	
5/12/2021	1.34	1.06				7

# Time Series

Constituent: Calcium, total (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	18.3	1.4	0.618	1.15	
4/18/2016	23.2	1.2	0.505		
4/19/2016				1.04	
6/6/2016	19.7	1.48			
6/7/2016			0.587	1.22	
8/30/2016	10.9	1.13	0.495 (J)	1.18	
10/18/2016	8.74	1.45	0.503	1.12	
1/30/2017		1.95		1.23	
1/31/2017	7.89		0.554		
5/2/2017	5.81	0.908	0.548	1.2	
6/6/2017	4.72				
6/7/2017		1.29	0.545	1.17	
9/12/2017	4.39	1.44			
9/13/2017			0.723	1.25	
5/1/2018	4.66	0.695		1.25	
5/2/2018			0.751		
11/26/2018	3.41			1.61	
11/27/2018		0.798	0.743		
5/28/2019	10	0.973	0.789		
5/29/2019				1.8	
10/2/2019	4.94	0.929	0.882	1.85	
3/30/2020	7.56	1.32	0.841		
3/31/2020				1.67	0.663
9/8/2020	6.38	1.12	0.981		0.724
9/9/2020				1.79	
5/12/2021	13.5	1.63	1.02	1.82	0.861

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	3.59	3.57	3.99	3.68	3.5	3.86
4/18/2016						4.46
4/19/2016	2.89	3.12	4.08	3.72	3.63	
6/6/2016	3.12				3.6	
6/7/2016		3.14	4.28	3.66		3.74
8/30/2016	3.91	2.93	4.26	3.7	3.54	3.5
10/18/2016	3.9	2.96	4.26	3.77	3.68	3.5
3/20/2017	3.5		4.1	3.7	4.6	
3/21/2017		4.4				2.8
5/2/2017	3.5	3.7	5	4.6	3.9	3.9
6/6/2017	3.1		3.9	3.4	3.4	3.4
6/7/2017		3.3				
9/12/2017					4.3	
9/13/2017	<2 (U*)	5.1	<2 (U*)	<2 (U*)		<2 (U*)
5/1/2018		4	3.7	4.1	3.8	
5/2/2018	9.9					3.5
11/26/2018		3.8			3.6	
11/27/2018	4.7		3.2	3.5		3.7
5/28/2019					3.6	3.69
5/29/2019	5.48	4.34	2.93	3.58		
10/2/2019	3.65	4.34	2.75	3.64	3.5	3.49
3/30/2020						3.45
3/31/2020	3.17	3.89	2.72	3.47	3.34	
9/8/2020					3.29	6.23
9/9/2020	2.92	4.11	2.32	3.47		
5/11/2021			2.16	3.42	3.33	
5/12/2021	2.18	3.94				5.89

# Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	6.06	4.08	4.47	4.1	
4/18/2016	6.13	4.14	4.74		
4/19/2016				3.11	
6/6/2016	5.52	4.09			
6/7/2016			4.52	3.72	
8/30/2016	5.35	4.6	4.71	4.8	
10/18/2016	4.55	8.32	4.73	4.71	
3/21/2017	3.5	5.6	4.9	5.3	
5/2/2017	4.8	4.8	5.7	6.6	
6/6/2017	3.6				
6/7/2017		6.3	4.1	5.2	
9/12/2017	4.3	8.5			
9/13/2017			4.9	6.5	
5/1/2018	3.8	4		5.7	
5/2/2018			4.1		
11/26/2018	3.5			11	
11/27/2018		4.3	4.9		
5/28/2019	6.26	4.63	4.43		
5/29/2019				8.56	
10/2/2019	4.13	5.02	4.32	8.48	
3/30/2020	4.95	10.5	4.38		
3/31/2020				6.87	4.13
9/8/2020	5.71	8.74	4.61		3.96
9/9/2020				7.94	
5/12/2021	7.77	17.2	5.25	8.77	4.89

# Time Series

Constituent: Chromium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4/18/2016						<0.01
4/19/2016	<0.01	<0.01	<0.01	<0.01	<0.01	
6/6/2016	<0.01				<0.01	
6/7/2016		<0.01	<0.01	<0.01		<0.01
8/30/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10/18/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1/30/2017		<0.01				
1/31/2017	<0.01		<0.01	<0.01	<0.01	<0.01
5/2/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6/6/2017	<0.01		<0.01	<0.01	<0.01	<0.01
6/7/2017		<0.01				
1/23/2018	<0.01	<0.01	0.00596 (J)	0.00229 (J)	<0.01	
1/24/2018						<0.01
5/1/2018		<0.01	<0.01	<0.01	<0.01	
5/2/2018	<0.01					<0.01
11/26/2018		<0.01			<0.01	
11/27/2018	<0.01		<0.01	<0.01		<0.01
5/28/2019					<0.01	<0.01
5/29/2019	<0.01	<0.01	<0.01	<0.01		
10/2/2019	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3/30/2020						<0.01
3/31/2020	<0.01	<0.01	<0.01	<0.01	0.00604 (J)	
9/8/2020					<0.01	0.00221 (J)
9/9/2020	<0.01	<0.01	<0.01	<0.01		
5/11/2021			0.00136	0.00146	0.00159	
5/12/2021	0.000296 (J)	0.000695 (J)				0.00232

# Time Series

Constituent: Chromium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	0.00209 (J)	<0.01	<0.01	<0.01	
4/18/2016	0.00324 (J)	<0.01	0.00201 (J)		
4/19/2016				<0.01	
6/6/2016	0.0031 (J)	<0.01			
6/7/2016			<0.01	<0.01	
8/30/2016	0.00227 (J)	<0.01	0.00205 (J)	<0.01	
10/18/2016	<0.01	<0.01	0.00218 (J)	<0.01	
1/30/2017		<0.01		<0.01	
1/31/2017	<0.01		<0.01		
5/2/2017	<0.01	<0.01	0.00208 (J)	<0.01	
6/6/2017	<0.01				
6/7/2017		<0.01	0.0022 (J)	<0.01	
1/22/2018	<0.01	<0.01			
1/23/2018				<0.01	
1/24/2018			0.00258 (J)		
5/1/2018	<0.01	<0.01		<0.01	
5/2/2018			0.00202 (J)		
11/26/2018	<0.01			<0.01	
11/27/2018		<0.01	<0.01		
5/28/2019	0.00223 (J)	<0.01	0.00209 (J)		
5/29/2019				<0.01	
10/2/2019	<0.01	<0.01	0.00223 (J)	<0.01	
3/30/2020	0.00273 (J)	<0.01	0.00275 (J)		
3/31/2020				<0.01	0.00249 (J)
9/8/2020	0.00237 (J)	<0.01	0.00224 (J)		0.00253 (J)
9/9/2020				<0.01	
5/12/2021	0.0034	0.00139	0.00218	0.000783 (J)	0.00281

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	0.0035 (J)	0.00247 (J)	<0.005	<0.005	<0.005	<0.005
4/18/2016						0.00278 (J)
4/19/2016	0.0038 (J)	0.00241 (J)	<0.005	<0.005	<0.005	
6/6/2016	0.00427 (J)				<0.005	
6/7/2016		0.00247 (J)	<0.005	<0.005		<0.005
8/30/2016	0.00348 (J)	0.00251 (J)	<0.005	<0.005	<0.005	<0.005
10/18/2016	0.00338 (J)	0.00272 (J)	<0.005	<0.005	<0.005	<0.005
1/30/2017		<0.005				
1/31/2017	0.00308 (J)		<0.005	<0.005	<0.005	<0.005
5/2/2017	0.00314 (J)	0.00205 (J)	<0.005	<0.005	<0.005	<0.005
6/6/2017	0.0036 (J)		<0.005	<0.005	<0.005	<0.005
6/7/2017		0.00201 (J)				
1/23/2018	0.00586 (J)	0.00229 (J)	0.0021 (J)	<0.005	<0.005	
1/24/2018						<0.005
5/1/2018		0.00216 (J)	<0.005	<0.005	<0.005	
5/2/2018	0.00702 (J)					<0.005
11/26/2018		0.00205 (J)			<0.005	
11/27/2018	0.0157		0.00209 (J)	<0.005		<0.005
5/28/2019					<0.005	<0.005
5/29/2019	0.0109	0.00261 (J)	0.00248 (J)	<0.005		
10/2/2019	0.0129	0.00262 (J)	0.00244 (J)	<0.005	<0.005	<0.005
3/30/2020						<0.005
3/31/2020	0.0123	0.00238 (J)	0.00224 (J)	<0.005	<0.005	
9/8/2020					<0.005	0.00227 (J)
9/9/2020	0.00697	0.00241 (J)	0.00219 (J)	<0.005		
5/11/2021			0.00194	0.00142	0.00137	
5/12/2021	0.00611	0.00237				0.0046

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.005	<0.005	<0.005	<0.005	
4/18/2016	0.00338 (J)	<0.005	<0.005		
4/19/2016				<0.005	
6/6/2016	0.00361 (J)	<0.005			
6/7/2016			<0.005	<0.005	
8/30/2016	<0.005	<0.005	<0.005	<0.005	
10/18/2016	<0.005	<0.005	<0.005	<0.005	
1/30/2017		<0.005		<0.005	
1/31/2017	<0.005		<0.005		
5/2/2017	<0.005	<0.005	<0.005	<0.005	
6/6/2017	<0.005				
6/7/2017		<0.005	<0.005	<0.005	
1/22/2018	<0.005	<0.005			
1/23/2018				<0.005	
1/24/2018			<0.005		
5/1/2018	<0.005	<0.005		<0.005	
5/2/2018			<0.005		
11/26/2018	<0.005			<0.005	
11/27/2018		<0.005	<0.005		
5/28/2019	0.00301 (J)	<0.005	<0.005		
5/29/2019				<0.005	
10/2/2019	<0.005	<0.005	<0.005	<0.005	
3/30/2020	0.0031 (J)	<0.005	<0.005		
3/31/2020				<0.005	<0.005
9/8/2020	0.00296 (J)	<0.005	<0.005		<0.005
9/9/2020				<0.005	
5/12/2021	0.0054	0.00192	0.000437	0.00177	0.00101

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	2.8971 (U)	3 (U)	3 (U)	3 (U)	2.1138	3 (U)
4/18/2016						3 (U)
4/19/2016	3 (U)	3 (U)	3 (U)	3 (U)	3 (U)	
6/6/2016	0.841				0.757	
6/7/2016		1.03	0.652	0.342 (U)		1.03
8/30/2016	1.74	1.05	0.411 (U)	0.702	0.992	0.696
10/18/2016	1.47	1.36	1	0.791	0.905	0.966
1/30/2017		0.847				
1/31/2017	0.952		0.398 (U)	0.0613 (U)	1.08	0.724
5/2/2017	0.768	0.649	0.66	0.974	1.18	0.587
6/6/2017	1.04		0.639	0.748	1.1	0.591
6/7/2017		1.4				
1/23/2018	0.513 (U)	1.36 (U)	0.669 (U)	0.558 (U)	1.32 (U)	
1/24/2018						0.566 (U)
5/1/2018		1.03	1.06	0.296 (U)	1.19	
5/2/2018	0.916					0.401
11/26/2018		1.04			0.863	
11/27/2018	1.37		0.636	0.357 (U)		0.611
5/28/2019					0.474 (U)	0.391 (U)
5/29/2019	1.57	0.548 (U)	0.579 (U)	0.275 (U)		
10/2/2019	0.905	2.19	1.33	0.458 (U)	0.624 (U)	0.954
3/30/2020						0.525
3/31/2020	1.77	1.01	0.814	0.941	1.09	
9/8/2020					1.27	0.845
9/9/2020	1.77	1.32	0.653 (U)	1.05		
5/11/2021			0.945 (U)	0.521 (U)	0.969 (U)	
5/12/2021	0.639 (U)	2.02				0.465 (U)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	1.2261 (U)	3 (U)	3 (U)	3 (U)	
4/18/2016	1.92351 (U)	3 (U)	3 (U)		
4/19/2016				3.81872	
6/6/2016	1.47	0.427			
6/7/2016			0.69	0.941	
8/30/2016	1.91	0.869	0.687	0.98	
10/18/2016	0.966	0.927	0.62	1.06	
1/30/2017		0.649		1.15	
1/31/2017	1.01		0.266 (U)		
5/2/2017	1.41	0.804	0.853	1.31	
6/6/2017	0.476				
6/7/2017		0.136 (U)	0.477	1.12	
1/22/2018	0.814 (U)	0.726 (U)			
1/23/2018				1.16 (U)	
1/24/2018			0.411 (U)		
5/1/2018	0.931	0.63		0.961	
5/2/2018			0.718		
11/26/2018	0.815			1.72	
11/27/2018		0.109 (U)	0.691		
5/28/2019	2.08	-0.428 (U)	0.311 (U)		
5/29/2019				2.2	
10/2/2019	0.836	0.43 (U)	0.969	2	
3/30/2020	1.54	0.939	0.397 (U)		
3/31/2020				1.88	0.968
9/8/2020	0.402 (U)	1.13	0.0249 (U)		0.468 (U)
9/9/2020				2.11	
5/12/2021	2.47	1.09	1.29	1.94	0.515 (U)

# Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	0.03 (J)	0.05 (J)	0.02 (J)	0.02 (J)	0.02 (J)	0.02 (J)
4/18/2016						0.04 (J)
4/19/2016	0.023 (J)	0.05 (J)	0.021 (J)	0.016 (J)	0.015 (J)	
6/6/2016	0.062 (J)				0.05 (J)	
6/7/2016		0.098 (J)	0.06 (J)	0.052 (J)		0.066 (J)
8/30/2016	0.053 (J)	0.089 (J)	0.05 (J)	0.038 (J)	0.036 (J)	0.046 (J)
10/18/2016	0.042 (J)	0.092 (J)	0.04 (J)	0.03 (J)	0.025 (J)	0.034 (J)
3/20/2017	<0.1		<0.1	<0.1	<0.1	
3/21/2017		0.06 (J)				<0.1
5/2/2017	0.04 (J)	0.07 (J)	0.04 (J)	<0.1	<0.1	<0.1
6/6/2017	<0.1		0.04 (J)	<0.1	<0.1	<0.1
6/7/2017		0.07 (J)				
9/12/2017					<0.1	
9/13/2017	0.04 (J)	0.08 (J)	0.043 (J)	<0.1		<0.1
1/23/2018	<0.1	0.08 (J)	0.04 (J)	<0.1	<0.1	
1/24/2018						<0.1
5/1/2018		0.09 (J)	0.04 (J)	<0.1	<0.1	
5/2/2018	0.04 (J)					<0.1
11/26/2018		0.08 (J)			<0.1	
11/27/2018	<0.1		<0.1	<0.1		<0.1
5/28/2019					<0.1	<0.1
5/29/2019	0.0502 (J)	<0.1	<0.1	<0.1		
10/2/2019	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3/30/2020						<0.1
3/31/2020	<0.1	<0.1	<0.1	<0.1	<0.1	
9/8/2020					<0.1	<0.1
9/9/2020	<0.1	<0.1	<0.1	<0.1		
5/11/2021			<0.1	<0.1	<0.1	
5/12/2021	<0.1	<0.1				<0.1

# Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	0.06 (J)	0.02 (J)	0.02 (J)	0.05 (J)	
4/18/2016	0.138 (J)	0.018 (J)	0.019 (J)		
4/19/2016				0.039 (J)	
6/6/2016	0.148 (J)	0.051 (J)			
6/7/2016			0.053 (J)	0.085 (J)	
8/30/2016	0.072 (J)	0.039 (J)	0.038 (J)	0.078 (J)	
10/18/2016	0.049 (J)	0.025 (J)	0.028 (J)	0.071 (J)	
3/21/2017	<0.1	<0.1	<0.1	0.05 (J)	
5/2/2017	<0.1	<0.1	<0.1	0.06 (J)	
6/6/2017	<0.1				
6/7/2017		<0.1	<0.1	0.07 (J)	
9/12/2017	<0.1	<0.1			
9/13/2017			<0.1	0.08 (J)	
1/22/2018	<0.1	<0.1			
1/23/2018				0.07 (J)	
1/24/2018			<0.1		
5/1/2018	<0.1	<0.1		0.07 (J)	
5/2/2018			<0.1		
11/26/2018	<0.1			0.07 (J)	
11/27/2018		<0.1	<0.1		
5/28/2019	0.0591 (J)	<0.1	<0.1		
5/29/2019				<0.1	
10/2/2019	<0.1	<0.1	<0.1	<0.1	
3/30/2020	<0.1	<0.1	<0.1		
3/31/2020				<0.1	<0.1
9/8/2020	<0.1	<0.1	<0.1		<0.1
9/9/2020				<0.1	
5/12/2021	<0.1	<0.1	<0.1	<0.1	<0.1

# Time Series

Constituent: Lead (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
4/18/2016						<0.000203
4/19/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2016	<0.000203				<0.000203	
6/7/2016		<0.000203	<0.000203	<0.000203		<0.000203
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
1/30/2017		<0.000203				
1/31/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/6/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
6/7/2017		<0.000203				
1/23/2018	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
1/24/2018						<0.000203
5/1/2018		<0.000203	<0.000203	<0.000203	<0.000203	
5/2/2018	<0.000203					<0.000203
11/26/2018		<0.000203			<0.000203	
11/27/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/28/2019					<0.000203	<0.000203
5/29/2019	<0.000203	<0.000203	<0.000203	<0.000203		
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020						<0.000203
3/31/2020	<0.000203	<0.000203	<0.000203	<0.000203	0.00126 (J)	
9/8/2020					<0.000203	<0.000203
9/9/2020	<0.000203	<0.000203	<0.000203	<0.000203		
5/11/2021			0.000118 (J)	<0.000203	0.000159 (J)	
5/12/2021	9.79E-05 (J)	0.000113 (J)				9.94E-05 (J)

# Time Series

Constituent: Lead (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	
4/18/2016	<0.000203	<0.000203	<0.000203		
4/19/2016				<0.000203	
6/6/2016	<0.000203	<0.000203			
6/7/2016			<0.000203	<0.000203	
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	
1/30/2017		<0.000203		<0.000203	
1/31/2017	<0.000203		<0.000203		
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2017	<0.000203				
6/7/2017		<0.000203	<0.000203	<0.000203	
1/22/2018	<0.000203	<0.000203			
1/23/2018				<0.000203	
1/24/2018			<0.000203		
5/1/2018	<0.000203	<0.000203		<0.000203	
5/2/2018			<0.000203		
11/26/2018	<0.000203			<0.000203	
11/27/2018		<0.000203	<0.000203		
5/28/2019	<0.000203	<0.000203	<0.000203		
5/29/2019				<0.000203	
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	
3/30/2020	<0.000203	<0.000203	<0.000203		
3/31/2020				<0.000203	<0.000203
9/8/2020	<0.000203	<0.000203	<0.000203		<0.000203
9/9/2020				<0.000203	
5/12/2021	0.000213	7.98E-05 (J)	<0.000203	0.000288	0.000208

# Time Series

Constituent: Lithium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956
4/18/2016						<0.01999956
4/19/2016	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
6/6/2016	<0.01999956				<0.01999956	
6/7/2016		<0.01999956	<0.01999956	<0.01999956		<0.01999956
8/30/2016	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956
10/18/2016	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956
1/30/2017		<0.01999956				
1/31/2017	<0.01999956		<0.01999956	<0.01999956	<0.01999956	<0.01999956
5/2/2017	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956
6/6/2017	<0.01999956		<0.01999956	<0.01999956	<0.01999956	<0.01999956
6/7/2017		<0.01999956				
1/23/2018	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
1/24/2018						<0.01999956
5/1/2018		<0.01999956	<0.01999956	<0.01999956	<0.01999956	
5/2/2018	<0.01999956					<0.01999956
11/26/2018		<0.01999956			<0.01999956	
11/27/2018	<0.01999956		<0.01999956	<0.01999956		<0.01999956
5/28/2019					<0.01999956	<0.01999956
5/29/2019	<0.01999956	<0.01999956	<0.01999956	<0.01999956		
10/2/2019	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956
3/30/2020						<0.01999956
3/31/2020	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
9/8/2020					<0.01999956	<0.01999956
9/9/2020	<0.01999956	<0.01999956	<0.01999956	<0.01999956		
5/11/2021			<0.01999956	<0.01999956	<0.01999956	
5/12/2021	<0.01999956	<0.01999956				<0.01999956

# Time Series

Constituent: Lithium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
4/18/2016	<0.01999956	<0.01999956	<0.01999956		
4/19/2016				<0.01999956	
6/6/2016	<0.01999956	<0.01999956			
6/7/2016			<0.01999956	<0.01999956	
8/30/2016	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
10/18/2016	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
1/30/2017		<0.01999956		<0.01999956	
1/31/2017	<0.01999956		<0.01999956		
5/2/2017	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
6/6/2017	<0.01999956				
6/7/2017		<0.01999956	<0.01999956	<0.01999956	
1/22/2018	<0.01999956	<0.01999956			
1/23/2018				<0.01999956	
1/24/2018			<0.01999956		
5/1/2018	<0.01999956	<0.01999956		<0.01999956	
5/2/2018			<0.01999956		
11/26/2018	<0.01999956			<0.01999956	
11/27/2018		<0.01999956	<0.01999956		
5/28/2019	<0.01999956	<0.01999956	<0.01999956		
5/29/2019				<0.01999956	
10/2/2019	<0.01999956	<0.01999956	<0.01999956	<0.01999956	
3/30/2020	<0.01999956	<0.01999956	<0.01999956		
3/31/2020				<0.01999956	<0.01999956
9/8/2020	<0.01999956	<0.01999956	<0.01999956		<0.01999956
9/9/2020				<0.01999956	
5/12/2021	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956

# Time Series

Constituent: Mercury (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4/18/2016						<0.0005
4/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6/6/2016	<0.0005				<0.0005	
6/7/2016		<0.0005	<0.0005	<0.0005		<0.0005
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10/18/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/30/2017		<0.0005				
1/31/2017	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
5/2/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2017	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
6/7/2017		<0.0005				
1/23/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1/24/2018						<0.0005
5/1/2018		<0.0005	<0.0005	<0.0005	<0.0005	
5/2/2018	<0.0005					<0.0005
11/26/2018		<0.0005			<0.0005	
11/27/2018	<0.0005		<0.0005	<0.0005		<0.0005
5/28/2019					<0.0005	<0.0005
5/29/2019	<0.0005	<0.0005	<0.0005	<0.0005		
10/2/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/30/2020						<0.0005
3/31/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
9/8/2020					<0.0005	<0.0005
9/9/2020	<0.0005	<0.0005	<0.0005	<0.0005		
5/11/2021			<0.0005	<0.0005	<0.0005	
5/12/2021	<0.0005	<0.0005				<0.0005

# Time Series

Constituent: Mercury (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.0005	<0.0005	<0.0005	<0.0005	
4/18/2016	<0.0005	<0.0005	<0.0005		
4/19/2016				<0.0005	
6/6/2016	<0.0005	<0.0005			
6/7/2016			0.00031 (J)	<0.0005	
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005	
10/18/2016	<0.0005	<0.0005	<0.0005	<0.0005	
1/30/2017		<0.0005		<0.0005	
1/31/2017	<0.0005		<0.0005		
5/2/2017	<0.0005	<0.0005	<0.0005	<0.0005	
6/6/2017	<0.0005				
6/7/2017		<0.0005	<0.0005	<0.0005	
1/22/2018	<0.0005	<0.0005			
1/23/2018				<0.0005	
1/24/2018			<0.0005		
5/1/2018	<0.0005	<0.0005		<0.0005	
5/2/2018			<0.0005		
11/26/2018	<0.0005			<0.0005	
11/27/2018		<0.0005	<0.0005		
5/28/2019	<0.0005	<0.0005	<0.0005		
5/29/2019				<0.0005	
10/2/2019	<0.0005	<0.0005	<0.0005	<0.0005	
3/30/2020	<0.0005	<0.0005	<0.0005		
3/31/2020				<0.0005	<0.0005
9/8/2020	<0.0005	<0.0005	<0.0005		<0.0005
9/9/2020				<0.0005	
5/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
4/18/2016						<0.000203
4/19/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2016	<0.000203				<0.000203	
6/7/2016		<0.000203	<0.000203	<0.000203		<0.000203
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
1/30/2017		<0.000203				
1/31/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/6/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
6/7/2017		<0.000203				
1/23/2018	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
1/24/2018						<0.000203
5/1/2018		<0.000203	<0.000203	<0.000203	<0.000203	
5/2/2018	<0.000203					<0.000203
11/26/2018		<0.000203			<0.000203	
11/27/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/28/2019					<0.000203	<0.000203
5/29/2019	<0.000203	<0.000203	<0.000203	<0.000203		
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020						<0.000203
3/31/2020	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
9/8/2020					<0.000203	<0.000203
9/9/2020	<0.000203	<0.000203	<0.000203	<0.000203		
5/11/2021			<0.000203	<0.000203	<0.000203	
5/12/2021	<0.000203	<0.000203				<0.000203

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	
4/18/2016	<0.000203	<0.000203	<0.000203		
4/19/2016				<0.000203	
6/6/2016	<0.000203	<0.000203			
6/7/2016			<0.000203	<0.000203	
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	
1/30/2017		<0.000203		<0.000203	
1/31/2017	<0.000203		<0.000203		
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2017	<0.000203				
6/7/2017		<0.000203	<0.000203	<0.000203	
1/22/2018	<0.000203	<0.000203			
1/23/2018				<0.000203	
1/24/2018			<0.000203		
5/1/2018	<0.000203	<0.000203		<0.000203	
5/2/2018			<0.000203		
11/26/2018	<0.000203			<0.000203	
11/27/2018		<0.000203	<0.000203		
5/28/2019	<0.000203	<0.000203	<0.000203		
5/29/2019				<0.000203	
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	
3/30/2020	<0.000203	<0.000203	<0.000203		
3/31/2020				<0.000203	<0.000203
9/8/2020	<0.000203	<0.000203	<0.000203		<0.000203
9/9/2020				<0.000203	
5/12/2021	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: pH, Field (SU) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	4.62	4.67	4.79	4.96	4.74	4.76
4/18/2016						4.75
4/19/2016	4.74	4.79	4.84	4.94	4.86	
6/6/2016	4.65				4.88	
6/7/2016		4.73	4.81	4.96		4.77
8/30/2016	4.64	4.68	4.76	4.92	4.91	4.82
10/18/2016	4.74	4.75	4.84	4.98	4.95	4.82
1/30/2017		4.65				
1/31/2017	4.54		4.6	4.74	4.71	4.8
3/20/2017	4.67		4.71	4.9	4.83	
3/21/2017		4.68				4.86
5/2/2017	4.79	4.75	4.8	4.98	4.93	4.89
6/6/2017	4.76		4.72	4.94	4.9	4.86
6/7/2017		4.7				
9/12/2017					4.82	
9/13/2017	4.81	4.71	4.71	4.93		4.89
1/23/2018	4.79	4.6	4.67	4.91	4.85	
1/24/2018						4.86
5/1/2018		4.61	4.61	4.87	4.8	
5/2/2018	4.62					4.87
11/26/2018		4.65			4.88	
11/27/2018	4.73		4.72	4.94		4.92
5/28/2019					4.73	4.8
5/29/2019	4.65	4.54	4.58	4.8		
10/2/2019	4.57	4.6	4.43	4.52	4.67	4.44
3/30/2020						4.83
3/31/2020	4.64	4.55	4.6	4.4	4.51	
9/8/2020					4.75	4.77
9/9/2020	4.65	4.58	4.67	4.76		
5/11/2021			4.29	4.53	4.67	
5/12/2021	4.74	4.4				4.61

# Time Series

Constituent: pH, Field (SU) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	6.59	5.12	4.92	4.56	
4/18/2016	6.21	5.11	5.16		
4/19/2016				4.62	
6/6/2016	5.97	5.14			
6/7/2016			5.11	4.64	
8/30/2016	5.99	5.06	5.14	4.58	
10/18/2016	5.94	5.01	5.09	4.58	
1/30/2017		4.74		4.44	
1/31/2017	5.92		5.01		
3/21/2017	5.74	5.04	5.07	4.57	
5/2/2017	5.82	5.08	5.13	4.64	
6/6/2017	5.77				
6/7/2017		5.07	5.05	4.58	
9/12/2017	5.64	5.03			
9/13/2017			5.06	4.54	
1/22/2018	5.66	5.06			
1/23/2018				4.53	
1/24/2018			5.02		
5/1/2018	5.71	4.89		4.46	
5/2/2018			4.99		
11/26/2018	5.58			4.5	
11/27/2018		5.05	5.06		
5/28/2019	5.21	4.83	4.92		
5/29/2019				4.45	
10/2/2019	5.4	5.04	4.86	4.49	
3/30/2020	5.51	4.91	4.92		
3/31/2020				4.45	4.91
9/8/2020	5.15	4.39	4.35		4.12
9/9/2020				4.46	
5/12/2021	5.46	4.84	4.83	4.43	4.93

# Time Series

Constituent: Selenium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	0.00572 (J)
4/18/2016						0.0141
4/19/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
6/6/2016	<0.001015				<0.001015	
6/7/2016		<0.001015	<0.001015	<0.001015		0.00698 (J)
8/30/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	0.0042 (J)
10/18/2016	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	0.00386 (J)
1/30/2017		<0.001015				
1/31/2017	<0.001015		<0.001015	<0.001015	<0.001015	0.00247 (J)
5/2/2017	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	0.00284 (J)
6/6/2017	<0.001015		<0.001015	<0.001015	<0.001015	0.003 (J)
6/7/2017		<0.001015				
1/23/2018	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
1/24/2018						0.00201 (J)
5/1/2018		<0.001015	<0.001015	<0.001015	<0.001015	
5/2/2018	<0.001015					<0.001015
11/26/2018		<0.001015			<0.001015	
11/27/2018	<0.001015		<0.001015	<0.001015		<0.001015
5/28/2019					<0.001015	<0.001015
5/29/2019	<0.001015	<0.001015	<0.001015	<0.001015		
10/2/2019	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
3/30/2020						<0.001015
3/31/2020	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	
9/8/2020					<0.001015	0.0052 (J)
9/9/2020	<0.001015	<0.001015	<0.001015	<0.001015		
5/11/2021			0.000602 (J)	<0.001015	<0.001015	
5/12/2021	<0.001015	0.000778 (J)				0.0163

# Time Series

Constituent: Selenium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	0.0266	<0.001015	<0.001015	<0.001015	
4/18/2016	0.0529	<0.001015	<0.001015		
4/19/2016				<0.001015	
6/6/2016	0.0382	<0.001015			
6/7/2016			<0.001015	<0.001015	
8/30/2016	0.014	<0.001015	<0.001015	<0.001015	
10/18/2016	0.0105	<0.001015	<0.001015	<0.001015	
1/30/2017		<0.001015		<0.001015	
1/31/2017	0.0104		<0.001015		
5/2/2017	0.00778 (J)	<0.001015	<0.001015	<0.001015	
6/6/2017	0.00576 (J)				
6/7/2017		<0.001015	<0.001015	<0.001015	
1/22/2018	0.00287 (J)	<0.001015			
1/23/2018				<0.001015	
1/24/2018			<0.001015		
5/1/2018	0.00367 (J)	<0.001015		<0.001015	
5/2/2018			<0.001015		
11/26/2018	0.00286 (J)			<0.001015	
11/27/2018		<0.001015	<0.001015		
5/28/2019	0.0089 (J)	<0.001015	<0.001015		
5/29/2019				<0.001015	
10/2/2019	0.00472 (J)	<0.001015	<0.001015	<0.001015	
3/30/2020	0.00658 (J)	<0.001015	<0.001015		
3/31/2020				<0.001015	<0.001015
9/8/2020	0.0052 (J)	<0.001015	<0.001015		<0.001015
9/9/2020				<0.001015	
5/12/2021	0.0123	<0.001015	<0.001015	0.00128	0.00111

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	8.59	9.29	7.2	7.44	7.04	12.5
4/18/2016						28.6
4/19/2016	8.27	9.92	7.22	7.66	6.74	
6/6/2016	8.66				7.04	
6/7/2016		10	7.92	8.16		18.7
8/30/2016	9.74	11.1	8.17	8.43	7.57	13.8
10/18/2016	10.2	11.7	7.99	8.47	6.62	12.2
3/20/2017	8.3		6.1	7.4	7	
3/21/2017		9				8.6
5/2/2017	6.6	7.9	5	6.3	5.6	8
6/6/2017	7.6		5.3	7.1	6.6	8.6
6/7/2017		8.4				
9/12/2017					7.2	
9/13/2017	8.4	8.7	4.9 (J)	7.3		7.6
5/1/2018		10	4.2 (J)	6.9	5.9	
5/2/2018	5.9					6
11/26/2018		8.3			5.1	
11/27/2018	22		3.7 (J)	6.5		5.5
5/28/2019					7.1	6.5
5/29/2019	23.3	11.1	5.94	7.81		
10/2/2019	17.5	13.2	6.04	7.62	6.88	6.55
3/30/2020						6.34
3/31/2020	24.3	11.1	6.83	7.98	10.8	
9/8/2020					6.52	15.1
9/9/2020	16.5	9.28	6.08	7.13		
5/11/2021			7.92	7.73	6.8	
5/12/2021	16.3	11				38.2

# Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	36.5	3.82	3.33	7.71	
4/18/2016	80.2 (O)	3.48	3.78		
4/19/2016				7.85	
6/6/2016	0.498 (J)	3.76			
6/7/2016			4.44	7.76	
8/30/2016	27.8	3.62	4.29	8.22	
10/18/2016	22.5	2.58	4.27	9.29	
3/21/2017	15	3.3 (J)	3.6 (J)	7.1	
5/2/2017	11	2.5 (J)	2.9 (J)	5.7	
6/6/2017	10				
6/7/2017		3.1 (J)	2.9 (J)	7.1	
9/12/2017	7.5	3 (J)			
9/13/2017			3.2 (J)	7.3	
5/1/2018	8.5	1.6 (J)		7.1	
5/2/2018			2.6 (J)		
11/26/2018	7.4			7.3	
11/27/2018		1.9 (J)	2.8 (J)		
5/28/2019	32.7	4.86	4.46		
5/29/2019				12.3	
10/2/2019	15.9	4.6	4.96	11.6	
3/30/2020	21.8	4.29	4.84		
3/31/2020				12.5	3.16
9/8/2020	17.7	3.59	4.56		3.61
9/9/2020				10.7	
5/12/2021	37.1	3.58	4.7	12.5	4.62

# Time Series

Constituent: Thallium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
4/18/2016						<0.000203
4/19/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2016	<0.000203				<0.000203	
6/7/2016		<0.000203	<0.000203	<0.000203		<0.000203
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
1/30/2017		<0.000203				
1/31/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/6/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
6/7/2017		<0.000203				
1/23/2018	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
1/24/2018						<0.000203
5/1/2018		<0.000203	<0.000203	<0.000203	<0.000203	
5/2/2018	<0.000203					<0.000203
11/26/2018		<0.000203			<0.000203	
11/27/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/28/2019					<0.000203	<0.000203
5/29/2019	<0.000203	<0.000203	<0.000203	<0.000203		
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020						<0.000203
3/31/2020	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	
9/8/2020					<0.000203	<0.000203
9/9/2020	<0.000203	<0.000203	<0.000203	<0.000203		
5/11/2021			<0.000203	<0.000203	<0.000203	
5/12/2021	<0.000203	<0.000203				<0.000203

# Time Series

Constituent: Thallium (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	<0.000203	<0.000203	<0.000203	<0.000203	
4/18/2016	<0.000203	<0.000203	<0.000203		
4/19/2016				<0.000203	
6/6/2016	<0.000203	<0.000203			
6/7/2016			<0.000203	<0.000203	
8/30/2016	<0.000203	<0.000203	<0.000203	<0.000203	
10/18/2016	<0.000203	<0.000203	<0.000203	<0.000203	
1/30/2017		<0.000203		<0.000203	
1/31/2017	<0.000203		<0.000203		
5/2/2017	<0.000203	<0.000203	<0.000203	<0.000203	
6/6/2017	<0.000203				
6/7/2017		<0.000203	<0.000203	<0.000203	
1/22/2018	<0.000203	<0.000203			
1/23/2018				<0.000203	
1/24/2018			<0.000203		
5/1/2018	<0.000203	<0.000203		<0.000203	
5/2/2018			<0.000203		
11/26/2018	<0.000203			<0.000203	
11/27/2018		<0.000203	<0.000203		
5/28/2019	<0.000203	<0.000203	<0.000203		
5/29/2019				<0.000203	
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	
3/30/2020	<0.000203	<0.000203	<0.000203		
3/31/2020				<0.000203	<0.000203
9/8/2020	<0.000203	<0.000203	<0.000203		<0.000203
9/9/2020				<0.000203	
5/12/2021	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5
2/23/2016	26.7	37.3	30.7	40	<25	38
4/18/2016						62
4/19/2016	<25	34	<25	32	<25	
6/6/2016	32.7				28.7	
6/7/2016		38.7	35.3	38.7		51.3
8/30/2016	33.3	34	27.3	31.3	25.3	38
10/18/2016	27.3	31.3	<25	26.7	<25	28.7
1/30/2017		<25				
1/31/2017	32		32.7	30	26	34
5/2/2017	31.3	29.3	30.7	30.7	<25	37.3
6/6/2017	35.3		34.7	32.7	42.7	36.7
6/7/2017		36				
9/12/2017					26.7	
9/13/2017	36.7	35.3	39.3	38		37.3
5/1/2018		32	42	35.3	34.7	
5/2/2018	34					30.7
11/26/2018		31.3			32.7	
11/27/2018	50.7		31.3	36		<25
5/28/2019					31.3	26
5/29/2019	58	43.3	40	37.3		
10/2/2019	46	36	41.3	36.7	36	34.7
3/30/2020						32
3/31/2020	53.3	33.3	40	39.3	36.7	
9/8/2020					39.3	55.3
9/9/2020	42	39.3	40.7	42.7		
5/11/2021			35.3	44	46.7	
5/12/2021	40.7	42.7				85.3

# Time Series

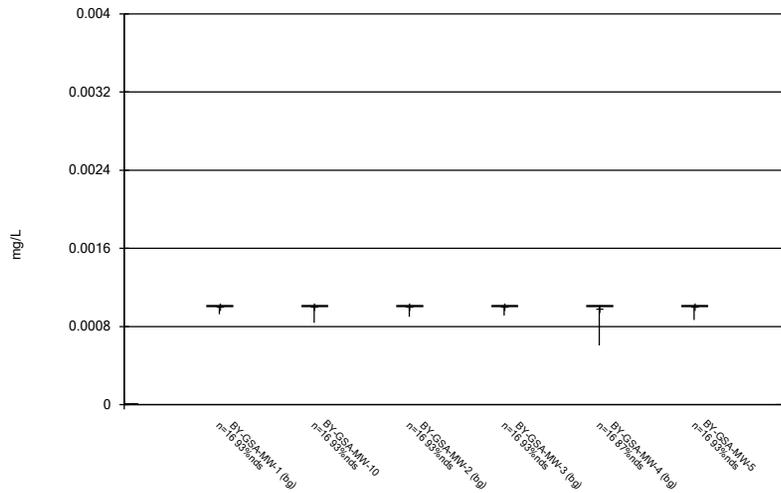
Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/6/2021 3:07 PM View: Constituent View

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-PZ-11
2/23/2016	128	<25	30	25.3	
4/18/2016	166	<25	27.3		
4/19/2016				28	
6/6/2016	131	32.7			
6/7/2016			32	34.7	
8/30/2016	86.7	25.3	<25	26.7	
10/18/2016	67.3	28	28	32	
1/30/2017		45.3		32.7	
1/31/2017	60.7		26		
5/2/2017	50	26.7	25.3	30.7	
6/6/2017	47.3				
6/7/2017		28	<25	<25	
9/12/2017	42.7	35.3			
9/13/2017			31.3	37.3	
5/1/2018	44	30.7		39.3	
5/2/2018			30.7		
11/26/2018	38			48	
11/27/2018		30.7	35.3		
5/28/2019	77.3	33.3	28.7		
5/29/2019				60	
10/2/2019	50.7	30.7	37.3	46.7	
3/30/2020	58	39.3	30		
3/31/2020				37.3	<25
9/8/2020	59.3	42	38		29.3
9/9/2020				50.7	
5/12/2021	98.7	52.7	40	50.7	40

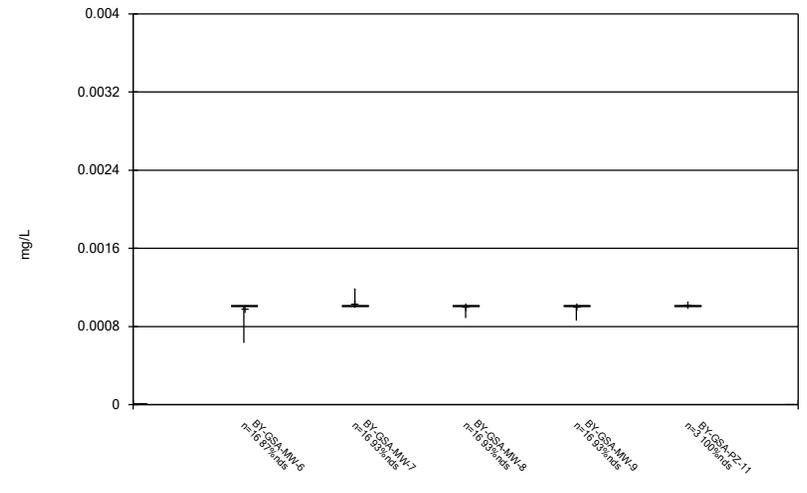
FIGURE B.

### Box & Whiskers Plot



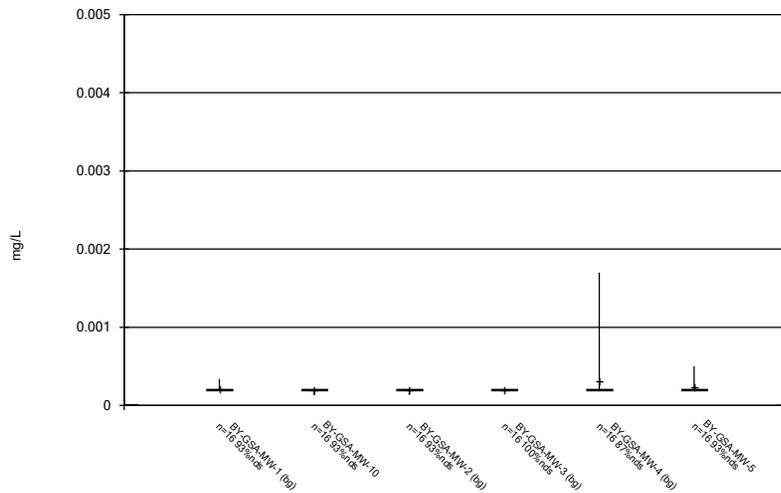
Constituent: Antimony Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



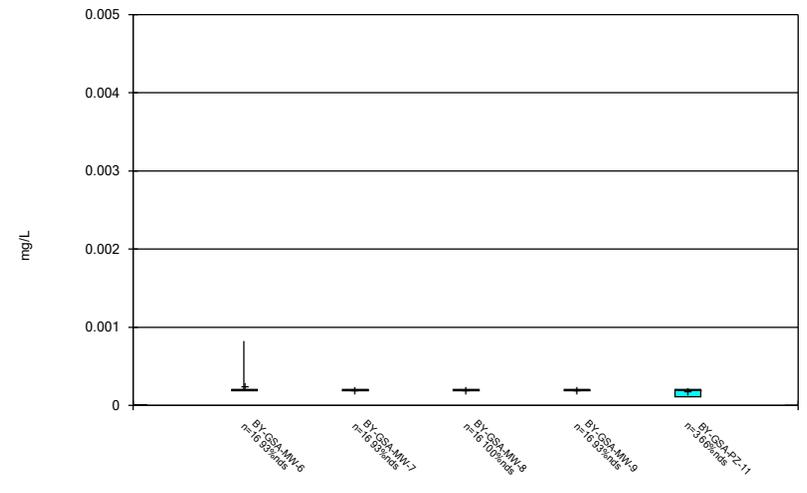
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 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



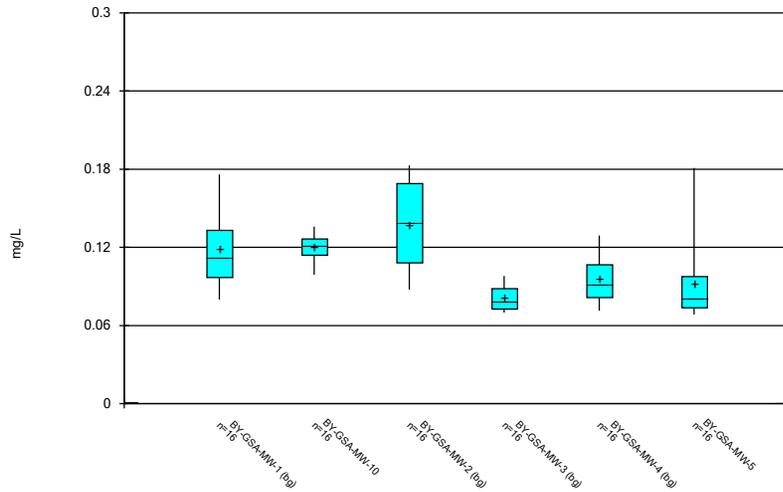
Constituent: Arsenic Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



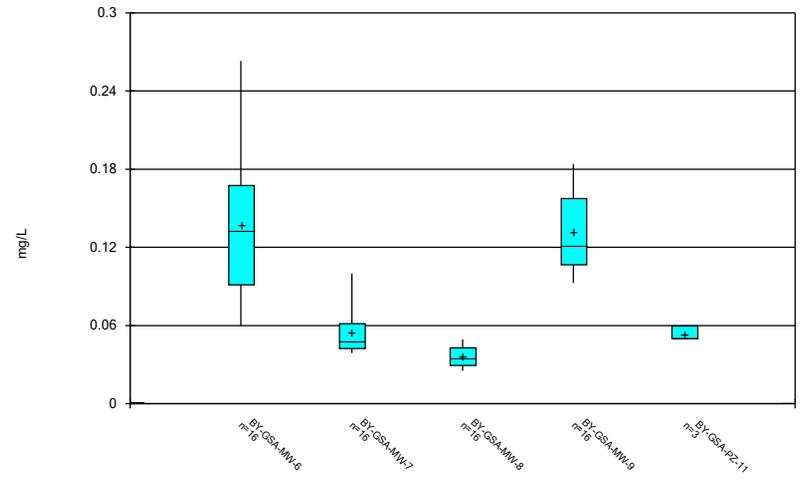
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 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



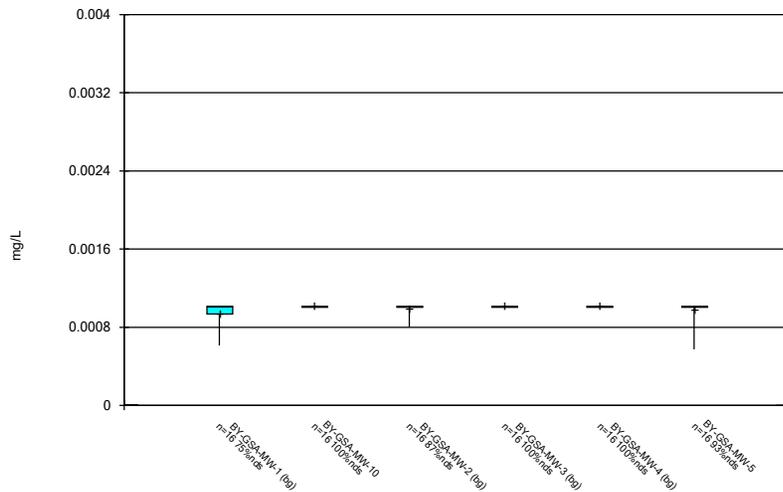
Constituent: Barium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



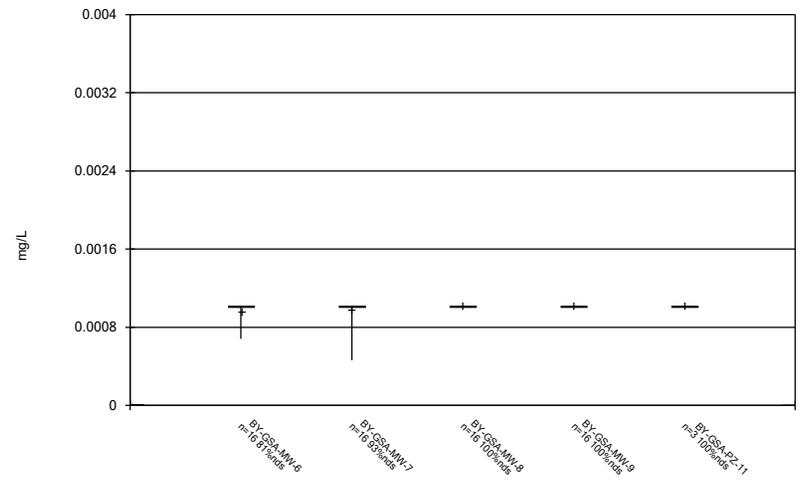
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



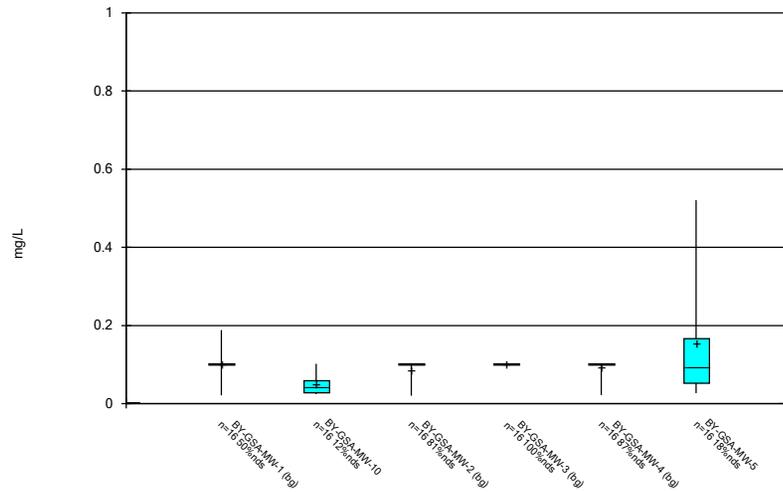
Constituent: Beryllium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



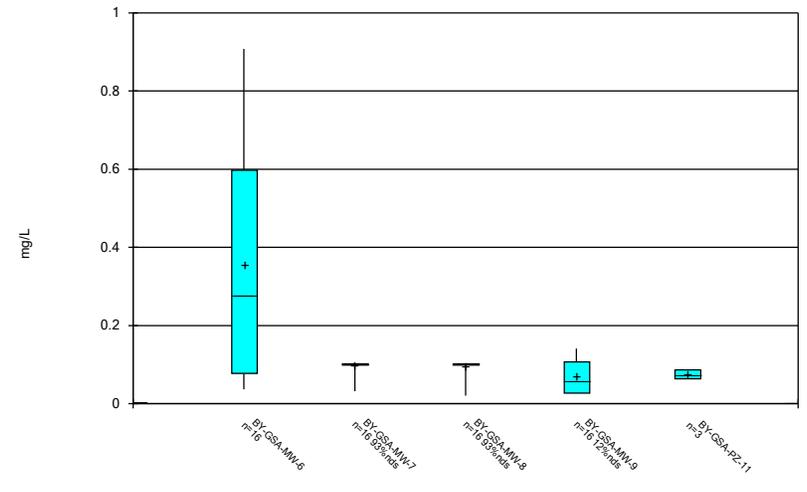
Constituent: Beryllium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



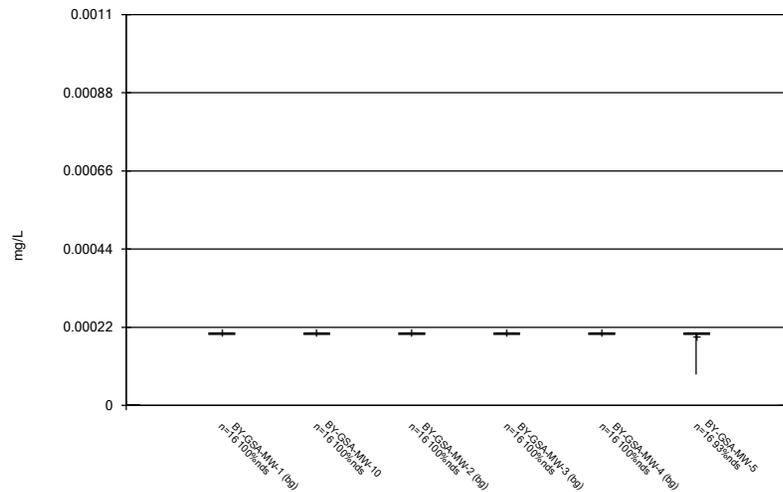
Constituent: Boron, total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



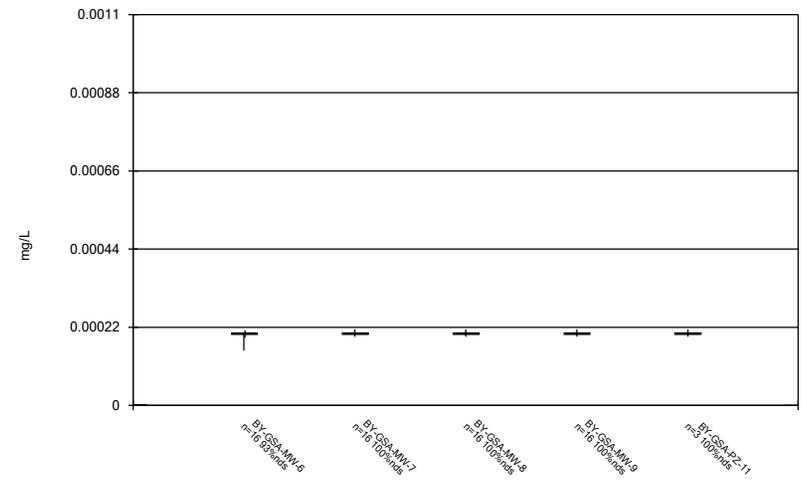
Constituent: Boron, total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



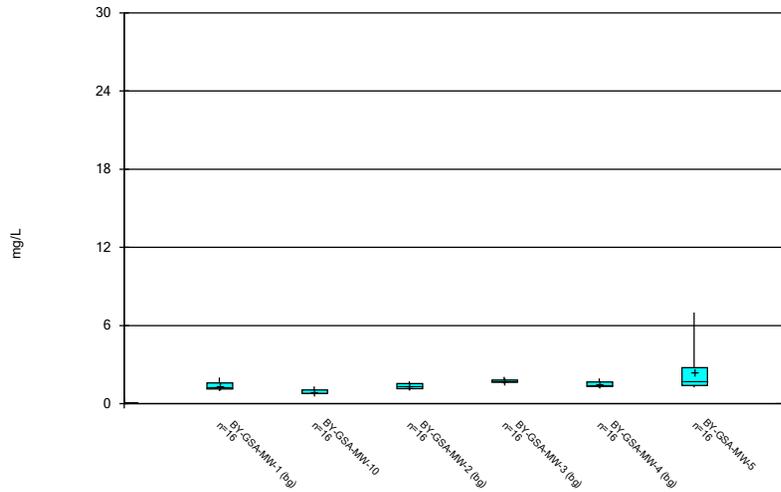
Constituent: Cadmium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



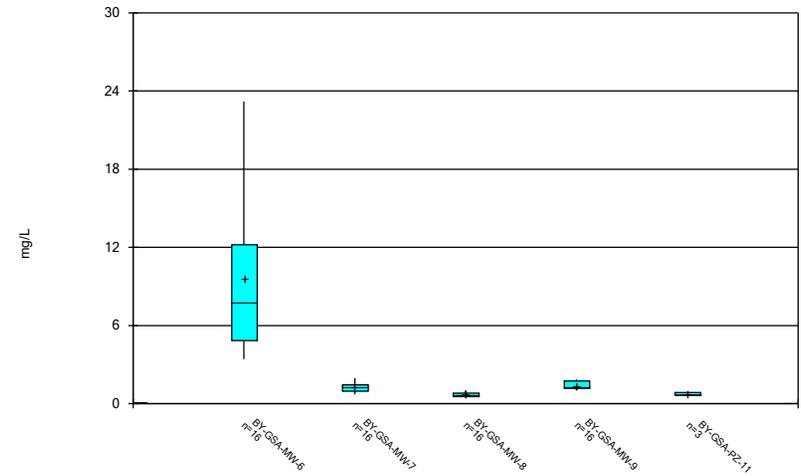
Constituent: Cadmium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



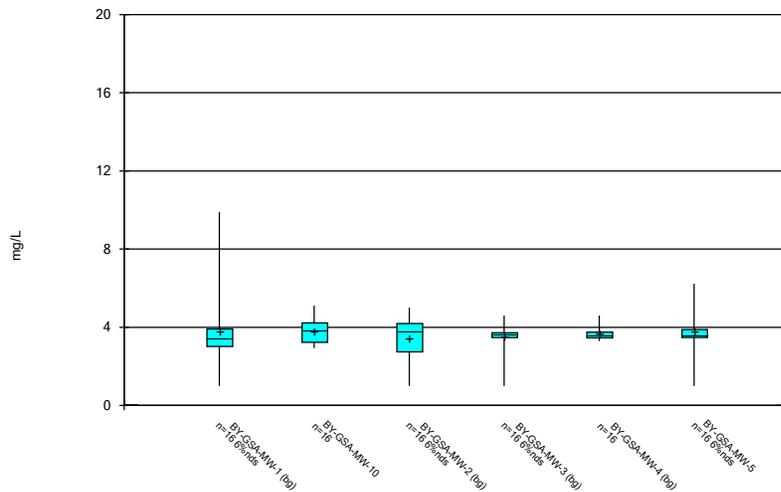
Constituent: Calcium, total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



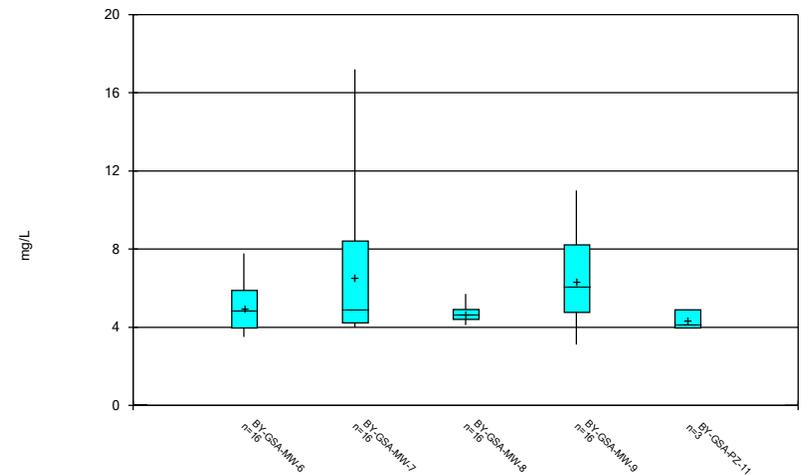
Constituent: Calcium, total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



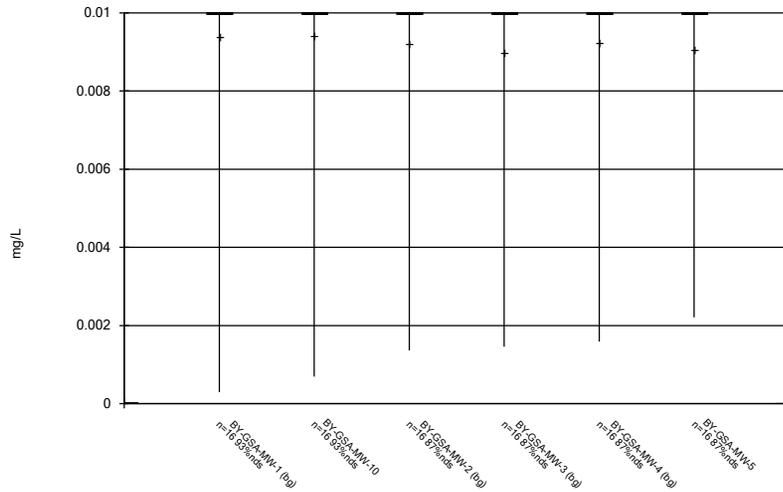
Constituent: Chloride, Total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



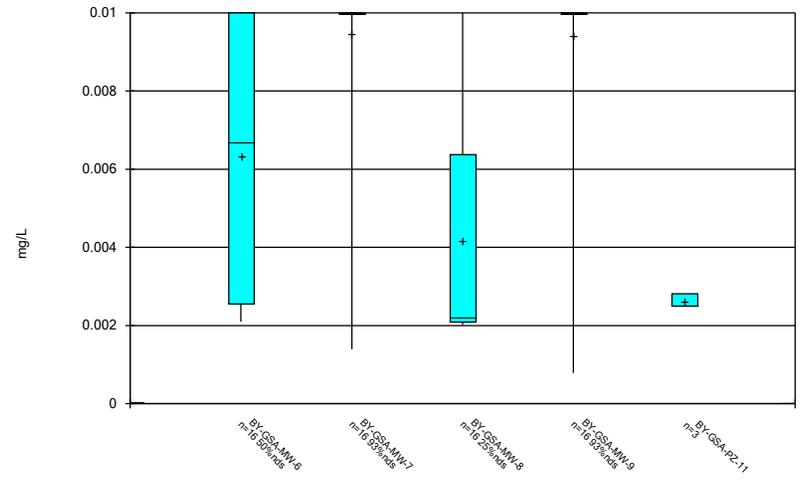
Constituent: Chloride, Total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



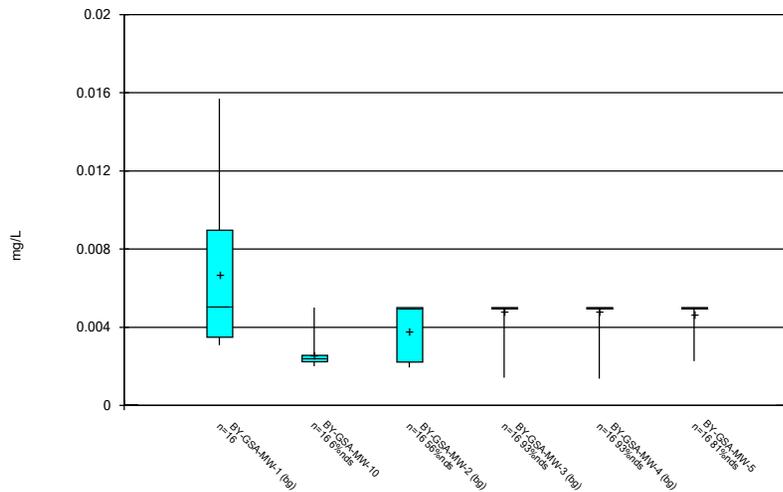
Constituent: Chromium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



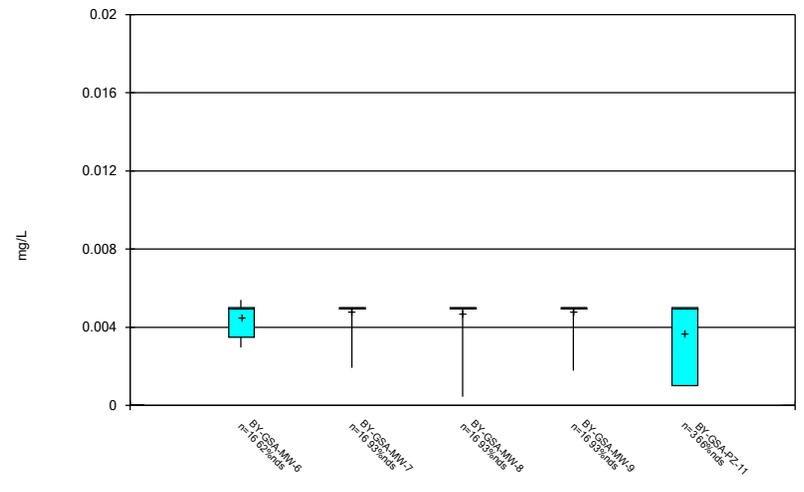
Constituent: Chromium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



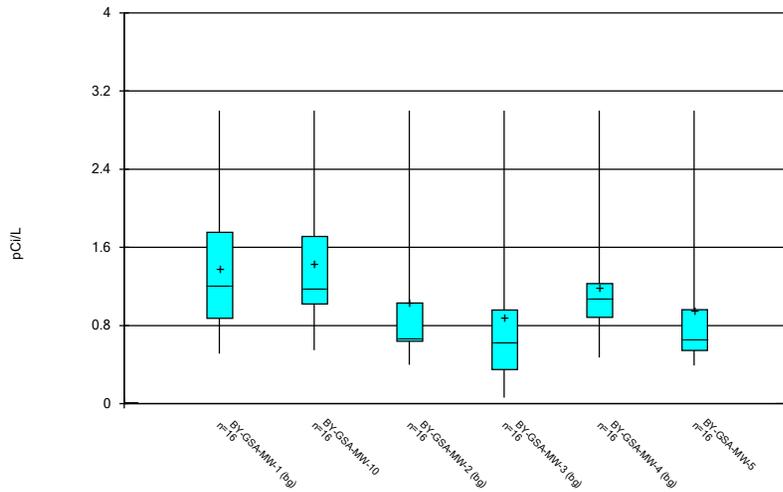
Constituent: Cobalt Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



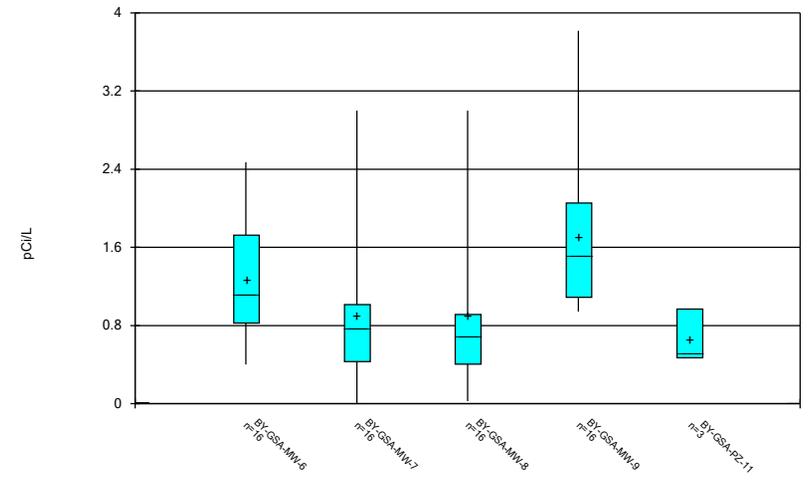
Constituent: Cobalt Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



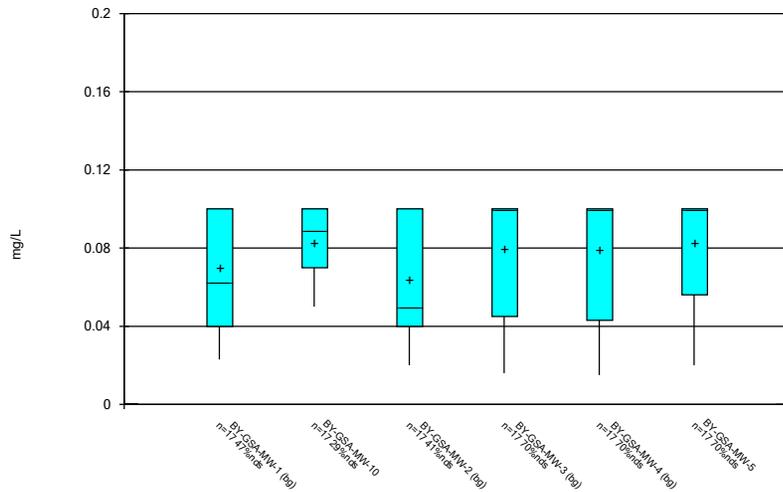
Constituent: Combined Radium 226 + 228 Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



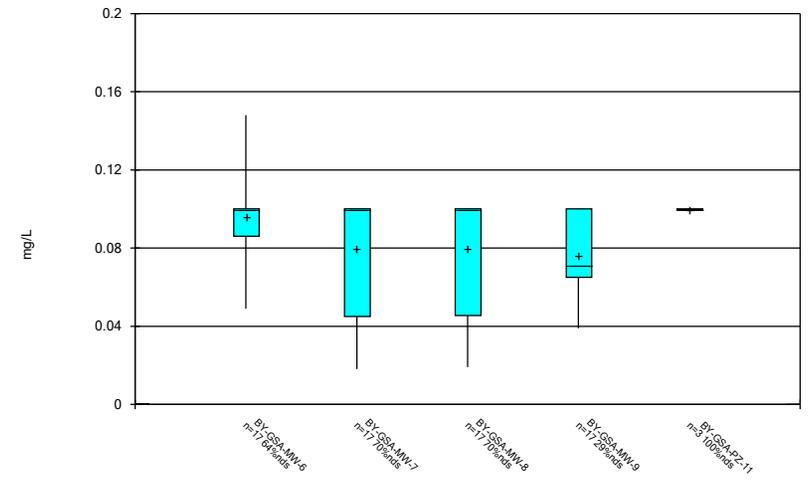
Constituent: Combined Radium 226 + 228 Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



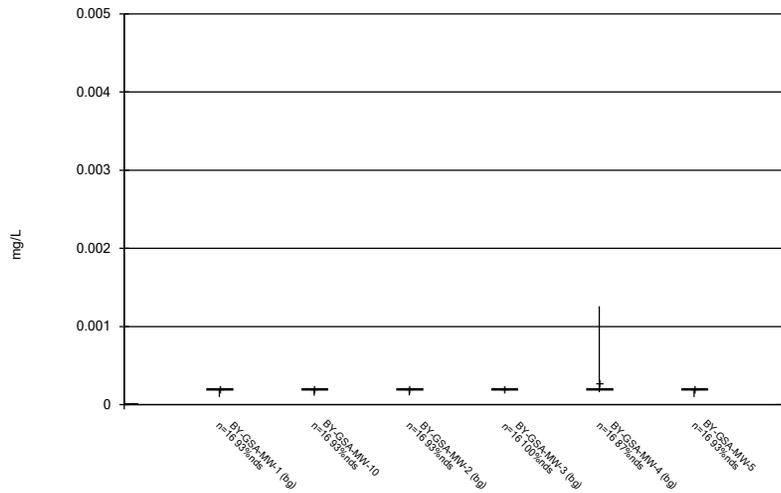
Constituent: Fluoride, total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



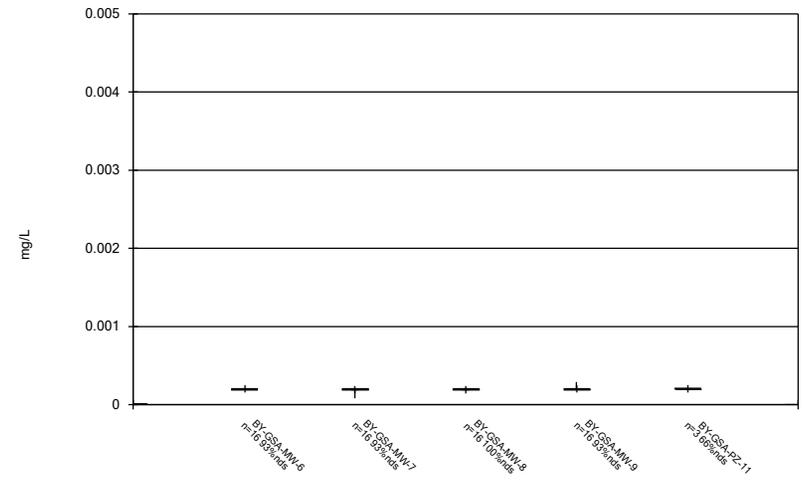
Constituent: Fluoride, total Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



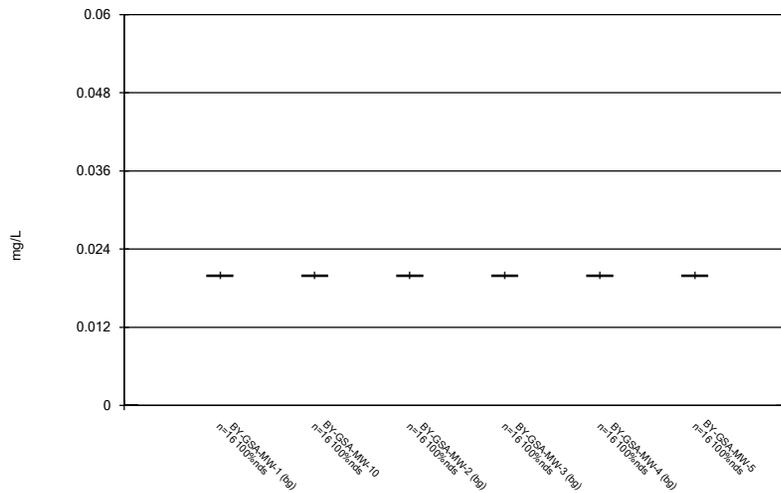
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



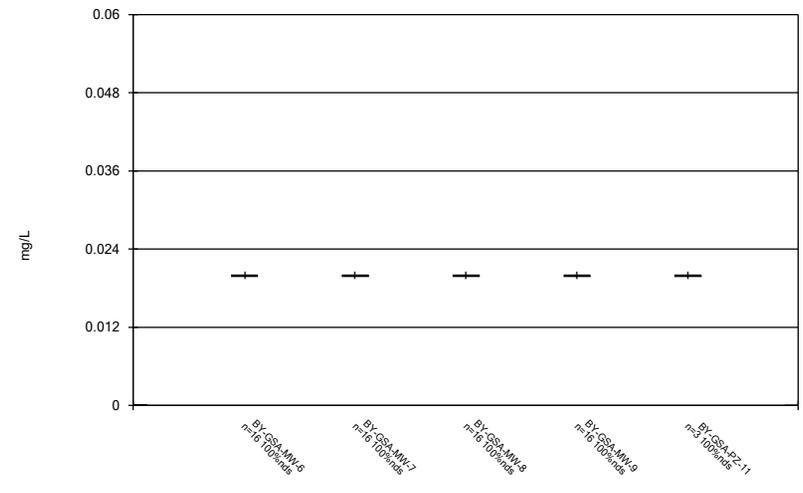
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



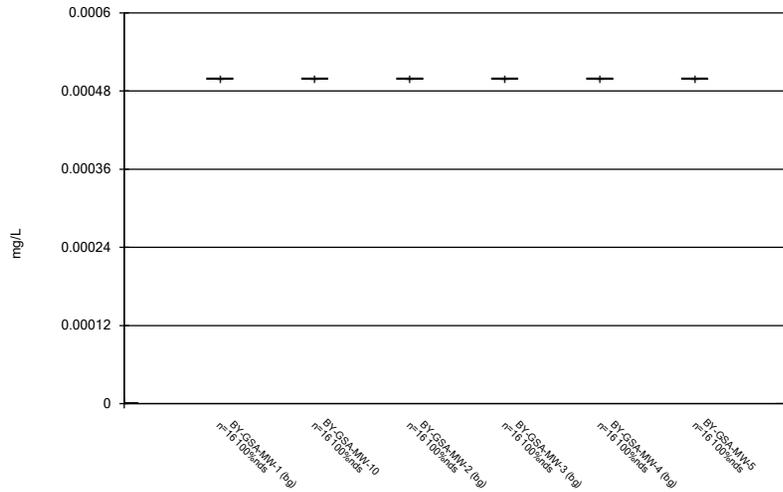
Constituent: Lithium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



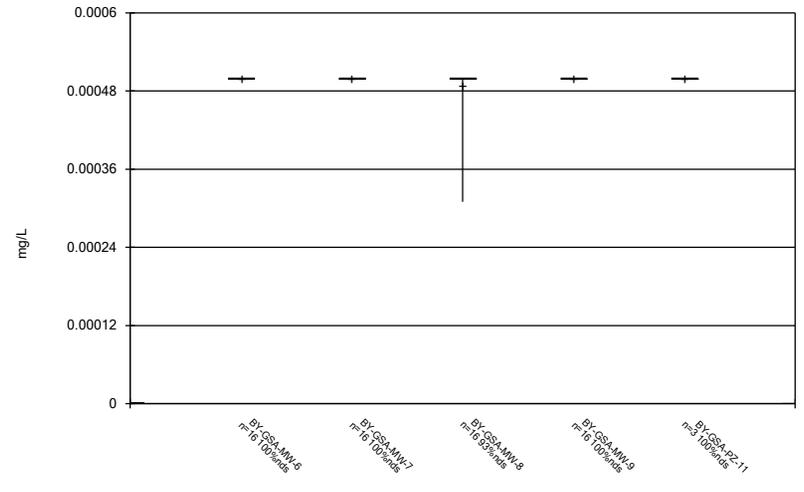
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



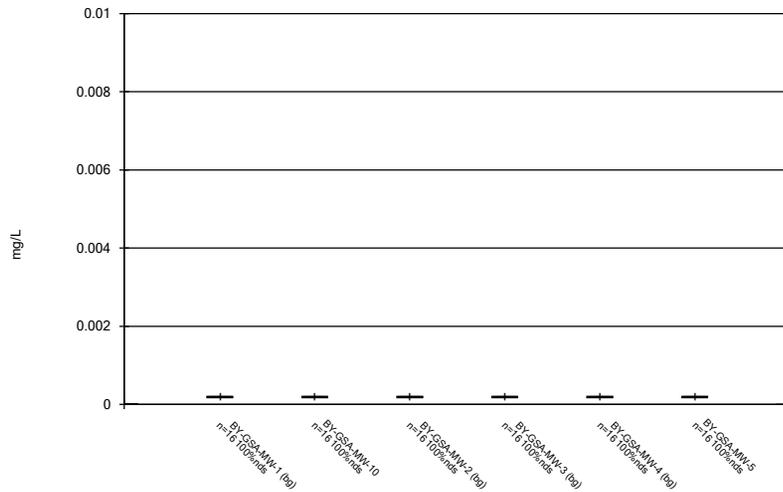
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 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



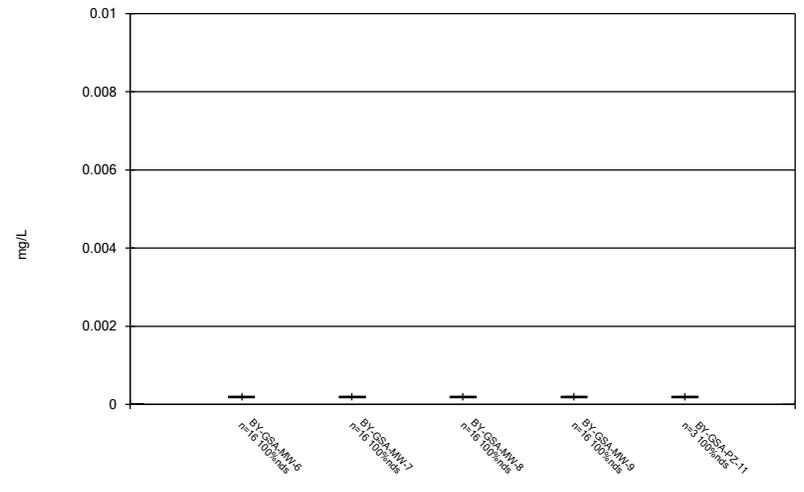
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 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



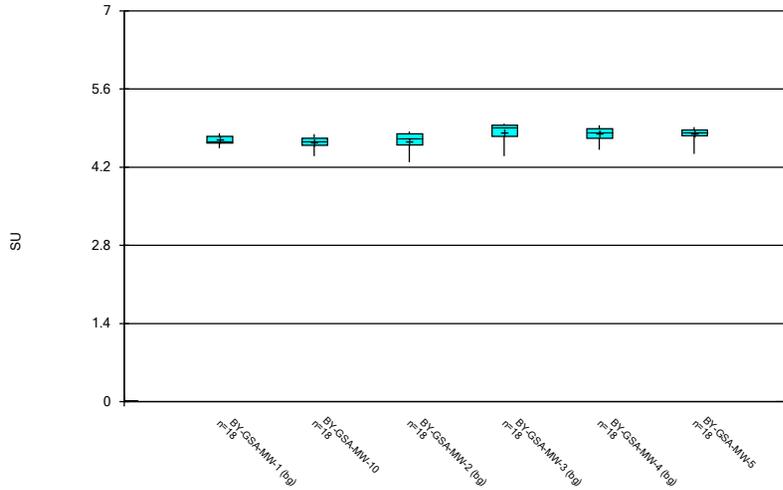
Constituent: Molybdenum Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



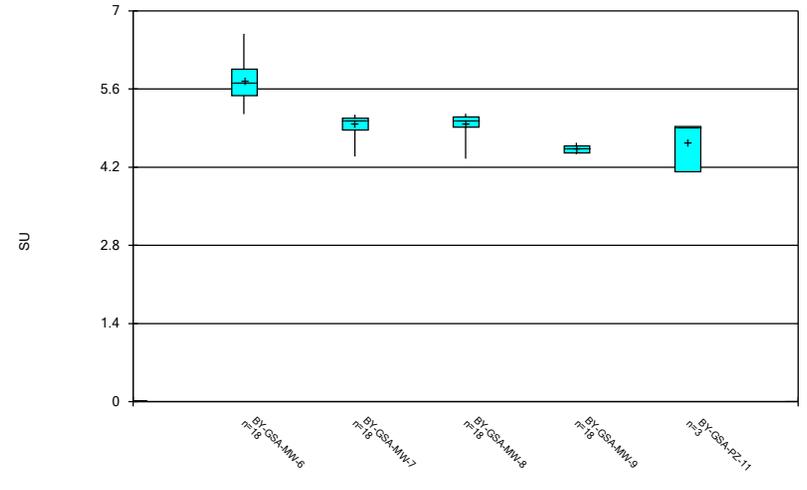
Constituent: Molybdenum Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



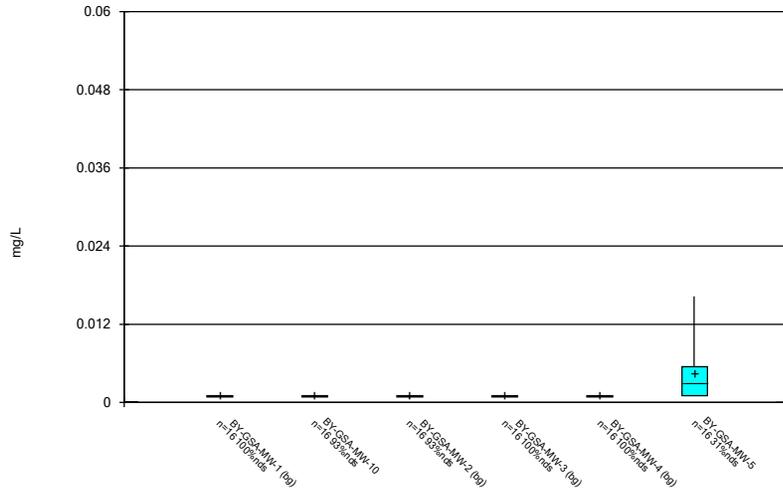
Constituent: pH, Field Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



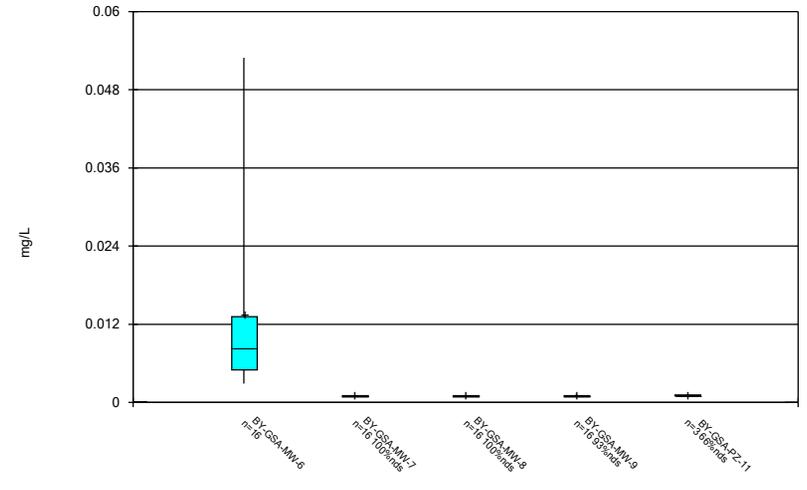
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



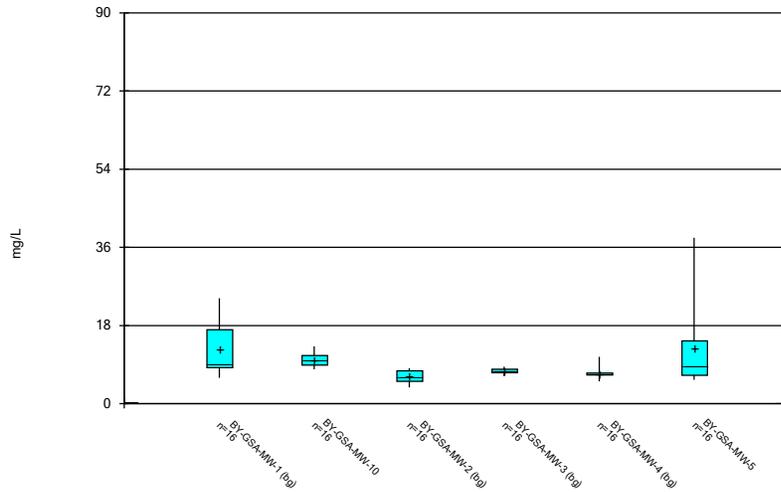
Constituent: Selenium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



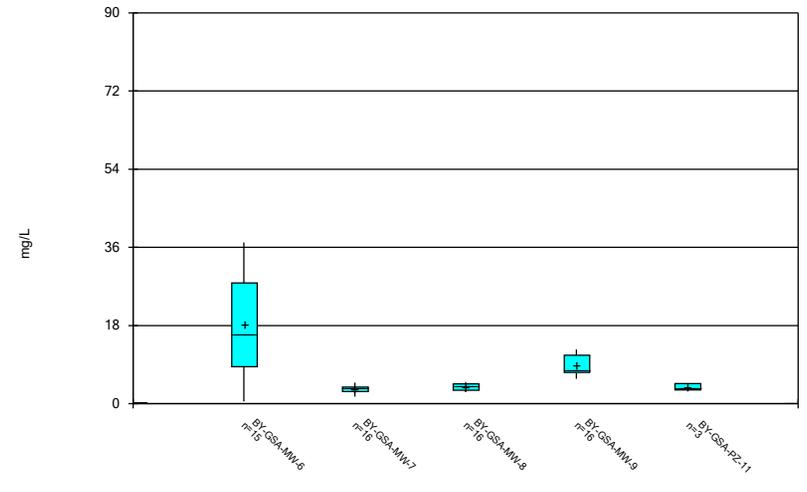
Constituent: Selenium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



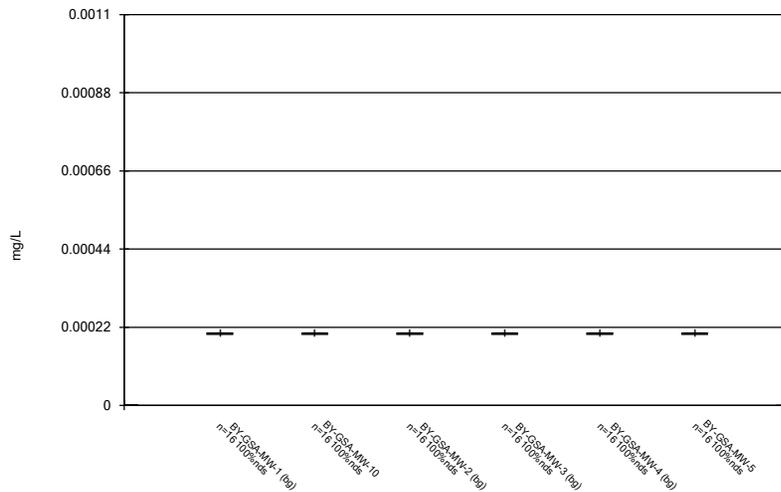
Constituent: Sulfate as SO4 Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



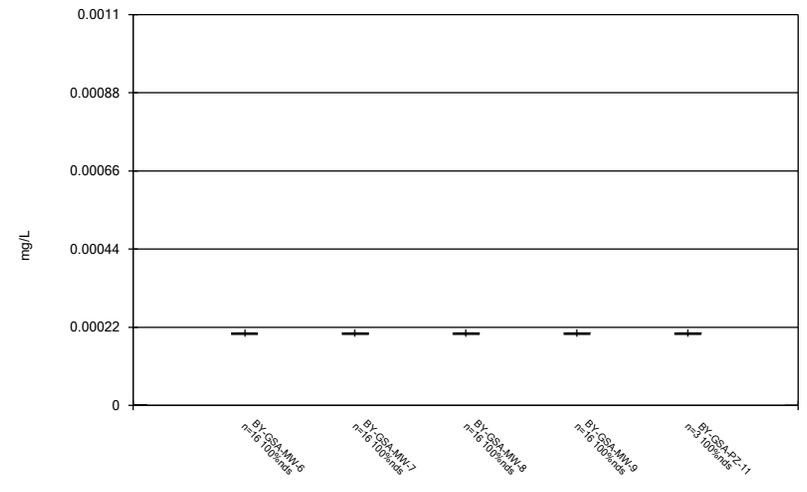
Constituent: Sulfate as SO4 Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



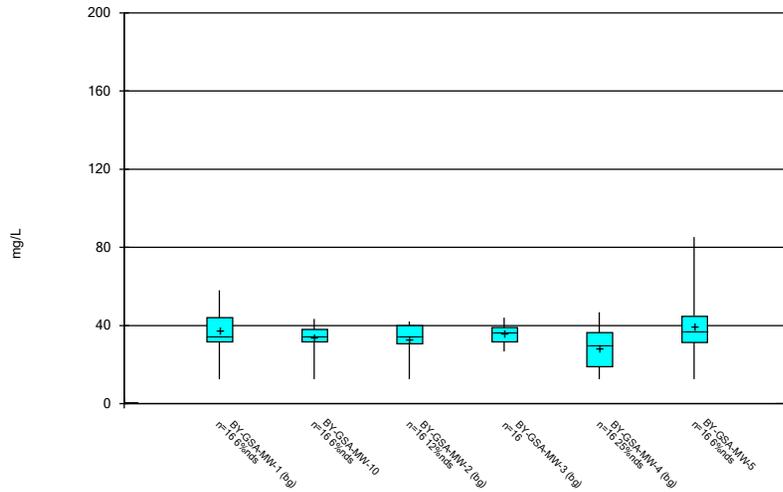
Constituent: Thallium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Box & Whiskers Plot



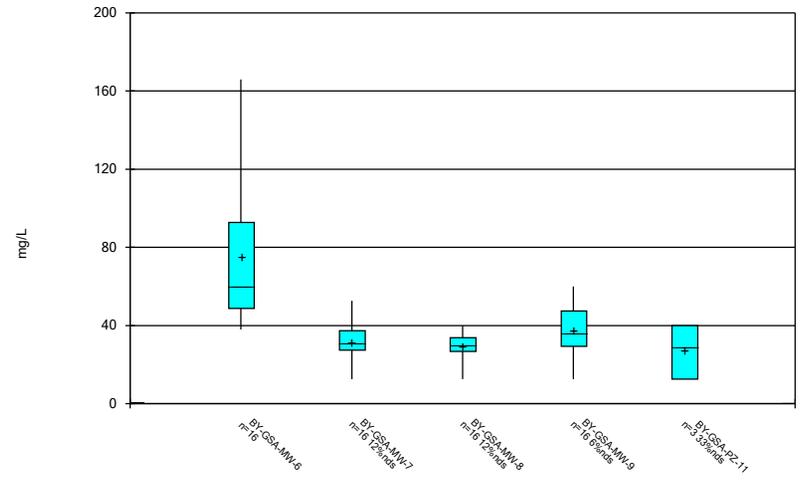
Constituent: Thallium Analysis Run 7/6/2021 3:08 PM View: Constituent View  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 7/6/2021 3:08 PM View: Constituent View  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

FIGURE C.

# Outlier Summary

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/6/2021, 2:06 PM

BY-GSA-MW-6 Sulfate as SO<sub>4</sub> (mg/L)

4/18/2016

80.2 (O)

FIGURE D.

# Appendix III - Intrawell Prediction Limits - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/2/2021, 4:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chloride, Total (mg/L)	BY-GSA-MW-5	4.8	n/a	5/12/2021	5.89	Yes	12	12.37	4.547	8.333	None	x^2	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-6	7.3	n/a	5/12/2021	7.77	Yes	12	4.781	1.063	0	None	No	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-7	9.7	n/a	5/12/2021	17.2	Yes	12	1.627	0.271	0	None	ln(x)	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-5	29	n/a	5/12/2021	38.2	Yes	12	3.268	0.8781	0	None	sqrt(x)	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-9	12	n/a	5/12/2021	12.5	Yes	12	2.798	0.2716	0	None	sqrt(x)	0.001254	Param 1 of 2

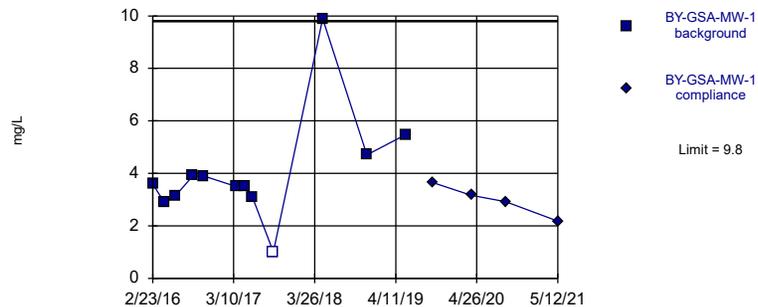
# Appendix III - Intrawell Prediction Limits - All Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 7/2/2021, 4:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq N	Bq Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chloride, Total (mg/L)	BY-GSA-MW-1	9.8	n/a	5/12/2021	2.18	No	12	1.956	0.4939	8.333	None	sqrt(x)	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-10	5.3	n/a	5/12/2021	3.94	No	12	3.697	0.6693	0	None	No	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-2	5.4	n/a	5/11/2021	2.16	No	12	14.81	6.021	8.333	None	x^2	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-3	4.7	n/a	5/11/2021	3.42	No	12	50.05	21.74	8.333	None	x^3	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-4	4.6	n/a	5/11/2021	3.33	No	12	1.938	0.08822	0	None	sqrt(x)	0.001254	Param 1 of 2
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>4.8</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>5.89</b>	<b>Yes</b>	<b>12</b>	<b>12.37</b>	<b>4.547</b>	<b>8.333</b>	<b>None</b>	<b>x^2</b>	<b>0.001254</b>	Param 1 of 2
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>7.3</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>7.77</b>	<b>Yes</b>	<b>12</b>	<b>4.781</b>	<b>1.063</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	Param 1 of 2
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>9.7</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>17.2</b>	<b>Yes</b>	<b>12</b>	<b>1.627</b>	<b>0.271</b>	<b>0</b>	<b>None</b>	<b>ln(x)</b>	<b>0.001254</b>	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-8	5.7	n/a	5/12/2021	5.25	No	12	4.683	0.4261	0	None	No	0.001254	Param 1 of 2
Chloride, Total (mg/L)	BY-GSA-MW-9	11	n/a	5/12/2021	8.77	No	12	5.775	2.196	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-1	23	n/a	5/12/2021	16.3	No	12	n/a	n/a	0	n/a	n/a	0.01077	NP (normality) 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-10	13	n/a	5/12/2021	11	No	12	9.618	1.229	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-2	9.8	n/a	5/11/2021	7.92	No	12	6.137	1.546	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-3	9.1	n/a	5/11/2021	7.73	No	12	7.456	0.6976	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-4	8.4	n/a	5/11/2021	6.8	No	12	6.626	0.7293	0	None	No	0.001254	Param 1 of 2
<b>Sulfate as SO4 (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>29</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>38.2</b>	<b>Yes</b>	<b>12</b>	<b>3.268</b>	<b>0.8781</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.001254</b>	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-6	45	n/a	5/12/2021	37.1	No	11	16.31	11.77	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-7	5.3	n/a	5/12/2021	3.58	No	12	3.127	0.8959	0	None	No	0.001254	Param 1 of 2
Sulfate as SO4 (mg/L)	BY-GSA-MW-8	5.2	n/a	5/12/2021	4.7	No	12	3.548	0.689	0	None	No	0.001254	Param 1 of 2
<b>Sulfate as SO4 (mg/L)</b>	<b>BY-GSA-MW-9</b>	<b>12</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>12.5</b>	<b>Yes</b>	<b>12</b>	<b>2.798</b>	<b>0.2716</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.001254</b>	Param 1 of 2

Within Limit

Prediction Limit  
Intrawell Parametric

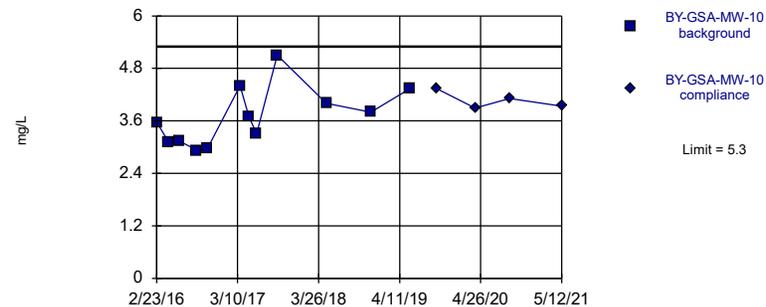


Background Data Summary (based on square root transformation): Mean=1.956, Std. Dev.=0.4939, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8699, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

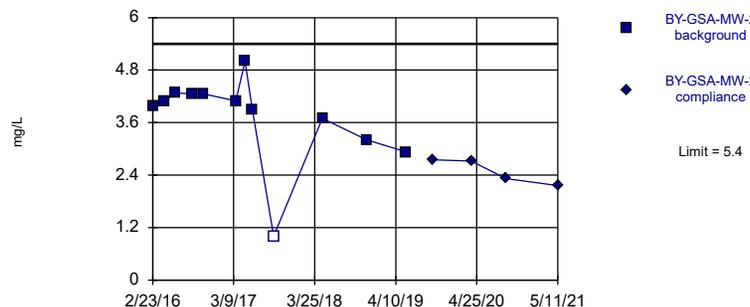


Background Data Summary: Mean=3.697, Std. Dev.=0.6693, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9292, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

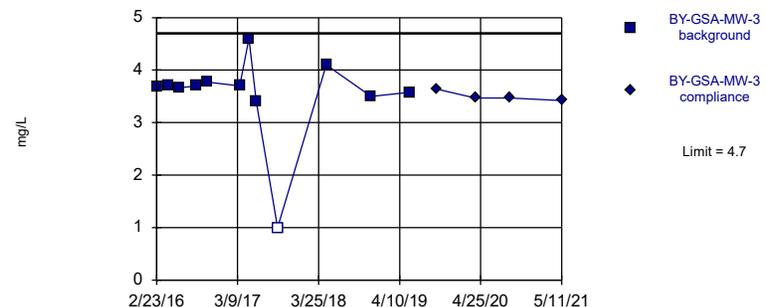


Background Data Summary (based on square transformation): Mean=14.81, Std. Dev.=6.021, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

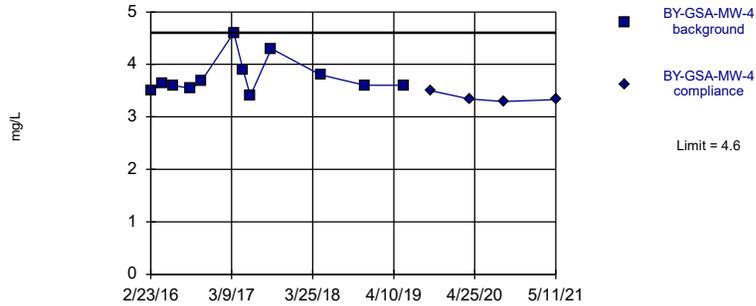


Background Data Summary (based on cube transformation): Mean=50.05, Std. Dev.=21.74, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8422, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

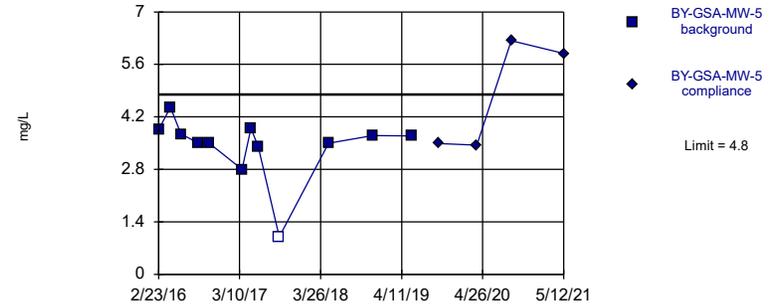


Background Data Summary (based on square root transformation): Mean=1.938, Std. Dev.=0.08822, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8171, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limit

Prediction Limit  
Intrawell Parametric

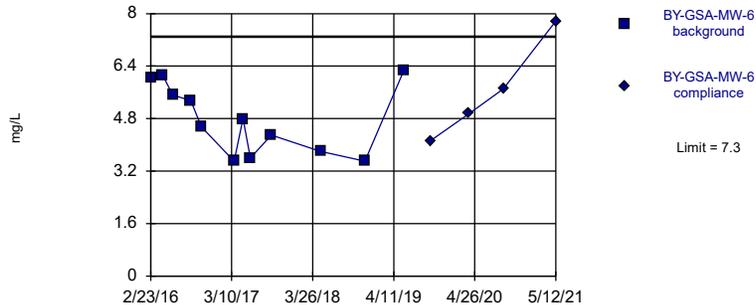


Background Data Summary (based on square transformation): Mean=12.37, Std. Dev.=4.547, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8651, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limit

Prediction Limit  
Intrawell Parametric

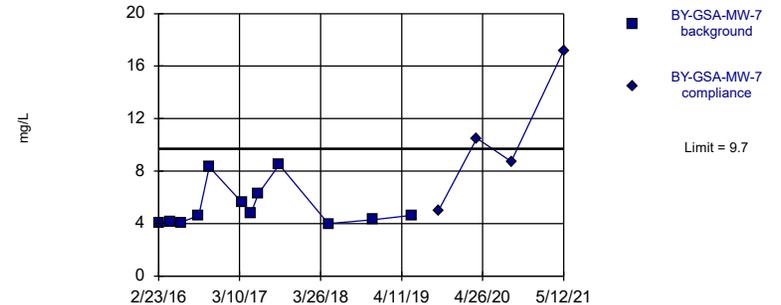


Background Data Summary: Mean=4.781, Std. Dev.=1.063, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.897, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limit

Prediction Limit  
Intrawell Parametric

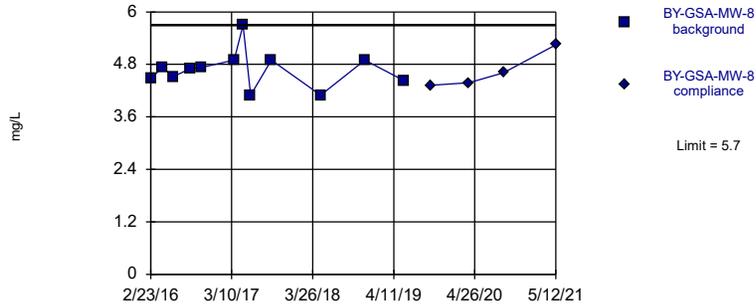


Background Data Summary (based on natural log transformation): Mean=1.627, Std. Dev.=0.271, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8109, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

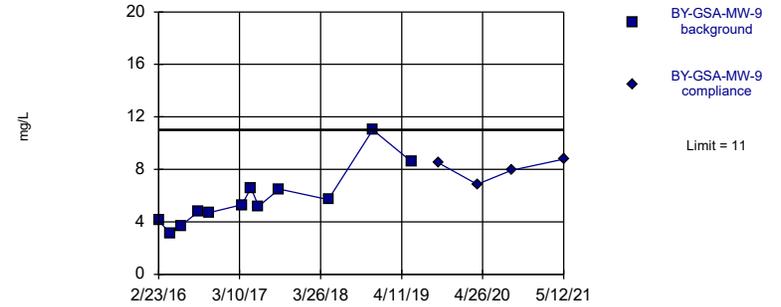


Background Data Summary: Mean=4.683, Std. Dev.=0.4261, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9008, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

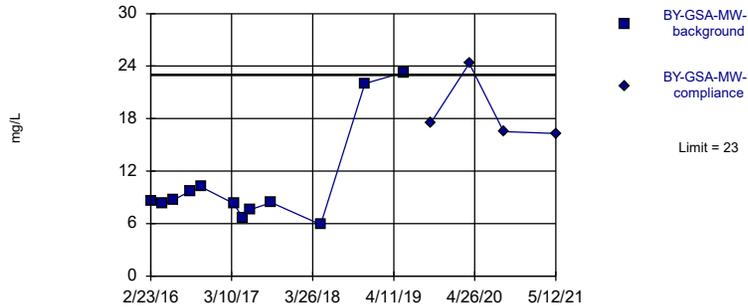


Background Data Summary: Mean=5.775, Std. Dev.=2.196, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8939, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride, Total Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Non-parametric

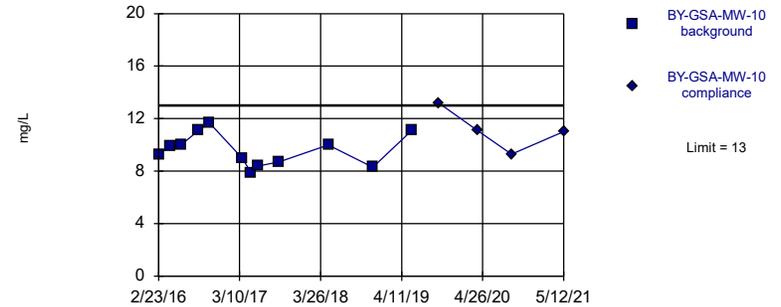


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. Well-constituent pair annual alpha = 0.02143. Individual comparison alpha = 0.01077 (1 of 2).

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

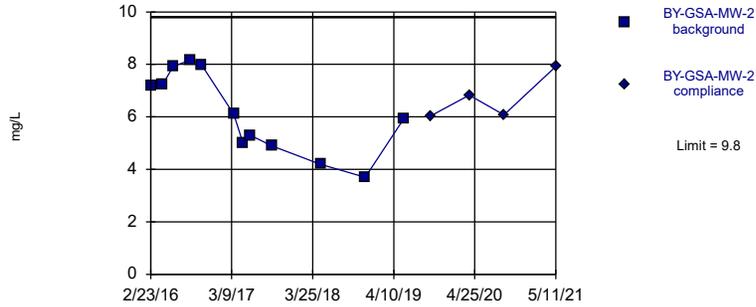


Background Data Summary: Mean=9.618, Std. Dev.=1.229, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9451, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

### Prediction Limit Intrawell Parametric

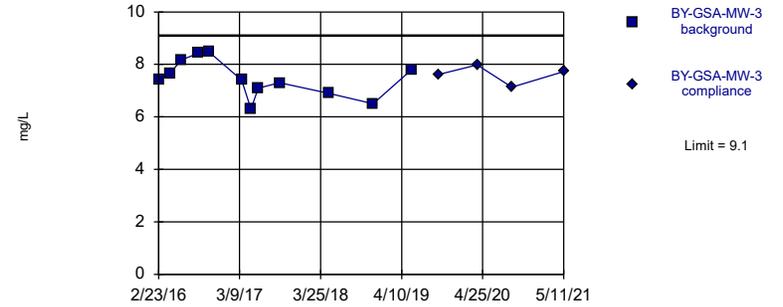


Background Data Summary: Mean=6.137, Std. Dev.=1.546, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9309, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:27 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

### Prediction Limit Intrawell Parametric

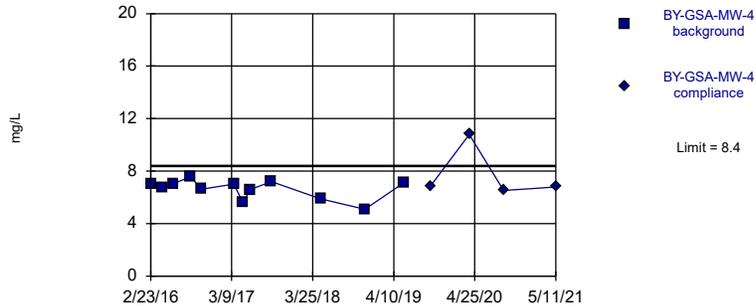


Background Data Summary: Mean=7.456, Std. Dev.=0.6976, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9647, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:28 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

### Prediction Limit Intrawell Parametric

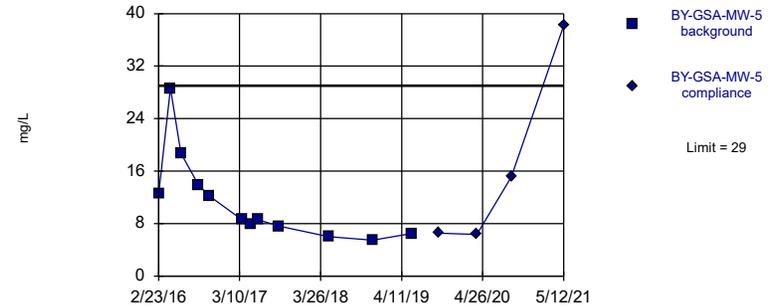


Background Data Summary: Mean=6.626, Std. Dev.=0.7293, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8904, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:28 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limit

### Prediction Limit Intrawell Parametric

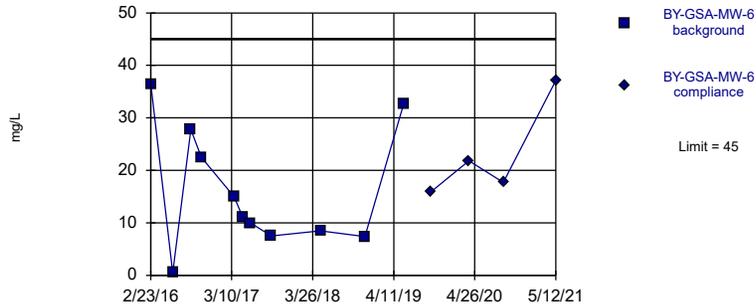


Background Data Summary (based on square root transformation): Mean=3.268, Std. Dev.=0.8781, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.876, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:28 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

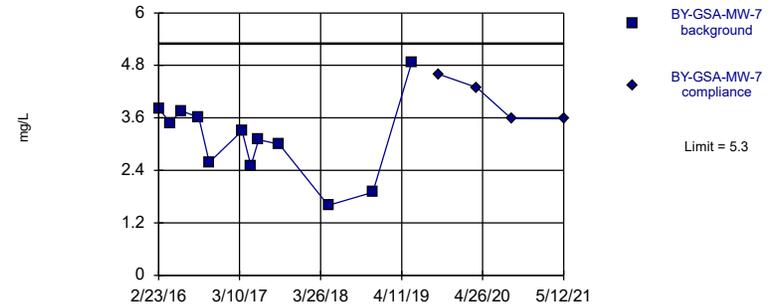


Background Data Summary: Mean=16.31, Std. Dev.=11.77, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9097, critical = 0.792. Kappa = 2.467 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:28 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

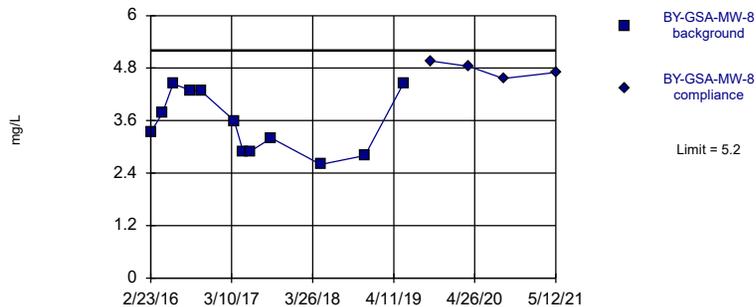


Background Data Summary: Mean=3.127, Std. Dev.=0.8959, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9752, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:28 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

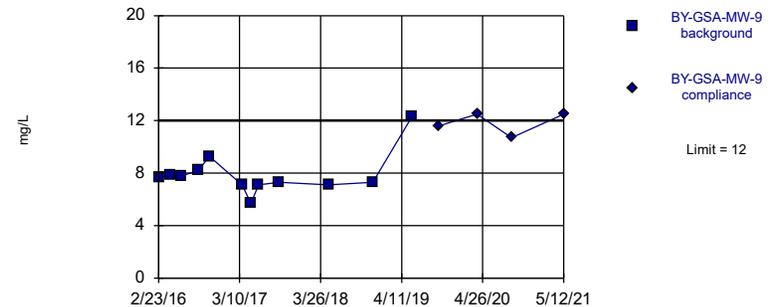


Background Data Summary: Mean=3.548, Std. Dev.=0.689, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9007, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:28 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limit

Prediction Limit  
Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=2.798, Std. Dev.=0.2716, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8285, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate as SO4 Analysis Run 7/2/2021 4:28 PM View: Appendix III - Intrawell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1	BY-GSA-MW-1
2/23/2016	3.59	
4/19/2016	2.89	
6/6/2016	3.12	
8/30/2016	3.91	
10/18/2016	3.9	
3/20/2017	3.5	
5/2/2017	3.5	
6/6/2017	3.1	
9/13/2017	<2 (U*)	
5/2/2018	9.9	
11/27/2018	4.7	
5/29/2019	5.48	
10/2/2019		3.65
3/31/2020		3.17
9/9/2020		2.92
5/12/2021		2.18

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-10
2/23/2016	3.57	
4/19/2016	3.12	
6/7/2016	3.14	
8/30/2016	2.93	
10/18/2016	2.96	
3/21/2017	4.4	
5/2/2017	3.7	
6/7/2017	3.3	
9/13/2017	5.1	
5/1/2018	4	
11/26/2018	3.8	
5/29/2019	4.34	
10/2/2019		4.34
3/31/2020		3.89
9/9/2020		4.11
5/12/2021		3.94

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-2	BY-GSA-MW-2
2/23/2016	3.99	
4/19/2016	4.08	
6/7/2016	4.28	
8/30/2016	4.26	
10/18/2016	4.26	
3/20/2017	4.1	
5/2/2017	5	
6/6/2017	3.9	
9/13/2017	<2 (U*)	
5/1/2018	3.7	
11/27/2018	3.2	
5/29/2019	2.93	
10/2/2019		2.75
3/31/2020		2.72
9/9/2020		2.32
5/11/2021		2.16

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-3	BY-GSA-MW-3
2/23/2016	3.68	
4/19/2016	3.72	
6/7/2016	3.66	
8/30/2016	3.7	
10/18/2016	3.77	
3/20/2017	3.7	
5/2/2017	4.6	
6/6/2017	3.4	
9/13/2017	<2 (U*)	
5/1/2018	4.1	
11/27/2018	3.5	
5/29/2019	3.58	
10/2/2019		3.64
3/31/2020		3.47
9/9/2020		3.47
5/11/2021		3.42

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-4	BY-GSA-MW-4
2/23/2016	3.5	
4/19/2016	3.63	
6/6/2016	3.6	
8/30/2016	3.54	
10/18/2016	3.68	
3/20/2017	4.6	
5/2/2017	3.9	
6/6/2017	3.4	
9/12/2017	4.3	
5/1/2018	3.8	
11/26/2018	3.6	
5/28/2019	3.6	
10/2/2019		3.5
3/31/2020		3.34
9/8/2020		3.29
5/11/2021		3.33

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-5	BY-GSA-MW-5
2/23/2016	3.86	
4/18/2016	4.46	
6/7/2016	3.74	
8/30/2016	3.5	
10/18/2016	3.5	
3/21/2017	2.8	
5/2/2017	3.9	
6/6/2017	3.4	
9/13/2017	<2 (U*)	
5/2/2018	3.5	
11/27/2018	3.7	
5/28/2019	3.69	
10/2/2019		3.49
3/30/2020		3.45
9/8/2020		6.23
5/12/2021		5.89

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-6
2/23/2016	6.06	
4/18/2016	6.13	
6/6/2016	5.52	
8/30/2016	5.35	
10/18/2016	4.55	
3/21/2017	3.5	
5/2/2017	4.8	
6/6/2017	3.6	
9/12/2017	4.3	
5/1/2018	3.8	
11/26/2018	3.5	
5/28/2019	6.26	
10/2/2019		4.13
3/30/2020		4.95
9/8/2020		5.71
5/12/2021		7.77

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-7	BY-GSA-MW-7
2/23/2016	4.08	
4/18/2016	4.14	
6/6/2016	4.09	
8/30/2016	4.6	
10/18/2016	8.32	
3/21/2017	5.6	
5/2/2017	4.8	
6/7/2017	6.3	
9/12/2017	8.5	
5/1/2018	4	
11/27/2018	4.3	
5/28/2019	4.63	
10/2/2019		5.02
3/30/2020		10.5
9/8/2020		8.74
5/12/2021		17.2

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-8	BY-GSA-MW-8
2/23/2016	4.47	
4/18/2016	4.74	
6/7/2016	4.52	
8/30/2016	4.71	
10/18/2016	4.73	
3/21/2017	4.9	
5/2/2017	5.7	
6/7/2017	4.1	
9/13/2017	4.9	
5/2/2018	4.1	
11/27/2018	4.9	
5/28/2019	4.43	
10/2/2019		4.32
3/30/2020		4.38
9/8/2020		4.61
5/12/2021		5.25

# Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-9	BY-GSA-MW-9
2/23/2016	4.1	
4/19/2016	3.11	
6/7/2016	3.72	
8/30/2016	4.8	
10/18/2016	4.71	
3/21/2017	5.3	
5/2/2017	6.6	
6/7/2017	5.2	
9/13/2017	6.5	
5/1/2018	5.7	
11/26/2018	11	
5/29/2019	8.56	
10/2/2019		8.48
3/31/2020		6.87
9/9/2020		7.94
5/12/2021		8.77

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1	BY-GSA-MW-1
2/23/2016	8.59	
4/19/2016	8.27	
6/6/2016	8.66	
8/30/2016	9.74	
10/18/2016	10.2	
3/20/2017	8.3	
5/2/2017	6.6	
6/6/2017	7.6	
9/13/2017	8.4	
5/2/2018	5.9	
11/27/2018	22	
5/29/2019	23.3	
10/2/2019		17.5
3/31/2020		24.3
9/9/2020		16.5
5/12/2021		16.3

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-10
2/23/2016	9.29	
4/19/2016	9.92	
6/7/2016	10	
8/30/2016	11.1	
10/18/2016	11.7	
3/21/2017	9	
5/2/2017	7.9	
6/7/2017	8.4	
9/13/2017	8.7	
5/1/2018	10	
11/26/2018	8.3	
5/29/2019	11.1	
10/2/2019		13.2
3/31/2020		11.1
9/9/2020		9.28
5/12/2021		11

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-2	BY-GSA-MW-2
2/23/2016	7.2	
4/19/2016	7.22	
6/7/2016	7.92	
8/30/2016	8.17	
10/18/2016	7.99	
3/20/2017	6.1	
5/2/2017	5	
6/6/2017	5.3	
9/13/2017	4.9 (J)	
5/1/2018	4.2 (J)	
11/27/2018	3.7 (J)	
5/29/2019	5.94	
10/2/2019		6.04
3/31/2020		6.83
9/9/2020		6.08
5/11/2021		7.92

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-3	BY-GSA-MW-3
2/23/2016	7.44	
4/19/2016	7.66	
6/7/2016	8.16	
8/30/2016	8.43	
10/18/2016	8.47	
3/20/2017	7.4	
5/2/2017	6.3	
6/6/2017	7.1	
9/13/2017	7.3	
5/1/2018	6.9	
11/27/2018	6.5	
5/29/2019	7.81	
10/2/2019		7.62
3/31/2020		7.98
9/9/2020		7.13
5/11/2021		7.73

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-4	BY-GSA-MW-4
2/23/2016	7.04	
4/19/2016	6.74	
6/6/2016	7.04	
8/30/2016	7.57	
10/18/2016	6.62	
3/20/2017	7	
5/2/2017	5.6	
6/6/2017	6.6	
9/12/2017	7.2	
5/1/2018	5.9	
11/26/2018	5.1	
5/28/2019	7.1	
10/2/2019		6.88
3/31/2020		10.8
9/8/2020		6.52
5/11/2021		6.8

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-5	BY-GSA-MW-5
2/23/2016	12.5	
4/18/2016	28.6	
6/7/2016	18.7	
8/30/2016	13.8	
10/18/2016	12.2	
3/21/2017	8.6	
5/2/2017	8	
6/6/2017	8.6	
9/13/2017	7.6	
5/2/2018	6	
11/27/2018	5.5	
5/28/2019	6.5	
10/2/2019		6.55
3/30/2020		6.34
9/8/2020		15.1
5/12/2021		38.2

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-6	BY-GSA-MW-6
2/23/2016	36.5	
4/18/2016	80.2 (O)	
6/6/2016	0.498 (J)	
8/30/2016	27.8	
10/18/2016	22.5	
3/21/2017	15	
5/2/2017	11	
6/6/2017	10	
9/12/2017	7.5	
5/1/2018	8.5	
11/26/2018	7.4	
5/28/2019	32.7	
10/2/2019		15.9
3/30/2020		21.8
9/8/2020		17.7
5/12/2021		37.1

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-7	BY-GSA-MW-7
2/23/2016	3.82	
4/18/2016	3.48	
6/6/2016	3.76	
8/30/2016	3.62	
10/18/2016	2.58	
3/21/2017	3.3 (J)	
5/2/2017	2.5 (J)	
6/7/2017	3.1 (J)	
9/12/2017	3 (J)	
5/1/2018	1.6 (J)	
11/27/2018	1.9 (J)	
5/28/2019	4.86	
10/2/2019		4.6
3/30/2020		4.29
9/8/2020		3.59
5/12/2021		3.58

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-8	BY-GSA-MW-8
2/23/2016	3.33	
4/18/2016	3.78	
6/7/2016	4.44	
8/30/2016	4.29	
10/18/2016	4.27	
3/21/2017	3.6 (J)	
5/2/2017	2.9 (J)	
6/7/2017	2.9 (J)	
9/13/2017	3.2 (J)	
5/2/2018	2.6 (J)	
11/27/2018	2.8 (J)	
5/28/2019	4.46	
10/2/2019		4.96
3/30/2020		4.84
9/8/2020		4.56
5/12/2021		4.7

# Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 7/2/2021 4:30 PM View: Appendix III - IntraWell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-9	BY-GSA-MW-9
2/23/2016	7.71	
4/19/2016	7.85	
6/7/2016	7.76	
8/30/2016	8.22	
10/18/2016	9.29	
3/21/2017	7.1	
5/2/2017	5.7	
6/7/2017	7.1	
9/13/2017	7.3	
5/1/2018	7.1	
11/26/2018	7.3	
5/29/2019	12.3	
10/2/2019		11.6
3/31/2020		12.5
9/9/2020		10.7
5/12/2021		12.5

FIGURE E.

# Appendix III - Interwell Prediction Limits - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 6:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	BY-GSA-MW-5	0.19	n/a	5/12/2021	0.511	Yes	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-6	0.19	n/a	5/12/2021	0.876	Yes	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-5	2	n/a	5/12/2021	7	Yes	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-6	2	n/a	5/12/2021	13.5	Yes	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-10	5	4.5	5/12/2021	4.4	Yes	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-6	5	4.5	5/12/2021	5.46	Yes	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-9	5	4.5	5/12/2021	4.43	Yes	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-5	58	n/a	5/12/2021	85.3	Yes	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-6	58	n/a	5/12/2021	98.7	Yes	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2

# Appendix III - Interwell Prediction Limits - All Results

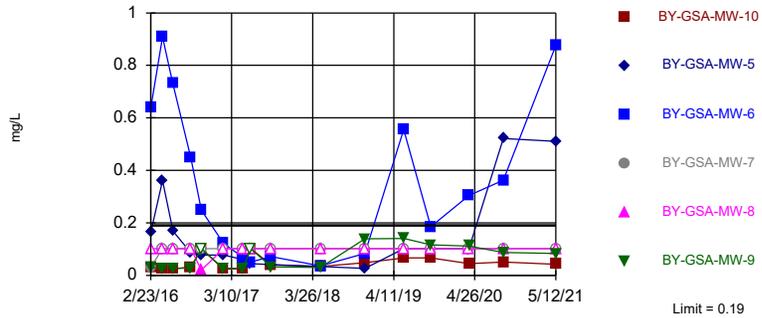
Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 6:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	BY-GSA-MW-10	0.19	n/a	5/12/2021	0.0423J	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
<b>Boron, total (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>0.19</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>0.511</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>79.69</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (NDs) 1 of 2
<b>Boron, total (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>0.19</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>0.876</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>79.69</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-7	0.19	n/a	5/12/2021	0.1015ND	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-8	0.19	n/a	5/12/2021	0.1015ND	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Boron, total (mg/L)	BY-GSA-MW-9	0.19	n/a	5/12/2021	0.0834J	No	64	n/a	n/a	79.69	n/a	n/a	0.000468	NP (NDs) 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-10	2	n/a	5/12/2021	1.06	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>2</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>7</b>	<b>Yes</b>	<b>64</b>	<b>1.486</b>	<b>0.2843</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	Param 1 of 2
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>2</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>13.5</b>	<b>Yes</b>	<b>64</b>	<b>1.486</b>	<b>0.2843</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-7	2	n/a	5/12/2021	1.63	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-8	2	n/a	5/12/2021	1.02	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Calcium, total (mg/L)	BY-GSA-MW-9	2	n/a	5/12/2021	1.82	No	64	1.486	0.2843	0	None	No	0.001254	Param 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-10	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-5	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-6	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-7	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-8	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
Fluoride, total (mg/L)	BY-GSA-MW-9	0.10	n/a	5/12/2021	0.1ND	No	68	n/a	n/a	57.35	n/a	n/a	0.0004142	NP (NDs) 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-10</b>	<b>5</b>	<b>4.5</b>	<b>5/12/2021</b>	<b>4.4</b>	<b>Yes</b>	<b>72</b>	<b>4.748</b>	<b>0.1474</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268</b>	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-5	5	4.5	5/12/2021	4.61	No	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>5</b>	<b>4.5</b>	<b>5/12/2021</b>	<b>5.46</b>	<b>Yes</b>	<b>72</b>	<b>4.748</b>	<b>0.1474</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268</b>	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-7	5	4.5	5/12/2021	4.84	No	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
pH, Field (SU)	BY-GSA-MW-8	5	4.5	5/12/2021	4.83	No	72	4.748	0.1474	0	None	No	0.0006268	Param 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>5</b>	<b>4.5</b>	<b>5/12/2021</b>	<b>4.43</b>	<b>Yes</b>	<b>72</b>	<b>4.748</b>	<b>0.1474</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268</b>	Param 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-10	58	n/a	5/12/2021	42.7	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>58</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>85.3</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>10.94</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (normality) 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>58</b>	<b>n/a</b>	<b>5/12/2021</b>	<b>98.7</b>	<b>Yes</b>	<b>64</b>	<b>n/a</b>	<b>n/a</b>	<b>10.94</b>	<b>n/a</b>	<b>n/a</b>	<b>0.000468</b>	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-7	58	n/a	5/12/2021	52.7	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-8	58	n/a	5/12/2021	40	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	BY-GSA-MW-9	58	n/a	5/12/2021	50.7	No	64	n/a	n/a	10.94	n/a	n/a	0.000468	NP (normality) 1 of 2

Sanitas™ v.9.6.29 . UG  
Hollow symbols indicate censored values.

Exceeds Limit: BY-GSA-MW-5, BY-GSA-MW-6

Prediction Limit  
Interwell Non-parametric



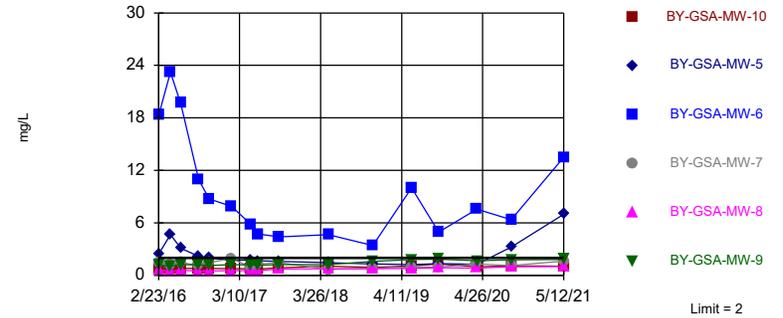
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 64 background values. 79.69% NDs. Annual per-constituent alpha = 0.005602. Individual comparison alpha = 0.000468 (1 of 2). Comparing 6 points to limit.

Constituent: Boron, total Analysis Run 7/7/2021 6:17 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sanitas™ v.9.6.29 . UG

Exceeds Limit: BY-GSA-MW-5, BY-GSA-MW-6

Prediction Limit  
Interwell Parametric



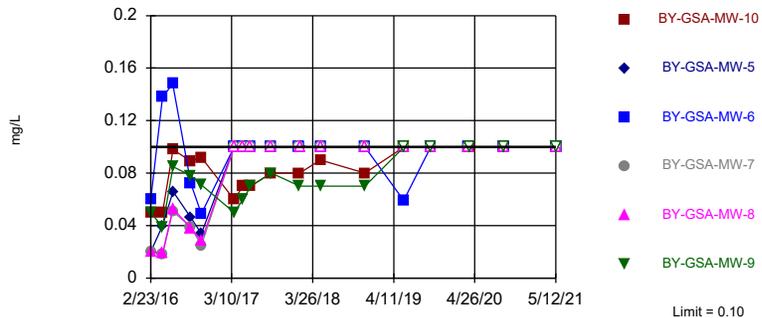
Background Data Summary: Mean=1.486, Std. Dev.=0.2843, n=64. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9837, critical = 0.947. Kappa = 1.876 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001254. Comparing 6 points to limit.

Constituent: Calcium, total Analysis Run 7/7/2021 6:17 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sanitas™ v.9.6.29 . UG  
Hollow symbols indicate censored values.

Within Limit

Prediction Limit  
Interwell Non-parametric



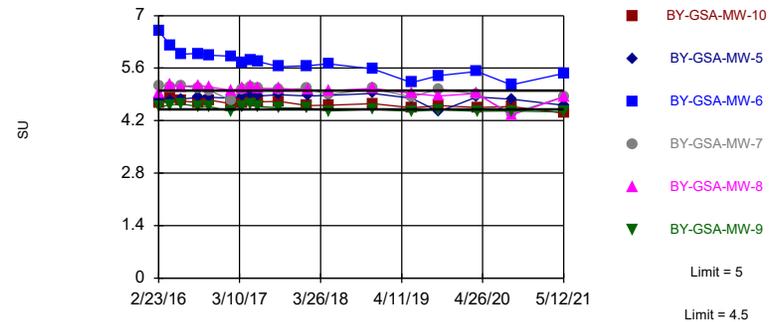
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 68 background values. 57.35% NDs. Annual per-constituent alpha = 0.004959. Individual comparison alpha = 0.0004142 (1 of 2). Comparing 6 points to limit.

Constituent: Fluoride, total Analysis Run 7/7/2021 6:17 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sanitas™ v.9.6.29 . UG

Exceeds Limits: BY-GSA-MW-10, BY-GSA-MW-6, BY-GSA-MW-9

Prediction Limit  
Interwell Parametric



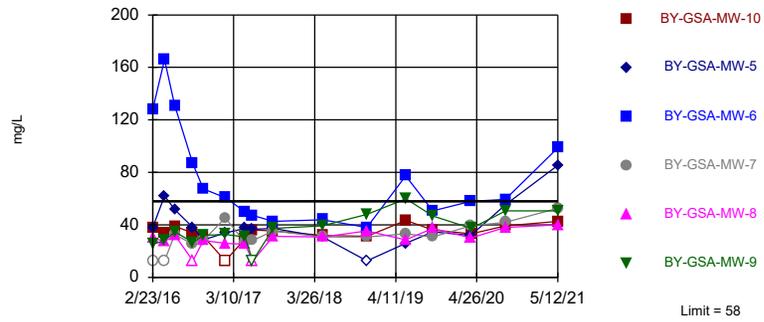
Background Data Summary: Mean=4.748, Std. Dev.=0.1474, n=72. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9683, critical = 0.954. Kappa = 1.866 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0006268. Comparing 6 points to limit.

Constituent: pH, Field Analysis Run 7/7/2021 6:17 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sanitas™ v.9.6.29 - UG  
Hollow symbols indicate censored values.

Exceeds Limit: BY-GSA-MW-5, BY-GSA-MW-6

### Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 64 background values. 10.94% NDs. Annual per-constituent alpha = 0.005602. Individual comparison alpha = 0.000468 (1 of 2). Comparing 6 points to limit.

Constituent: Total Dissolved Solids Analysis Run 7/7/2021 6:17 PM View: Appendix III - Interwell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-6	BY-GSA-MW-2 (bg)	BY-GSA-MW-10	BY-GSA-MW-9	BY-GSA-MW-5	BY-GSA-MW-8
2/23/2016	0.0212 (J)	<0.1015	0.0257 (J)	0.638	0.0252 (J)	0.0294 (J)	0.0297 (J)	0.163	<0.1015
4/18/2016				0.908				0.361	<0.1015
4/19/2016	<0.1015	<0.1015	<0.1015		<0.1015	0.0257 (J)	0.0269 (J)		
6/6/2016	<0.1015		<0.1015	0.733					
6/7/2016		<0.1015			0.0202 (J)	0.0257 (J)	0.0271 (J)	0.169	<0.1015
8/30/2016	<0.1015	<0.1015	<0.1015	0.448	<0.1015	0.0317 (J)	0.0272 (J)	0.0858 (J)	<0.1015
10/18/2016	<0.1015	<0.1015	0.022 (J)	0.249	<0.1015	<0.1015	<0.1015	0.0778 (J)	0.0207 (J)
1/30/2017						0.0243 (J)	0.0269 (J)		
1/31/2017	<0.1015	<0.1015	<0.1015	0.121	<0.1015			0.077 (J)	<0.1015
5/2/2017	<0.1015	<0.1015	<0.1015	0.0695 (J)	<0.1015	0.0259 (J)	0.027 (J)	0.0602 (J)	<0.1015
6/6/2017	<0.1015	<0.1015	<0.1015	0.0509 (J)	<0.1015			0.0442 (J)	
6/7/2017						<0.1015	<0.1015		<0.1015
9/12/2017			<0.1015	0.0709 (J)					
9/13/2017	<0.1015	<0.1015			<0.1015	0.0394 (J)	0.032 (J)	0.0411 (J)	<0.1015
5/1/2018		<0.1015	<0.1015	0.0365 (J)	<0.1015	0.0338 (J)	0.0302 (J)		
5/2/2018	0.0362 (J)							0.0334 (J)	<0.1015
11/26/2018			<0.1015	0.0836 (J)		0.0484 (J)	0.139		
11/27/2018	0.11	<0.1015			0.0207 (J)			0.0265 (J)	<0.1015
5/28/2019			<0.1015	0.556				<0.1015	<0.1015
5/29/2019	0.188	<0.1015			<0.1015	0.0669 (J)	0.141		
10/2/2019	0.097 (J)	<0.1015	<0.1015	0.186	<0.1015	0.0671 (J)	0.116	<0.1015	<0.1015
3/30/2020				0.304				<0.1015	<0.1015
3/31/2020	0.157	<0.1015	<0.1015		<0.1015	0.0442 (J)	0.112		
9/8/2020			<0.1015	0.362				0.521	<0.1015
9/9/2020	0.0999 (J)	<0.1015			<0.1015	0.0509 (J)	0.0873 (J)		
5/11/2021		<0.1015	<0.1015		<0.1015				
5/12/2021	0.0841 (J)			0.876		0.0423 (J)	0.0834 (J)	0.511	<0.1015

# Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-7
2/23/2016	0.0314 (J)
4/18/2016	<0.1015
4/19/2016	
6/6/2016	<0.1015
6/7/2016	
8/30/2016	<0.1015
10/18/2016	<0.1015
1/30/2017	<0.1015
1/31/2017	
5/2/2017	<0.1015
6/6/2017	
6/7/2017	<0.1015
9/12/2017	<0.1015
9/13/2017	
5/1/2018	<0.1015
5/2/2018	
11/26/2018	
11/27/2018	<0.1015
5/28/2019	<0.1015
5/29/2019	
10/2/2019	<0.1015
3/30/2020	<0.1015
3/31/2020	
9/8/2020	<0.1015
9/9/2020	
5/11/2021	
5/12/2021	<0.1015

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-6	BY-GSA-MW-2 (bg)	BY-GSA-MW-10	BY-GSA-MW-9	BY-GSA-MW-5	BY-GSA-MW-8
2/23/2016	1.28	1.77	1.42	18.3	1.11	0.795	1.15	2.42	0.618
4/18/2016				23.2				4.65	0.505
4/19/2016	1.19	1.68	1.31		1.09	0.761	1.04		
6/6/2016	1.19		1.35	19.7					
6/7/2016		1.68			1.16	0.799	1.22	3.1	0.587
8/30/2016	1.11	1.62	1.31	10.9	1.08	0.788	1.18	2.19	0.495 (J)
10/18/2016	1.04	1.53	1.22	8.74	1.03	0.788	1.12	1.97	0.503
1/30/2017						0.755	1.23		
1/31/2017	1.19	1.65	1.36	7.89	1.23			1.73	0.554
5/2/2017	1.05	1.58	1.24	5.81	1.28	0.763	1.2	1.74	0.548
6/6/2017	0.978	1.55	1.28	4.72	1.25			1.66	
6/7/2017						0.706	1.17		0.545
9/12/2017			1.47	4.39					
9/13/2017	1.14	1.71			1.6	0.873	1.25	1.61	0.723
5/1/2018		1.76	1.47	4.66	1.58	1.05	1.25		
5/2/2018	1.64							1.44	0.751
11/26/2018			1.52	3.41		0.922	1.61		
11/27/2018	2.01	1.69			1.49			1.3	0.743
5/28/2019			1.6	10				1.25	0.789
5/29/2019	1.85	1.74			1.59	1.07	1.8		
10/2/2019	1.55	1.86	1.7	4.94	1.7	1.32	1.85	1.33	0.882
3/30/2020				7.56				1.26	0.841
3/31/2020	1.96	1.92	1.78		1.43	0.98	1.67		
9/8/2020			1.94	6.38				3.24	0.981
9/9/2020	1.43	1.97			1.5	1.1	1.79		
5/11/2021		2.06	1.93		1.39				
5/12/2021	1.34			13.5		1.06	1.82	7	1.02

# Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-7
2/23/2016	1.4
4/18/2016	1.2
4/19/2016	
6/6/2016	1.48
6/7/2016	
8/30/2016	1.13
10/18/2016	1.45
1/30/2017	1.95
1/31/2017	
5/2/2017	0.908
6/6/2017	
6/7/2017	1.29
9/12/2017	1.44
9/13/2017	
5/1/2018	0.695
5/2/2018	
11/26/2018	
11/27/2018	0.798
5/28/2019	0.973
5/29/2019	
10/2/2019	0.929
3/30/2020	1.32
3/31/2020	
9/8/2020	1.12
9/9/2020	
5/11/2021	
5/12/2021	1.63

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-2 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-10	BY-GSA-MW-9
2/23/2016	0.03 (J)	0.02 (J)	0.02 (J)	0.06 (J)	0.02 (J)	0.02 (J)	0.02 (J)	0.05 (J)	0.05 (J)
4/18/2016			0.04 (J)	0.138 (J)		0.018 (J)	0.019 (J)		
4/19/2016	0.023 (J)	0.016 (J)			0.021 (J)			0.05 (J)	0.039 (J)
6/6/2016	0.062 (J)			0.148 (J)		0.051 (J)			
6/7/2016		0.052 (J)	0.066 (J)		0.06 (J)		0.053 (J)	0.098 (J)	0.085 (J)
8/30/2016	0.053 (J)	0.038 (J)	0.046 (J)	0.072 (J)	0.05 (J)	0.039 (J)	0.038 (J)	0.089 (J)	0.078 (J)
10/18/2016	0.042 (J)	0.03 (J)	0.034 (J)	0.049 (J)	0.04 (J)	0.025 (J)	0.028 (J)	0.092 (J)	0.071 (J)
3/20/2017	<0.1	<0.1			<0.1				
3/21/2017			<0.1	<0.1		<0.1	<0.1	0.06 (J)	0.05 (J)
5/2/2017	0.04 (J)	<0.1	<0.1	<0.1	0.04 (J)	<0.1	<0.1	0.07 (J)	0.06 (J)
6/6/2017	<0.1	<0.1	<0.1	<0.1	0.04 (J)				
6/7/2017						<0.1	<0.1	0.07 (J)	0.07 (J)
9/12/2017				<0.1		<0.1			
9/13/2017	0.04 (J)	<0.1	<0.1		0.043 (J)		<0.1	0.08 (J)	0.08 (J)
1/22/2018				<0.1		<0.1			
1/23/2018	<0.1	<0.1			0.04 (J)			0.08 (J)	0.07 (J)
1/24/2018			<0.1				<0.1		
5/1/2018		<0.1		<0.1	0.04 (J)	<0.1		0.09 (J)	0.07 (J)
5/2/2018	0.04 (J)		<0.1				<0.1		
11/26/2018				<0.1				0.08 (J)	0.07 (J)
11/27/2018	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1		
5/28/2019			<0.1	0.0591 (J)		<0.1	<0.1		
5/29/2019	0.0502 (J)	<0.1			<0.1			<0.1	<0.1
10/2/2019	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3/30/2020			<0.1	<0.1		<0.1	<0.1		
3/31/2020	<0.1	<0.1			<0.1			<0.1	<0.1
9/8/2020			<0.1	<0.1		<0.1	<0.1		
9/9/2020	<0.1	<0.1			<0.1			<0.1	<0.1
5/11/2021		<0.1			<0.1				
5/12/2021	<0.1		<0.1	<0.1		<0.1	<0.1	<0.1	<0.1

# Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-4 (bg)
2/23/2016	0.02 (J)
4/18/2016	
4/19/2016	0.015 (J)
6/6/2016	0.05 (J)
6/7/2016	
8/30/2016	0.036 (J)
10/18/2016	0.025 (J)
3/20/2017	<0.1
3/21/2017	
5/2/2017	<0.1
6/6/2017	<0.1
6/7/2017	
9/12/2017	<0.1
9/13/2017	
1/22/2018	
1/23/2018	<0.1
1/24/2018	
5/1/2018	<0.1
5/2/2018	
11/26/2018	<0.1
11/27/2018	
5/28/2019	<0.1
5/29/2019	
10/2/2019	<0.1
3/30/2020	
3/31/2020	<0.1
9/8/2020	<0.1
9/9/2020	
5/11/2021	<0.1
5/12/2021	

# Prediction Limit

Constituent: pH, Field (SU) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-MW-7	BY-GSA-MW-2 (bg)	BY-GSA-MW-6	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-4 (bg)
2/23/2016	4.62	4.92	4.56	5.12	4.79	6.59	4.67	4.76	4.74
4/18/2016		5.16		5.11		6.21		4.75	
4/19/2016	4.74		4.62		4.84		4.79		4.86
6/6/2016	4.65			5.14		5.97			4.88
6/7/2016		5.11	4.64		4.81		4.73	4.77	
8/30/2016	4.64	5.14	4.58	5.06	4.76	5.99	4.68	4.82	4.91
10/18/2016	4.74	5.09	4.58	5.01	4.84	5.94	4.75	4.82	4.95
1/30/2017			4.44	4.74			4.65		
1/31/2017	4.54	5.01			4.6	5.92		4.8	4.71
3/20/2017	4.67				4.71				4.83
3/21/2017		5.07	4.57	5.04		5.74	4.68	4.86	
5/2/2017	4.79	5.13	4.64	5.08	4.8	5.82	4.75	4.89	4.93
6/6/2017	4.76				4.72	5.77		4.86	4.9
6/7/2017		5.05	4.58	5.07			4.7		
9/12/2017				5.03		5.64			4.82
9/13/2017	4.81	5.06	4.54		4.71		4.71	4.89	
1/22/2018				5.06		5.66			
1/23/2018	4.79		4.53		4.67		4.6		4.85
1/24/2018		5.02						4.86	
5/1/2018			4.46	4.89	4.61	5.71	4.61		4.8
5/2/2018	4.62	4.99						4.87	
11/26/2018			4.5			5.58	4.65		4.88
11/27/2018	4.73	5.06		5.05	4.72			4.92	
5/28/2019		4.92		4.83		5.21		4.8	4.73
5/29/2019	4.65		4.45		4.58		4.54		
10/2/2019	4.57	4.86	4.49	5.04	4.43	5.4	4.6	4.44	4.67
3/30/2020		4.92		4.91		5.51		4.83	
3/31/2020	4.64		4.45		4.6		4.55		4.51
9/8/2020		4.35		4.39		5.15		4.77	4.75
9/9/2020	4.65		4.46		4.67		4.58		
5/11/2021					4.29				4.67
5/12/2021	4.74	4.83	4.43	4.84		5.46	4.4	4.61	

# Prediction Limit

Constituent: pH, Field (SU) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

BY-GSA-MW-3 (bg)

2/23/2016	4.96
4/18/2016	
4/19/2016	4.94
6/6/2016	
6/7/2016	4.96
8/30/2016	4.92
10/18/2016	4.98
1/30/2017	
1/31/2017	4.74
3/20/2017	4.9
3/21/2017	
5/2/2017	4.98
6/6/2017	4.94
6/7/2017	
9/12/2017	
9/13/2017	4.93
1/22/2018	
1/23/2018	4.91
1/24/2018	
5/1/2018	4.87
5/2/2018	
11/26/2018	
11/27/2018	4.94
5/28/2019	
5/29/2019	4.8
10/2/2019	4.52
3/30/2020	
3/31/2020	4.4
9/8/2020	
9/9/2020	4.76
5/11/2021	4.53
5/12/2021	

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLs

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-6	BY-GSA-MW-2 (bg)	BY-GSA-MW-10	BY-GSA-MW-9	BY-GSA-MW-5	BY-GSA-MW-8
2/23/2016	26.7	40	<25	128	30.7	37.3	25.3	38	30
4/18/2016				166				62	27.3
4/19/2016	<25	32	<25		<25	34	28		
6/6/2016	32.7		28.7	131					
6/7/2016		38.7			35.3	38.7	34.7	51.3	32
8/30/2016	33.3	31.3	25.3	86.7	27.3	34	26.7	38	<25
10/18/2016	27.3	26.7	<25	67.3	<25	31.3	32	28.7	28
1/30/2017						<25	32.7		
1/31/2017	32	30	26	60.7	32.7			34	26
5/2/2017	31.3	30.7	<25	50	30.7	29.3	30.7	37.3	25.3
6/6/2017	35.3	32.7	42.7	47.3	34.7			36.7	
6/7/2017						36	<25		<25
9/12/2017			26.7	42.7					
9/13/2017	36.7	38			39.3	35.3	37.3	37.3	31.3
5/1/2018		35.3	34.7	44	42	32	39.3		
5/2/2018	34							30.7	30.7
11/26/2018			32.7	38		31.3	48		
11/27/2018	50.7	36			31.3			<25	35.3
5/28/2019			31.3	77.3				26	28.7
5/29/2019	58	37.3			40	43.3	60		
10/2/2019	46	36.7	36	50.7	41.3	36	46.7	34.7	37.3
3/30/2020				58				32	30
3/31/2020	53.3	39.3	36.7		40	33.3	37.3		
9/8/2020			39.3	59.3				55.3	38
9/9/2020	42	42.7			40.7	39.3	50.7		
5/11/2021		44	46.7		35.3				
5/12/2021	40.7			98.7		42.7	50.7	85.3	40

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/7/2021 6:20 PM View: Appendix III - Interwell PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

BY-GSA-MW-7

2/23/2016	<25
4/18/2016	<25
4/19/2016	
6/6/2016	32.7
6/7/2016	
8/30/2016	25.3
10/18/2016	28
1/30/2017	45.3
1/31/2017	
5/2/2017	26.7
6/6/2017	
6/7/2017	28
9/12/2017	35.3
9/13/2017	
5/1/2018	30.7
5/2/2018	
11/26/2018	
11/27/2018	30.7
5/28/2019	33.3
5/29/2019	
10/2/2019	30.7
3/30/2020	39.3
3/31/2020	
9/8/2020	42
9/9/2020	
5/11/2021	
5/12/2021	52.7

FIGURE F.

# Appendix III - Trend Test Summary - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/9/2021, 1:52 PM

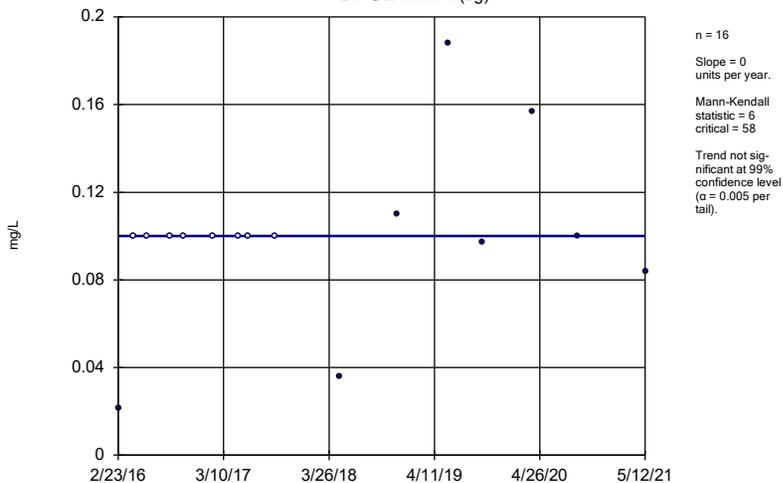
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Calcium, total (mg/L)	BY-GSA-MW-2 (bg)	0.1183	62	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-3 (bg)	0.07545	59	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-4 (bg)	0.122	78	58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-2 (bg)	-0.4298	-75	-58	Yes	16	6.25	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-7	0.9544	60	58	Yes	16	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-10	-0.04746	-91	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-2 (bg)	-0.06952	-94	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-3 (bg)	-0.0553	-82	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-6	-0.1996	-129	-68	Yes	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-9	-0.03571	-89	-68	Yes	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-1 (bg)	5.298	76	58	Yes	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-2 (bg)	2.894	62	58	Yes	16	12.5	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-4 (bg)	4.909	78	58	Yes	16	25	n/a	n/a	0.01	NP

# Appendix III - Trend Test Summary - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/9/2021, 1:52 PM

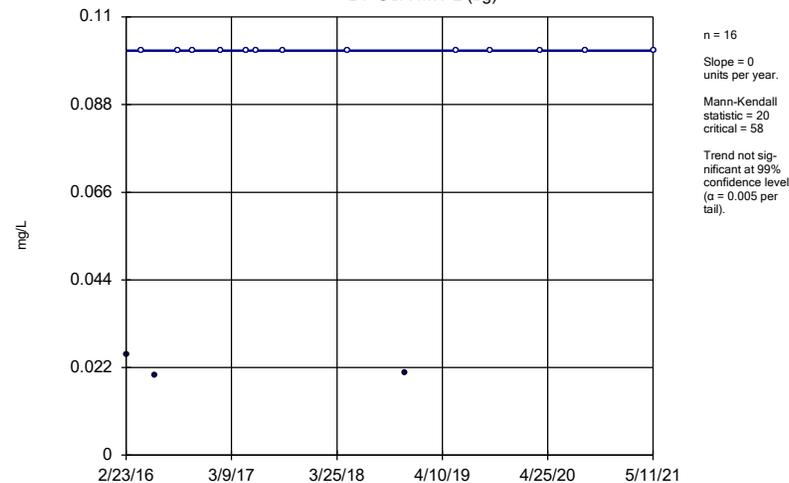
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron, total (mg/L)	BY-GSA-MW-1 (bg)	0	6	58	No	16	50	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-2 (bg)	0	20	58	No	16	81.25	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-3 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-4 (bg)	0	21	58	No	16	87.5	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-5	-0.01197	-9	-58	No	16	18.75	n/a	n/a	0.01	NP
Boron, total (mg/L)	BY-GSA-MW-6	-0.03664	-14	-58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-1 (bg)	0.07712	33	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>0.1183</b>	<b>62</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-3 (bg)</b>	<b>0.07545</b>	<b>59</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium, total (mg/L)</b>	<b>BY-GSA-MW-4 (bg)</b>	<b>0.122</b>	<b>78</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium, total (mg/L)	BY-GSA-MW-5	-0.2436	-52	-58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	BY-GSA-MW-6	-2.496	-44	-58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-1 (bg)	-0.07985	-11	-58	No	16	6.25	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>-0.4298</b>	<b>-75</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>6.25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride, Total (mg/L)	BY-GSA-MW-3 (bg)	-0.05051	-42	-58	No	16	6.25	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-4 (bg)	-0.06007	-40	-58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-5	-0.003309	-5	-58	No	16	6.25	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	BY-GSA-MW-6	-0.07987	-5	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>0.9544</b>	<b>60</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (SU)	BY-GSA-MW-1 (bg)	0	4	68	No	18	0	n/a	n/a	0.01	NP
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-10</b>	<b>-0.04746</b>	<b>-91</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>-0.06952</b>	<b>-94</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-3 (bg)</b>	<b>-0.0553</b>	<b>-82</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH, Field (SU)	BY-GSA-MW-4 (bg)	-0.03973	-61	-68	No	18	0	n/a	n/a	0.01	NP
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>-0.1996</b>	<b>-129</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>-0.03571</b>	<b>-89</b>	<b>-68</b>	<b>Yes</b>	<b>18</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate as SO4 (mg/L)	BY-GSA-MW-1 (bg)	2.216	38	58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-2 (bg)	-0.3035	-23	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-3 (bg)	-0.07291	-12	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-4 (bg)	-0.04665	-13	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-5	-1.674	-43	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	BY-GSA-MW-9	0.9151	41	58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-1 (bg)</b>	<b>5.298</b>	<b>76</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>6.25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>2.894</b>	<b>62</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>12.5</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	BY-GSA-MW-3 (bg)	2.208	50	58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>BY-GSA-MW-4 (bg)</b>	<b>4.909</b>	<b>78</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>25</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	BY-GSA-MW-5	-1.055	-20	-58	No	16	6.25	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	BY-GSA-MW-6	-13.34	-40	-58	No	16	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator BY-GSA-MW-1 (bg)



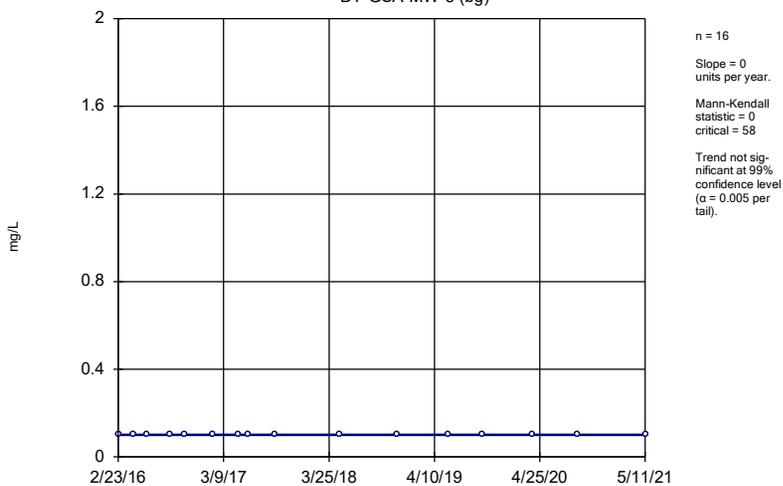
Constituent: Boron, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-2 (bg)



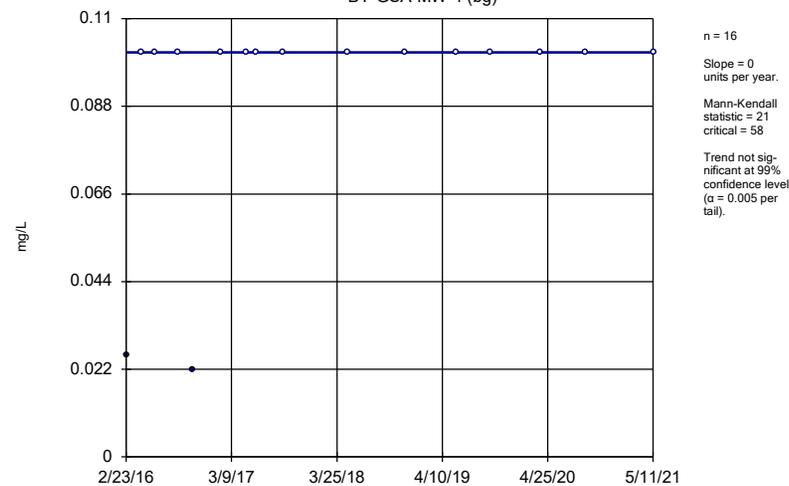
Constituent: Boron, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-3 (bg)



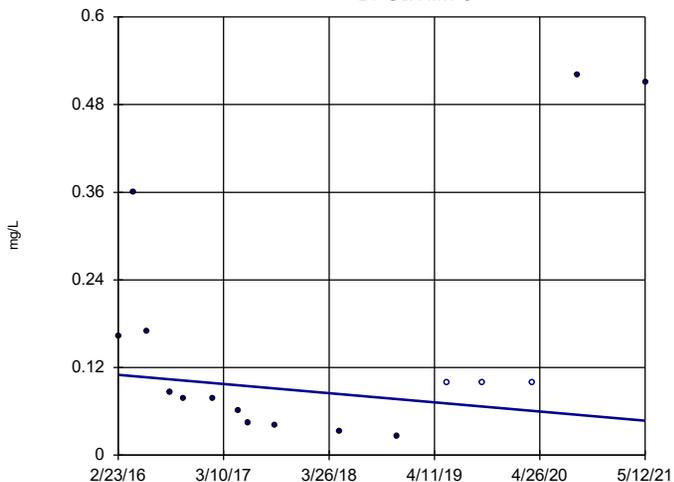
Constituent: Boron, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-4 (bg)



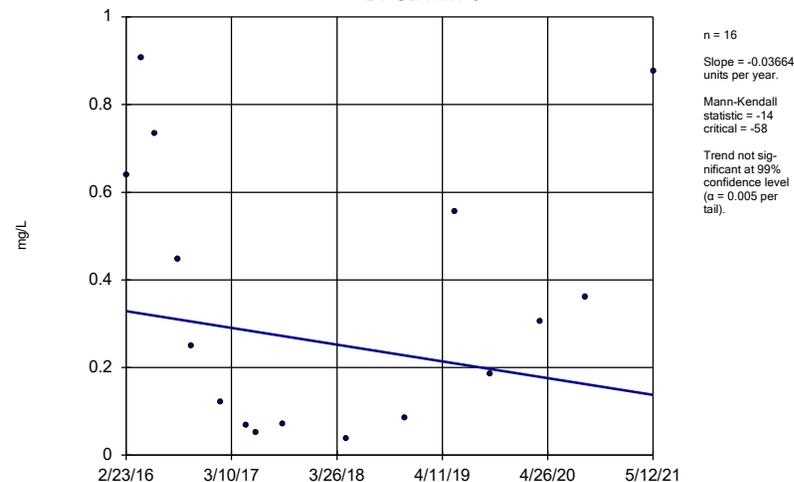
Constituent: Boron, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-5



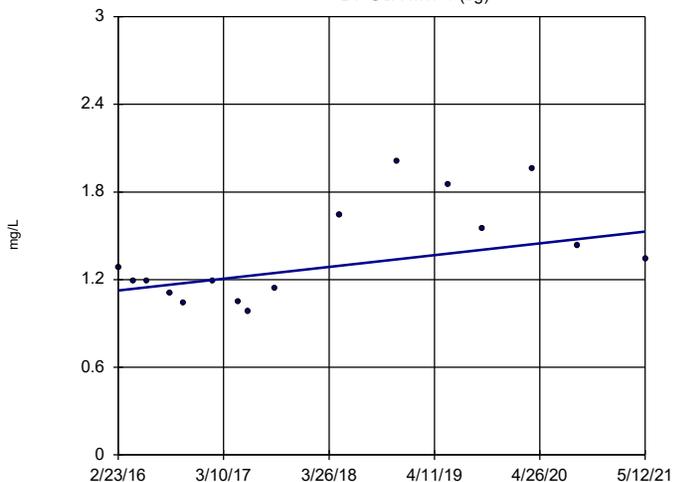
Constituent: Boron, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-6



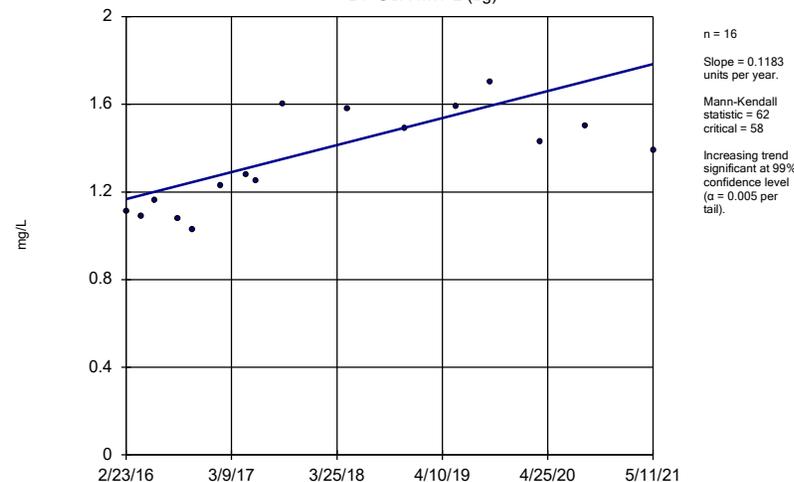
Constituent: Boron, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-1 (bg)



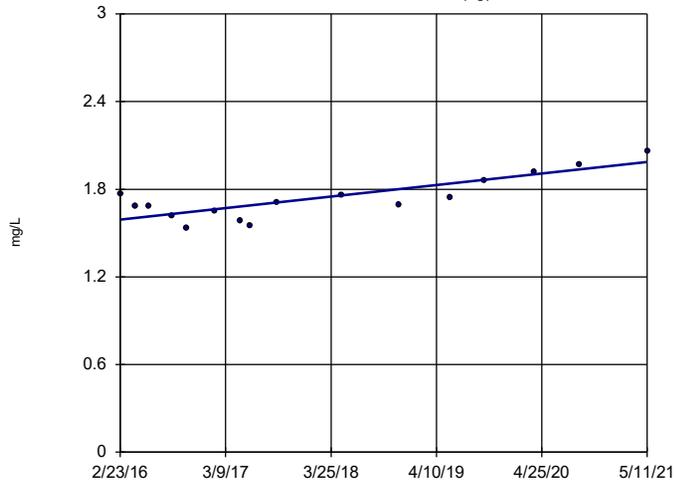
Constituent: Calcium, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-2 (bg)



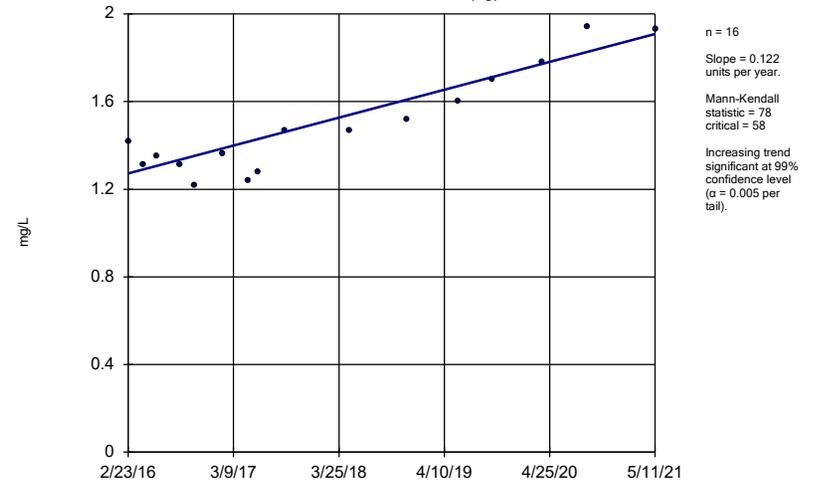
Constituent: Calcium, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-3 (bg)



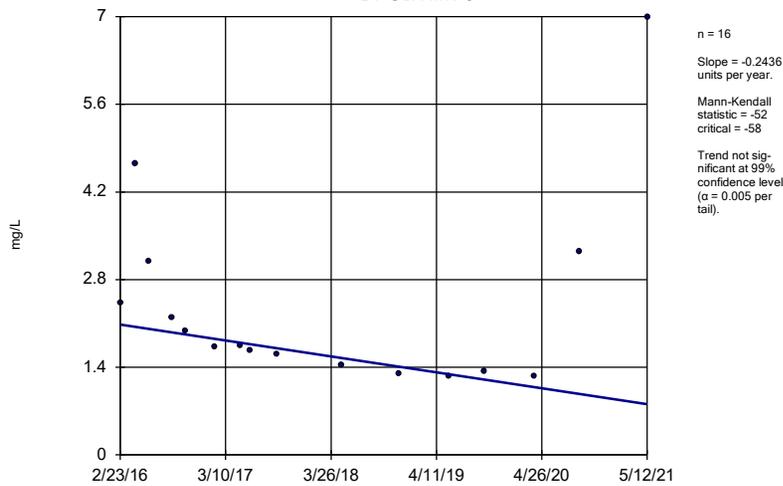
Constituent: Calcium, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-4 (bg)



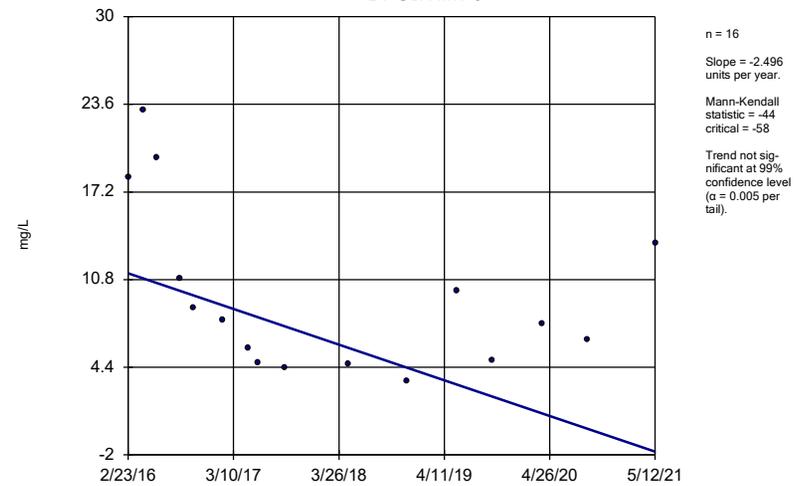
Constituent: Calcium, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-5



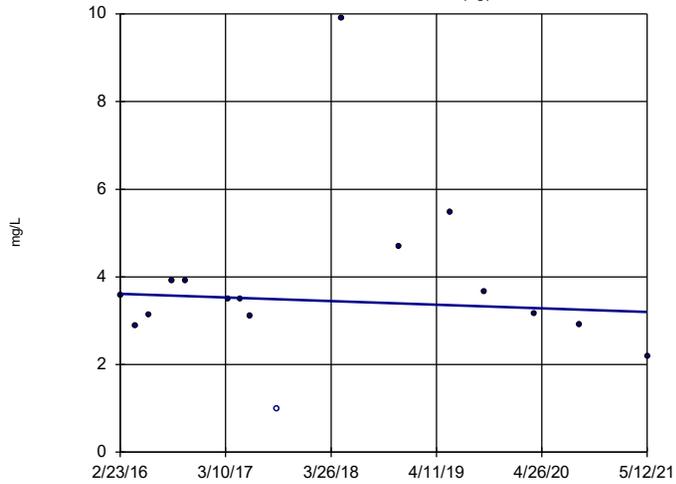
Constituent: Calcium, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-6



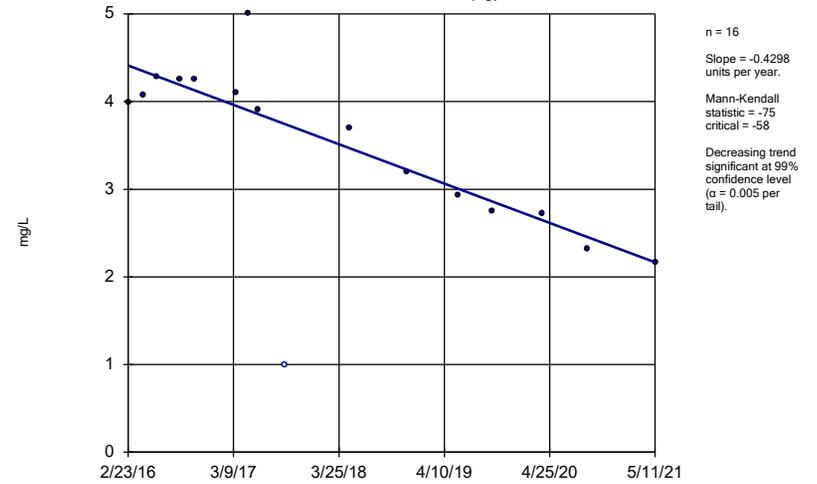
Constituent: Calcium, total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-1 (bg)



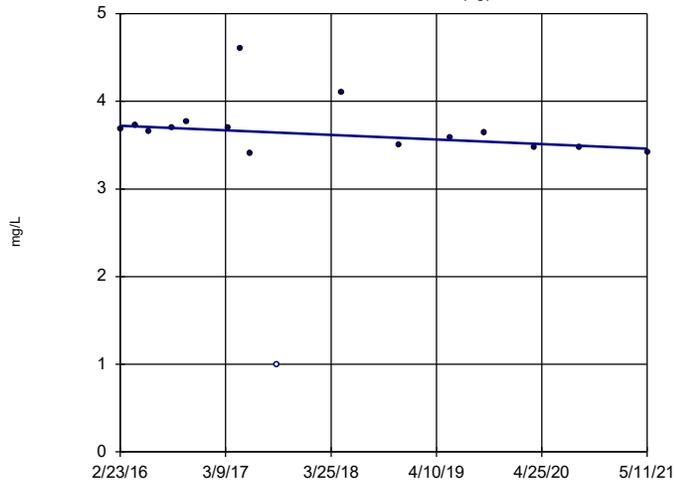
Constituent: Chloride, Total Analysis Run 7/9/2021 1:50 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-2 (bg)



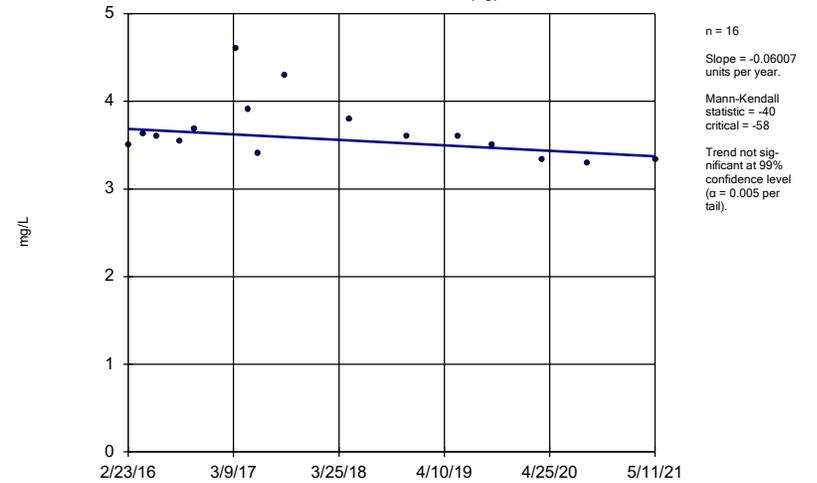
Constituent: Chloride, Total Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-3 (bg)



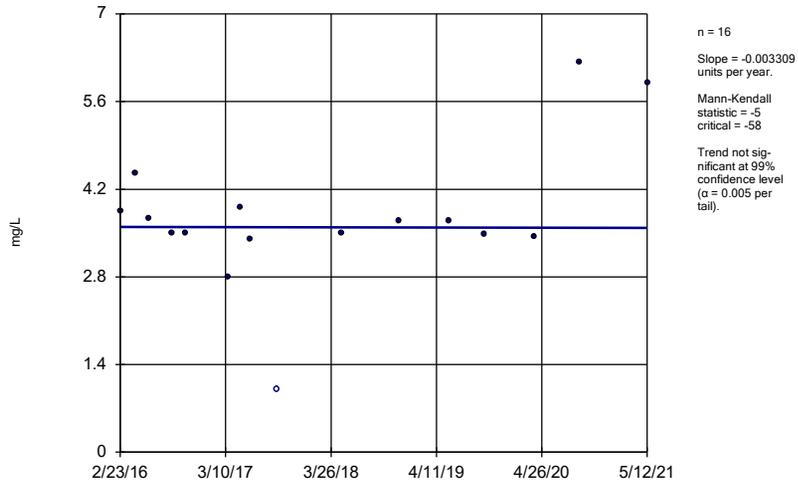
Constituent: Chloride, Total Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-4 (bg)



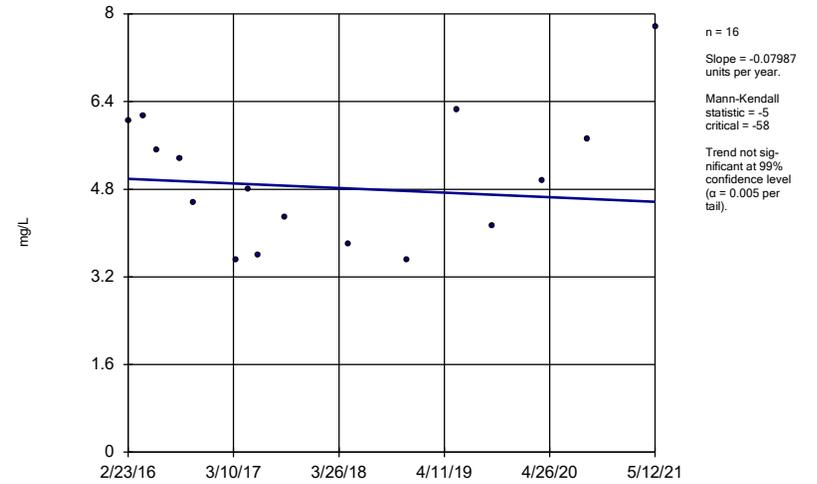
Constituent: Chloride, Total Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator  
BY-GSA-MW-5



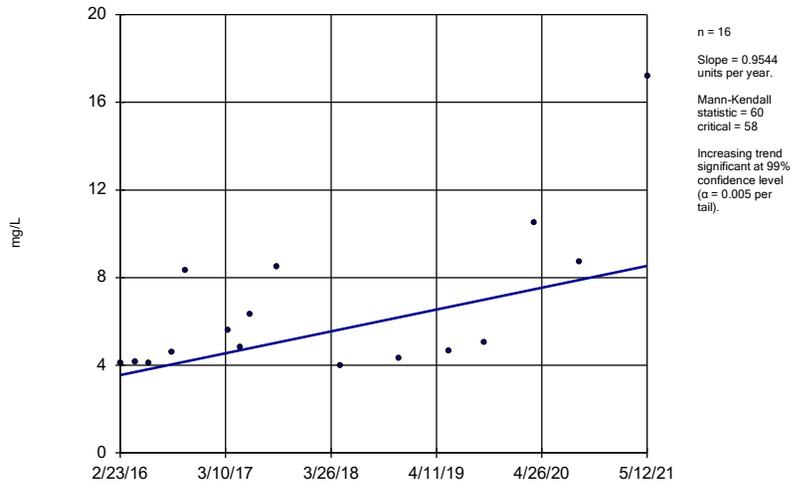
Constituent: Chloride, Total Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator  
BY-GSA-MW-6



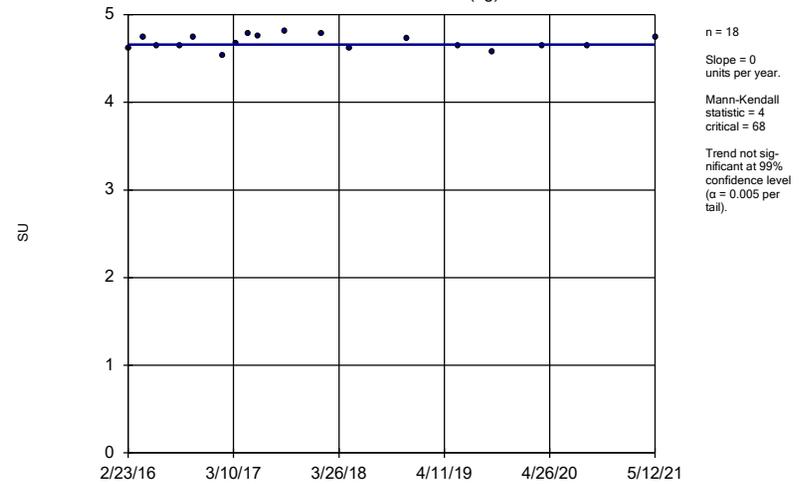
Constituent: Chloride, Total Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator  
BY-GSA-MW-7



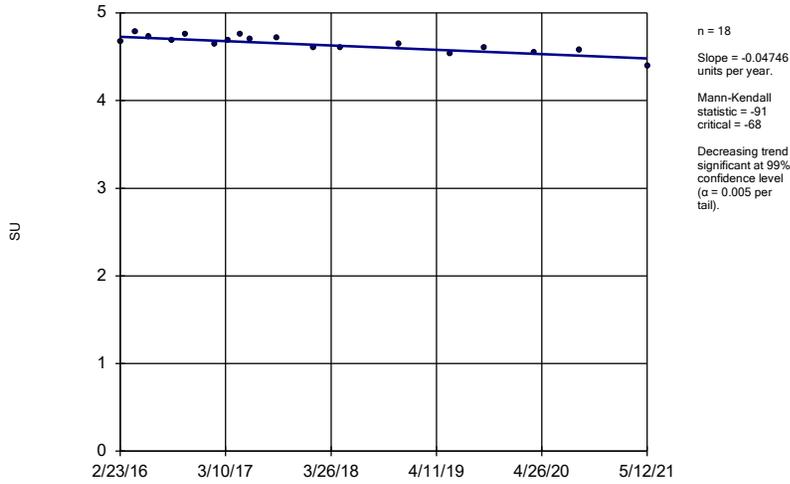
Constituent: Chloride, Total Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator  
BY-GSA-MW-1 (bg)



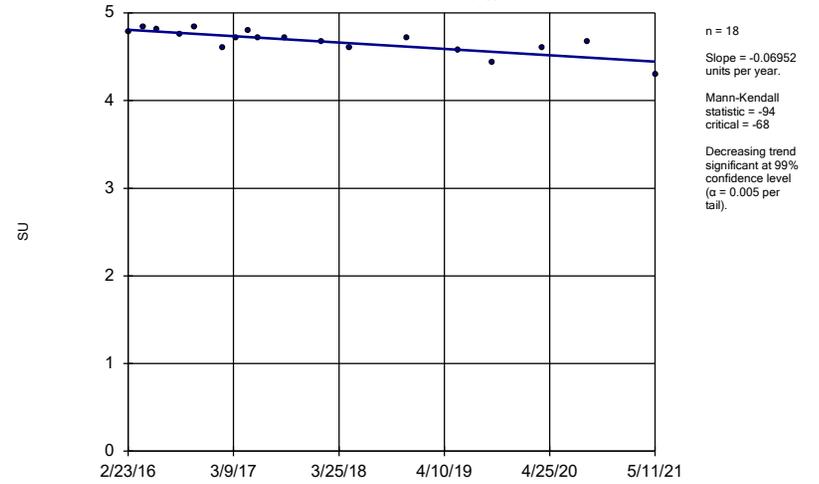
Constituent: pH, Field Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-10



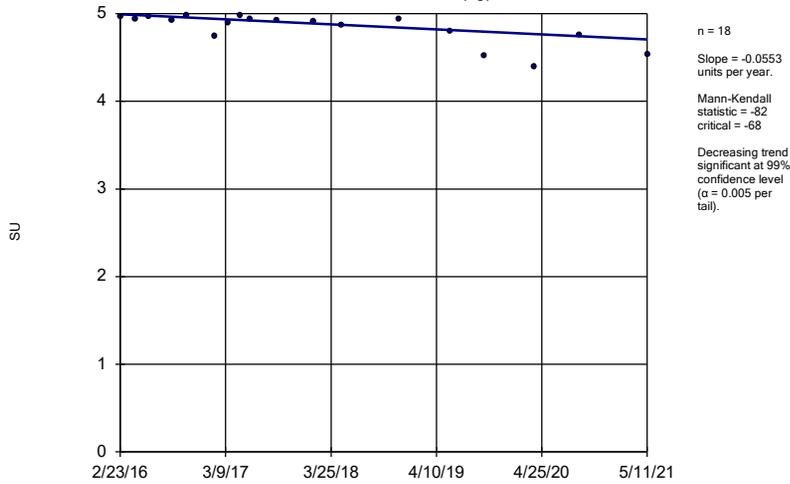
Constituent: pH, Field Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-2 (bg)



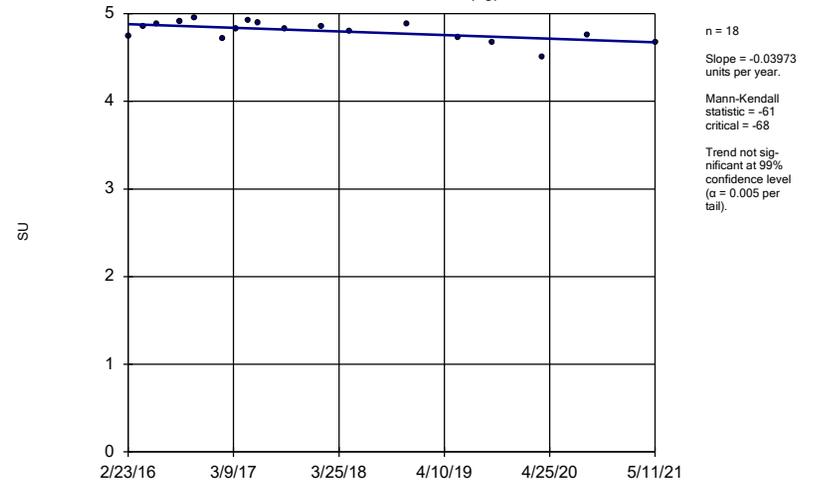
Constituent: pH, Field Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-3 (bg)



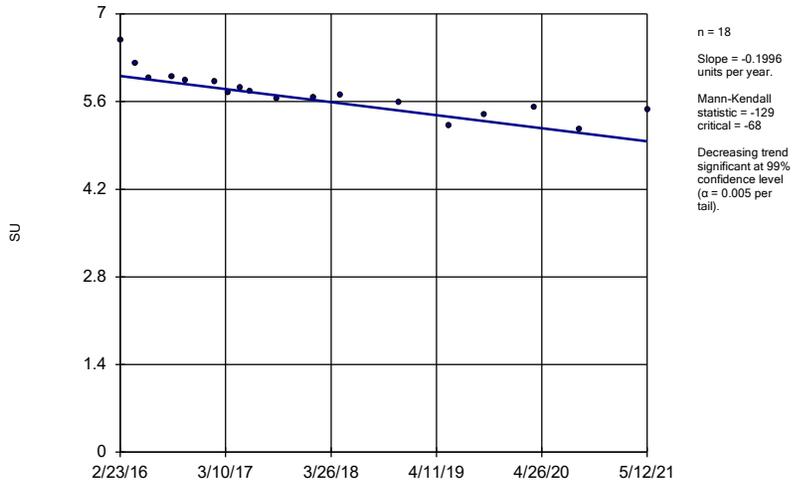
Constituent: pH, Field Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-4 (bg)



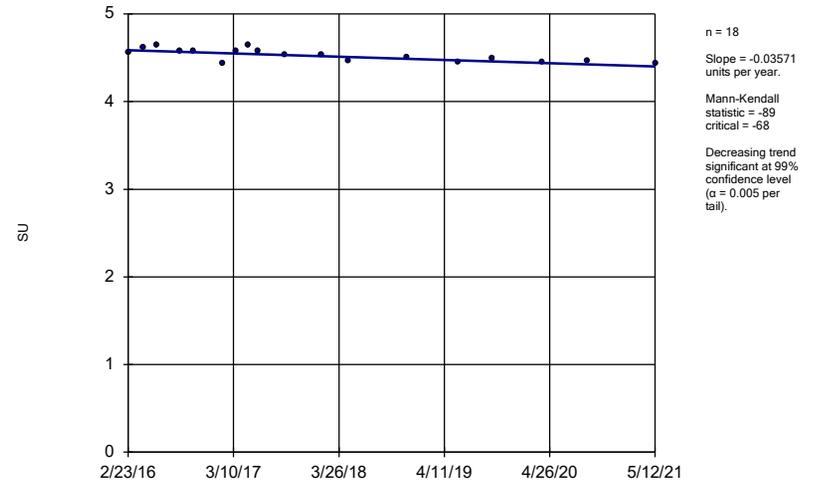
Constituent: pH, Field Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-6



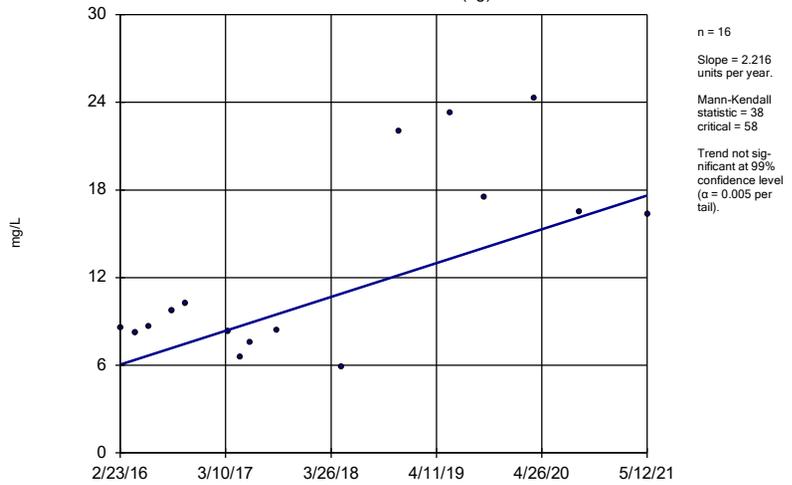
Constituent: pH, Field Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-9



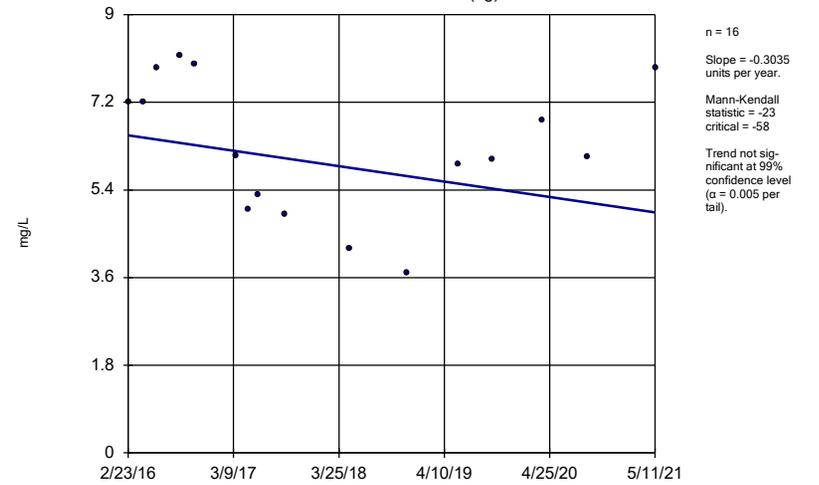
Constituent: pH, Field Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-1 (bg)



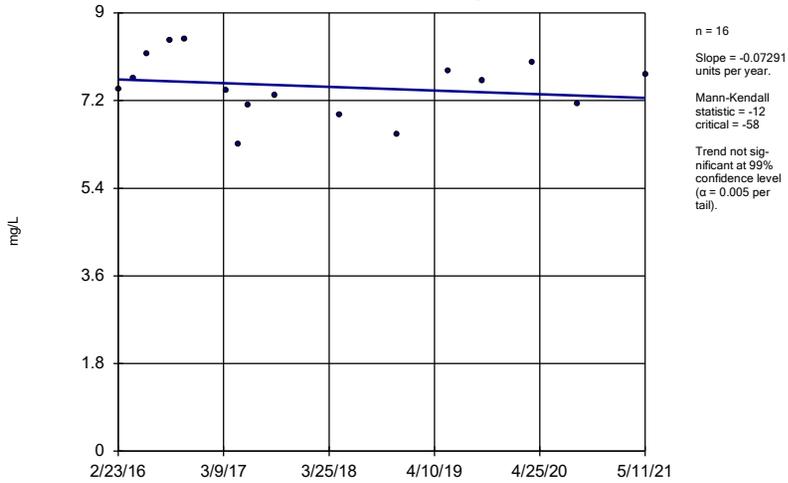
Constituent: Sulfate as SO4 Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-2 (bg)



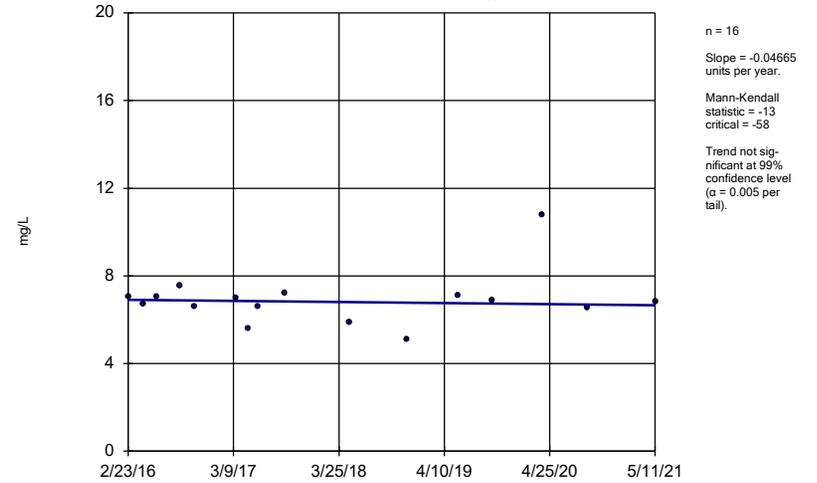
Constituent: Sulfate as SO4 Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-3 (bg)



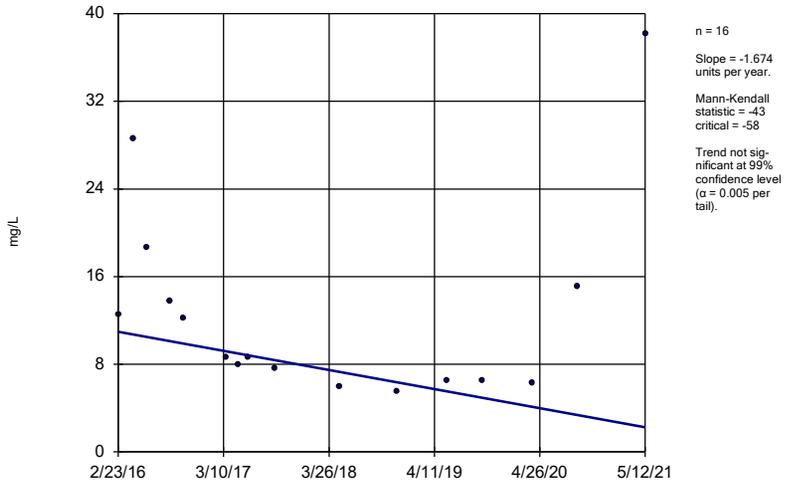
Constituent: Sulfate as SO4 Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-4 (bg)



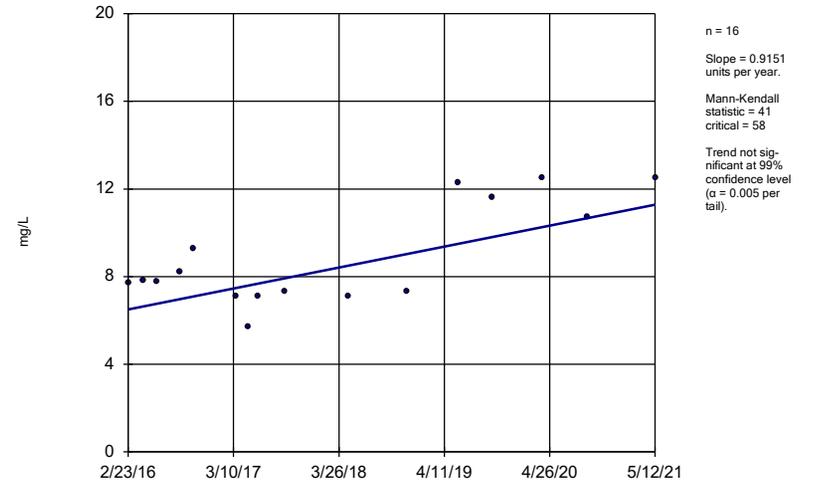
Constituent: Sulfate as SO4 Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-5

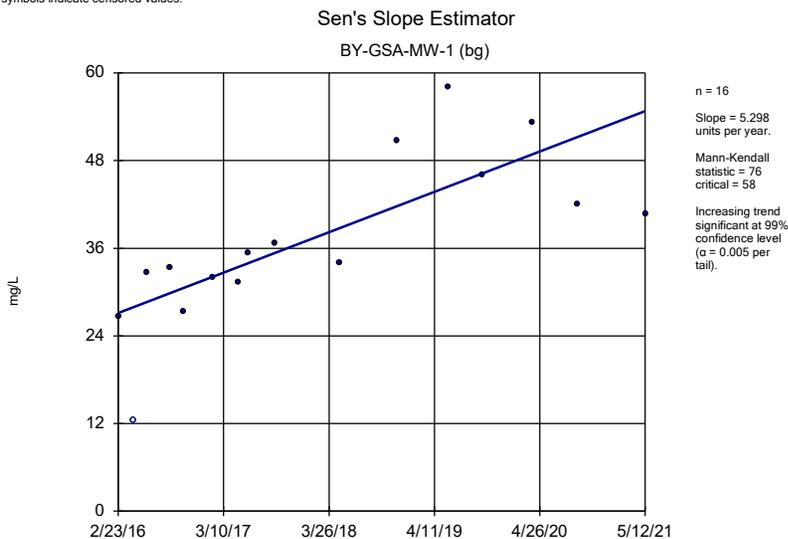


Constituent: Sulfate as SO4 Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

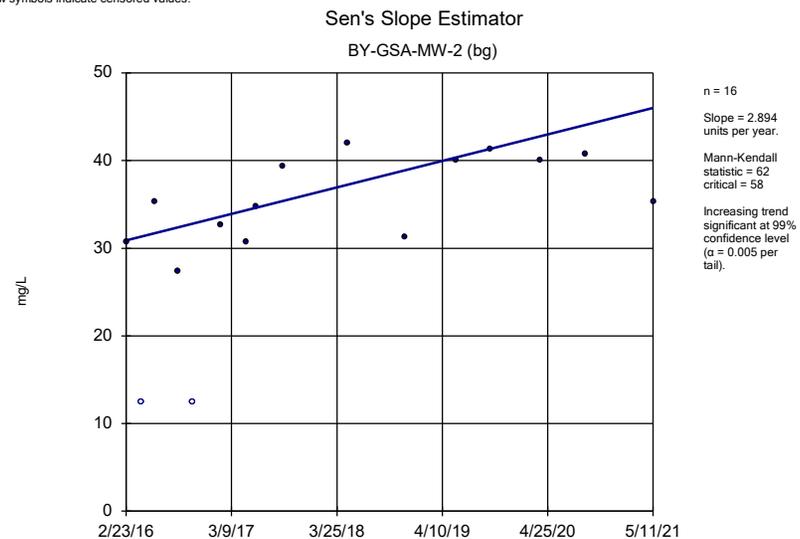
### Sen's Slope Estimator BY-GSA-MW-9



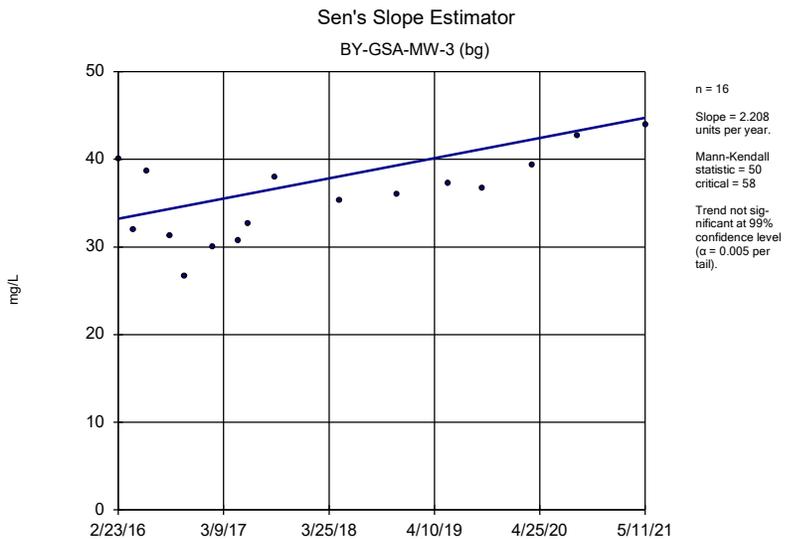
Constituent: Sulfate as SO4 Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond



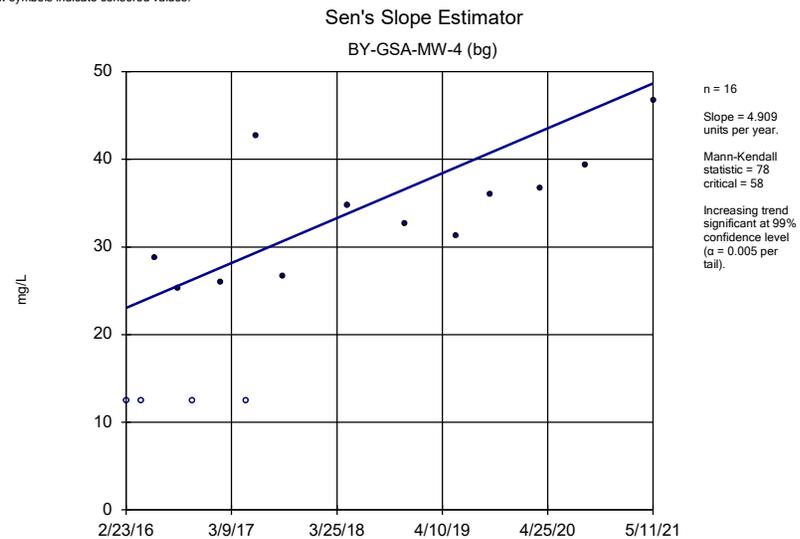
Constituent: Total Dissolved Solids Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond



Constituent: Total Dissolved Solids Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

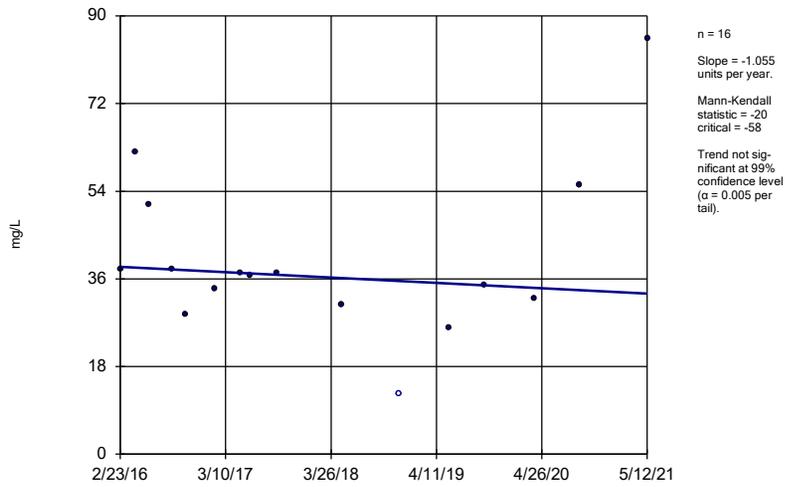


Constituent: Total Dissolved Solids Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond



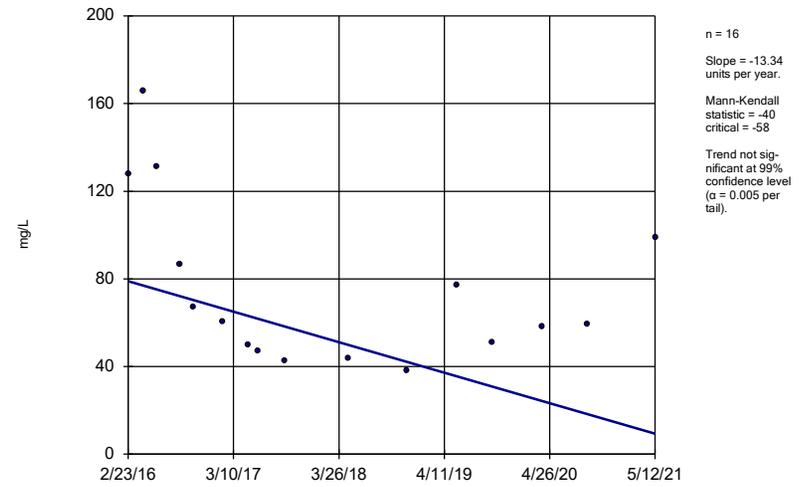
Constituent: Total Dissolved Solids Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-5



Constituent: Total Dissolved Solids Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator BY-GSA-MW-6



Constituent: Total Dissolved Solids Analysis Run 7/9/2021 1:51 PM View: Appendix III - Trend Test  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

FIGURE G.

# Upper Tolerance Limits - Appendix IV

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/24/2020, 8:10 AM

Constituent	Upper Lim.	Lower Lim.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	52	n/a	n/a	90.38	n/a	n/a	0.06944	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Barium (mg/L)	0.183	n/a	52	n/a	n/a	0	n/a	n/a	0.06944	NP Inter(normal...
Beryllium (mg/L)	0.003	n/a	52	n/a	n/a	90.38	n/a	n/a	0.06944	NP Inter(NDs)
Cadmium (mg/L)	0.001	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Chromium (mg/L)	0.01	n/a	52	n/a	n/a	96.15	n/a	n/a	0.06944	NP Inter(NDs)
Cobalt (mg/L)	0.0157	n/a	52	n/a	n/a	67.31	n/a	n/a	0.06944	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	3.202	n/a	52	0.9903	0.2355	0	None	x^(1/3)	0.05	Inter
Fluoride (mg/L)	0.1	n/a	56	n/a	n/a	48.21	n/a	n/a	0.05656	NP Inter(normal...
Lead (mg/L)	0.005	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Lithium (mg/L)	0.02	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Mercury (mg/L)	0.0005	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Selenium (mg/L)	0.01	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)

FIGURE H.

<b>BARRY GYPSUM POND GWPS</b>			
<b>Analyte</b>	<b>Units</b>	<b>Background</b>	<b>GWPS</b>
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.183	2
Beryllium	mg/L	0.003	0.004
Cadmium	mg/L	0.001	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.0157	0.0157
Combined Radium-226/228	pCi/L	3.202	5
Fluoride	mg/L	0.1	4
Lead	mg/L	0.005	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.01	0.1
Selenium	mg/L	0.01	0.05
Thallium	mg/L	0.001	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 second semi-annual sampling event in 2019.

FIGURE I.

# Appendix IV - Confidence Intervals - All Results (No Significant)

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 7:00 PM

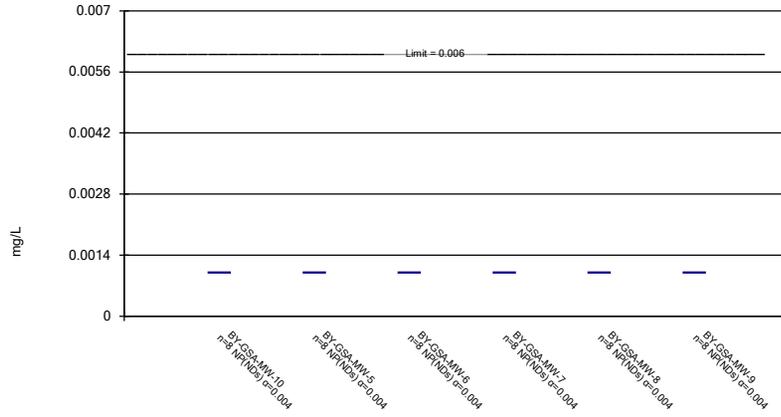
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	BY-GSA-MW-10	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-5	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-6	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-7	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-8	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-9	0.001015	0.001015	0.006	No	8	0	100	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-10	0.000203	0.000129	0.01	No	8	0.00002616	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-5	0.000501	0.000203	0.01	No	8	0.0001054	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-6	0.000821	0.000203	0.01	No	8	0.0002185	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-7	0.000203	0.000177	0.01	No	8	0.000009192	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.01	No	8	0	100	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-9	0.000203	0.000173	0.01	No	8	0.00001061	87.5	No	0.004	NP (NDs)
Barium (mg/L)	BY-GSA-MW-10	0.1319	0.1161	2	No	8	0.007483	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-5	0.181	0.0684	2	No	8	0.03817	0	No	0.004	NP (normality)
Barium (mg/L)	BY-GSA-MW-6	0.1543	0.06411	2	No	8	0.04254	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-7	0.07961	0.03739	2	No	8	0.02139	0	sqrt(x)	0.01	Param.
Barium (mg/L)	BY-GSA-MW-8	0.04815	0.03755	2	No	8	0.005003	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-9	0.1761	0.1357	2	No	8	0.01904	0	No	0.01	Param.
Beryllium (mg/L)	BY-GSA-MW-10	0.001015	0.001015	0.004	No	8	0	100	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-5	0.001015	0.000575	0.004	No	8	0.0001556	87.5	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-6	0.001015	0.000763	0.004	No	8	0.0000891	87.5	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-7	0.001015	0.000464	0.004	No	8	0.0001948	87.5	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-8	0.001015	0.001015	0.004	No	8	0	100	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-9	0.001015	0.001015	0.004	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-10	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-5	0.000203	0.0000867	0.005	No	8	0.00004112	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-6	0.000203	0.000154	0.005	No	8	0.00001732	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-7	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-9	0.000203	0.000203	0.005	No	8	0	100	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-10	0.01	0.000695	0.1	No	8	0.00329	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-5	0.01	0.00221	0.1	No	8	0.003581	75	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-6	0.01	0.00223	0.1	No	8	0.003926	50	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-7	0.01	0.00139	0.1	No	8	0.003044	87.5	No	0.004	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-8	0.01	0.00202	0.1	No	8	0.002734	12.5	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-9	0.01	0.000783	0.1	No	8	0.003259	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-10	0.002571	0.002152	0.0157	No	8	0.0001979	0	No	0.01	Param.
Cobalt (mg/L)	BY-GSA-MW-5	0.005	0.00227	0.0157	No	8	0.0009553	75	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-6	0.0054	0.00296	0.0157	No	8	0.001074	50	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-7	0.005	0.00192	0.0157	No	8	0.001089	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-8	0.005	0.000437	0.0157	No	8	0.001613	87.5	No	0.004	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-9	0.005	0.00177	0.0157	No	8	0.001142	87.5	No	0.004	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-10	1.896	0.7338	5	No	8	0.5481	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-5	0.8118	0.3777	5	No	8	0.2048	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-6	1.999	0.4726	5	No	8	0.7203	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-7	1.141	0.01514	5	No	8	0.5313	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-8	1.027	0.1764	5	No	8	0.401	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-9	2.224	1.269	5	No	8	0.4502	0	No	0.01	Param.
Fluoride, total (mg/L)	BY-GSA-MW-10	0.1	0.08	4	No	8	0.009161	62.5	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-5	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-6	0.1	0.0591	4	No	8	0.01446	87.5	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-7	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-8	0.1	0.1	4	No	8	0	100	No	0.004	NP (NDs)
Fluoride, total (mg/L)	BY-GSA-MW-9	0.1	0.07	4	No	8	0.01553	62.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-10	0.000203	0.000113	0.015	No	8	0.00003182	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-5	0.000203	0.0000994	0.015	No	8	0.00003663	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-6	0.000213	0.000203	0.015	No	8	0.00003536	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-7	0.000203	0.0000798	0.015	No	8	0.00004356	87.5	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.015	No	8	0	100	No	0.004	NP (NDs)
Lead (mg/L)	BY-GSA-MW-9	0.000288	0.000203	0.015	No	8	0.00003005	87.5	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-10	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-5	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-6	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-7	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-8	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-9	0.02	0.02	0.04	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-10	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-5	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)

# Appendix IV - Confidence Intervals - All Results (No Significant) Page 2

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 7/7/2021, 7:00 PM

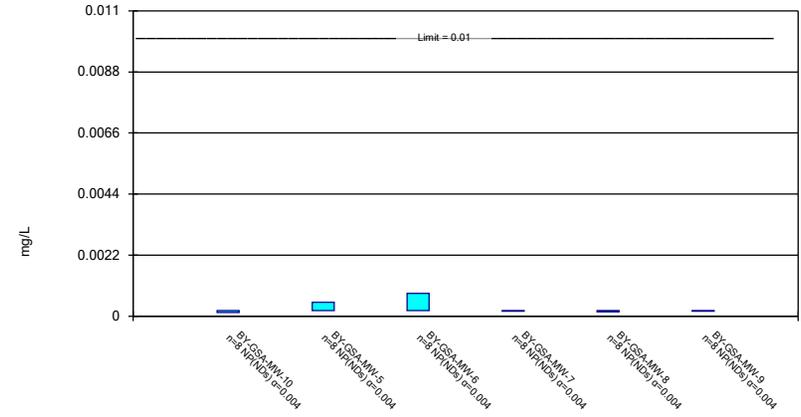
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Mercury (mg/L)	BY-GSA-MW-6	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-7	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-8	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-9	0.0005	0.0005	0.002	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-10	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-5	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-6	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-7	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-9	0.000203	0.000203	0.1	No	8	0	100	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-10	0.001015	0.000778	0.05	No	8	0.00008379	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-5	0.0163	0.001015	0.05	No	8	0.005342	62.5	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-6	0.009373	0.002402	0.05	No	8	0.003288	0	No	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-7	0.001015	0.001015	0.05	No	8	0	100	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-8	0.001015	0.001015	0.05	No	8	0	100	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-9	0.00128	0.001015	0.05	No	8	0.00009369	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-10	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-5	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-6	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-7	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-8	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-9	0.000203	0.000203	0.002	No	8	0	100	No	0.004	NP (NDs)

Non-Parametric Confidence Interval  
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

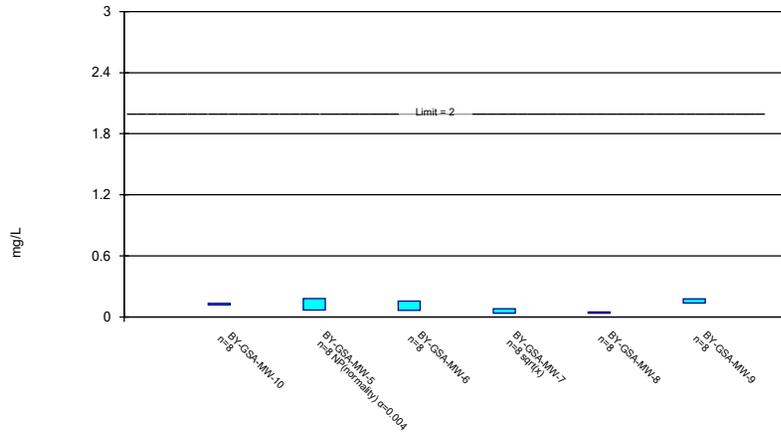
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Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Parametric and Non-Parametric (NP) Confidence Interval

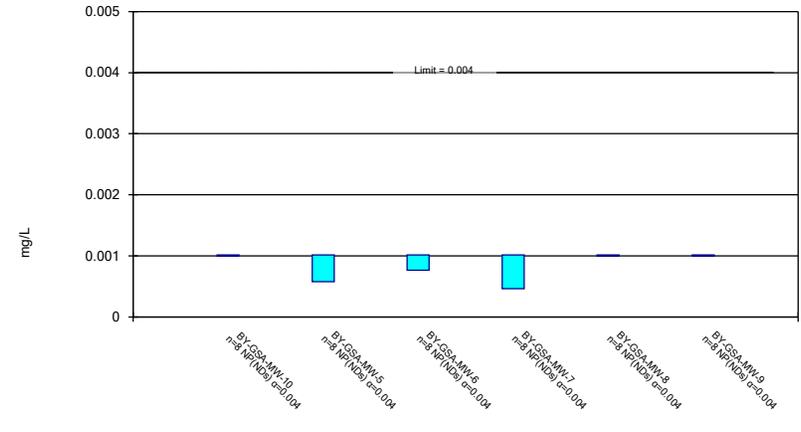
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

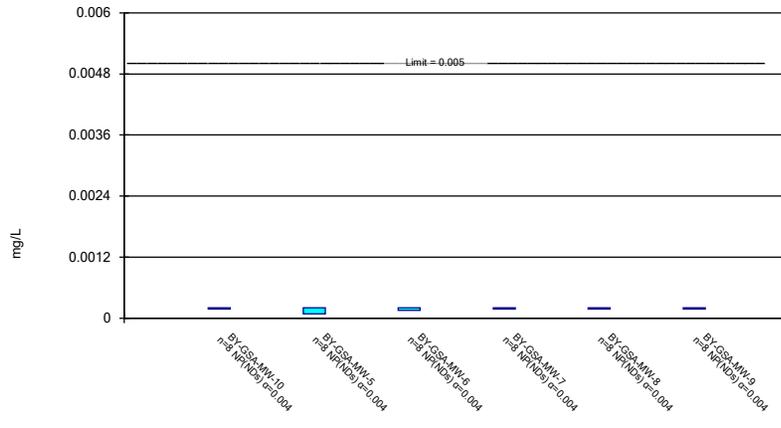
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



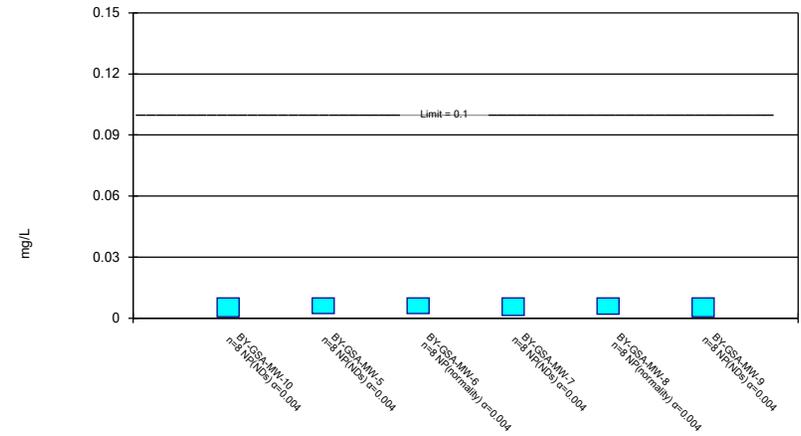
Constituent: Beryllium Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

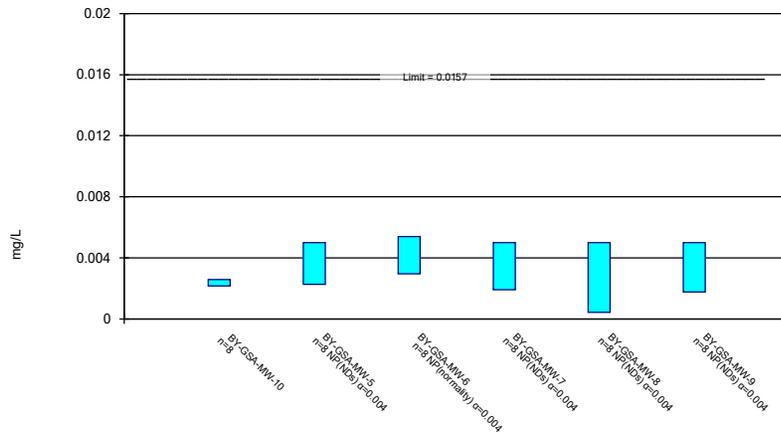
### Non-Parametric Confidence Interval Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric and Non-Parametric (NP) Confidence Interval

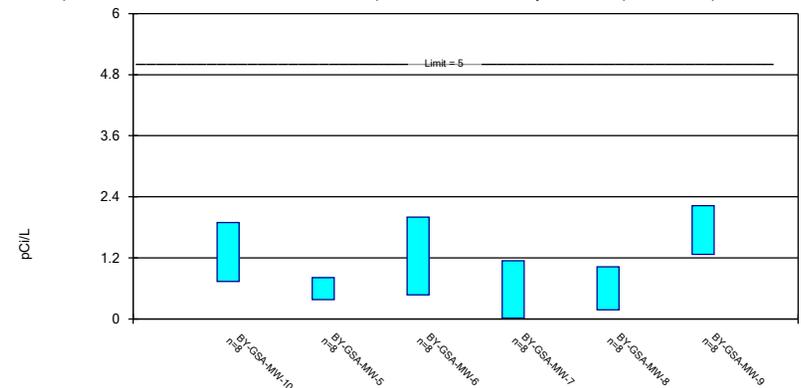
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric Confidence Interval

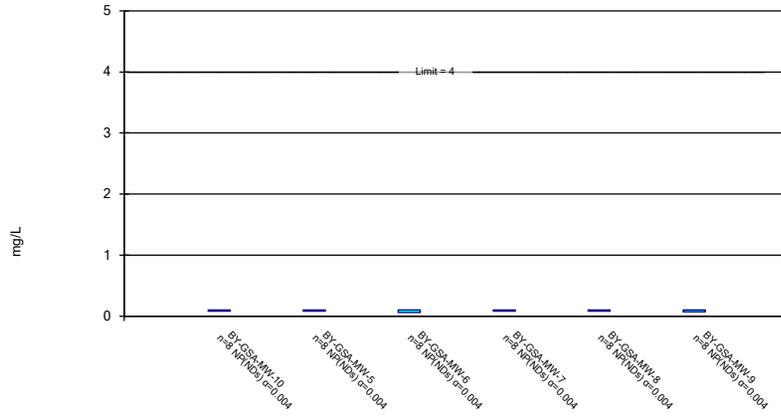
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Constituent: Combined Radium 226 + 228 Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidenc  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

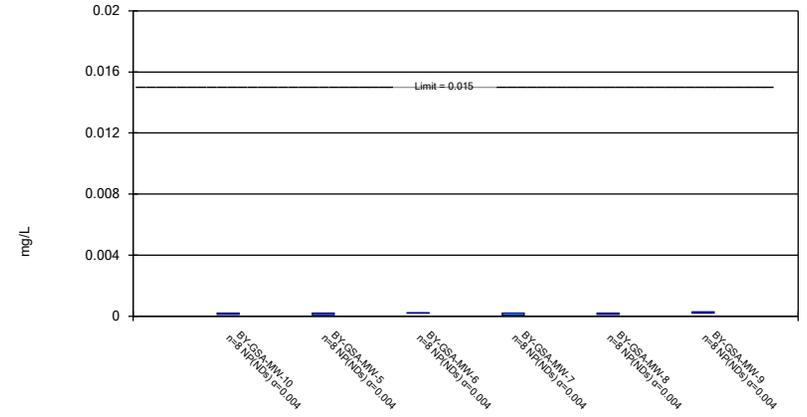
Compliance Limit is not exceeded.



Constituent: Fluoride, total Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

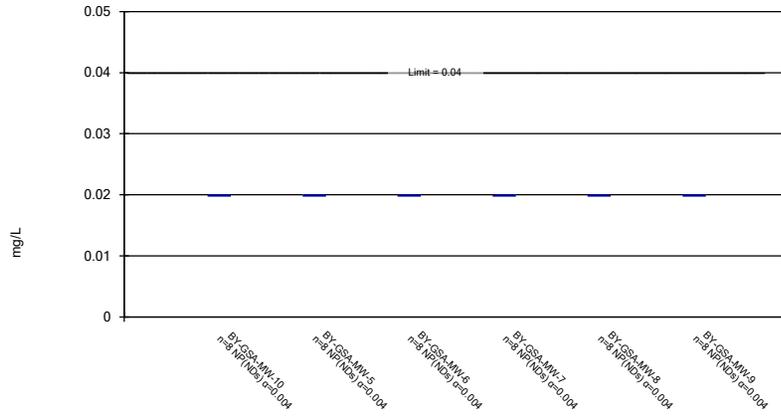
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

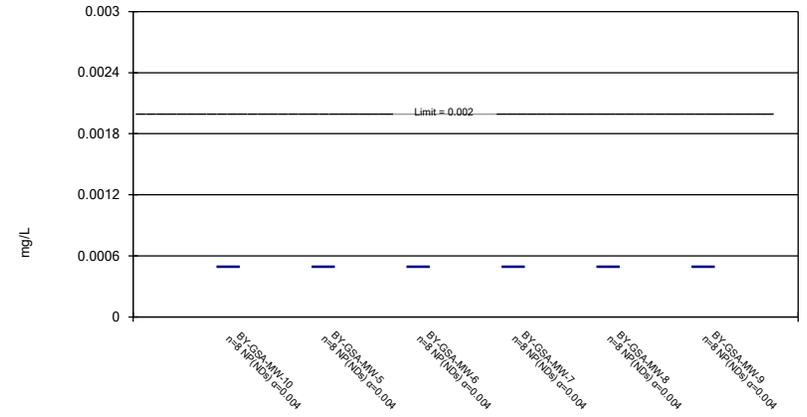
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Constituent: Lithium Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

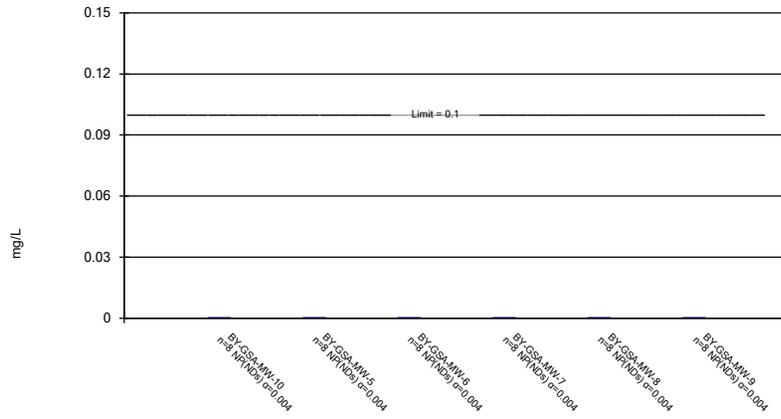
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Constituent: Mercury Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

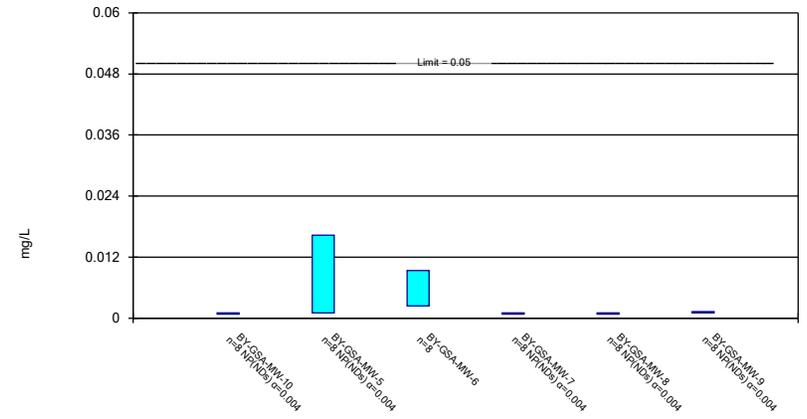
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric and Non-Parametric (NP) Confidence Interval

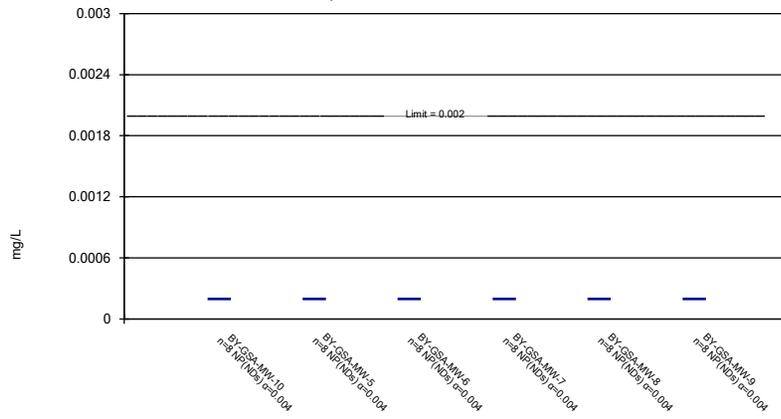
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 7/7/2021 6:55 PM View: Appendix IV - Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.001015	<0.001015		
1/23/2018	<0.001015					<0.001015
1/24/2018		<0.001015			<0.001015	
5/1/2018	<0.001015		<0.001015	<0.001015		<0.001015
5/2/2018		<0.001015			<0.001015	
11/26/2018	<0.001015		<0.001015			<0.001015
11/27/2018		<0.001015		<0.001015	<0.001015	
5/28/2019		<0.001015	<0.001015	<0.001015	<0.001015	
5/29/2019	<0.001015					<0.001015
10/2/2019	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
3/30/2020		<0.001015	<0.001015	<0.001015	<0.001015	
3/31/2020	<0.001015					<0.001015
9/8/2020		<0.001015	<0.001015	<0.001015	<0.001015	
9/9/2020	<0.001015					<0.001015
5/12/2021	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
Mean	0.001015	0.001015	0.001015	0.001015	0.001015	0.001015
Std. Dev.	0	0	0	0	0	0
Upper Lim.	0.001015	0.001015	0.001015	0.001015	0.001015	0.001015
Lower Lim.	0.001015	0.001015	0.001015	0.001015	0.001015	0.001015

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.000203	<0.000203		
1/23/2018	<0.000203					<0.000203
1/24/2018		<0.000203			<0.000203	
5/1/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/2/2018		<0.000203			<0.000203	
11/26/2018	<0.000203		<0.000203			<0.000203
11/27/2018		<0.000203		<0.000203	<0.000203	
5/28/2019		<0.000203	<0.000203	<0.000203	<0.000203	
5/29/2019	<0.000203					<0.000203
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020		<0.000203	<0.000203	<0.000203	<0.000203	
3/31/2020	<0.000203					<0.000203
9/8/2020		<0.000203	<0.000203	<0.000203	<0.000203	
9/9/2020	<0.000203					<0.000203
5/12/2021	0.000129 (J)	0.000501	0.000821	0.000177 (J)	<0.000203	0.000173 (J)
Mean	0.0001938	0.0002403	0.0002803	0.0001998	0.000203	0.0001993
Std. Dev.	2.616E-05	0.0001054	0.0002185	9.192E-06	0	1.061E-05
Upper Lim.	0.000203	0.000501	0.000821	0.000203	0.000203	0.000203
Lower Lim.	0.000129	0.000203	0.000203	0.000177	0.000203	0.000173

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			0.0593	0.0399		
1/23/2018	0.119					0.122
1/24/2018		0.0746			0.0351	
5/1/2018	0.132		0.081	0.04		0.139
5/2/2018		0.085			0.0398	
11/26/2018	0.112		0.0657			0.152
11/27/2018		0.072		0.0427	0.0388	
5/28/2019		0.0684	0.17	0.0524	0.0412	
5/29/2019	0.125					0.155
10/2/2019	0.136	0.0728	0.0985	0.0492	0.0453	0.16
3/30/2020		0.0718	0.142	0.0788	0.0444	
3/31/2020	0.122					0.165
9/8/2020		0.181	0.0981	0.0615	0.0494	
9/9/2020	0.125					0.17
5/12/2021	0.121	0.106	0.159	0.1	0.0488	0.184
Mean	0.124	0.09145	0.1092	0.05806	0.04285	0.1559
Std. Dev.	0.007483	0.03817	0.04254	0.02139	0.005003	0.01904
Upper Lim.	0.1319	0.181	0.1543	0.07961	0.04815	0.1761
Lower Lim.	0.1161	0.0684	0.06411	0.03739	0.03755	0.1357

# Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.001015	<0.001015		
1/23/2018	<0.001015					<0.001015
1/24/2018		<0.001015			<0.001015	
5/1/2018	<0.001015		<0.001015	<0.001015		<0.001015
5/2/2018		<0.001015			<0.001015	
11/26/2018	<0.001015		<0.001015			<0.001015
11/27/2018		<0.001015		<0.001015	<0.001015	
5/28/2019		<0.001015	<0.001015	<0.001015	<0.001015	
5/29/2019	<0.001015					<0.001015
10/2/2019	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
3/30/2020		<0.001015	<0.001015	<0.001015	<0.001015	
3/31/2020	<0.001015					<0.001015
9/8/2020		<0.001015	<0.001015	<0.001015	<0.001015	
9/9/2020	<0.001015					<0.001015
5/12/2021	<0.001015	0.000575 (J)	0.000763 (J)	0.000464 (J)	<0.001015	<0.001015
Mean	0.001015	0.00096	0.0009835	0.0009461	0.001015	0.001015
Std. Dev.	0	0.0001556	8.91E-05	0.0001948	0	0
Upper Lim.	0.001015	0.001015	0.001015	0.001015	0.001015	0.001015
Lower Lim.	0.001015	0.000575	0.000763	0.000464	0.001015	0.001015

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.000203	<0.000203		
1/23/2018	<0.000203					<0.000203
1/24/2018		<0.000203			<0.000203	
5/1/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/2/2018		<0.000203			<0.000203	
11/26/2018	<0.000203		<0.000203			<0.000203
11/27/2018		<0.000203		<0.000203	<0.000203	
5/28/2019		<0.000203	<0.000203	<0.000203	<0.000203	
5/29/2019	<0.000203					<0.000203
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020		<0.000203	<0.000203	<0.000203	<0.000203	
3/31/2020	<0.000203					<0.000203
9/8/2020		<0.000203	<0.000203	<0.000203	<0.000203	
9/9/2020	<0.000203					<0.000203
5/12/2021	<0.000203	8.67E-05 (J)	0.000154 (J)	<0.000203	<0.000203	<0.000203
Mean	0.000203	0.0001885	0.0001969	0.000203	0.000203	0.000203
Std. Dev.	0	4.112E-05	1.732E-05	0	0	0
Upper Lim.	0.000203	0.000203	0.000203	0.000203	0.000203	0.000203
Lower Lim.	0.000203	8.67E-05	0.000154	0.000203	0.000203	0.000203

# Confidence Interval

Constituent: Chromium (mg/L)    Analysis Run 7/7/2021 7:00 PM    View: Appendix IV - Confidence Intervals

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.01	<0.01		
1/23/2018	<0.01					<0.01
1/24/2018		<0.01			0.00258 (J)	
5/1/2018	<0.01		<0.01	<0.01		<0.01
5/2/2018		<0.01			0.00202 (J)	
11/26/2018	<0.01		<0.01			<0.01
11/27/2018		<0.01		<0.01	<0.01	
5/28/2019		<0.01	0.00223 (J)	<0.01	0.00209 (J)	
5/29/2019	<0.01					<0.01
10/2/2019	<0.01	<0.01	<0.01	<0.01	0.00223 (J)	<0.01
3/30/2020		<0.01	0.00273 (J)	<0.01	0.00275 (J)	
3/31/2020	<0.01					<0.01
9/8/2020		0.00221 (J)	0.00237 (J)	<0.01	0.00224 (J)	
9/9/2020	<0.01					<0.01
5/12/2021	0.000695 (J)	0.00232	0.0034	0.00139	0.00218	0.000783 (J)
Mean	0.008837	0.008066	0.006341	0.008924	0.003261	0.008848
Std. Dev.	0.00329	0.003581	0.003926	0.003044	0.002734	0.003259
Upper Lim.	0.01	0.01	0.01	0.01	0.01	0.01
Lower Lim.	0.000695	0.00221	0.00223	0.00139	0.00202	0.000783

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.005	<0.005		
1/23/2018	0.00229 (J)					<0.005
1/24/2018		<0.005			<0.005	
5/1/2018	0.00216 (J)		<0.005	<0.005		<0.005
5/2/2018		<0.005			<0.005	
11/26/2018	0.00205 (J)		<0.005			<0.005
11/27/2018		<0.005		<0.005	<0.005	
5/28/2019		<0.005	0.00301 (J)	<0.005	<0.005	
5/29/2019	0.00261 (J)					<0.005
10/2/2019	0.00262 (J)	<0.005	<0.005	<0.005	<0.005	<0.005
3/30/2020		<0.005	0.0031 (J)	<0.005	<0.005	
3/31/2020	0.00238 (J)					<0.005
9/8/2020		0.00227 (J)	0.00296 (J)	<0.005	<0.005	
9/9/2020	0.00241 (J)					<0.005
5/12/2021	0.00237	0.0046	0.0054	0.00192	0.000437	0.00177
Mean	0.002361	0.004609	0.004309	0.004615	0.00443	0.004596
Std. Dev.	0.0001979	0.0009553	0.001074	0.001089	0.001613	0.001142
Upper Lim.	0.002571	0.005	0.0054	0.005	0.005	0.005
Lower Lim.	0.002152	0.00227	0.00296	0.00192	0.000437	0.00177

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			0.814 (U)	0.726 (U)		
1/23/2018	1.36 (U)					1.16 (U)
1/24/2018		0.566 (U)			0.411 (U)	
5/1/2018	1.03		0.931	0.63		0.961
5/2/2018		0.401			0.718	
11/26/2018	1.04		0.815			1.72
11/27/2018		0.611		0.109 (U)	0.691	
5/28/2019		0.391 (U)	2.08	-0.428 (U)	0.311 (U)	
5/29/2019	0.548 (U)					2.2
10/2/2019	2.19	0.954	0.836	0.43 (U)	0.969	2
3/30/2020		0.525	1.54	0.939	0.397 (U)	
3/31/2020	1.01					1.88
9/8/2020		0.845	0.402 (U)	1.13	0.0249 (U)	
9/9/2020	1.32					2.11
5/12/2021	2.02	0.465 (U)	2.47	1.09	1.29	1.94
Mean	1.315	0.5948	1.236	0.5783	0.6015	1.746
Std. Dev.	0.5481	0.2048	0.7203	0.5313	0.401	0.4502
Upper Lim.	1.896	0.8118	1.999	1.141	1.027	2.224
Lower Lim.	0.7338	0.3777	0.4726	0.01514	0.1764	1.269

# Confidence Interval

Constituent: Fluoride, total (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.1	<0.1		
1/23/2018	0.08 (J)					0.07 (J)
1/24/2018		<0.1			<0.1	
5/1/2018	0.09 (J)		<0.1	<0.1		0.07 (J)
5/2/2018		<0.1			<0.1	
11/26/2018	0.08 (J)		<0.1			0.07 (J)
11/27/2018		<0.1		<0.1	<0.1	
5/28/2019		<0.1	0.0591 (J)	<0.1	<0.1	
5/29/2019	<0.1					<0.1
10/2/2019	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3/30/2020		<0.1	<0.1	<0.1	<0.1	
3/31/2020	<0.1					<0.1
9/8/2020		<0.1	<0.1	<0.1	<0.1	
9/9/2020	<0.1					<0.1
5/12/2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mean	0.09375	0.1	0.09489	0.1	0.1	0.08875
Std. Dev.	0.009161	0	0.01446	0	0	0.01553
Upper Lim.	0.1	0.1	0.1	0.1	0.1	0.1
Lower Lim.	0.08	0.1	0.0591	0.1	0.1	0.07

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.000203	<0.000203		
1/23/2018	<0.000203					<0.000203
1/24/2018		<0.000203			<0.000203	
5/1/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/2/2018		<0.000203			<0.000203	
11/26/2018	<0.000203		<0.000203			<0.000203
11/27/2018		<0.000203		<0.000203	<0.000203	
5/28/2019		<0.000203	<0.000203	<0.000203	<0.000203	
5/29/2019	<0.000203					<0.000203
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020		<0.000203	<0.000203	<0.000203	<0.000203	
3/31/2020	<0.000203					<0.000203
9/8/2020		<0.000203	<0.000203	<0.000203	<0.000203	
9/9/2020	<0.000203					<0.000203
5/12/2021	0.000113 (J)	9.94E-05 (J)	0.000213	7.98E-05 (J)	<0.000203	0.000288
Mean	0.0001918	0.0001901	0.0002043	0.0001876	0.000203	0.0002136
Std. Dev.	3.182E-05	3.663E-05	3.536E-06	4.356E-05	0	3.005E-05
Upper Lim.	0.000203	0.000203	0.000213	0.000203	0.000203	0.000288
Lower Lim.	0.000113	9.94E-05	0.000203	7.98E-05	0.000203	0.000203

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.01999956	<0.01999956		
1/23/2018	<0.01999956					<0.01999956
1/24/2018		<0.01999956			<0.01999956	
5/1/2018	<0.01999956		<0.01999956	<0.01999956		<0.01999956
5/2/2018		<0.01999956			<0.01999956	
11/26/2018	<0.01999956		<0.01999956			<0.01999956
11/27/2018		<0.01999956		<0.01999956	<0.01999956	
5/28/2019		<0.01999956	<0.01999956	<0.01999956	<0.01999956	
5/29/2019	<0.01999956					<0.01999956
10/2/2019	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956
3/30/2020		<0.01999956	<0.01999956	<0.01999956	<0.01999956	
3/31/2020	<0.01999956					<0.01999956
9/8/2020		<0.01999956	<0.01999956	<0.01999956	<0.01999956	
9/9/2020	<0.01999956					<0.01999956
5/12/2021	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956	<0.01999956
Mean	0.02	0.02	0.02	0.02	0.02	0.02
Std. Dev.	0	0	0	0	0	0
Upper Lim.	0.02	0.02	0.02	0.02	0.02	0.02
Lower Lim.	0.02	0.02	0.02	0.02	0.02	0.02

# Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.0005	<0.0005		
1/23/2018	<0.0005					<0.0005
1/24/2018		<0.0005			<0.0005	
5/1/2018	<0.0005		<0.0005	<0.0005		<0.0005
5/2/2018		<0.0005			<0.0005	
11/26/2018	<0.0005		<0.0005			<0.0005
11/27/2018		<0.0005		<0.0005	<0.0005	
5/28/2019		<0.0005	<0.0005	<0.0005	<0.0005	
5/29/2019	<0.0005					<0.0005
10/2/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/30/2020		<0.0005	<0.0005	<0.0005	<0.0005	
3/31/2020	<0.0005					<0.0005
9/8/2020		<0.0005	<0.0005	<0.0005	<0.0005	
9/9/2020	<0.0005					<0.0005
5/12/2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Mean	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Std. Dev.	0	0	0	0	0	0
Upper Lim.	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Lower Lim.	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005

# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.000203	<0.000203		
1/23/2018	<0.000203					<0.000203
1/24/2018		<0.000203			<0.000203	
5/1/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/2/2018		<0.000203			<0.000203	
11/26/2018	<0.000203		<0.000203			<0.000203
11/27/2018		<0.000203		<0.000203	<0.000203	
5/28/2019		<0.000203	<0.000203	<0.000203	<0.000203	
5/29/2019	<0.000203					<0.000203
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020		<0.000203	<0.000203	<0.000203	<0.000203	
3/31/2020	<0.000203					<0.000203
9/8/2020		<0.000203	<0.000203	<0.000203	<0.000203	
9/9/2020	<0.000203					<0.000203
5/12/2021	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
Mean	0.000203	0.000203	0.000203	0.000203	0.000203	0.000203
Std. Dev.	0	0	0	0	0	0
Upper Lim.	0.000203	0.000203	0.000203	0.000203	0.000203	0.000203
Lower Lim.	0.000203	0.000203	0.000203	0.000203	0.000203	0.000203

# Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			0.00287 (J)	<0.001015		
1/23/2018	<0.001015					<0.001015
1/24/2018		0.00201 (J)			<0.001015	
5/1/2018	<0.001015		0.00367 (J)	<0.001015		<0.001015
5/2/2018		<0.001015			<0.001015	
11/26/2018	<0.001015		0.00286 (J)			<0.001015
11/27/2018		<0.001015		<0.001015	<0.001015	
5/28/2019		<0.001015	0.0089 (J)	<0.001015	<0.001015	
5/29/2019	<0.001015					<0.001015
10/2/2019	<0.001015	<0.001015	0.00472 (J)	<0.001015	<0.001015	<0.001015
3/30/2020		<0.001015	0.00658 (J)	<0.001015	<0.001015	
3/31/2020	<0.001015					<0.001015
9/8/2020		0.0052 (J)	0.0052 (J)	<0.001015	<0.001015	
9/9/2020	<0.001015					<0.001015
5/12/2021	0.000778 (J)	0.0163	0.0123	<0.001015	<0.001015	0.00128
Mean	0.0009854	0.003573	0.005888	0.001015	0.001015	0.001048
Std. Dev.	8.379E-05	0.005342	0.003288	0	0	9.369E-05
Upper Lim.	0.001015	0.0163	0.009373	0.001015	0.001015	0.00128
Lower Lim.	0.000778	0.001015	0.002402	0.001015	0.001015	0.001015

# Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 7/7/2021 7:00 PM View: Appendix IV - Confidence Intervals

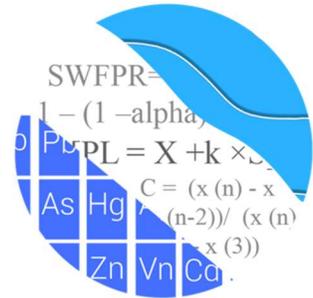
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-10	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-9
1/22/2018			<0.000203	<0.000203		
1/23/2018	<0.000203					<0.000203
1/24/2018		<0.000203			<0.000203	
5/1/2018	<0.000203		<0.000203	<0.000203		<0.000203
5/2/2018		<0.000203			<0.000203	
11/26/2018	<0.000203		<0.000203			<0.000203
11/27/2018		<0.000203		<0.000203	<0.000203	
5/28/2019		<0.000203	<0.000203	<0.000203	<0.000203	
5/29/2019	<0.000203					<0.000203
10/2/2019	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
3/30/2020		<0.000203	<0.000203	<0.000203	<0.000203	
3/31/2020	<0.000203					<0.000203
9/8/2020		<0.000203	<0.000203	<0.000203	<0.000203	
9/9/2020	<0.000203					<0.000203
5/12/2021	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
Mean	0.000203	0.000203	0.000203	0.000203	0.000203	0.000203
Std. Dev.	0	0	0	0	0	0
Upper Lim.	0.000203	0.000203	0.000203	0.000203	0.000203	0.000203
Lower Lim.	0.000203	0.000203	0.000203	0.000203	0.000203	0.000203

# GROUNDWATER STATS CONSULTING

January 13, 2022

Southern Company Services  
Attn: Mr. Greg Dyer  
3535 Colonnade Parkway  
Birmingham, AL 35243



Re: Plant Barry Gypsum Pond  
Background Update & 2<sup>nd</sup> 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 2<sup>nd</sup> semi-annual sample event for Alabama Power Company's Plant Barry Gypsum Pond. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule, 2015) as well as with the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began at site for the CCR program in 2016. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** BY-GSA-MW-1, BY-GSA-MW-2, BY-GSA-MW-3, and BY-GSA-MW-4
- **Downgradient wells:** BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9, BY-GSA-MW-10, and BY-GSA-PZ-11

Note that BY-GSA-PZ-11 was converted from a piezometer to a downgradient monitoring well and currently has 4 samples. Data are analyzed along with neighboring downgradient wells using interwell prediction limits and confidence intervals. Intrawell prediction limits, which are used for chloride and sulfate as discussed below, will be constructed when a minimum of 8 background samples are available.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was prepared according to the Statistical Analysis Plan approved by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance, and Senior Advisor to Groundwater Stats Consulting. The 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 summary of Appendix IV downgradient well/constituent pairs with 100% non-detects follows this letter.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). 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): 15

- # Background Samples (Interwell): 68
- # Constituents: 7
- # Downgradient wells: 6

### **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 chloride and sulfate
- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, fluoride, pH, 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 data points 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 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.

### **Background Update – Conducted in Fall 2021**

Intrawell prediction limits, which compare the most recent compliance sample from a given well to historical data from the same well, are updated by testing for the appropriateness of consolidating new sampling observations with the screened background data. The last background update was performed in 2019, and is performed during this analysis. This process is described below and requires a minimum of four new data points. Historical data were evaluated for updating with newer data through May 2021 for constituents tested with intrawell prediction limits and through October 2021 for constituents tested with interwell prediction limits through the use of time series graphs to identify potential outliers when necessary. The Mann Whitney test for equality of medians is used to formally evaluate constituents using intrawell prediction limits. As discussed in the Statistical Analysis Plan (August 2020), intrawell prediction limits are used to evaluate chloride and sulfate at all wells due to natural spatial variation for these parameters.

Interwell prediction limits, which compare the most recent sample from each downgradient well to statistical limits constructed from pooled upgradient well data, are updated during each sample event. Data from upgradient wells are periodically re-screened for newly developing trends, which may require adjustment of the background period to eliminate the trend, as well as for outliers over the entire record. Interwell prediction limits are used to evaluate boron, calcium, fluoride, pH, and TDS.

### Outlier Analysis

Prior to performing prediction limits, proposed background data through May 2021 at all wells were reviewed to identify any newly suspected outliers at all wells for chloride and sulfate, and through October 2021 at upgradient wells for boron, calcium, fluoride, pH,

and TDS. No new outliers were suspected (Figure C). When values are identified as outliers, these measurements are flagged with "o" and excluded to reduce variation, better represent background conditions, and provide limits that are conservative (i.e., lower) from a regulatory perspective. All 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. A summary of previously flagged outliers follows this report (Figure C).

### Mann-Whitney

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through May 2019 to compliance data through May 2021 (Figure D). When no statistically significant difference in medians between the two groups is found at a 99% confidence level, background data may be updated with 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

- Sulfate: BY-GSA-MW-8 and BY-GSA-MW-9

#### Decrease

- Chloride: BY-GSA-MW-4 (upgradient)

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.

In this analysis, the record for chloride at upgradient well BY-GSA-MW-4 was updated since data at upgradient wells represent naturally occurring groundwater quality unimpacted by the facility. Additionally, the decreasing shift between historical and compliance data was small and signifies lower concentrations, which subsequently results in a more conservative (i.e., lower) statistical limit.

Regarding well/constituent pairs with statistically significant increases in medians, the group of new measurements were similar to those observed historically for sulfate in

downgradient well BY-GSA-MW-8. It was also observed that sulfate concentrations at downgradient well BY-GSA-MW-9 were similar to those reported in upgradient wells. Therefore, these records were updated with more recent data.

### 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

- Calcium: BY-GSA-MW-3 and BY-GSA-MW-4
- Fluoride: BY-GSA-MW-2
- TDS: BY-GSA-MW-1, BY-GSA-MW-2, and BY-GSA-MW-4

#### Decreasing

- pH: BY-GSA-MW-2, BY-GSA-MW-3 and BY-GSA-MW-4

The median slopes for calcium, pH and TDS at the above wells were small relative to average concentrations at these wells and reported measurements were similar across all upgradient wells. In the case of fluoride, the increasing trend is a result of non-detects in the more recent portion of the record compared to trace values reported in the historical portion of the record. Therefore, no adjustments were required to any of the records.

### **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.

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 chloride and sulfate using screened background data through May 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, fluoride, pH, 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 interwell and intrawell prediction limits:

#### Intrawell:

- Chloride: BY-GSA-MW-6 and BY-GSA-MW-7

#### Interwell:

- Boron: BY-GSA-MW-5 and BY-GSA-MW-6
- Calcium: BY-GSA-MW-5 and BY-GSA-MW-6
- pH: BY-GSA-MW-6, BY-GSA-MW-7, and BY-GSA-MW-9
- TDS: BY-GSA-MW-6

### 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 H). 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:

- Chloride: BY-GSA-MW-7

Decreasing:

- Chloride: BY-GSA-MW-2 (upgradient)
- pH: BY-GSA-MW-6, BY-GSA-MW-7, and BY-GSA-MW-9

### **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 2<sup>nd</sup> semi-annual statistical analysis. The GWPS will be updated again during the 2023 2<sup>nd</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 with 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.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Barry Gypsum Pond. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Kristina Rayner  
Senior Statistician



Andrew T. Collins  
Project Manager

# 100% Non-Detects: Appendix IV Downgradient

Analysis Run 1/11/2022 4:07 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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Antimony (mg/L)

BY-GSA-PZ-11

Beryllium (mg/L)

BY-GSA-MW-10, BY-GSA-MW-8, BY-GSA-MW-9, BY-GSA-PZ-11

Cadmium (mg/L)

BY-GSA-MW-10, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9, BY-GSA-PZ-11

Fluoride (mg/L)

BY-GSA-PZ-11

Lead (mg/L)

BY-GSA-MW-8

Lithium (mg/L)

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9, BY-GSA-PZ-11

Mercury (mg/L)

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-9, BY-GSA-PZ-11

Molybdenum (mg/L)

BY-GSA-MW-10, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-9, BY-GSA-PZ-11

Selenium (mg/L)

BY-GSA-MW-7

Thallium (mg/L)

BY-GSA-MW-10, BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-8, BY-GSA-MW-9, BY-GSA-PZ-11

# Date Ranges

Date: 7/20/2021 4:54 PM

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

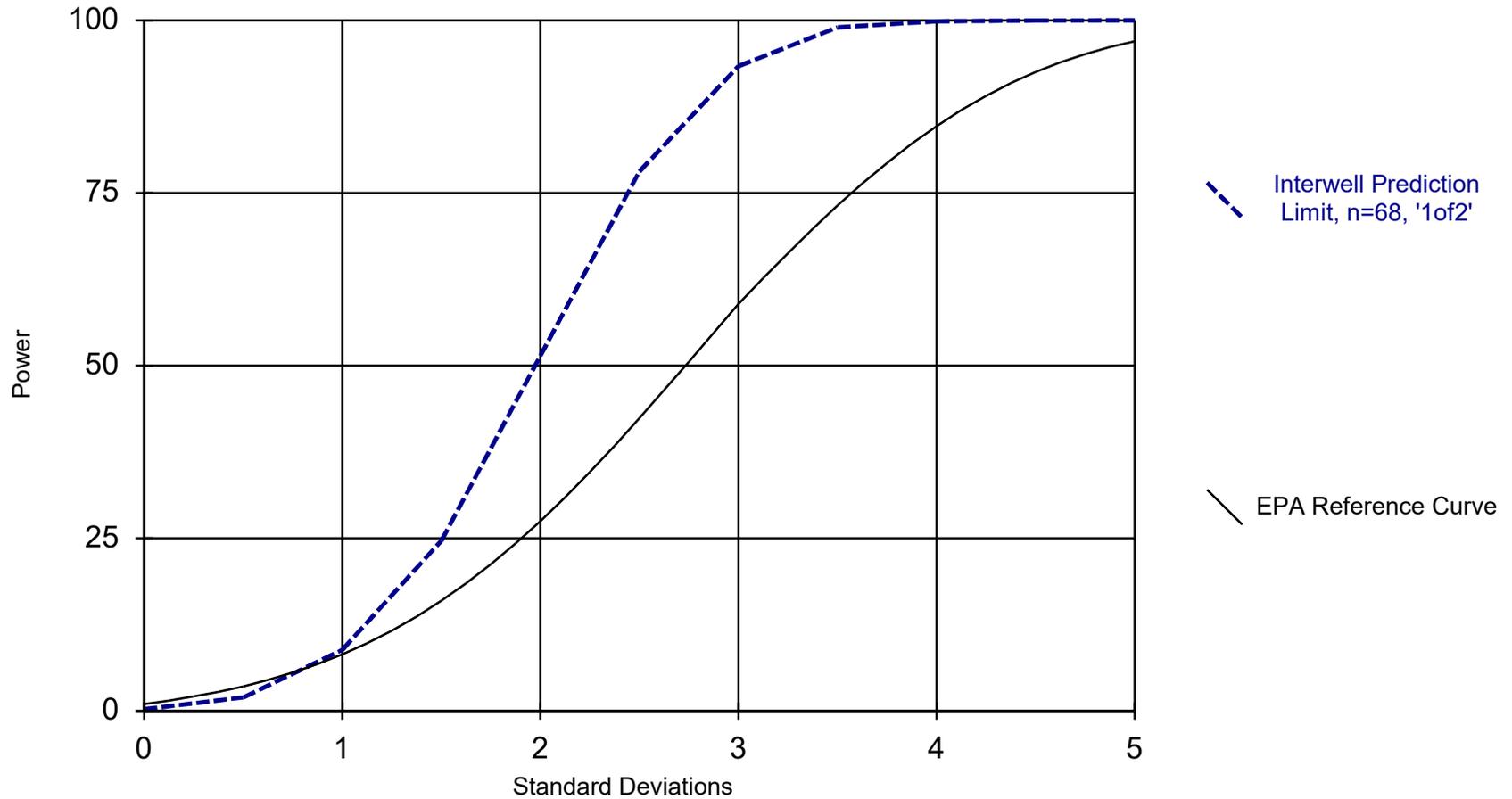
Chloride, Total (mg/L)

BY-GSA-MW-5 background:2/23/2016-5/28/2019

BY-GSA-MW-6 background:2/23/2016-5/28/2019

BY-GSA-MW-7 background:2/23/2016-5/28/2019

### Interwell Power Curve

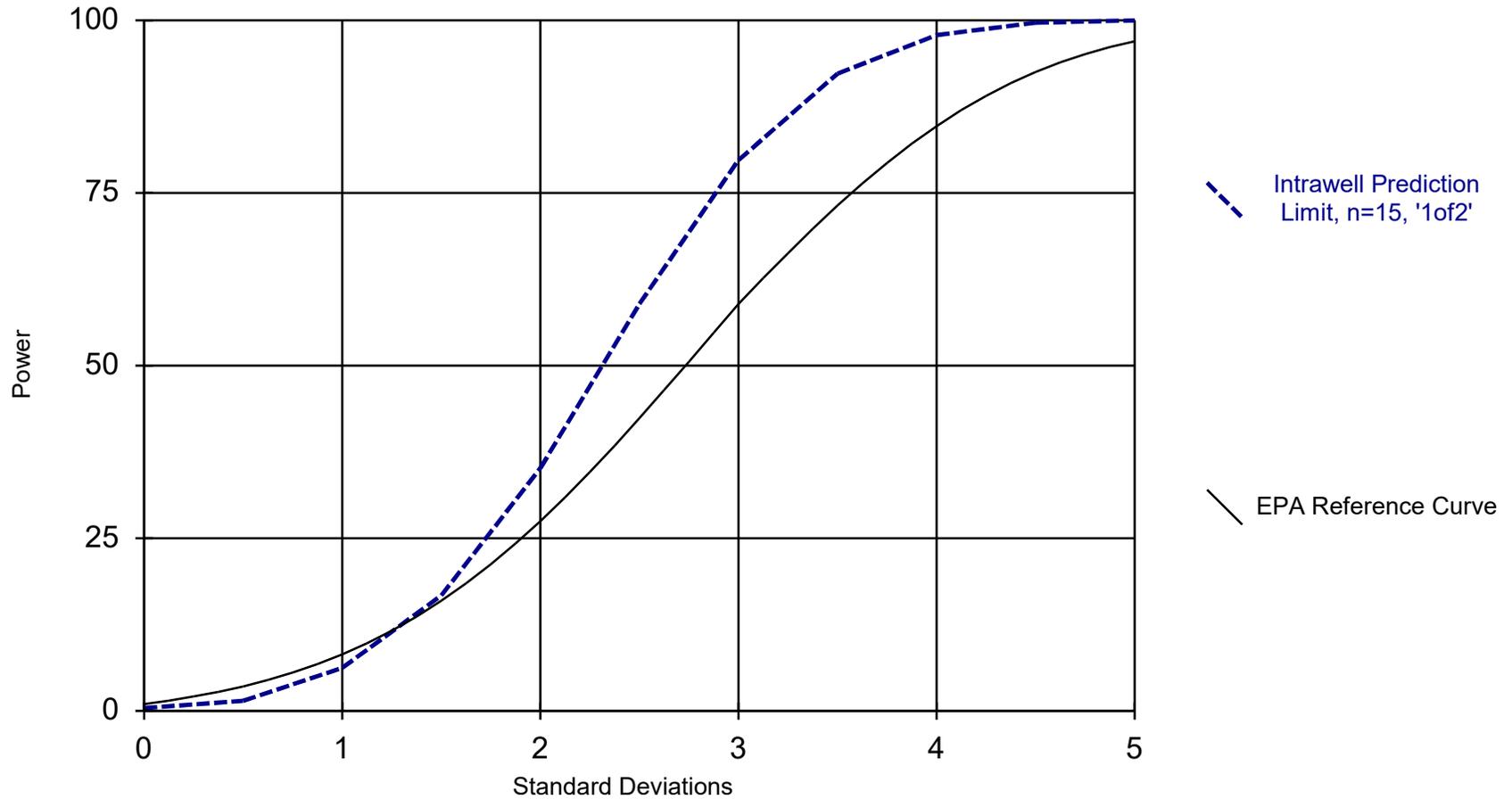


Kappa = 1.871, based on 6 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/11/2022 4:31 PM

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Intrawell Power Curve



Kappa = 2.25, based on 6 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/13/2022 8:25 AM View: Outlier Testing - Upgradient Wells

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Intrawell Prediction Limit - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method	
Chloride (mg/L)	BY-GSA-MW-6	7.663	n/a	10/18/2021	10	Yes	16	4.996	1.21	0	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-7	15.21	n/a	10/18/2021	16.8	Yes	16	1.782	0.4263	0	None	ln(x)	0.001254	Param Intra 1 of 2

# Intrawell Prediction Limit - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chloride (mg/L)	BY-GSA-MW-1	8.264	n/a	10/19/2021	2.37	No	16	1.897	0.4435	6.25	None	sqrt(x)	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-10	5.122	n/a	10/19/2021	3.79	No	16	3.79	0.6038	0	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-2	5.698	n/a	10/19/2021	2.08	No	16	3.416	1.035	6.25	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-3	4.6	n/a	10/18/2021	3.45	No	16	n/a	n/a	6.25	n/a	n/a	0.006456	NP Intra (normality) 1 of 2
Chloride (mg/L)	BY-GSA-MW-4	4.448	n/a	10/18/2021	3.32	No	16	1.912	0.08933	0	None	sqrt(x)	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-5	6.23	n/a	10/19/2021	4.81	No	16	n/a	n/a	6.25	n/a	n/a	0.006456	NP Intra (normality) 1 of 2
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>7.663</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>10</b>	<b>Yes</b>	<b>16</b>	<b>4.996</b>	<b>1.21</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	<b>Param Intra 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>15.21</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>16.8</b>	<b>Yes</b>	<b>16</b>	<b>1.782</b>	<b>0.4263</b>	<b>0</b>	<b>None</b>	<b>ln(x)</b>	<b>0.001254</b>	<b>Param Intra 1 of 2</b>
Chloride (mg/L)	BY-GSA-MW-8	5.581	n/a	10/19/2021	5.34	No	16	4.673	0.412	0	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-9	11.11	n/a	10/19/2021	6.33	No	16	6.335	2.163	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-1	28.44	n/a	10/19/2021	15.5	No	16	3.458	0.85	0	None	sqrt(x)	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-10	13.19	n/a	10/19/2021	10.1	No	16	9.999	1.445	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-2	9.382	n/a	10/19/2021	7.48	No	16	6.282	1.406	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-3	8.868	n/a	10/18/2021	7.36	No	16	7.496	0.6224	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-4	10.8	n/a	10/18/2021	6.58	No	16	n/a	n/a	0	n/a	n/a	0.006456	NP Intra (normality) 1 of 2
Sulfate (mg/L)	BY-GSA-MW-5	34.74	n/a	10/19/2021	12.3	No	16	2.238	0.4647	0	None	x^(1/3)	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-6	43.64	n/a	10/18/2021	24.7	No	15	18.13	11.34	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-7	5.32	n/a	10/18/2021	2.54	No	16	3.349	0.8938	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-8	5.631	n/a	10/19/2021	4.2	No	16	3.852	0.8066	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-9	13.89	n/a	10/19/2021	12.6	No	16	8.877	2.273	0	None	No	0.001254	Param Intra 1 of 2

# Interwell Prediction Limit - Significant Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 1/11/2022, 5:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method	
Boron (mg/L)	BY-GSA-MW-5	0.188	n/a	10/19/2021	0.243	Yes	68	n/a	n/a	79.41	n/a	n/a	0.0004142	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-6	0.188	n/a	10/18/2021	0.987	Yes	68	n/a	n/a	79.41	n/a	n/a	0.0004142	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BY-GSA-MW-5	2.049	n/a	10/19/2021	2.75	Yes	68	1.496	0.2959	0	None	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-6	2.049	n/a	10/18/2021	9.06	Yes	68	1.496	0.2959	0	None	No	0.001254	Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-6	5.021	4.454	10/18/2021	5.28	Yes	76	4.738	0.1522	0	None	No	0.0006268	Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-7	5.021	4.454	10/18/2021	5.05	Yes	76	4.738	0.1522	0	None	No	0.0006268	Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-9	5.021	4.454	10/19/2021	4.34	Yes	76	4.738	0.1522	0	None	No	0.0006268	Param Inter 1 of 2
TDS (mg/L)	BY-GSA-MW-6	58	n/a	10/18/2021	77.3	Yes	68	n/a	n/a	10.29	n/a	n/a	0.0004142	NP Inter (normality) 1 of 2

# Interwell Prediction Limit - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method
Boron (mg/L)	BY-GSA-MW-10	0.188	n/a	10/19/2021	0.0444J	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>0.188</b>	<b>n/a</b>	<b>10/19/2021</b>	<b>0.243</b>	<b>Yes</b>	<b>68</b>	<b>n/a</b>	<b>n/a</b>	<b>79.41</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0004142 NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>0.188</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>0.987</b>	<b>Yes</b>	<b>68</b>	<b>n/a</b>	<b>n/a</b>	<b>79.41</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0004142 NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	BY-GSA-MW-7	0.188	n/a	10/18/2021	0.1015ND	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-8	0.188	n/a	10/19/2021	0.0303J	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-9	0.188	n/a	10/19/2021	0.0966J	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
Calcium (mg/L)	BY-GSA-MW-10	2.049	n/a	10/19/2021	0.977	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
<b>Calcium (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>2.049</b>	<b>n/a</b>	<b>10/19/2021</b>	<b>2.75</b>	<b>Yes</b>	<b>68</b>	<b>1.496</b>	<b>0.2959</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254 Param Inter 1 of 2</b>
<b>Calcium (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>2.049</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>9.06</b>	<b>Yes</b>	<b>68</b>	<b>1.496</b>	<b>0.2959</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254 Param Inter 1 of 2</b>
Calcium (mg/L)	BY-GSA-MW-7	2.049	n/a	10/18/2021	1.53	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-8	2.049	n/a	10/19/2021	1.01	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-9	2.049	n/a	10/19/2021	1.75	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
Fluoride (mg/L)	BY-GSA-MW-10	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-5	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-6	0.1	n/a	10/18/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-7	0.1	n/a	10/18/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-8	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-9	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
pH, Field (SU)	BY-GSA-MW-10	5.021	4.454	10/19/2021	4.48	No	76	4.738	0.1522	0	None	No	0.0006268 Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-5	5.021	4.454	10/19/2021	4.79	No	76	4.738	0.1522	0	None	No	0.0006268 Param Inter 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>5.021</b>	<b>4.454</b>	<b>10/18/2021</b>	<b>5.28</b>	<b>Yes</b>	<b>76</b>	<b>4.738</b>	<b>0.1522</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268 Param Inter 1 of 2</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-7</b>	<b>5.021</b>	<b>4.454</b>	<b>10/18/2021</b>	<b>5.05</b>	<b>Yes</b>	<b>76</b>	<b>4.738</b>	<b>0.1522</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268 Param Inter 1 of 2</b>
pH, Field (SU)	BY-GSA-MW-8	5.021	4.454	10/19/2021	4.77	No	76	4.738	0.1522	0	None	No	0.0006268 Param Inter 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>5.021</b>	<b>4.454</b>	<b>10/19/2021</b>	<b>4.34</b>	<b>Yes</b>	<b>76</b>	<b>4.738</b>	<b>0.1522</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268 Param Inter 1 of 2</b>
TDS (mg/L)	BY-GSA-MW-10	58	n/a	10/19/2021	39.3	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
TDS (mg/L)	BY-GSA-MW-5	58	n/a	10/19/2021	48.7	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
<b>TDS (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>58</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>77.3</b>	<b>Yes</b>	<b>68</b>	<b>n/a</b>	<b>n/a</b>	<b>10.29</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0004142 NP Inter (normality) 1 of 2</b>
TDS (mg/L)	BY-GSA-MW-7	58	n/a	10/18/2021	42.7	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
TDS (mg/L)	BY-GSA-MW-8	58	n/a	10/19/2021	33.3	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
TDS (mg/L)	BY-GSA-MW-9	58	n/a	10/19/2021	48	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2

# Trend Test (Prediction Limit Exceedances) - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:33 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Chloride (mg/L)	BY-GSA-MW-2 (bg)	-0.4174	-89	-63	Yes	17	5.882	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-7	1.213	74	63	Yes	17	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-6	-0.1869	-143	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-7	-0.04186	-76	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-9	-0.03751	-107	-74	Yes	19	0	n/a	n/a	0.01	NP

# Trend Test (Prediction Limit Exceedances) - All Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 1/11/2022, 5:33 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)	BY-GSA-MW-5	-0.01104	-23	-63	No	17	17.65	n/a	n/a	0.01	NP
Boron (mg/L)	BY-GSA-MW-6	0.006412	2	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-5	-0.2139	-44	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-6	-1.581	-40	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-1 (bg)	-0.111	-23	-63	No	17	5.882	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>-0.4174</b>	<b>-89</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>5.882</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	BY-GSA-MW-3 (bg)	-0.04943	-52	-63	No	17	5.882	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-4 (bg)	-0.06007	-54	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-6	0.1027	11	63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>1.213</b>	<b>74</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>-0.1869</b>	<b>-143</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-7</b>	<b>-0.04186</b>	<b>-76</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>-0.03751</b>	<b>-107</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
TDS (mg/L)	BY-GSA-MW-6	-8.487	-35	-63	No	17	0	n/a	n/a	0.01	NP

# Upper Tolerance Limits Summary Table

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 4:06 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.00102	68	n/a	n/a	92.65	n/a	n/a	0.03056	NP Inter
Arsenic (mg/L)	0.0017	68	n/a	n/a	88.24	n/a	n/a	0.03056	NP Inter
Barium (mg/L)	0.183	68	n/a	n/a	0	n/a	n/a	0.03056	NP Inter
Beryllium (mg/L)	0.00102	68	n/a	n/a	91.18	n/a	n/a	0.03056	NP Inter
Cadmium (mg/L)	0.0002	68	n/a	n/a	98.53	n/a	n/a	0.03056	NP Inter
Chromium (mg/L)	0.01	68	n/a	n/a	83.82	n/a	n/a	0.03056	NP Inter
Cobalt (mg/L)	0.0157	68	n/a	n/a	57.35	n/a	n/a	0.03056	NP Inter
Combined Radium 226 + 228 (pCi/L)	3	68	n/a	n/a	0	n/a	n/a	0.03056	NP Inter
Fluoride (mg/L)	0.1	72	n/a	n/a	59.72	n/a	n/a	0.02489	NP Inter
Lead (mg/L)	0.00126	68	n/a	n/a	89.71	n/a	n/a	0.03056	NP Inter
Lithium (mg/L)	0.02	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter
Mercury (mg/L)	0.0005	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter
Molybdenum (mg/L)	0.0002	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter
Selenium (mg/L)	0.00102	68	n/a	n/a	98.53	n/a	n/a	0.03056	NP Inter
Thallium (mg/L)	0.0002	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter

<b>BARRY GYPSUM 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	0.0017	0.01
Barium	mg/L	0.183	2
Beryllium	mg/L	0.00102	0.004
Cadmium	mg/L	0.0002	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.0157	0.006
Combined Radium-226/228	pCi/L	3	5
Fluoride	mg/L	0.1	4
Lead	mg/L	0.00126	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.0002	0.1
Selenium	mg/L	0.00102	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 second semi-annual sampling event in 2021.

# Confidence Interval - All Results (No Significant)

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 4:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BY-GSA-MW-10	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-5	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-6	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-7	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-8	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-9	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-10	0.0002	0.000129	0.01	No	8	0.0001824	0.00003264	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-5	0.000501	0.0002	0.01	No	8	0.0002376	0.0001064	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-6	0.000821	0.0002	0.01	No	8	0.0002926	0.0002176	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-7	0.00023	0.000177	0.01	No	8	0.0002009	0.00001426	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-8	0.0002	0.00016	0.01	No	8	0.000195	0.00001414	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-9	0.0002	0.000173	0.01	No	8	0.0001966	0.000009546	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-PZ-11	0.0003569	0.00001893	0.01	No	4	0.0001602	0.00004655	50	Cohen's	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-10	0.132	0.115	2	No	8	0.1235	0.007982	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-5	0.181	0.0684	2	No	8	0.0946	0.03762	0	None	No	0.004	NP (normality)
Barium (mg/L)	BY-GSA-MW-6	0.1613	0.07881	2	No	8	0.12	0.0389	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-7	0.08712	0.04051	2	No	8	0.06381	0.02199	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-8	0.04827	0.03995	2	No	8	0.04411	0.003926	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-9	0.174	0.145	2	No	8	0.1595	0.01368	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-PZ-11	0.0599	0.0499	2	No	4	0.05488	0.005688	0	None	No	0.0625	NP (normality)
Beryllium (mg/L)	BY-GSA-MW-5	0.00102	0.000575	0.004	No	8	0.0009644	0.0001573	87.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-6	0.00102	0.000763	0.004	No	8	0.0009879	0.00009086	87.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-7	0.00102	0.000464	0.004	No	8	0.0009505	0.0001966	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-5	0.001	0.0000867	0.005	No	8	0.0007783	0.0004107	75	None	No	0.004	NP (normality)
Cadmium (mg/L)	BY-GSA-MW-6	0.001	0.00011	0.005	No	8	0.000783	0.000402	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-10	0.01	0.000695	0.1	No	8	0.007686	0.004285	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-5	0.01	0.00221	0.1	No	8	0.007151	0.003934	62.5	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-6	0.01	0.00223	0.1	No	8	0.00551	0.003741	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-7	0.01	0.00131	0.1	No	8	0.007837	0.004004	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-8	0.01	0.00202	0.1	No	8	0.003246	0.002739	12.5	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-9	0.01	0.000783	0.1	No	8	0.007699	0.00426	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-PZ-11	0.003708	0.001887	0.1	No	4	0.002798	0.0004011	0	None	No	0.01	Param.
Cobalt (mg/L)	BY-GSA-MW-10	0.00258	0.002165	0.006	No	8	0.002373	0.0001958	0	None	No	0.01	Param.
Cobalt (mg/L)	BY-GSA-MW-5	0.005	0.00217	0.006	No	8	0.004255	0.001264	62.5	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-6	0.00552	0.00296	0.006	No	8	0.004374	0.001135	37.5	None	No	0.004	NP (Cohens/xfrm)
Cobalt (mg/L)	BY-GSA-MW-7	0.005	0.00164	0.006	No	8	0.004195	0.001492	75	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-8	0.005	0.000437	0.006	No	8	0.003866	0.0021	75	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-9	0.005	0.00156	0.006	No	8	0.004166	0.001545	75	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-PZ-11	0.005	0.00101	0.006	No	4	0.003045	0.002258	50	None	No	0.0625	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-10	1.936	0.7539	5	No	8	1.345	0.5574	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-5	0.8352	0.3925	5	No	8	0.6139	0.2088	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-6	2.179	0.5969	5	No	8	1.388	0.7463	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-7	1.135	0.012	5	No	8	0.5738	0.53	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-8	1.282	0.2035	5	No	8	0.7426	0.5086	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-9	2.635	1.355	5	No	8	1.995	0.6036	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-PZ-11	1.275	0.1359	5	No	4	0.7053	0.2508	0	None	No	0.01	Param.
Fluoride (mg/L)	BY-GSA-MW-10	0.1	0.08	4	No	8	0.09625	0.00744	75	None	No	0.004	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-5	0.1	0.1	4	No	8	0.1	0	100	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-6	0.1	0.0591	4	No	8	0.09489	0.01446	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-7	0.1	0.1	4	No	8	0.1	0	100	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-8	0.1	0.1	4	No	8	0.1	0	100	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-9	0.1	0.07	4	No	8	0.0925	0.01389	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-10	0.005	0.0001	0.015	No	8	0.003777	0.002265	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-5	0.005	0.0000994	0.015	No	8	0.003795	0.002232	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-6	0.005	0.00011	0.015	No	8	0.00379	0.00224	75	None	No	0.004	NP (normality)

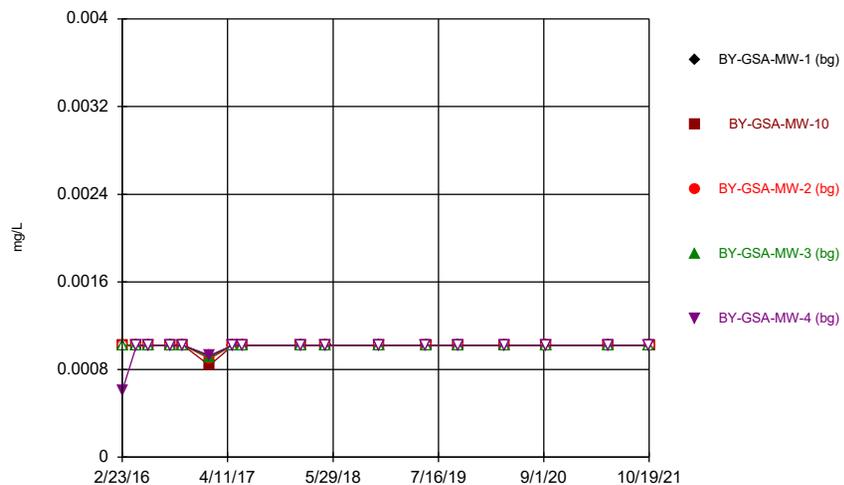
# Confidence Interval - All Results (No Significant)

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 4:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	BY-GSA-MW-7	0.005	0.0000798	0.015	No	8	0.00377	0.002278	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-9	0.005	0.00025	0.015	No	8	0.003817	0.00219	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-PZ-11	0.005	0.00014	0.015	No	4	0.002587	0.002786	50	None	No	0.0625	NP (normality)
Mercury (mg/L)	BY-GSA-MW-8	0.0005	0.0005	0.002	No	8	0.0005	0	100	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-5	0.000203	0.0001	0.1	No	8	0.0001901	0.00003642	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-8	0.000203	0.00008	0.1	No	8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-10	0.001015	0.000778	0.05	No	8	0.0009623	0.00009866	75	None	No	0.004	NP (normality)
Selenium (mg/L)	BY-GSA-MW-5	0.0163	0.001015	0.05	No	8	0.003684	0.005314	62.5	None	No	0.004	NP (normality)
Selenium (mg/L)	BY-GSA-MW-6	0.009609	0.003128	0.05	No	8	0.006369	0.003057	0	None	No	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-8	0.001015	0.00052	0.05	No	8	0.0009531	0.000175	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-9	0.00128	0.001015	0.05	No	8	0.001069	0.0001031	75	None	No	0.004	NP (normality)
Selenium (mg/L)	BY-GSA-PZ-11	0.001267	0.0007962	0.05	No	4	0.00107	0.00006468	50	Cohen's	No	0.01	Param.

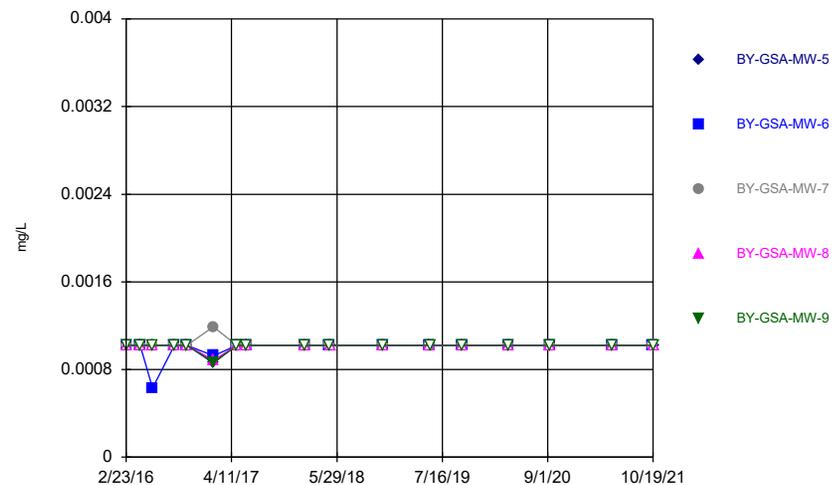
FIGURE A.

### Time Series



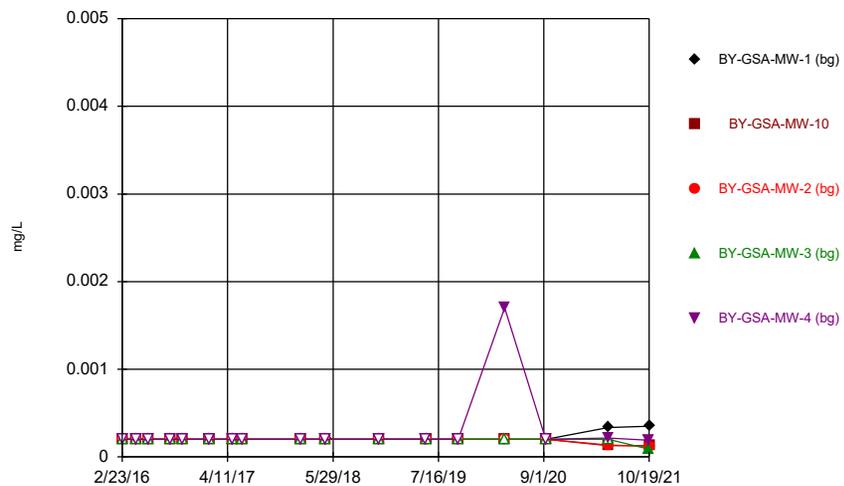
Constituent: Antimony Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



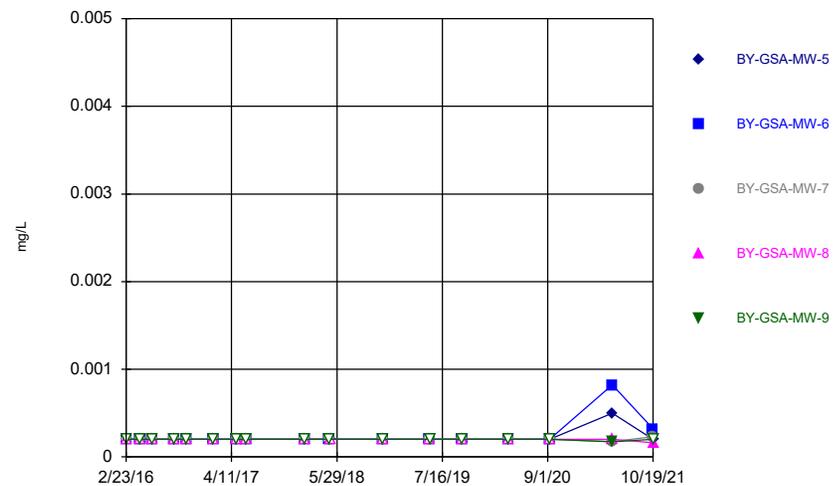
Constituent: Antimony Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



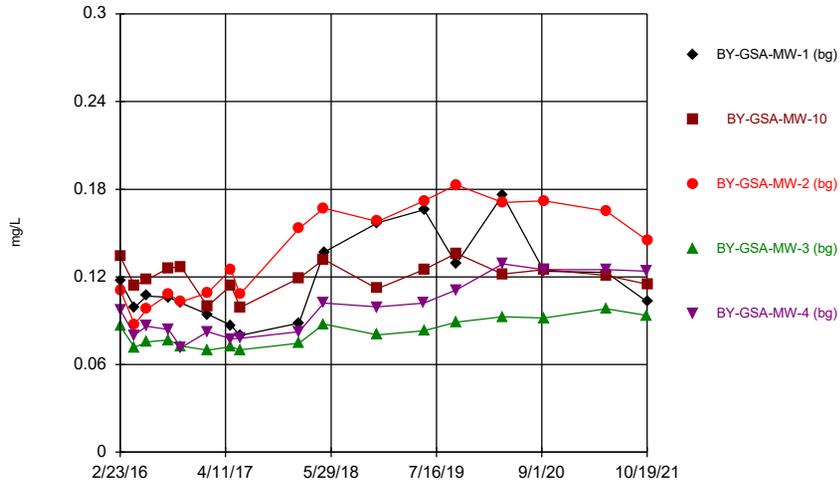
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



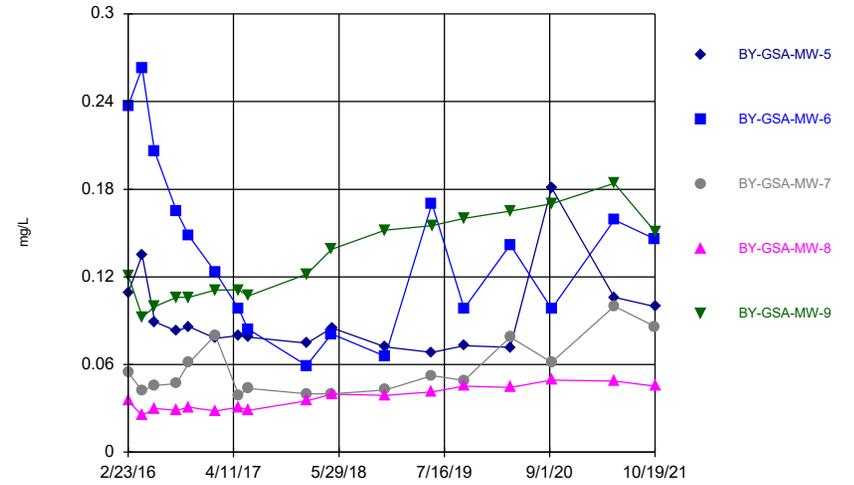
Constituent: Arsenic Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



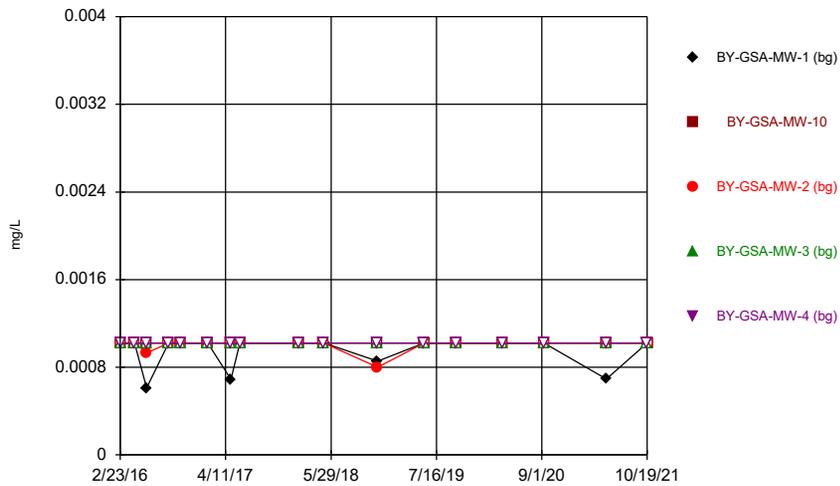
Constituent: Barium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



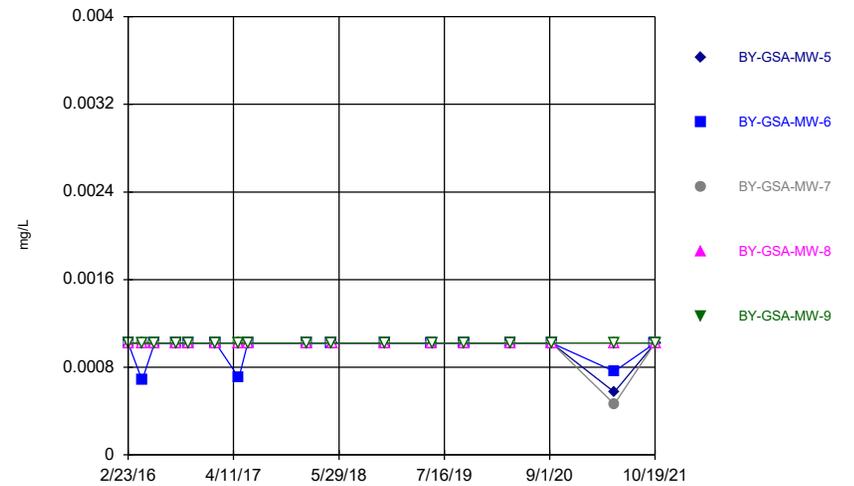
Constituent: Barium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



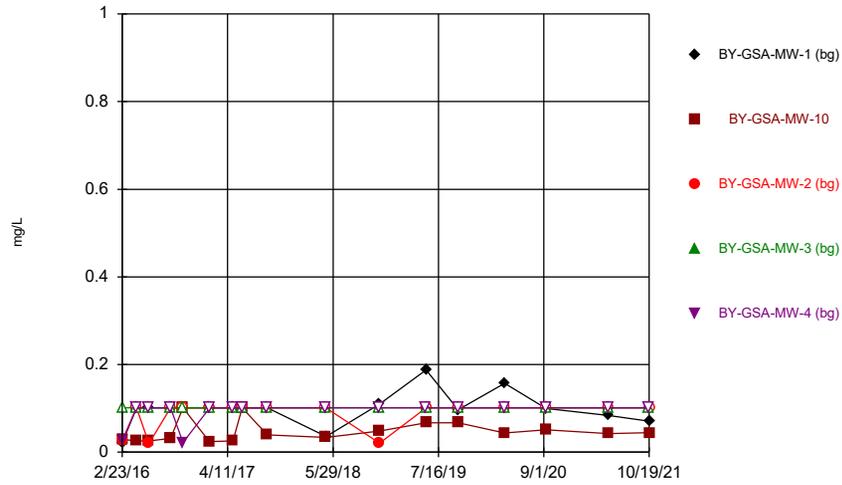
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 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



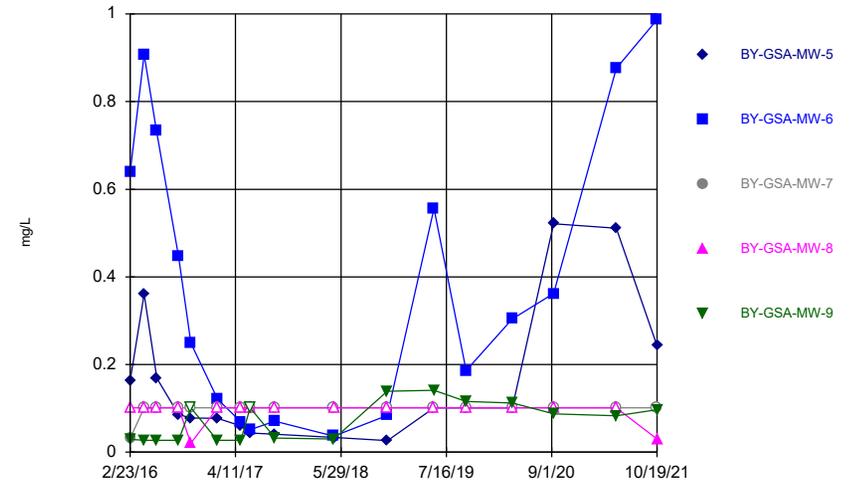
Constituent: Beryllium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



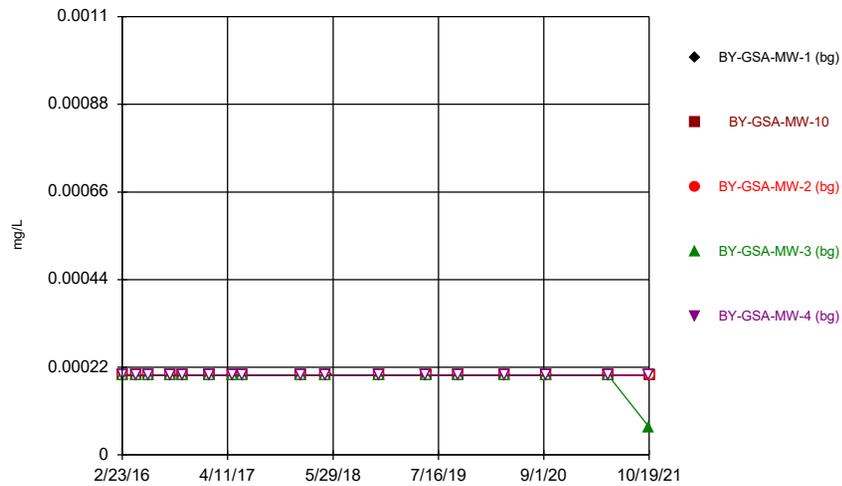
Constituent: Boron Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



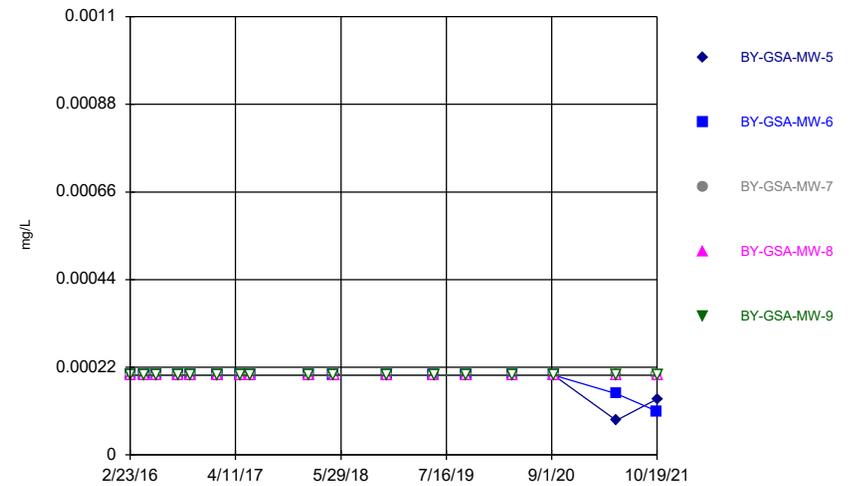
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



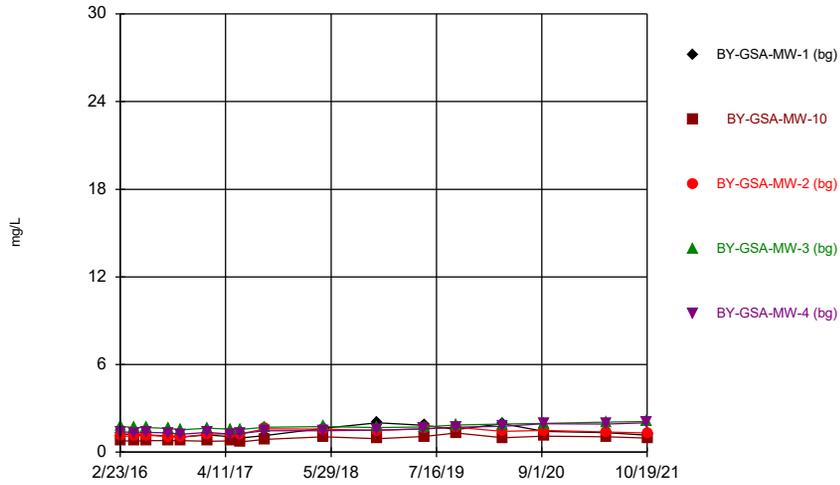
Constituent: Cadmium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



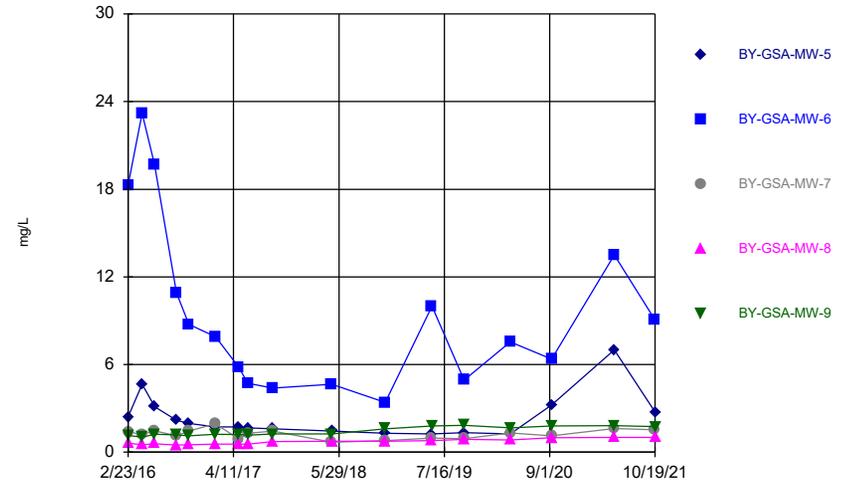
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



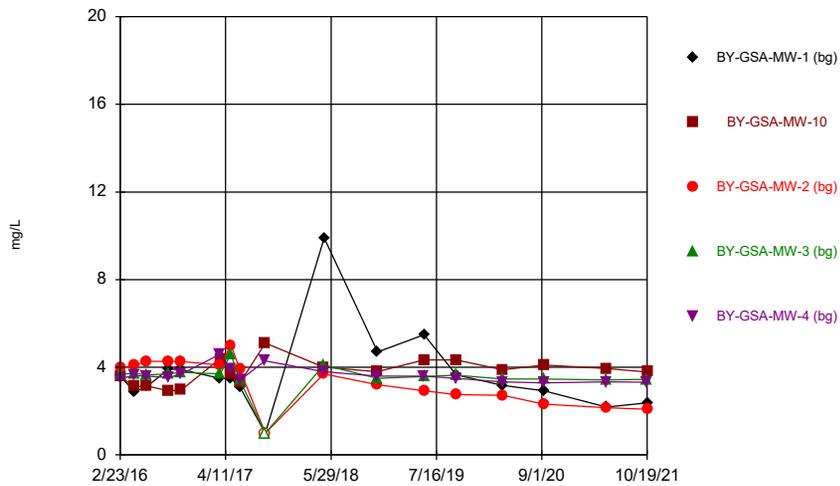
Constituent: Calcium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



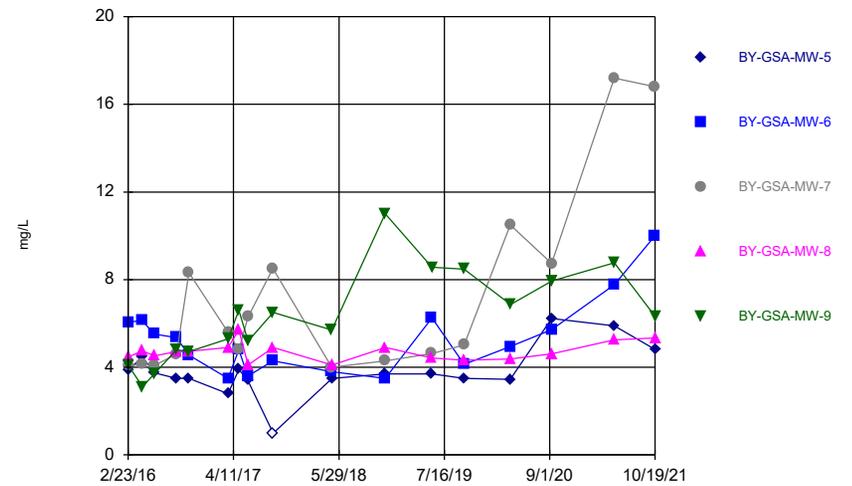
Constituent: Calcium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



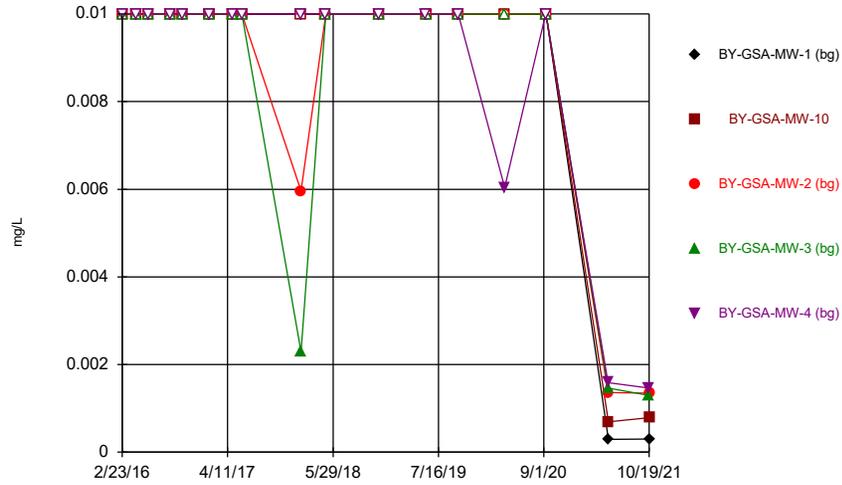
Constituent: Chloride Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



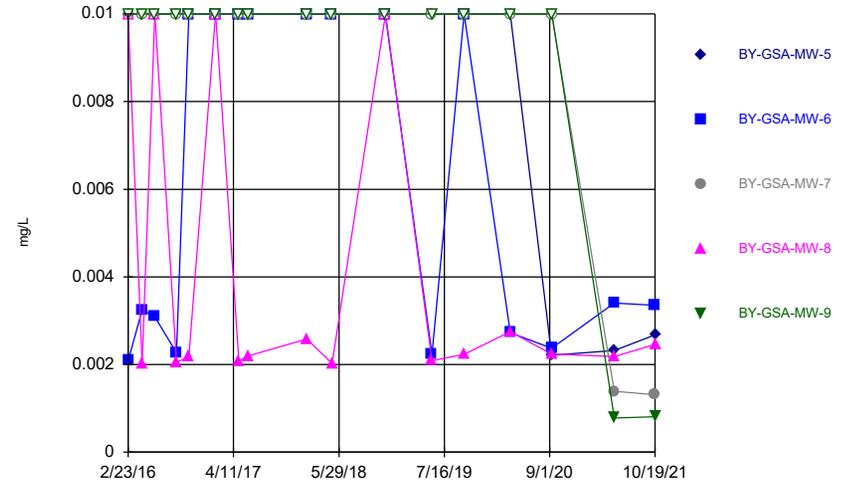
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



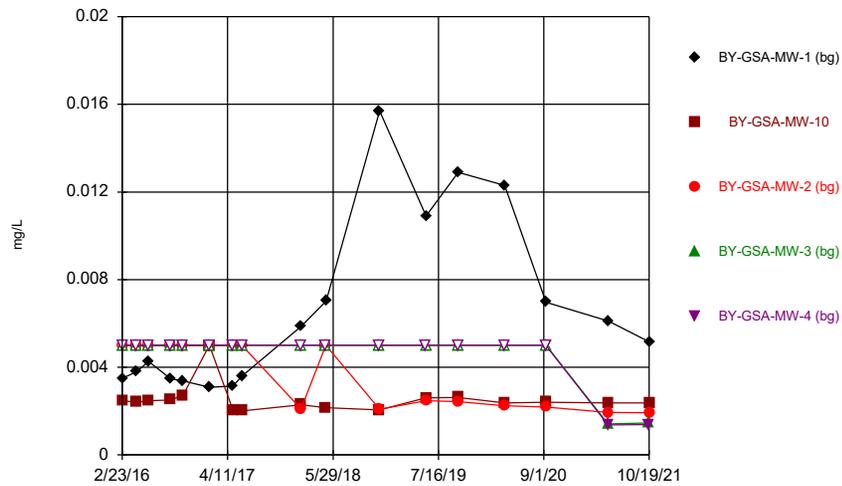
Constituent: Chromium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



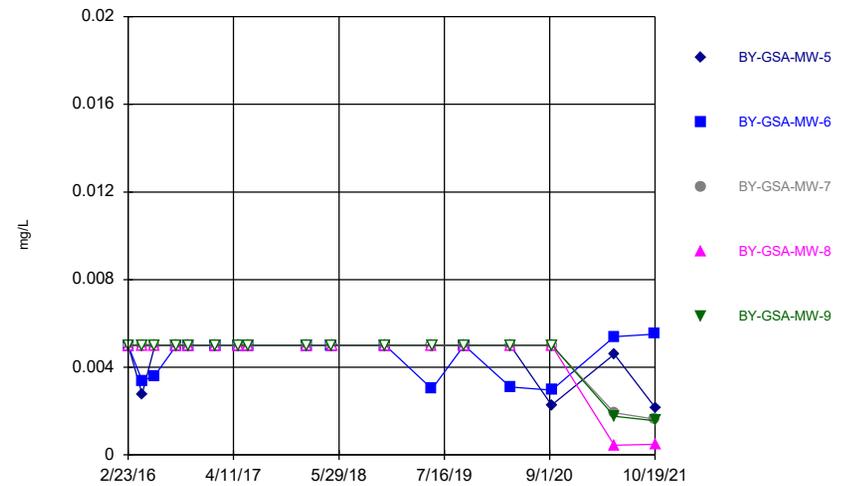
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



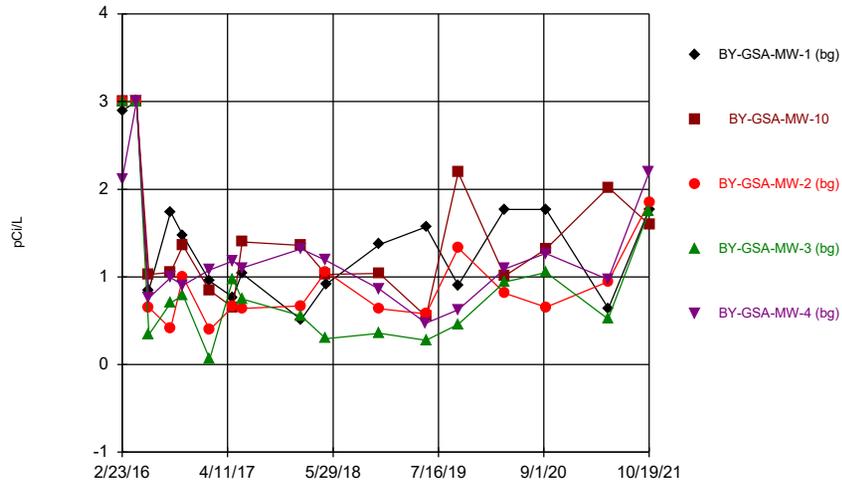
Constituent: Cobalt Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



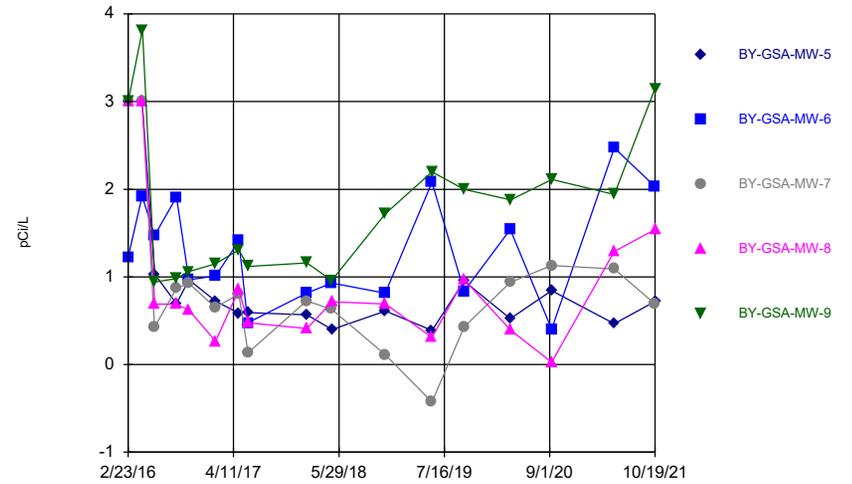
Constituent: Cobalt Analysis Run 1/11/2022 4:19 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



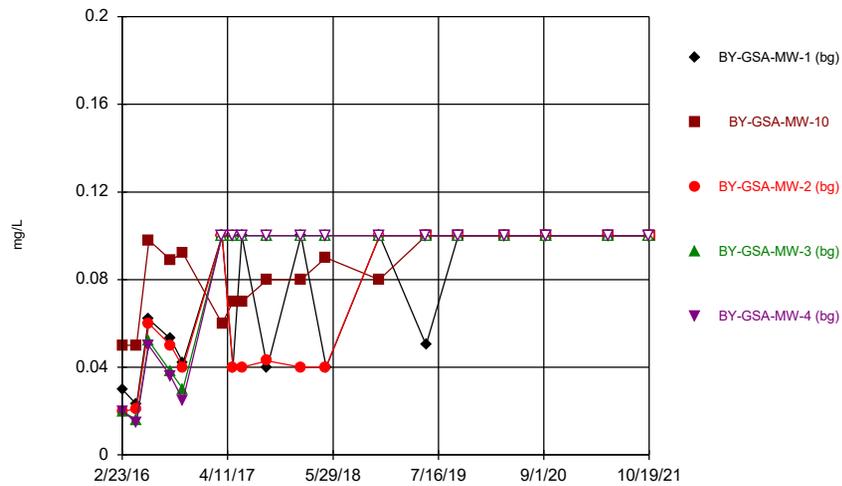
Constituent: Combined Radium 226 + 228 Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



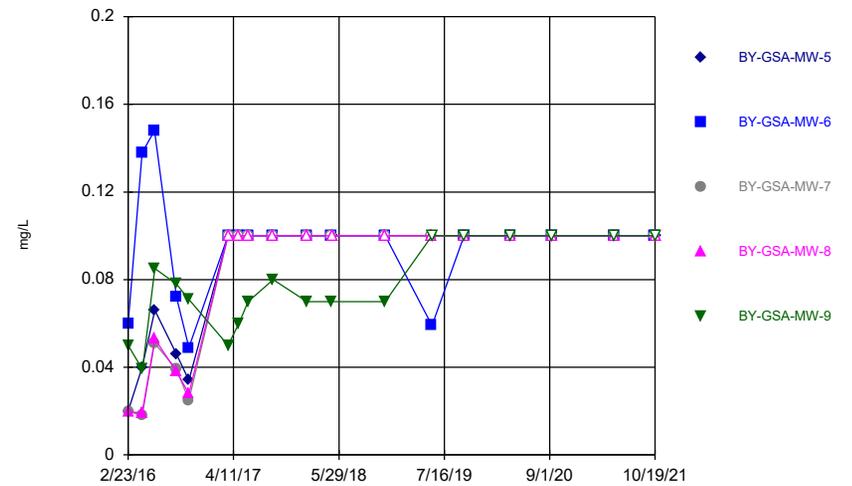
Constituent: Combined Radium 226 + 228 Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



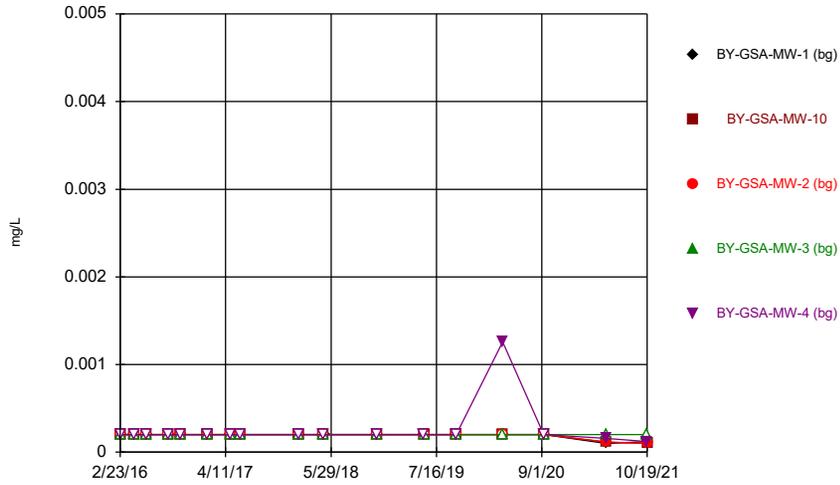
Constituent: Fluoride Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



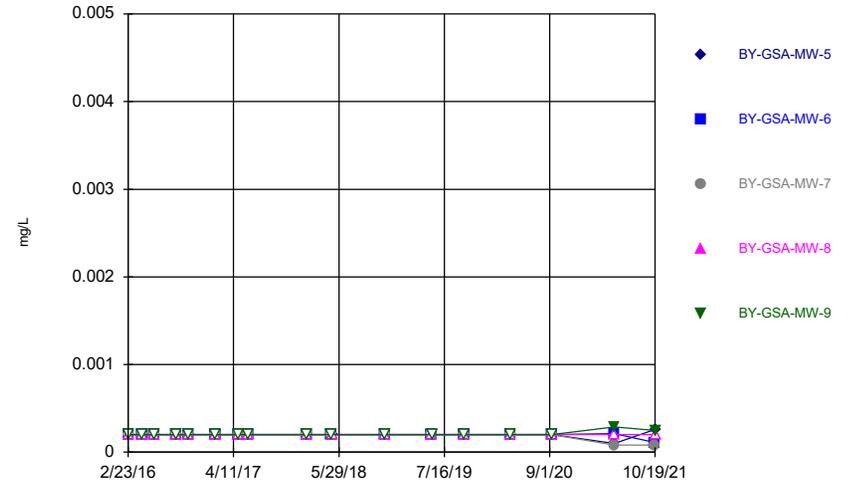
Constituent: Fluoride Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



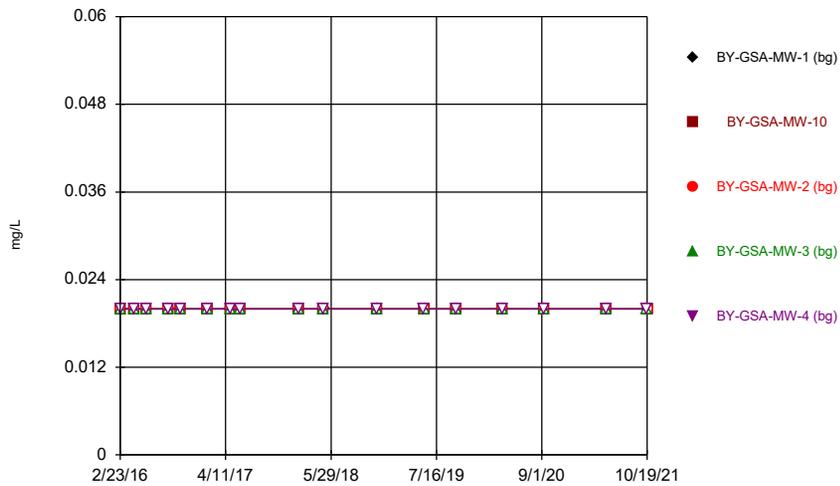
Constituent: Lead Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



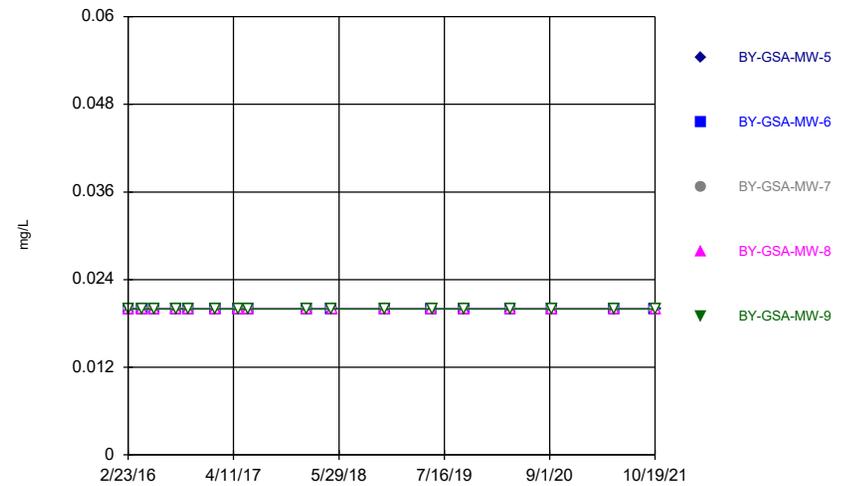
Constituent: Lead Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



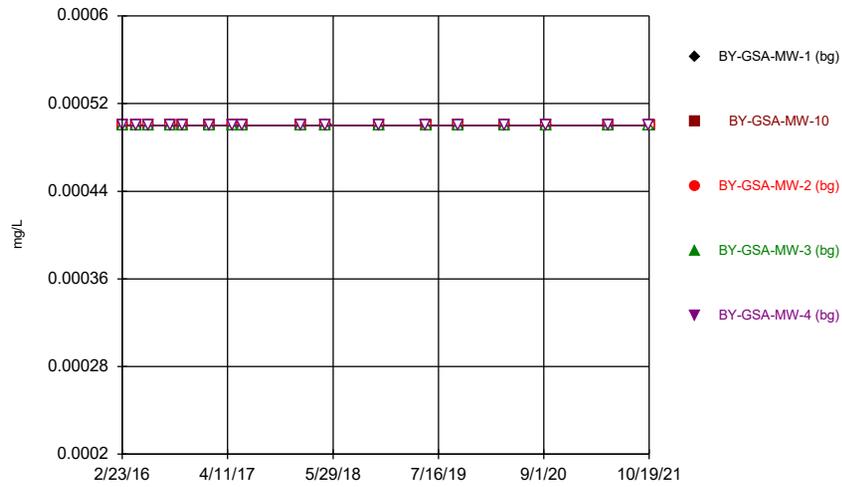
Constituent: Lithium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



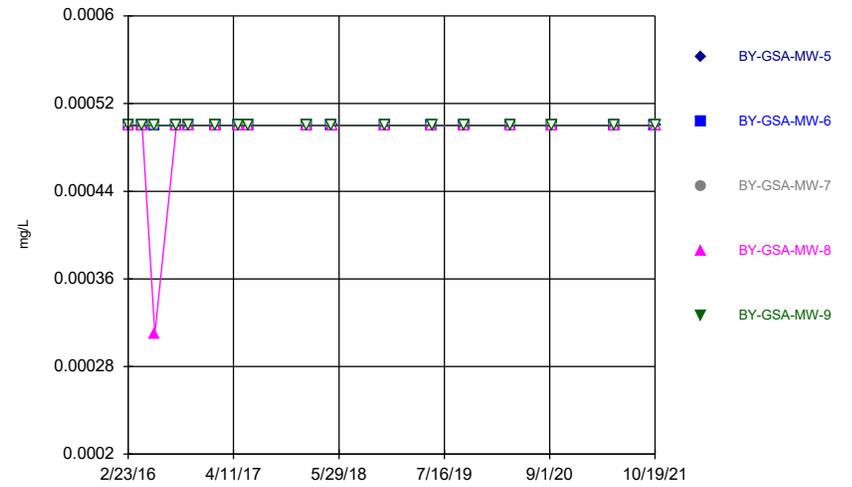
Constituent: Lithium Analysis Run 1/11/2022 4:19 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



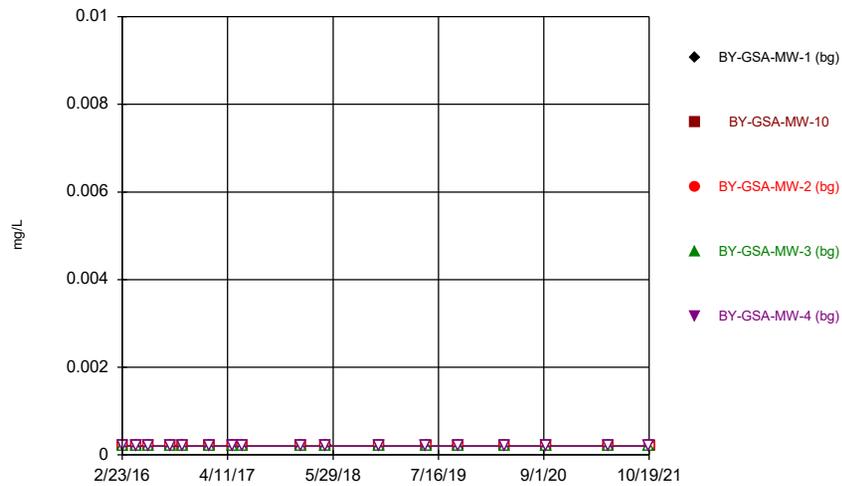
Constituent: Mercury Analysis Run 1/11/2022 4:20 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



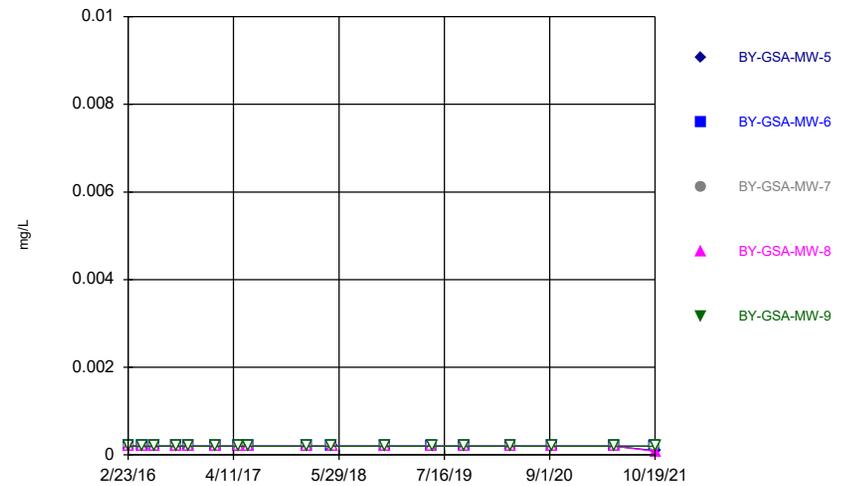
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Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



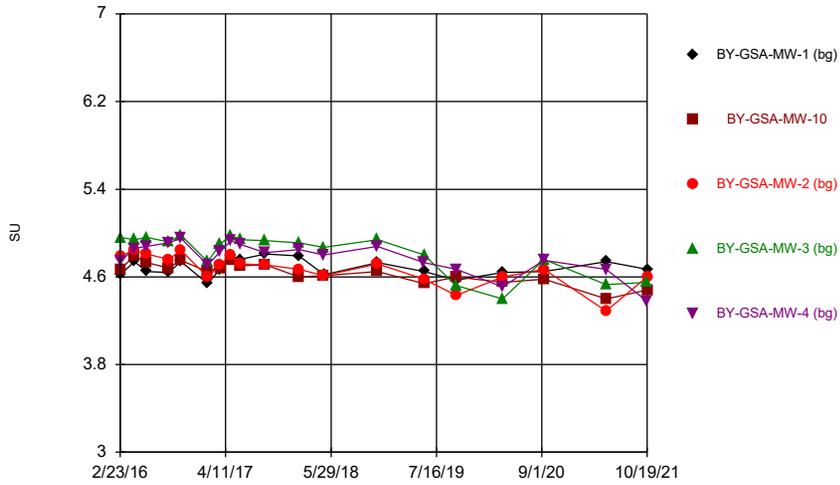
Constituent: Molybdenum Analysis Run 1/11/2022 4:20 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



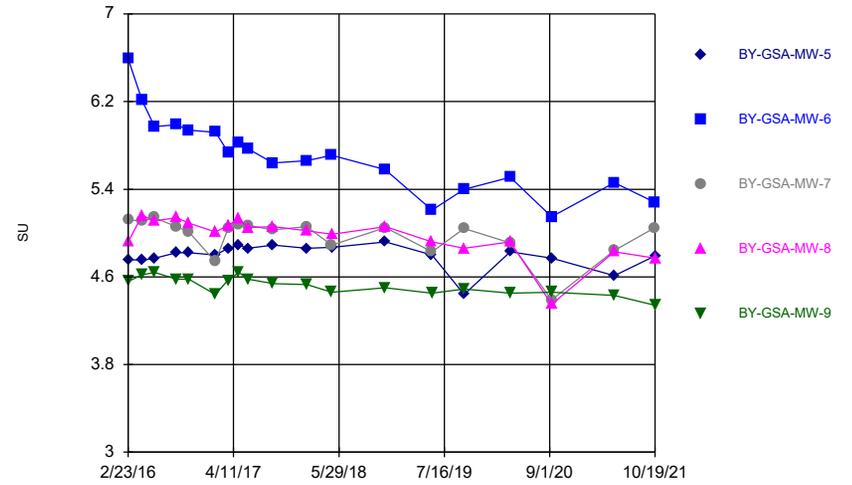
Constituent: Molybdenum Analysis Run 1/11/2022 4:20 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



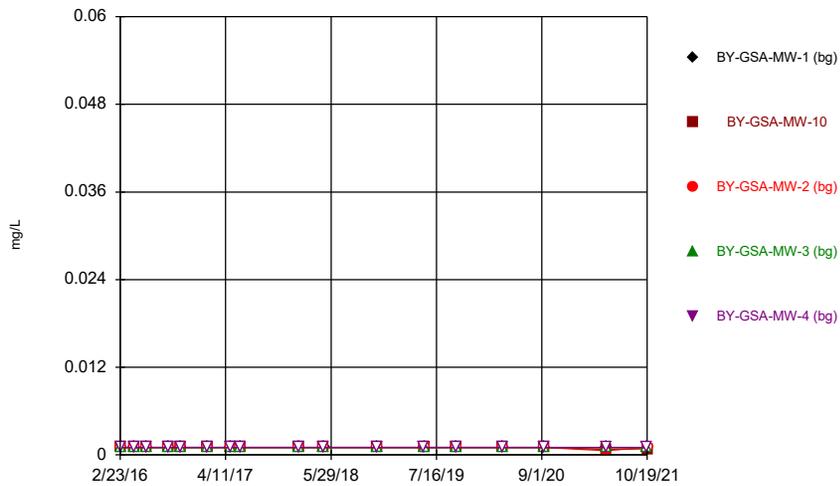
Constituent: pH, Field Analysis Run 1/11/2022 4:20 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



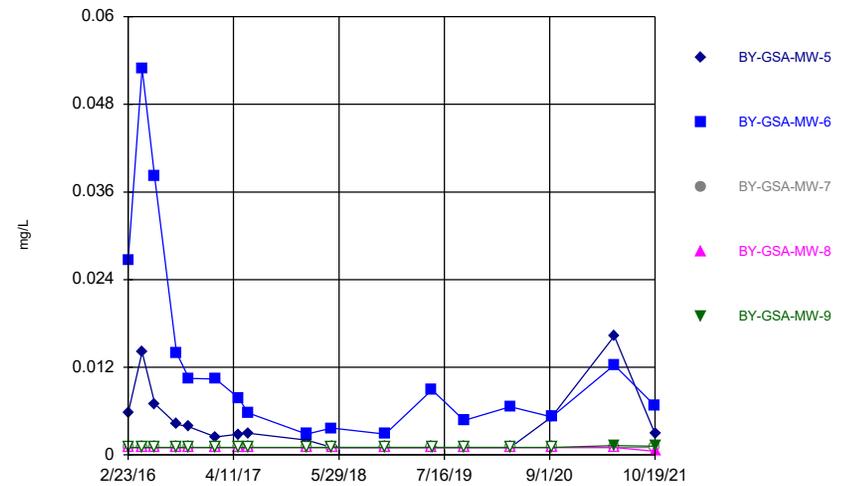
Constituent: pH, Field Analysis Run 1/11/2022 4:20 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



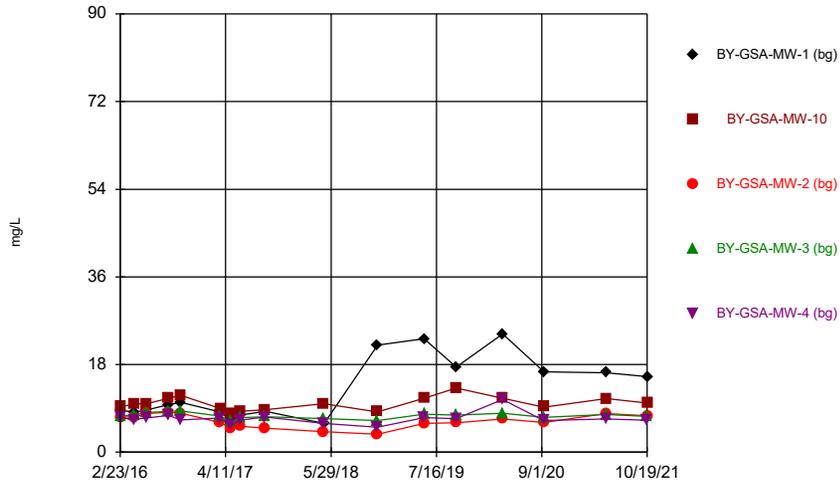
Constituent: Selenium Analysis Run 1/11/2022 4:20 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



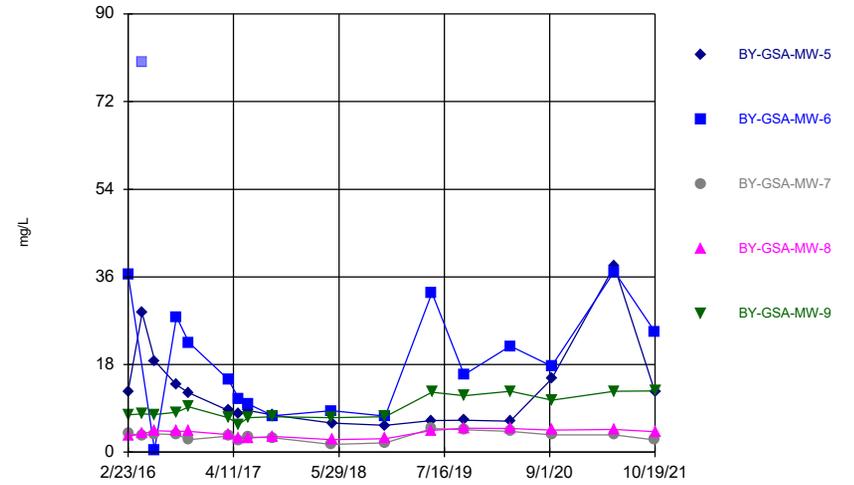
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 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



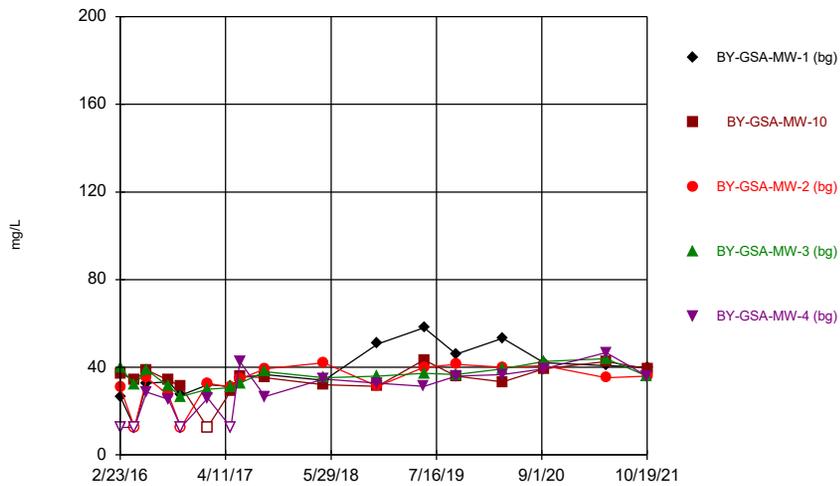
Constituent: Sulfate Analysis Run 1/11/2022 4:20 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



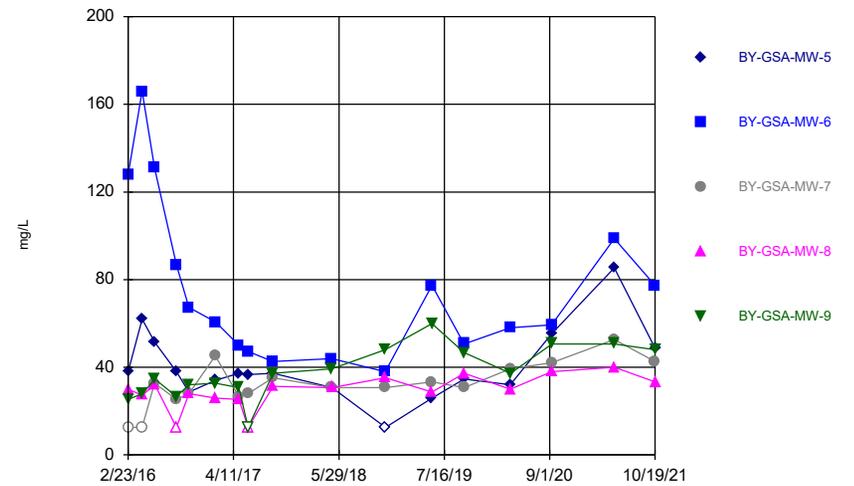
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 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



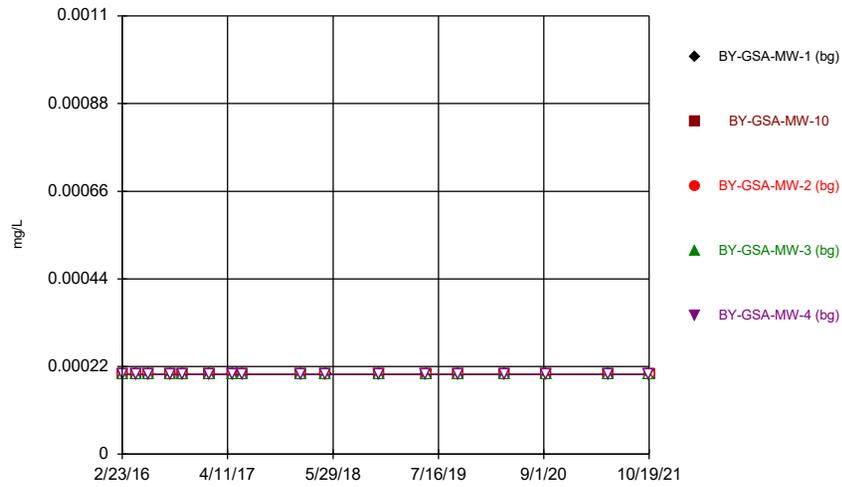
Constituent: TDS Analysis Run 1/11/2022 4:20 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Time Series



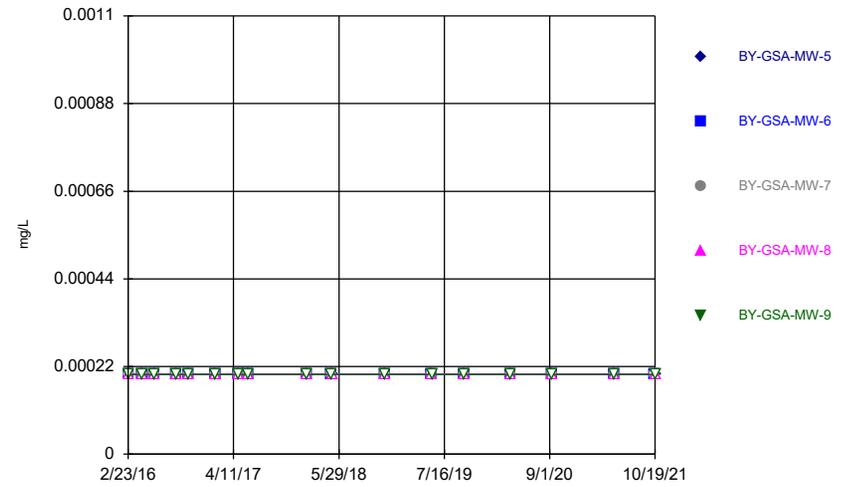
Constituent: TDS Analysis Run 1/11/2022 4:20 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



Constituent: Thallium Analysis Run 1/11/2022 4:20 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Time Series



Constituent: Thallium Analysis Run 1/11/2022 4:20 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.00102	<0.00102	<0.00102	<0.00102	0.000606 (J)	<0.00102	<0.00102	<0.00102	<0.00102
4/18/2016						<0.00102	<0.00102	<0.00102	<0.00102
4/19/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
6/6/2016	<0.00102				<0.00102		0.000633 (J)	<0.00102	
6/7/2016		<0.00102	<0.00102	<0.00102		<0.00102			<0.00102
8/30/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
10/18/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
1/30/2017		0.000838 (J)						0.00119 (J)	
1/31/2017	0.000925 (J)		0.000898 (J)	0.000911 (J)	0.000928 (J)	0.000866 (J)	0.000926 (J)		0.000885 (J)
5/2/2017	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
6/6/2017	<0.00102		<0.00102	<0.00102	<0.00102	<0.00102	<0.00102		
6/7/2017		<0.00102						<0.00102	<0.00102
1/22/2018							<0.00102	<0.00102	
1/23/2018	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
1/24/2018						<0.00102			<0.00102
5/1/2018		<0.00102	<0.00102	<0.00102	<0.00102		<0.00102	<0.00102	
5/2/2018	<0.00102						<0.00102		<0.00102
11/26/2018		<0.00102			<0.00102		<0.00102		
11/27/2018	<0.00102		<0.00102	<0.00102		<0.00102		<0.00102	<0.00102
5/28/2019					<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
5/29/2019	<0.00102	<0.00102	<0.00102	<0.00102					
10/2/2019	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
3/30/2020						<0.00102	<0.00102	<0.00102	<0.00102
3/31/2020	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
9/8/2020					<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
9/9/2020	<0.00102	<0.00102	<0.00102	<0.00102					
5/11/2021			<0.00102	<0.00102	<0.00102				
5/12/2021	<0.00102	<0.00102				<0.00102	<0.00102	<0.00102	<0.00102
10/18/2021				<0.00102	<0.00102		<0.00102	<0.00102	
10/19/2021	<0.00102	<0.00102	<0.00102			<0.00102			<0.00102

# Time Series

Constituent: Antimony (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	<0.00102
4/19/2016	<0.00102
6/7/2016	<0.00102
8/30/2016	<0.00102
10/18/2016	<0.00102
1/30/2017	0.000859 (J)
5/2/2017	<0.00102
6/7/2017	<0.00102
1/23/2018	<0.00102
5/1/2018	<0.00102
11/26/2018	<0.00102
5/29/2019	<0.00102
10/2/2019	<0.00102
3/31/2020	<0.00102
9/9/2020	<0.00102
5/12/2021	<0.00102
10/19/2021	<0.00102

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
4/18/2016						<0.0002	<0.0002	<0.0002	<0.0002
4/19/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
6/6/2016	<0.0002				<0.0002		<0.0002	<0.0002	
6/7/2016		<0.0002	<0.0002	<0.0002		<0.0002			<0.0002
8/30/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10/18/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/30/2017		<0.0002						<0.0002	
1/31/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
5/2/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
6/6/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2017		<0.0002						<0.0002	<0.0002
1/22/2018							<0.0002	<0.0002	
1/23/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
1/24/2018						<0.0002			<0.0002
5/1/2018		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	
5/2/2018	<0.0002					<0.0002			<0.0002
11/26/2018		<0.0002			<0.0002		<0.0002		
11/27/2018	<0.0002		<0.0002	<0.0002		<0.0002		<0.0002	<0.0002
5/28/2019					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
5/29/2019	<0.0002	<0.0002	<0.0002	<0.0002					
10/2/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/30/2020						<0.0002	<0.0002	<0.0002	<0.0002
3/31/2020	<0.0002	<0.0002	<0.0002	<0.0002	0.0017 (J)				
9/8/2020					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/9/2020	<0.0002	<0.0002	<0.0002	<0.0002					
5/11/2021			0.000136 (J)	<0.0002	0.000217				
5/12/2021	0.000336	0.000129 (J)				0.000501	0.000821	0.000177 (J)	<0.0002
10/18/2021				9E-05 (J)	0.00019 (J)		0.00032	0.00023	
10/19/2021	0.00035	0.00013 (J)	0.00012 (J)			0.0002 (J)			0.00016 (J)

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	<0.0002
4/19/2016	<0.0002
6/7/2016	<0.0002
8/30/2016	<0.0002
10/18/2016	<0.0002
1/30/2017	<0.0002
5/2/2017	<0.0002
6/7/2017	<0.0002
1/23/2018	<0.0002
5/1/2018	<0.0002
11/26/2018	<0.0002
5/29/2019	<0.0002
10/2/2019	<0.0002
3/31/2020	<0.0002
9/9/2020	<0.0002
5/12/2021	0.000173 (J)
10/19/2021	<0.0002

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	0.117	0.134	0.111	0.0862	0.0973	0.109	0.237	0.0546	0.0352
4/18/2016						0.135	0.263	0.0421	0.0251
4/19/2016	0.099	0.114	0.0875	0.0718	0.0802				
6/6/2016	0.107				0.0862		0.206	0.0457	
6/7/2016		0.118	0.0979	0.0754		0.0892			0.0299
8/30/2016	0.106	0.126	0.108	0.0768	0.0841	0.083	0.165	0.0469	0.0287
10/18/2016	0.102	0.127	0.103	0.0727	0.0715	0.0859	0.148	0.0611	0.0309
1/30/2017		0.1						0.0801	
1/31/2017	0.0944		0.109	0.0698	0.0825	0.0779	0.123		0.0282
5/2/2017	0.0868	0.114	0.125	0.0723	0.0777	0.0799	0.098	0.0388	0.0309
6/6/2017	0.0799		0.108	0.07	0.078	0.0788	0.0844		
6/7/2017		0.0991						0.0437	0.0287
1/22/2018							0.0593	0.0399	
1/23/2018	0.0884	0.119	0.153	0.0747	0.0825				
1/24/2018						0.0746			0.0351
5/1/2018		0.132	0.167	0.0877	0.102		0.081	0.04	
5/2/2018	0.137					0.085			0.0398
11/26/2018		0.112			0.0994		0.0657		
11/27/2018	0.157		0.158	0.0804		0.072		0.0427	0.0388
5/28/2019					0.102	0.0684	0.17	0.0524	0.0412
5/29/2019	0.166	0.125	0.172	0.0831					
10/2/2019	0.129	0.136	0.183	0.089	0.111	0.0728	0.0985	0.0492	0.0453
3/30/2020						0.0718	0.142	0.0788	0.0444
3/31/2020	0.176	0.122	0.171	0.0927	0.129				
9/8/2020					0.125	0.181	0.0981	0.0615	0.0494
9/9/2020	0.124	0.125	0.172	0.0919					
5/11/2021			0.165	0.0981	0.125				
5/12/2021	0.123	0.121				0.106	0.159	0.1	0.0488
10/18/2021				0.0935	0.124		0.146	0.0859	
10/19/2021	0.103	0.115	0.145			0.0998			0.0452

# Time Series

Constituent: Barium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	0.121
4/19/2016	0.0926
6/7/2016	0.0998
8/30/2016	0.106
10/18/2016	0.106
1/30/2017	0.111
5/2/2017	0.111
6/7/2017	0.107
1/23/2018	0.122
5/1/2018	0.139
11/26/2018	0.152
5/29/2019	0.155
10/2/2019	0.16
3/31/2020	0.165
9/9/2020	0.17
5/12/2021	0.184
10/19/2021	0.151

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
4/18/2016						<0.00102	0.000681 (J)	<0.00102	<0.00102
4/19/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
6/6/2016	0.000612 (J)				<0.00102		<0.00102	<0.00102	
6/7/2016		<0.00102	0.00093 (J)	<0.00102		<0.00102			<0.00102
8/30/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
10/18/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
1/30/2017		<0.00102						<0.00102	
1/31/2017	<0.00102		<0.00102	<0.00102	<0.00102	<0.00102	<0.00102		<0.00102
5/2/2017	0.00069 (J)	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	0.000704 (J)	<0.00102	<0.00102
6/6/2017	<0.00102		<0.00102	<0.00102	<0.00102	<0.00102	<0.00102		
6/7/2017		<0.00102						<0.00102	<0.00102
1/22/2018							<0.00102	<0.00102	
1/23/2018	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
1/24/2018						<0.00102			<0.00102
5/1/2018		<0.00102	<0.00102	<0.00102	<0.00102		<0.00102	<0.00102	
5/2/2018	<0.00102					<0.00102			<0.00102
11/26/2018		<0.00102			<0.00102		<0.00102		
11/27/2018	0.000856 (J)		0.000801 (J)	<0.00102		<0.00102		<0.00102	<0.00102
5/28/2019					<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
5/29/2019	<0.00102	<0.00102	<0.00102	<0.00102					
10/2/2019	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
3/30/2020						<0.00102	<0.00102	<0.00102	<0.00102
3/31/2020	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
9/8/2020					<0.00102	<0.00102	<0.00102	<0.00102	<0.00102
9/9/2020	<0.00102	<0.00102	<0.00102	<0.00102					
5/11/2021			<0.00102	<0.00102	<0.00102				
5/12/2021	0.000694 (J)	<0.00102				0.000575 (J)	0.000763 (J)	0.000464 (J)	<0.00102
10/18/2021				<0.00102	<0.00102		<0.00102	<0.00102	
10/19/2021	<0.00102	<0.00102	<0.00102			<0.00102			<0.00102

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	<0.00102
4/19/2016	<0.00102
6/7/2016	<0.00102
8/30/2016	<0.00102
10/18/2016	<0.00102
1/30/2017	<0.00102
5/2/2017	<0.00102
6/7/2017	<0.00102
1/23/2018	<0.00102
5/1/2018	<0.00102
11/26/2018	<0.00102
5/29/2019	<0.00102
10/2/2019	<0.00102
3/31/2020	<0.00102
9/9/2020	<0.00102
5/12/2021	<0.00102
10/19/2021	<0.00102

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	0.0212 (J)	0.0294 (J)	0.0252 (J)	<0.1015	0.0257 (J)	0.163	0.638	0.0314 (J)	<0.1015
4/18/2016						0.361	0.908	<0.1015	<0.1015
4/19/2016	<0.1015	0.0257 (J)	<0.1015	<0.1015	<0.1015				
6/6/2016	<0.1015				<0.1015		0.733	<0.1015	
6/7/2016		0.0257 (J)	0.0202 (J)	<0.1015		0.169			<0.1015
8/30/2016	<0.1015	0.0317 (J)	<0.1015	<0.1015	<0.1015	0.0858 (J)	0.448	<0.1015	<0.1015
10/18/2016	<0.1015	<0.1015	<0.1015	<0.1015	0.022 (J)	0.0778 (J)	0.249	<0.1015	0.0207 (J)
1/30/2017		0.0243 (J)						<0.1015	
1/31/2017	<0.1015		<0.1015	<0.1015	<0.1015	0.077 (J)	0.121		<0.1015
5/2/2017	<0.1015	0.0259 (J)	<0.1015	<0.1015	<0.1015	0.0602 (J)	0.0695 (J)	<0.1015	<0.1015
6/6/2017	<0.1015		<0.1015	<0.1015	<0.1015	0.0442 (J)	0.0509 (J)		
6/7/2017		<0.1015						<0.1015	<0.1015
9/12/2017					<0.1015		0.0709 (J)	<0.1015	
9/13/2017	<0.1015	0.0394 (J)	<0.1015	<0.1015		0.0411 (J)			<0.1015
5/1/2018		0.0338 (J)	<0.1015	<0.1015	<0.1015		0.0365 (J)	<0.1015	
5/2/2018	0.0362 (J)					0.0334 (J)			<0.1015
11/26/2018		0.0484 (J)			<0.1015		0.0836 (J)		
11/27/2018	0.11		0.0207 (J)	<0.1015		0.0265 (J)		<0.1015	<0.1015
5/28/2019					<0.1015	<0.1015	0.556	<0.1015	<0.1015
5/29/2019	0.188	0.0669 (J)	<0.1015	<0.1015					
10/2/2019	0.097 (J)	0.0671 (J)	<0.1015	<0.1015	<0.1015	<0.1015	0.186	<0.1015	<0.1015
3/30/2020						<0.1015	0.304	<0.1015	<0.1015
3/31/2020	0.157	0.0442 (J)	<0.1015	<0.1015	<0.1015				
9/8/2020					<0.1015	0.521	0.362	<0.1015	<0.1015
9/9/2020	0.0999 (J)	0.0509 (J)	<0.1015	<0.1015					
5/11/2021			<0.1015	<0.1015	<0.1015				
5/12/2021	0.0841 (J)	0.0423 (J)				0.511	0.876	<0.1015	<0.1015
10/18/2021				<0.1015	<0.1015		0.987	<0.1015	
10/19/2021	0.0708 (J)	0.0444 (J)	<0.1015			0.243			0.0303 (J)

# Time Series

Constituent: Boron (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	0.0297 (J)
4/19/2016	0.0269 (J)
6/7/2016	0.0271 (J)
8/30/2016	0.0272 (J)
10/18/2016	<0.1015
1/30/2017	0.0269 (J)
5/2/2017	0.027 (J)
6/7/2017	<0.1015
9/13/2017	0.032 (J)
5/1/2018	0.0302 (J)
11/26/2018	0.139
5/29/2019	0.141
10/2/2019	0.116
3/31/2020	0.112
9/9/2020	0.0873 (J)
5/12/2021	0.0834 (J)
10/19/2021	0.0966 (J)

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
4/18/2016						<0.0002	<0.0002	<0.0002	<0.0002
4/19/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
6/6/2016	<0.0002				<0.0002		<0.0002	<0.0002	
6/7/2016		<0.0002	<0.0002	<0.0002		<0.0002			<0.0002
8/30/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10/18/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/30/2017		<0.0002						<0.0002	
1/31/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
5/2/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
6/6/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2017		<0.0002						<0.0002	<0.0002
1/22/2018							<0.0002	<0.0002	
1/23/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
1/24/2018						<0.0002			<0.0002
5/1/2018		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	
5/2/2018	<0.0002					<0.0002			<0.0002
11/26/2018		<0.0002			<0.0002		<0.0002		
11/27/2018	<0.0002		<0.0002	<0.0002		<0.0002		<0.0002	<0.0002
5/28/2019					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
5/29/2019	<0.0002	<0.0002	<0.0002	<0.0002					
10/2/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/30/2020						<0.0002	<0.0002	<0.0002	<0.0002
3/31/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
9/8/2020					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/9/2020	<0.0002	<0.0002	<0.0002	<0.0002					
5/11/2021			<0.0002	<0.0002	<0.0002				
5/12/2021	<0.0002	<0.0002					8.67E-05 (J)	0.000154 (J)	<0.0002
10/18/2021				7E-05 (J)	<0.0002		0.00011 (J)	<0.0002	
10/19/2021	<0.0002	<0.0002	<0.0002			0.00014 (J)			<0.0002

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	<0.0002
4/19/2016	<0.0002
6/7/2016	<0.0002
8/30/2016	<0.0002
10/18/2016	<0.0002
1/30/2017	<0.0002
5/2/2017	<0.0002
6/7/2017	<0.0002
1/23/2018	<0.0002
5/1/2018	<0.0002
11/26/2018	<0.0002
5/29/2019	<0.0002
10/2/2019	<0.0002
3/31/2020	<0.0002
9/9/2020	<0.0002
5/12/2021	<0.0002
10/19/2021	<0.0002

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	1.28	0.795	1.11	1.77	1.42	2.42	18.3	1.4	0.618
4/18/2016						4.65	23.2	1.2	0.505
4/19/2016	1.19	0.761	1.09	1.68	1.31				
6/6/2016	1.19				1.35		19.7	1.48	
6/7/2016		0.799	1.16	1.68		3.1			0.587
8/30/2016	1.11	0.788	1.08	1.62	1.31	2.19	10.9	1.13	0.495 (J)
10/18/2016	1.04	0.788	1.03	1.53	1.22	1.97	8.74	1.45	0.503
1/30/2017		0.755						1.95	
1/31/2017	1.19		1.23	1.65	1.36	1.73	7.89		0.554
5/2/2017	1.05	0.763	1.28	1.58	1.24	1.74	5.81	0.908	0.548
6/6/2017	0.978		1.25	1.55	1.28	1.66	4.72		
6/7/2017		0.706						1.29	0.545
9/12/2017					1.47		4.39	1.44	
9/13/2017	1.14	0.873	1.6	1.71		1.61			0.723
5/1/2018		1.05	1.58	1.76	1.47		4.66	0.695	
5/2/2018	1.64					1.44			0.751
11/26/2018		0.922			1.52		3.41		
11/27/2018	2.01		1.49	1.69		1.3		0.798	0.743
5/28/2019					1.6	1.25	10	0.973	0.789
5/29/2019	1.85	1.07	1.59	1.74					
10/2/2019	1.55	1.32	1.7	1.86	1.7	1.33	4.94	0.929	0.882
3/30/2020						1.26	7.56	1.32	0.841
3/31/2020	1.96	0.98	1.43	1.92	1.78				
9/8/2020					1.94	3.24	6.38	1.12	0.981
9/9/2020	1.43	1.1	1.5	1.97					
5/11/2021			1.39	2.06	1.93				
5/12/2021	1.34	1.06				7	13.5	1.63	1.02
10/18/2021				2.1	2.01		9.06	1.53	
10/19/2021	1.17	0.977	1.32			2.75			1.01

# Time Series

Constituent: Calcium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	1.15
4/19/2016	1.04
6/7/2016	1.22
8/30/2016	1.18
10/18/2016	1.12
1/30/2017	1.23
5/2/2017	1.2
6/7/2017	1.17
9/13/2017	1.25
5/1/2018	1.25
11/26/2018	1.61
5/29/2019	1.8
10/2/2019	1.85
3/31/2020	1.67
9/9/2020	1.79
5/12/2021	1.82
10/19/2021	1.75

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	3.59	3.57	3.99	3.68	3.5	3.86	6.06	4.08	4.47
4/18/2016						4.46	6.13	4.14	4.74
4/19/2016	2.89	3.12	4.08	3.72	3.63				
6/6/2016	3.12				3.6		5.52	4.09	
6/7/2016		3.14	4.28	3.66		3.74			4.52
8/30/2016	3.91	2.93	4.26	3.7	3.54	3.5	5.35	4.6	4.71
10/18/2016	3.9	2.96	4.26	3.77	3.68	3.5	4.55	8.32	4.73
3/20/2017	3.5		4.1	3.7	4.6				
3/21/2017		4.4				2.8	3.5	5.6	4.9
5/2/2017	3.5	3.7	5	4.6	3.9	3.9	4.8	4.8	5.7
6/6/2017	3.1		3.9	3.4	3.4	3.4	3.6		
6/7/2017		3.3						6.3	4.1
9/12/2017					4.3		4.3	8.5	
9/13/2017	<2 (U*)	5.1	<2 (U*)	<2 (U*)		<2 (U*)			4.9
5/1/2018		4	3.7	4.1	3.8		3.8	4	
5/2/2018	9.9					3.5			4.1
11/26/2018		3.8			3.6		3.5		
11/27/2018	4.7		3.2	3.5		3.7		4.3	4.9
5/28/2019					3.6	3.69	6.26	4.63	4.43
5/29/2019	5.48	4.34	2.93	3.58					
10/2/2019	3.65	4.34	2.75	3.64	3.5	3.49	4.13	5.02	4.32
3/30/2020						3.45	4.95	10.5	4.38
3/31/2020	3.17	3.89	2.72	3.47	3.34				
9/8/2020					3.29	6.23	5.71	8.74	4.61
9/9/2020	2.92	4.11	2.32	3.47					
5/11/2021			2.16	3.42	3.33				
5/12/2021	2.18	3.94				5.89	7.77	17.2	5.25
10/18/2021				3.45	3.32		10	16.8	
10/19/2021	2.37	3.79	2.08			4.81			5.34

# Time Series

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	4.1
4/19/2016	3.11
6/7/2016	3.72
8/30/2016	4.8
10/18/2016	4.71
3/21/2017	5.3
5/2/2017	6.6
6/7/2017	5.2
9/13/2017	6.5
5/1/2018	5.7
11/26/2018	11
5/29/2019	8.56
10/2/2019	8.48
3/31/2020	6.87
9/9/2020	7.94
5/12/2021	8.77
10/19/2021	6.33

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00209 (J)	<0.01	<0.01
4/18/2016						<0.01	0.00324 (J)	<0.01	0.00201 (J)
4/19/2016	<0.01	<0.01	<0.01	<0.01	<0.01				
6/6/2016	<0.01				<0.01		0.0031 (J)	<0.01	
6/7/2016		<0.01	<0.01	<0.01	<0.01	<0.01			<0.01
8/30/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00227 (J)	<0.01	0.00205 (J)
10/18/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00218 (J)
1/30/2017		<0.01						<0.01	
1/31/2017	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01
5/2/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00208 (J)
6/6/2017	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01		
6/7/2017		<0.01						<0.01	0.0022 (J)
1/22/2018							<0.01	<0.01	
1/23/2018	<0.01	<0.01	0.00596 (J)	0.00229 (J)	<0.01				
1/24/2018						<0.01			0.00258 (J)
5/1/2018		<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	
5/2/2018	<0.01					<0.01			0.00202 (J)
11/26/2018		<0.01			<0.01		<0.01		
11/27/2018	<0.01		<0.01	<0.01		<0.01		<0.01	<0.01
5/28/2019					<0.01	<0.01	0.00223 (J)	<0.01	0.00209 (J)
5/29/2019	<0.01	<0.01	<0.01	<0.01					
10/2/2019	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00223 (J)
3/30/2020						<0.01	0.00273 (J)	<0.01	0.00275 (J)
3/31/2020	<0.01	<0.01	<0.01	<0.01	0.00604 (J)				
9/8/2020					<0.01	0.00221 (J)	0.00237 (J)	<0.01	0.00224 (J)
9/9/2020	<0.01	<0.01	<0.01	<0.01					
5/11/2021			0.00136	0.00146	0.00159				
5/12/2021	0.000296 (J)	0.000695 (J)				0.00232	0.0034	0.00139	0.00218
10/18/2021				0.0013	0.00146		0.00335	0.00131	
10/19/2021	0.0003 (J)	0.00079 (J)	0.00135			0.00268			0.00246

# Time Series

Constituent: Chromium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	<0.01
4/19/2016	<0.01
6/7/2016	<0.01
8/30/2016	<0.01
10/18/2016	<0.01
1/30/2017	<0.01
5/2/2017	<0.01
6/7/2017	<0.01
1/23/2018	<0.01
5/1/2018	<0.01
11/26/2018	<0.01
5/29/2019	<0.01
10/2/2019	<0.01
3/31/2020	<0.01
9/9/2020	<0.01
5/12/2021	0.000783 (J)
10/19/2021	0.00081 (J)

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	0.0035 (J)	0.00247 (J)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4/18/2016						0.00278 (J)	0.00338 (J)	<0.005	<0.005
4/19/2016	0.0038 (J)	0.00241 (J)	<0.005	<0.005	<0.005				
6/6/2016	0.00427 (J)				<0.005		0.00361 (J)	<0.005	
6/7/2016		0.00247 (J)	<0.005	<0.005		<0.005			<0.005
8/30/2016	0.00348 (J)	0.00251 (J)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
10/18/2016	0.00338 (J)	0.00272 (J)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1/30/2017		<0.005						<0.005	
1/31/2017	0.00308 (J)		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
5/2/2017	0.00314 (J)	0.00205 (J)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/6/2017	0.0036 (J)		<0.005	<0.005	<0.005	<0.005	<0.005		
6/7/2017		0.00201 (J)						<0.005	<0.005
1/22/2018							<0.005	<0.005	
1/23/2018	0.00586 (J)	0.00229 (J)	0.0021 (J)	<0.005	<0.005				
1/24/2018						<0.005			<0.005
5/1/2018		0.00216 (J)	<0.005	<0.005	<0.005		<0.005	<0.005	
5/2/2018	0.00702 (J)					<0.005			<0.005
11/26/2018		0.00205 (J)			<0.005		<0.005		
11/27/2018	0.0157		0.00209 (J)	<0.005		<0.005		<0.005	<0.005
5/28/2019					<0.005	<0.005	0.00301 (J)	<0.005	<0.005
5/29/2019	0.0109	0.00261 (J)	0.00248 (J)	<0.005				<0.005	<0.005
10/2/2019	0.0129	0.00262 (J)	0.00244 (J)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/30/2020						<0.005	0.0031 (J)	<0.005	<0.005
3/31/2020	0.0123	0.00238 (J)	0.00224 (J)	<0.005	<0.005				
9/8/2020					<0.005	0.00227 (J)	0.00296 (J)	<0.005	<0.005
9/9/2020	0.00697	0.00241 (J)	0.00219 (J)	<0.005					
5/11/2021			0.00194	0.00142	0.00137				
5/12/2021	0.00611	0.00237				0.0046	0.0054	0.00192	0.000437
10/18/2021				0.00146	0.00139		0.00552	0.00164	
10/19/2021	0.00517	0.00238	0.00192			0.00217			0.00049

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	<0.005
4/19/2016	<0.005
6/7/2016	<0.005
8/30/2016	<0.005
10/18/2016	<0.005
1/30/2017	<0.005
5/2/2017	<0.005
6/7/2017	<0.005
1/23/2018	<0.005
5/1/2018	<0.005
11/26/2018	<0.005
5/29/2019	<0.005
10/2/2019	<0.005
3/31/2020	<0.005
9/9/2020	<0.005
5/12/2021	0.00177
10/19/2021	0.00156

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	2.8971 (U)	3 (U)	3 (U)	3 (U)	2.1138	3 (U)	1.2261 (U)	3 (U)	3 (U)
4/18/2016						3 (U)	1.92351 (U)	3 (U)	3 (U)
4/19/2016	3 (U)	3 (U)	3 (U)	3 (U)	3 (U)				
6/6/2016	0.841				0.757		1.47	0.427	
6/7/2016		1.03	0.652	0.342 (U)		1.03			0.69
8/30/2016	1.74	1.05	0.411 (U)	0.702	0.992	0.696	1.91	0.869	0.687
10/18/2016	1.47	1.36	1	0.791	0.905	0.966	0.966	0.927	0.62
1/30/2017		0.847						0.649	
1/31/2017	0.952		0.398 (U)	0.0613 (U)	1.08	0.724	1.01		0.266 (U)
5/2/2017	0.768	0.649	0.66	0.974	1.18	0.587	1.41	0.804	0.853
6/6/2017	1.04		0.639	0.748	1.1	0.591	0.476		
6/7/2017		1.4						0.136 (U)	0.477
1/22/2018							0.814 (U)	0.726 (U)	
1/23/2018	0.513 (U)	1.36 (U)	0.669 (U)	0.558 (U)	1.32 (U)				
1/24/2018						0.566 (U)			0.411 (U)
5/1/2018		1.03	1.06	0.296 (U)	1.19		0.931	0.63	
5/2/2018	0.916					0.401			0.718
11/26/2018		1.04			0.863		0.815		
11/27/2018	1.37		0.636	0.357 (U)		0.611		0.109 (U)	0.691
5/28/2019					0.474 (U)	0.391 (U)	2.08	-0.428 (U)	0.311 (U)
5/29/2019	1.57	0.548 (U)	0.579 (U)	0.275 (U)					
10/2/2019	0.905	2.19	1.33	0.458 (U)	0.624 (U)	0.954	0.836	0.43 (U)	0.969
3/30/2020						0.525	1.54	0.939	0.397 (U)
3/31/2020	1.77	1.01	0.814	0.941	1.09				
9/8/2020					1.27	0.845	0.402 (U)	1.13	0.0249 (U)
9/9/2020	1.77	1.32	0.653 (U)	1.05					
5/11/2021			0.945 (U)	0.521 (U)	0.969 (U)				
5/12/2021	0.639 (U)	2.02				0.465 (U)	2.47	1.09	1.29
10/18/2021				1.75	2.19		2.03	0.69 (U)	
10/19/2021	1.77	1.6 (V)	1.85			0.719 (U)			1.54

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	3 (U)
4/19/2016	3.81872
6/7/2016	0.941
8/30/2016	0.98
10/18/2016	1.06
1/30/2017	1.15
5/2/2017	1.31
6/7/2017	1.12
1/23/2018	1.16 (U)
5/1/2018	0.961
11/26/2018	1.72
5/29/2019	2.2
10/2/2019	2
3/31/2020	1.88
9/9/2020	2.11
5/12/2021	1.94
10/19/2021	3.15

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	0.03 (J)	0.05 (J)	0.02 (J)	0.02 (J)	0.02 (J)	0.02 (J)	0.06 (J)	0.02 (J)	0.02 (J)
4/18/2016						0.04 (J)	0.138 (J)	0.018 (J)	0.019 (J)
4/19/2016	0.023 (J)	0.05 (J)	0.021 (J)	0.016 (J)	0.015 (J)				
6/6/2016	0.062 (J)				0.05 (J)		0.148 (J)	0.051 (J)	
6/7/2016		0.098 (J)	0.06 (J)	0.052 (J)		0.066 (J)			0.053 (J)
8/30/2016	0.053 (J)	0.089 (J)	0.05 (J)	0.038 (J)	0.036 (J)	0.046 (J)	0.072 (J)	0.039 (J)	0.038 (J)
10/18/2016	0.042 (J)	0.092 (J)	0.04 (J)	0.03 (J)	0.025 (J)	0.034 (J)	0.049 (J)	0.025 (J)	0.028 (J)
3/20/2017	<0.1		<0.1	<0.1	<0.1				
3/21/2017		0.06 (J)				<0.1	<0.1	<0.1	<0.1
5/2/2017	0.04 (J)	0.07 (J)	0.04 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
6/6/2017	<0.1		0.04 (J)	<0.1	<0.1	<0.1	<0.1		
6/7/2017		0.07 (J)						<0.1	<0.1
9/12/2017					<0.1		<0.1	<0.1	
9/13/2017	0.04 (J)	0.08 (J)	0.043 (J)	<0.1		<0.1			<0.1
1/22/2018							<0.1	<0.1	
1/23/2018	<0.1	0.08 (J)	0.04 (J)	<0.1	<0.1				
1/24/2018						<0.1			<0.1
5/1/2018		0.09 (J)	0.04 (J)	<0.1	<0.1		<0.1	<0.1	
5/2/2018	0.04 (J)					<0.1			<0.1
11/26/2018		0.08 (J)			<0.1		<0.1		
11/27/2018	<0.1		<0.1	<0.1		<0.1		<0.1	<0.1
5/28/2019					<0.1	<0.1	0.0591 (J)	<0.1	<0.1
5/29/2019	0.0502 (J)	<0.1	<0.1	<0.1	<0.1				
10/2/2019	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3/30/2020						<0.1	<0.1	<0.1	<0.1
3/31/2020	<0.1	<0.1	<0.1	<0.1	<0.1				
9/8/2020					<0.1	<0.1	<0.1	<0.1	<0.1
9/9/2020	<0.1	<0.1	<0.1	<0.1					
5/11/2021			<0.1	<0.1	<0.1				
5/12/2021	<0.1	<0.1				<0.1	<0.1	<0.1	<0.1
10/18/2021				<0.1	<0.1		<0.1	<0.1	
10/19/2021	<0.1	<0.1	<0.1			<0.1			<0.1

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	0.05 (J)
4/19/2016	0.039 (J)
6/7/2016	0.085 (J)
8/30/2016	0.078 (J)
10/18/2016	0.071 (J)
3/21/2017	0.05 (J)
5/2/2017	0.06 (J)
6/7/2017	0.07 (J)
9/13/2017	0.08 (J)
1/23/2018	0.07 (J)
5/1/2018	0.07 (J)
11/26/2018	0.07 (J)
5/29/2019	<0.1
10/2/2019	<0.1
3/31/2020	<0.1
9/9/2020	<0.1
5/12/2021	<0.1
10/19/2021	<0.1

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
4/18/2016						<0.0002	<0.0002	<0.0002	<0.0002
4/19/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
6/6/2016	<0.0002				<0.0002		<0.0002	<0.0002	
6/7/2016		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002
8/30/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10/18/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/30/2017		<0.0002						<0.0002	
1/31/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
5/2/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
6/6/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2017		<0.0002						<0.0002	<0.0002
1/22/2018							<0.0002	<0.0002	
1/23/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
1/24/2018						<0.0002			<0.0002
5/1/2018		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	
5/2/2018	<0.0002					<0.0002			<0.0002
11/26/2018		<0.0002			<0.0002		<0.0002		
11/27/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
5/28/2019					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
5/29/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
10/2/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/30/2020						<0.0002	<0.0002	<0.0002	<0.0002
3/31/2020	<0.0002	<0.0002	<0.0002	<0.0002	0.00126 (J)				
9/8/2020					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/9/2020	<0.0002	<0.0002	<0.0002	<0.0002					
5/11/2021			0.000118 (J)	<0.0002	0.000159 (J)				
5/12/2021	9.79E-05 (J)	0.000113 (J)				9.94E-05 (J)	0.000213	7.98E-05 (J)	<0.0002
10/18/2021				<0.0002	0.00012 (J)		0.00011 (J)	8E-05 (J)	
10/19/2021	0.00012 (J)	0.0001 (J)	0.0001 (J)			0.00026			<0.0002

# Time Series

Constituent: Lead (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	<0.0002
4/19/2016	<0.0002
6/7/2016	<0.0002
8/30/2016	<0.0002
10/18/2016	<0.0002
1/30/2017	<0.0002
5/2/2017	<0.0002
6/7/2017	<0.0002
1/23/2018	<0.0002
5/1/2018	<0.0002
11/26/2018	<0.0002
5/29/2019	<0.0002
10/2/2019	<0.0002
3/31/2020	<0.0002
9/9/2020	<0.0002
5/12/2021	0.000288
10/19/2021	0.00025

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
4/18/2016						<0.02	<0.02	<0.02	<0.02
4/19/2016	<0.02	<0.02	<0.02	<0.02	<0.02				
6/6/2016	<0.02				<0.02		<0.02	<0.02	
6/7/2016		<0.02	<0.02	<0.02	<0.02	<0.02			<0.02
8/30/2016	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
10/18/2016	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1/30/2017		<0.02						<0.02	
1/31/2017	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02		<0.02
5/2/2017	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
6/6/2017	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02		
6/7/2017		<0.02						<0.02	<0.02
1/22/2018							<0.02	<0.02	
1/23/2018	<0.02	<0.02	<0.02	<0.02	<0.02				
1/24/2018						<0.02			<0.02
5/1/2018		<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	
5/2/2018	<0.02					<0.02			<0.02
11/26/2018		<0.02			<0.02		<0.02		
11/27/2018	<0.02		<0.02	<0.02		<0.02		<0.02	<0.02
5/28/2019					<0.02	<0.02	<0.02	<0.02	<0.02
5/29/2019	<0.02	<0.02	<0.02	<0.02					
10/2/2019	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3/30/2020						<0.02	<0.02	<0.02	<0.02
3/31/2020	<0.02	<0.02	<0.02	<0.02	<0.02				
9/8/2020					<0.02	<0.02	<0.02	<0.02	<0.02
9/9/2020	<0.02	<0.02	<0.02	<0.02	<0.02				
5/11/2021			<0.02	<0.02	<0.02				
5/12/2021	<0.02	<0.02				<0.02	<0.02	<0.02	<0.02
10/18/2021				<0.02	<0.02		<0.02	<0.02	
10/19/2021	<0.02	<0.02	<0.02			<0.02			<0.02

# Time Series

Constituent: Lithium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	<0.02
4/19/2016	<0.02
6/7/2016	<0.02
8/30/2016	<0.02
10/18/2016	<0.02
1/30/2017	<0.02
5/2/2017	<0.02
6/7/2017	<0.02
1/23/2018	<0.02
5/1/2018	<0.02
11/26/2018	<0.02
5/29/2019	<0.02
10/2/2019	<0.02
3/31/2020	<0.02
9/9/2020	<0.02
5/12/2021	<0.02
10/19/2021	<0.02

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4/18/2016						<0.0005	<0.0005	<0.0005	<0.0005
4/19/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
6/6/2016	<0.0005				<0.0005		<0.0005	<0.0005	
6/7/2016		<0.0005	<0.0005	<0.0005		<0.0005			0.00031 (J)
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10/18/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1/30/2017		<0.0005						<0.0005	
1/31/2017	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
5/2/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2017	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
6/7/2017		<0.0005						<0.0005	<0.0005
1/22/2018							<0.0005	<0.0005	
1/23/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
1/24/2018						<0.0005			<0.0005
5/1/2018		<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	
5/2/2018	<0.0005					<0.0005			<0.0005
11/26/2018		<0.0005			<0.0005		<0.0005		
11/27/2018	<0.0005		<0.0005	<0.0005		<0.0005		<0.0005	<0.0005
5/28/2019					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
5/29/2019	<0.0005	<0.0005	<0.0005	<0.0005					
10/2/2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
3/30/2020						<0.0005	<0.0005	<0.0005	<0.0005
3/31/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
9/8/2020					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
9/9/2020	<0.0005	<0.0005	<0.0005	<0.0005					
5/11/2021			<0.0005	<0.0005	<0.0005				
5/12/2021	<0.0005	<0.0005				<0.0005	<0.0005	<0.0005	<0.0005
10/18/2021				<0.0005	<0.0005		<0.0005	<0.0005	
10/19/2021	<0.0005	<0.0005	<0.0005			<0.0005			<0.0005

# Time Series

Constituent: Mercury (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	<0.0005
4/19/2016	<0.0005
6/7/2016	<0.0005
8/30/2016	<0.0005
10/18/2016	<0.0005
1/30/2017	<0.0005
5/2/2017	<0.0005
6/7/2017	<0.0005
1/23/2018	<0.0005
5/1/2018	<0.0005
11/26/2018	<0.0005
5/29/2019	<0.0005
10/2/2019	<0.0005
3/31/2020	<0.0005
9/9/2020	<0.0005
5/12/2021	<0.0005
10/19/2021	<0.0005

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
4/18/2016						<0.0002	<0.0002	<0.0002	<0.0002
4/19/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
6/6/2016	<0.0002				<0.0002		<0.0002	<0.0002	
6/7/2016		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002
8/30/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10/18/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/30/2017		<0.0002						<0.0002	
1/31/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
5/2/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
6/6/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2017		<0.0002						<0.0002	<0.0002
1/22/2018							<0.0002	<0.0002	
1/23/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
1/24/2018						<0.0002			<0.0002
5/1/2018		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	
5/2/2018	<0.0002					<0.0002			<0.0002
11/26/2018		<0.0002			<0.0002		<0.0002		
11/27/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
5/28/2019					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
5/29/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
10/2/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/30/2020						<0.0002	<0.0002	<0.0002	<0.0002
3/31/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
9/8/2020					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/9/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
5/11/2021			<0.0002	<0.0002	<0.0002				
5/12/2021	<0.0002	<0.0002				<0.0002	<0.0002	<0.0002	<0.0002
10/18/2021				<0.0002	<0.0002		<0.0002	<0.0002	
10/19/2021	<0.0002	<0.0002	<0.0002			0.0001 (J)			8E-05 (J)

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	<0.0002
4/19/2016	<0.0002
6/7/2016	<0.0002
8/30/2016	<0.0002
10/18/2016	<0.0002
1/30/2017	<0.0002
5/2/2017	<0.0002
6/7/2017	<0.0002
1/23/2018	<0.0002
5/1/2018	<0.0002
11/26/2018	<0.0002
5/29/2019	<0.0002
10/2/2019	<0.0002
3/31/2020	<0.0002
9/9/2020	<0.0002
5/12/2021	<0.0002
10/19/2021	<0.0002

# Time Series

Constituent: pH, Field (SU) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	4.62	4.67	4.79	4.96	4.74	4.76	6.59	5.12	4.92
4/18/2016						4.75	6.21	5.11	5.16
4/19/2016	4.74	4.79	4.84	4.94	4.86				
6/6/2016	4.65				4.88		5.97	5.14	
6/7/2016		4.73	4.81	4.96		4.77			5.11
8/30/2016	4.64	4.68	4.76	4.92	4.91	4.82	5.99	5.06	5.14
10/18/2016	4.74	4.75	4.84	4.98	4.95	4.82	5.94	5.01	5.09
1/30/2017		4.65						4.74	
1/31/2017	4.54		4.6	4.74	4.71	4.8	5.92		5.01
3/20/2017	4.67		4.71	4.9	4.83				
3/21/2017		4.68				4.86	5.74	5.04	5.07
5/2/2017	4.79	4.75	4.8	4.98	4.93	4.89	5.82	5.08	5.13
6/6/2017	4.76		4.72	4.94	4.9	4.86	5.77		
6/7/2017		4.7						5.07	5.05
9/12/2017					4.82		5.64	5.03	
9/13/2017	4.81	4.71	4.71	4.93		4.89			5.06
1/22/2018							5.66	5.06	
1/23/2018	4.79	4.6	4.67	4.91	4.85				
1/24/2018						4.86			5.02
5/1/2018		4.61	4.61	4.87	4.8		5.71	4.89	
5/2/2018	4.62					4.87			4.99
11/26/2018		4.65				4.88	5.58		
11/27/2018	4.73		4.72	4.94		4.92		5.05	5.06
5/28/2019					4.73	4.8	5.21	4.83	4.92
5/29/2019	4.65	4.54	4.58	4.8					
10/2/2019	4.57	4.6	4.43	4.52	4.67	4.44	5.4	5.04	4.86
3/30/2020						4.83	5.51	4.91	4.92
3/31/2020	4.64	4.55	4.6	4.4	4.51				
9/8/2020					4.75	4.77	5.15	4.39	4.35
9/9/2020	4.65	4.58	4.67	4.76					
5/11/2021			4.29	4.53	4.67				
5/12/2021	4.74	4.4				4.61	5.46	4.84	4.83
10/18/2021				4.55	4.38		5.28	5.05	
10/19/2021	4.67	4.48	4.6			4.79			4.77

# Time Series

Constituent: pH, Field (SU) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	4.56
4/19/2016	4.62
6/7/2016	4.64
8/30/2016	4.58
10/18/2016	4.58
1/30/2017	4.44
3/21/2017	4.57
5/2/2017	4.64
6/7/2017	4.58
9/13/2017	4.54
1/23/2018	4.53
5/1/2018	4.46
11/26/2018	4.5
5/29/2019	4.45
10/2/2019	4.49
3/31/2020	4.45
9/9/2020	4.46
5/12/2021	4.43
10/19/2021	4.34

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	0.00572 (J)	0.0266	<0.00102	<0.00102
4/18/2016						0.0141	0.0529	<0.00102	<0.00102
4/19/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
6/6/2016	<0.00102				<0.00102		0.0382	<0.00102	
6/7/2016		<0.00102	<0.00102	<0.00102		0.00698 (J)			<0.00102
8/30/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	0.0042 (J)	0.014	<0.00102	<0.00102
10/18/2016	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	0.00386 (J)	0.0105	<0.00102	<0.00102
1/30/2017		<0.00102						<0.00102	
1/31/2017	<0.00102		<0.00102	<0.00102	<0.00102	0.00247 (J)	0.0104		<0.00102
5/2/2017	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	0.00284 (J)	0.00778 (J)	<0.00102	<0.00102
6/6/2017	<0.00102		<0.00102	<0.00102	<0.00102	0.003 (J)	0.00576 (J)		
6/7/2017		<0.00102						<0.00102	<0.00102
1/22/2018							0.00287 (J)	<0.00102	
1/23/2018	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
1/24/2018						0.00201 (J)			<0.00102
5/1/2018		<0.00102	<0.00102	<0.00102	<0.00102		0.00367 (J)	<0.00102	
5/2/2018	<0.00102					<0.00102			<0.00102
11/26/2018		<0.00102			<0.00102		0.00286 (J)		
11/27/2018	<0.00102		<0.00102	<0.00102		<0.00102		<0.00102	<0.00102
5/28/2019					<0.00102	<0.00102	0.0089 (J)	<0.00102	<0.00102
5/29/2019	<0.00102	<0.00102	<0.00102	<0.00102					
10/2/2019	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102	0.00472 (J)	<0.00102	<0.00102
3/30/2020						<0.00102	0.00658 (J)	<0.00102	<0.00102
3/31/2020	<0.00102	<0.00102	<0.00102	<0.00102	<0.00102				
9/8/2020					<0.00102	0.0052 (J)	0.0052 (J)	<0.00102	<0.00102
9/9/2020	<0.00102	<0.00102	<0.00102	<0.00102					
5/11/2021			0.000602 (J)	<0.00102	<0.00102				
5/12/2021	<0.00102	0.000778 (J)				0.0163	0.0123	<0.00102	<0.00102
10/18/2021				<0.00102	<0.00102		0.00672	<0.00102	
10/19/2021	<0.00102	0.00083 (J)	<0.00102			0.0029			0.00052 (J)

# Time Series

Constituent: Selenium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	<0.00102
4/19/2016	<0.00102
6/7/2016	<0.00102
8/30/2016	<0.00102
10/18/2016	<0.00102
1/30/2017	<0.00102
5/2/2017	<0.00102
6/7/2017	<0.00102
1/23/2018	<0.00102
5/1/2018	<0.00102
11/26/2018	<0.00102
5/29/2019	<0.00102
10/2/2019	<0.00102
3/31/2020	<0.00102
9/9/2020	<0.00102
5/12/2021	0.00128
10/19/2021	0.00118

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	8.59	9.29	7.2	7.44	7.04	12.5	36.5	3.82	3.33
4/18/2016						28.6	80.2 (O)	3.48	3.78
4/19/2016	8.27	9.92	7.22	7.66	6.74				
6/6/2016	8.66				7.04		0.498 (J)	3.76	
6/7/2016		10	7.92	8.16		18.7			4.44
8/30/2016	9.74	11.1	8.17	8.43	7.57	13.8	27.8	3.62	4.29
10/18/2016	10.2	11.7	7.99	8.47	6.62	12.2	22.5	2.58	4.27
3/20/2017	8.3		6.1	7.4	7				
3/21/2017		9				8.6	15	3.3 (J)	3.6 (J)
5/2/2017	6.6	7.9	5	6.3	5.6	8	11	2.5 (J)	2.9 (J)
6/6/2017	7.6		5.3	7.1	6.6	8.6	10		
6/7/2017		8.4						3.1 (J)	2.9 (J)
9/12/2017					7.2		7.5	3 (J)	
9/13/2017	8.4	8.7	4.9 (J)	7.3		7.6			3.2 (J)
5/1/2018		10	4.2 (J)	6.9	5.9		8.5	1.6 (J)	
5/2/2018	5.9					6			2.6 (J)
11/26/2018		8.3			5.1		7.4		
11/27/2018	22		3.7 (J)	6.5		5.5		1.9 (J)	2.8 (J)
5/28/2019					7.1	6.5	32.7	4.86	4.46
5/29/2019	23.3	11.1	5.94	7.81					
10/2/2019	17.5	13.2	6.04	7.62	6.88	6.55	15.9	4.6	4.96
3/30/2020						6.34	21.8	4.29	4.84
3/31/2020	24.3	11.1	6.83	7.98	10.8				
9/8/2020					6.52	15.1	17.7	3.59	4.56
9/9/2020	16.5	9.28	6.08	7.13					
5/11/2021			7.92	7.73	6.8				
5/12/2021	16.3	11				38.2	37.1	3.58	4.7
10/18/2021				7.36	6.58		24.7	2.54	
10/19/2021	15.5	10.1	7.48			12.3			4.2

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	7.71
4/19/2016	7.85
6/7/2016	7.76
8/30/2016	8.22
10/18/2016	9.29
3/21/2017	7.1
5/2/2017	5.7
6/7/2017	7.1
9/13/2017	7.3
5/1/2018	7.1
11/26/2018	7.3
5/29/2019	12.3
10/2/2019	11.6
3/31/2020	12.5
9/9/2020	10.7
5/12/2021	12.5
10/19/2021	12.6

# Time Series

Constituent: TDS (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	26.7	37.3	30.7	40	<25	38	128	<25	30
4/18/2016						62	166	<25	27.3
4/19/2016	<25	34	<25	32	<25				
6/6/2016	32.7				28.7		131	32.7	
6/7/2016		38.7	35.3	38.7		51.3			32
8/30/2016	33.3	34	27.3	31.3	25.3	38	86.7	25.3	<25
10/18/2016	27.3	31.3	<25	26.7	<25	28.7	67.3	28	28
1/30/2017		<25						45.3	
1/31/2017	32		32.7	30	26	34	60.7		26
5/2/2017	31.3	29.3	30.7	30.7	<25	37.3	50	26.7	25.3
6/6/2017	35.3		34.7	32.7	42.7	36.7	47.3		
6/7/2017		36						28	<25
9/12/2017					26.7		42.7	35.3	
9/13/2017	36.7	35.3	39.3	38		37.3			31.3
5/1/2018		32	42	35.3	34.7		44	30.7	
5/2/2018	34					30.7			30.7
11/26/2018		31.3			32.7		38		
11/27/2018	50.7		31.3	36		<25		30.7	35.3
5/28/2019					31.3	26	77.3	33.3	28.7
5/29/2019	58	43.3	40	37.3					
10/2/2019	46	36	41.3	36.7	36	34.7	50.7	30.7	37.3
3/30/2020						32	58	39.3	30
3/31/2020	53.3	33.3	40	39.3	36.7				
9/8/2020					39.3	55.3	59.3	42	38
9/9/2020	42	39.3	40.7	42.7					
5/11/2021			35.3	44	46.7				
5/12/2021	40.7	42.7				85.3	98.7	52.7	40
10/18/2021				36	36		77.3	42.7	
10/19/2021	40	39.3	36			48.7			33.3

# Time Series

Constituent: TDS (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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BY-GSA-MW-9

2/23/2016	25.3
4/19/2016	28
6/7/2016	34.7
8/30/2016	26.7
10/18/2016	32
1/30/2017	32.7
5/2/2017	30.7
6/7/2017	<25
9/13/2017	37.3
5/1/2018	39.3
11/26/2018	48
5/29/2019	60
10/2/2019	46.7
3/31/2020	37.3
9/9/2020	50.7
5/12/2021	50.7
10/19/2021	48

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-10	BY-GSA-MW-2 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-8
2/23/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
4/18/2016						<0.0002	<0.0002	<0.0002	<0.0002
4/19/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
6/6/2016	<0.0002				<0.0002		<0.0002	<0.0002	
6/7/2016		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002
8/30/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10/18/2016	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
1/30/2017		<0.0002						<0.0002	
1/31/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002
5/2/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
6/6/2017	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
6/7/2017		<0.0002						<0.0002	<0.0002
1/22/2018							<0.0002	<0.0002	
1/23/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
1/24/2018						<0.0002			<0.0002
5/1/2018		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	
5/2/2018	<0.0002					<0.0002			<0.0002
11/26/2018		<0.0002			<0.0002		<0.0002		
11/27/2018	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
5/28/2019					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
5/29/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
10/2/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/30/2020						<0.0002	<0.0002	<0.0002	<0.0002
3/31/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
9/8/2020					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/9/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
5/11/2021			<0.0002	<0.0002	<0.0002				
5/12/2021	<0.0002	<0.0002				<0.0002	<0.0002	<0.0002	<0.0002
10/18/2021				<0.0002	<0.0002		<0.0002	<0.0002	
10/19/2021	<0.0002	<0.0002	<0.0002			<0.0002			<0.0002

# Time Series

Constituent: Thallium (mg/L) Analysis Run 1/11/2022 4:22 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

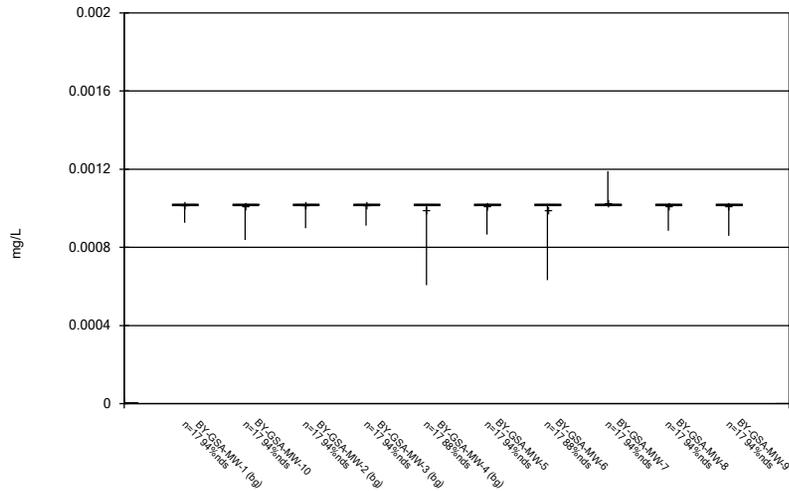
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BY-GSA-MW-9

2/23/2016	<0.0002
4/19/2016	<0.0002
6/7/2016	<0.0002
8/30/2016	<0.0002
10/18/2016	<0.0002
1/30/2017	<0.0002
5/2/2017	<0.0002
6/7/2017	<0.0002
1/23/2018	<0.0002
5/1/2018	<0.0002
11/26/2018	<0.0002
5/29/2019	<0.0002
10/2/2019	<0.0002
3/31/2020	<0.0002
9/9/2020	<0.0002
5/12/2021	<0.0002
10/19/2021	<0.0002

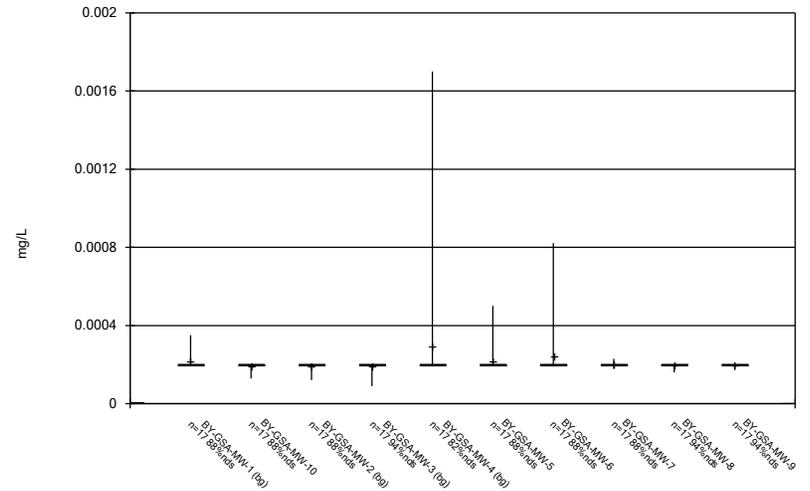
FIGURE B.

### Box & Whiskers Plot



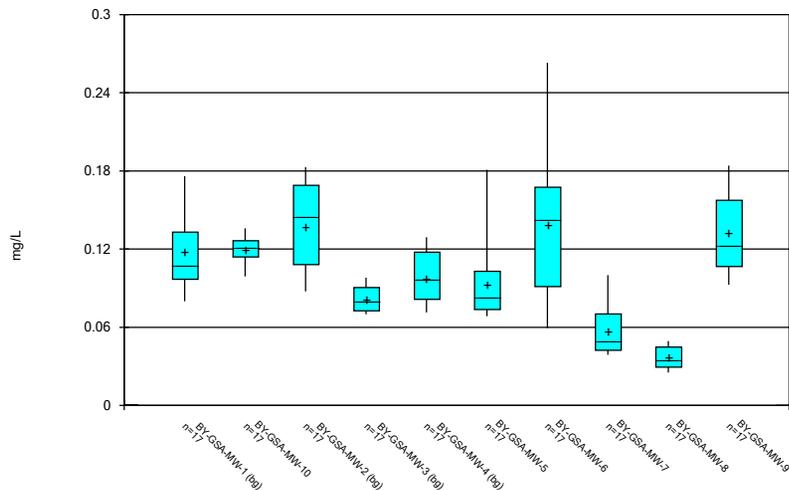
Constituent: Antimony Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



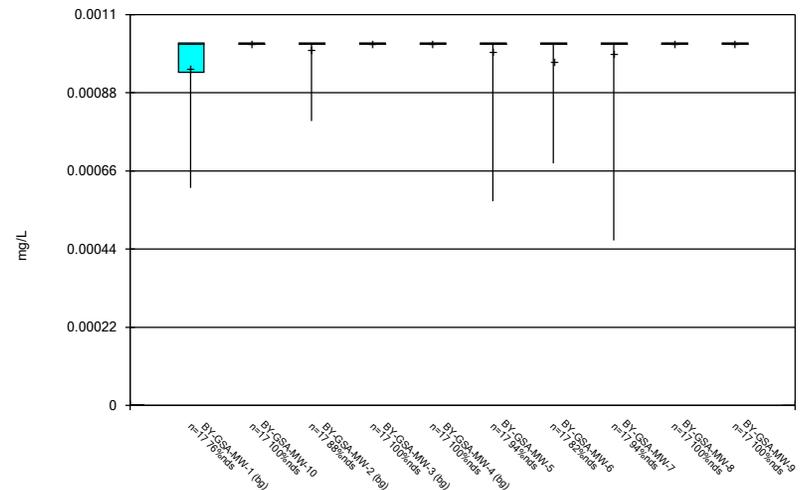
Constituent: Arsenic Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



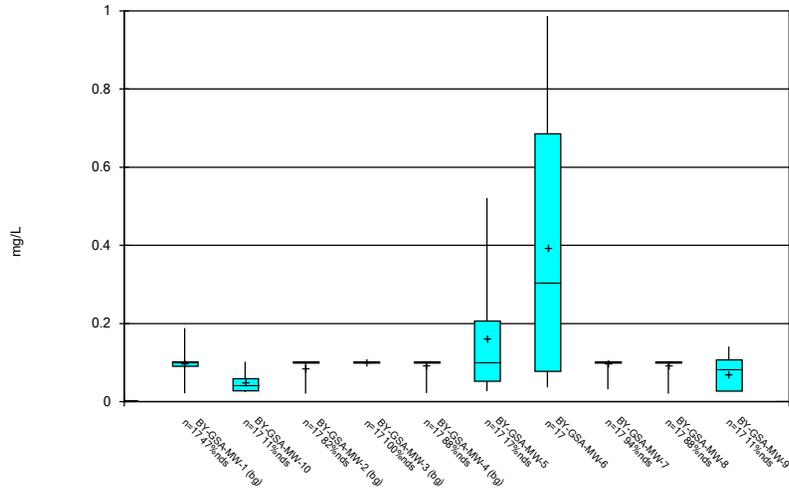
Constituent: Barium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



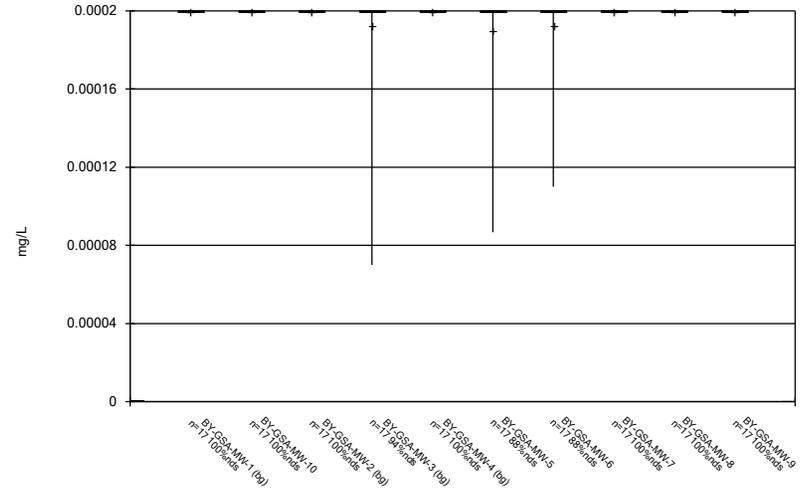
Constituent: Beryllium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



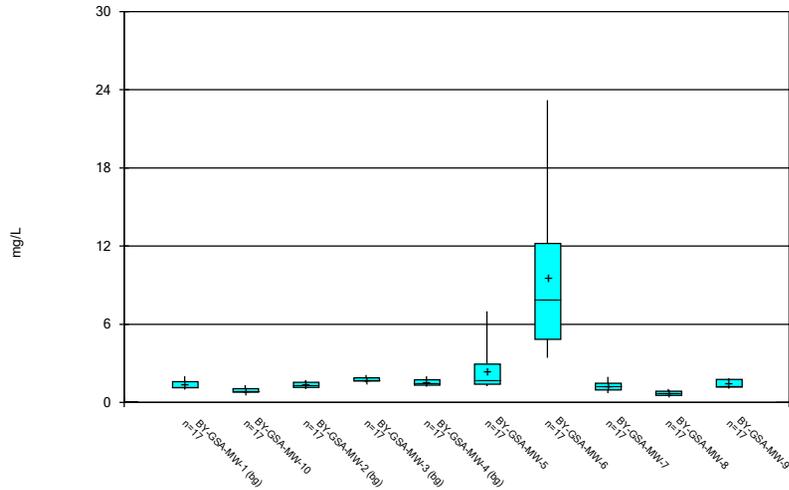
Constituent: Boron Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



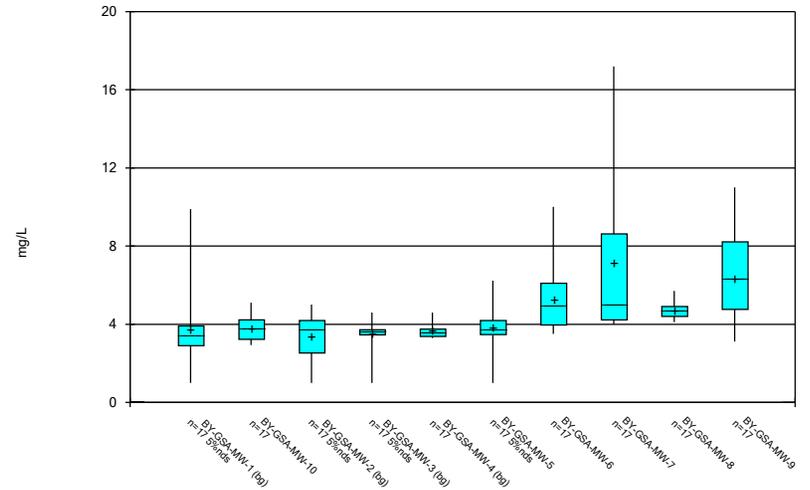
Constituent: Cadmium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



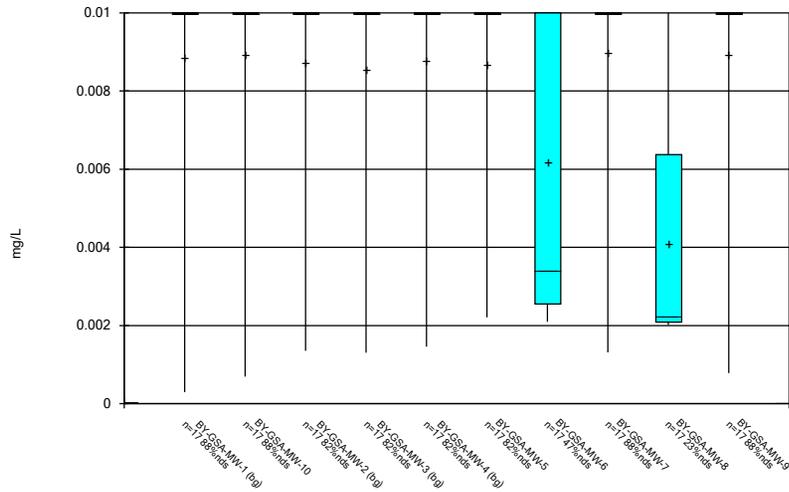
Constituent: Calcium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



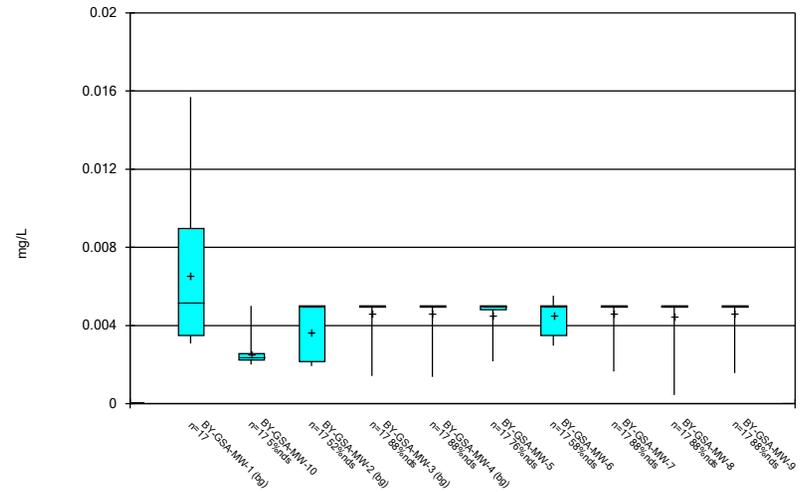
Constituent: Chloride Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



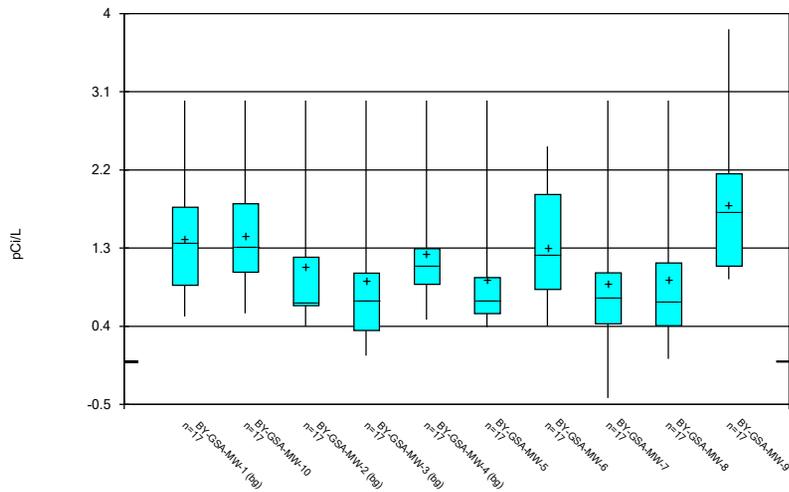
Constituent: Chromium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



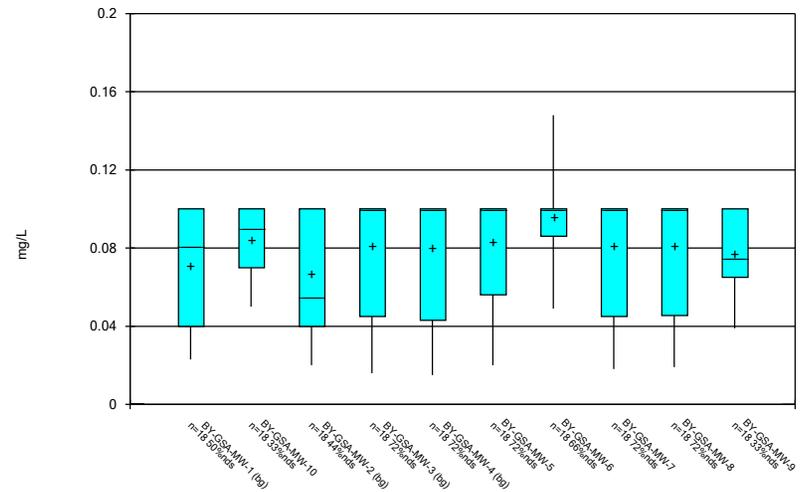
Constituent: Cobalt Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



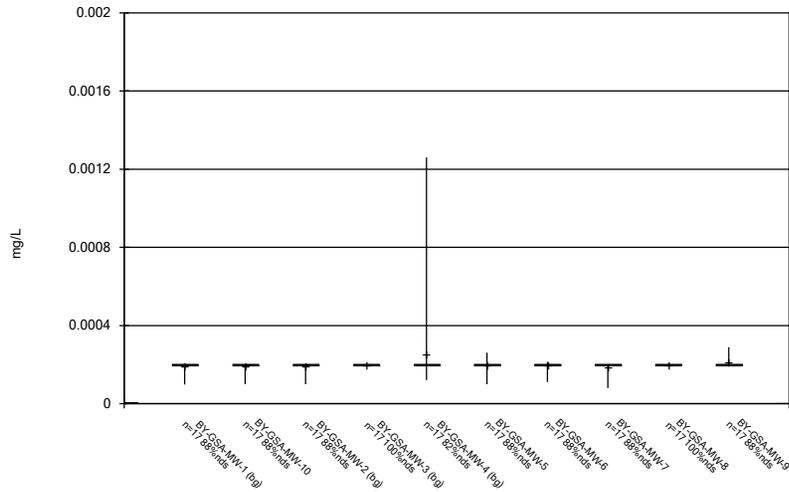
Constituent: Combined Radium 226 + 228 Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



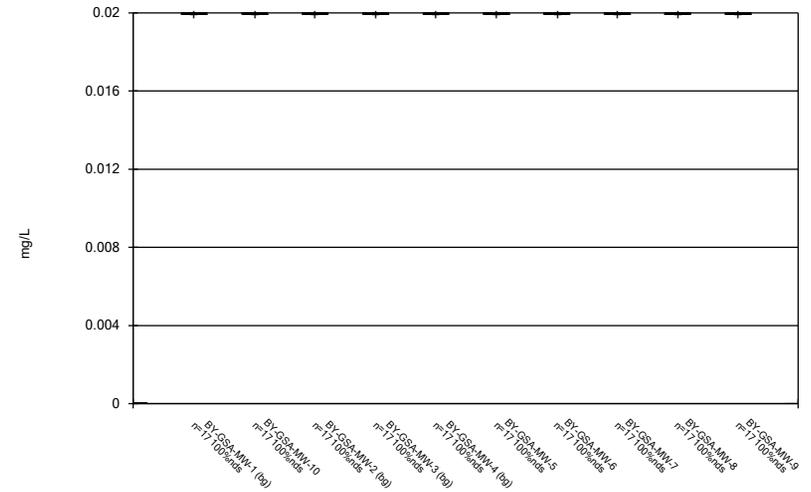
Constituent: Fluoride Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



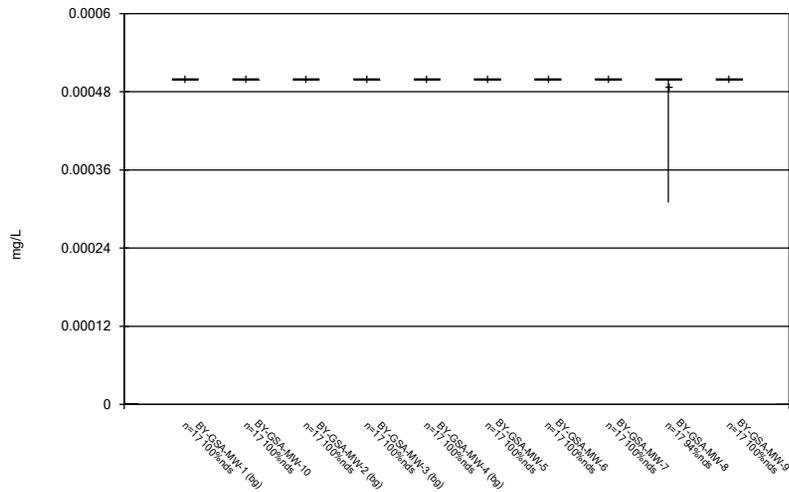
Constituent: Lead Analysis Run 1/11/2022 4:37 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



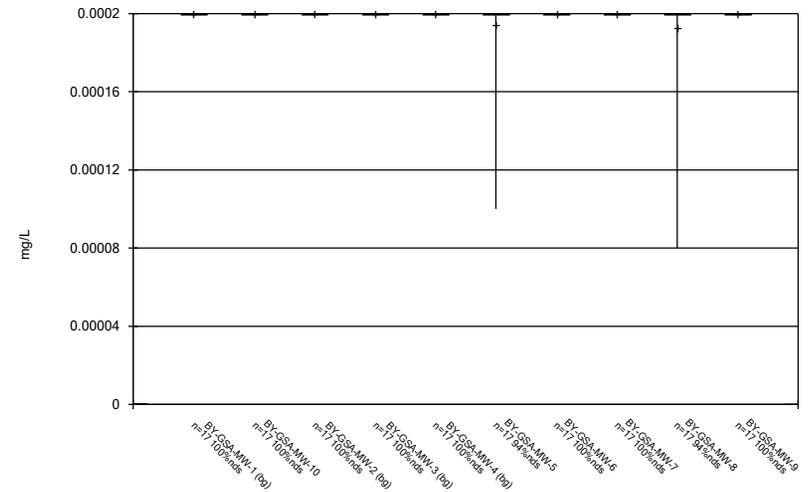
Constituent: Lithium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



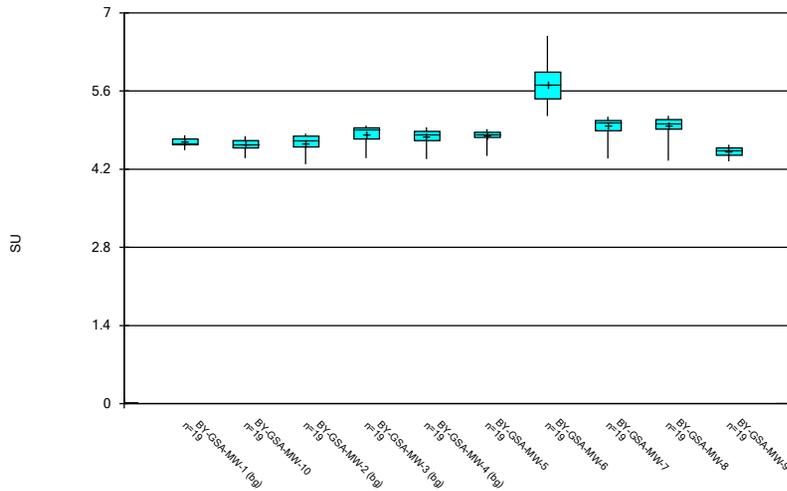
Constituent: Mercury Analysis Run 1/11/2022 4:37 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



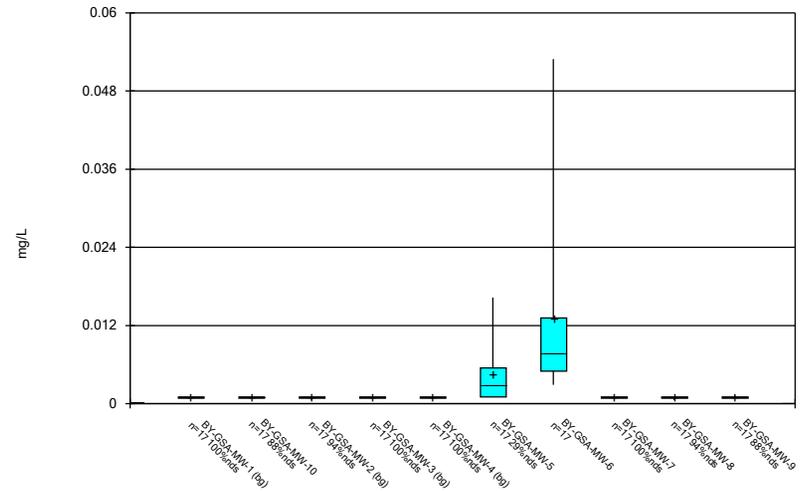
Constituent: Molybdenum Analysis Run 1/11/2022 4:37 PM View: Descriptive  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



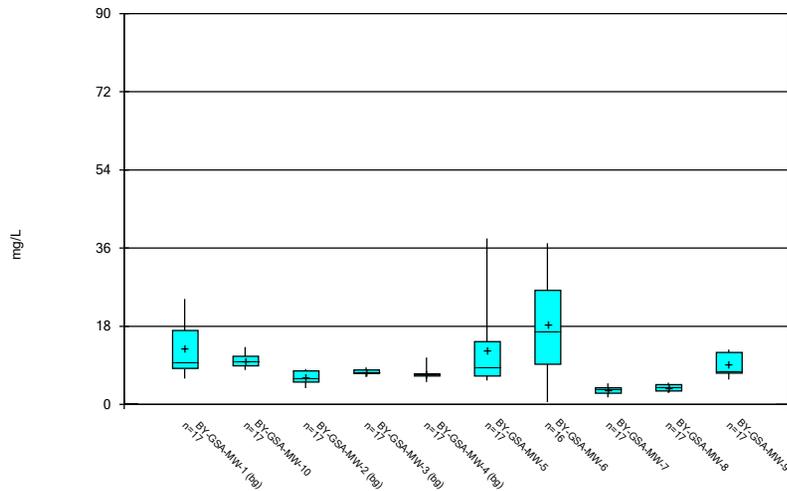
Constituent: pH, Field Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



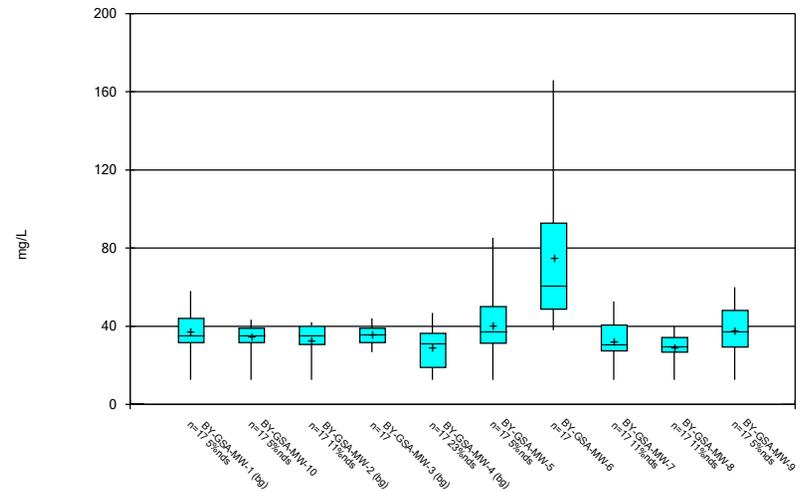
Constituent: Selenium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



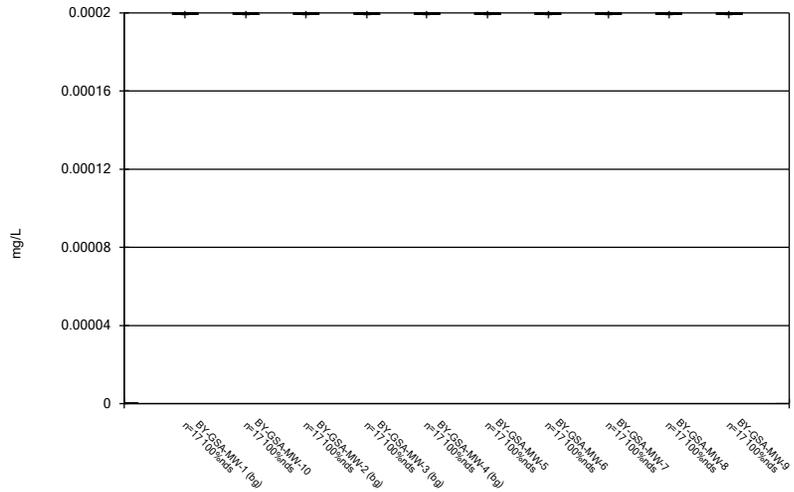
Constituent: Sulfate Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



Constituent: TDS Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Box & Whiskers Plot



Constituent: Thallium Analysis Run 1/11/2022 4:37 PM View: Descriptive  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

FIGURE C.

# Outlier Summary

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 4:18 PM

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BY-GSA-MW-6 Sulfate (mg/L)

4/18/2016

80.2 (O)

FIGURE D.

# Welch's t-test/Mann-Whitney - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 8/23/2021, 4:13 PM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Chloride, Total (mg/L)	BY-GSA-MW-4 (bg)	-2.799	Yes	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-8	2.852	Yes	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-9	2.619	Yes	Mann-W

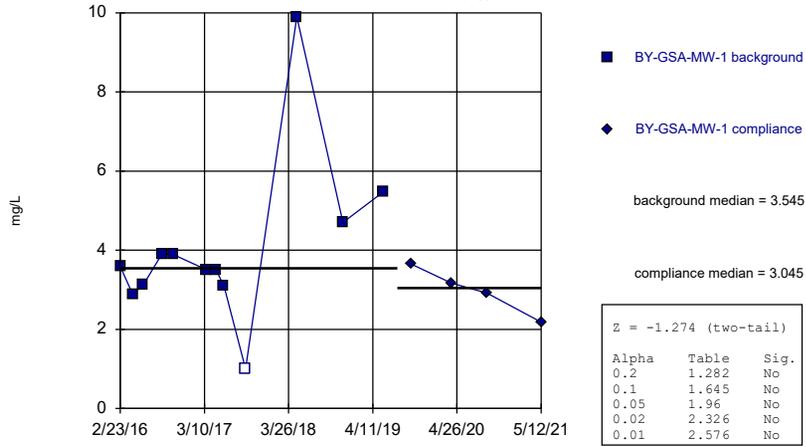
# Welch's t-test/Mann-Whitney - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 8/23/2021, 4:13 PM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Method</u>
Chloride, Total (mg/L)	BY-GSA-MW-1 (bg)	-1.274	No	Mann-W
Chloride, Total (mg/L)	BY-GSA-MW-10	1.214	No	Mann-W
Chloride, Total (mg/L)	BY-GSA-MW-2 (bg)	-2.488	No	Mann-W
Chloride, Total (mg/L)	BY-GSA-MW-3 (bg)	-1.761	No	Mann-W
<b>Chloride, Total (mg/L)</b>	<b>BY-GSA-MW-4 (bg)</b>	<b>-2.799</b>	<b>Yes</b>	<b>Mann-W</b>
Chloride, Total (mg/L)	BY-GSA-MW-5	0.6689	No	Mann-W
Chloride, Total (mg/L)	BY-GSA-MW-6	0.9102	No	Mann-W
Chloride, Total (mg/L)	BY-GSA-MW-7	1.949	No	Mann-W
Chloride, Total (mg/L)	BY-GSA-MW-8	-0.5477	No	Mann-W
Chloride, Total (mg/L)	BY-GSA-MW-9	2.001	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-1 (bg)	2.122	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-10	1.4	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-2 (bg)	0.4854	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-3 (bg)	0.4244	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-4 (bg)	0.3034	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-5	-0.5056	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-6	1.24	No	Mann-W
Sulfate as SO4 (mg/L)	BY-GSA-MW-7	1.637	No	Mann-W
<b>Sulfate as SO4 (mg/L)</b>	<b>BY-GSA-MW-8</b>	<b>2.852</b>	<b>Yes</b>	<b>Mann-W</b>
<b>Sulfate as SO4 (mg/L)</b>	<b>BY-GSA-MW-9</b>	<b>2.619</b>	<b>Yes</b>	<b>Mann-W</b>

Mann-Whitney (Wilcoxon Rank Sum)

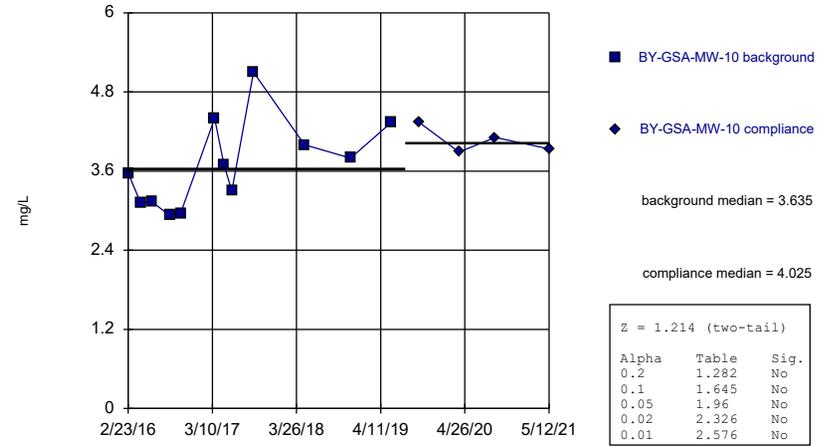
BY-GSA-MW-1 (bg)



Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)

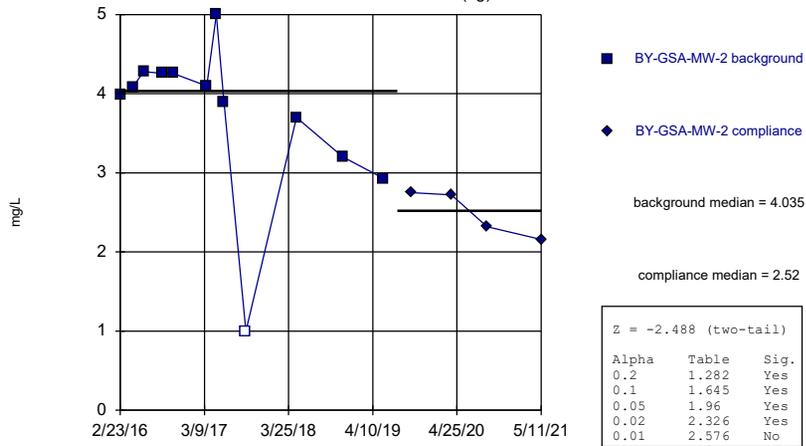
BY-GSA-MW-10



Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)

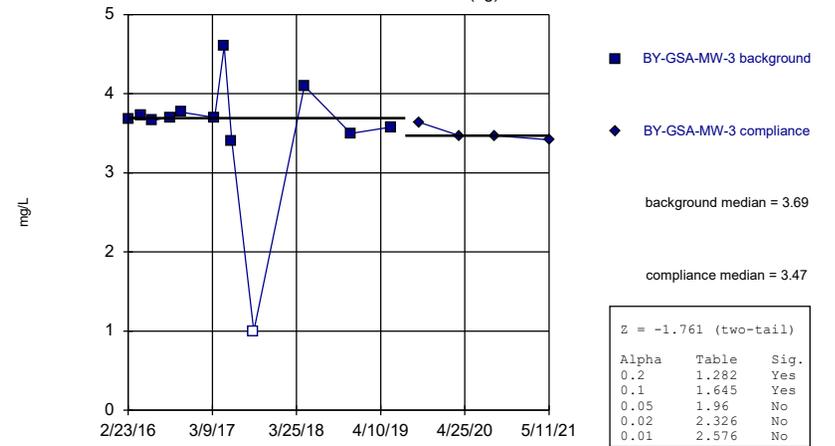
BY-GSA-MW-2 (bg)



Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

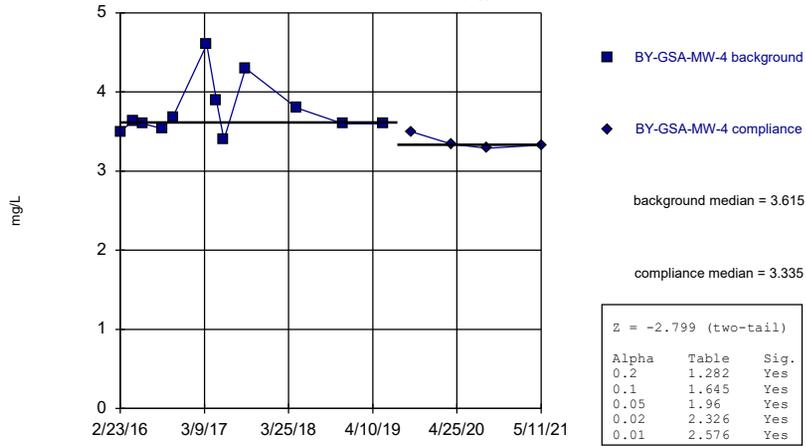
Mann-Whitney (Wilcoxon Rank Sum)

BY-GSA-MW-3 (bg)



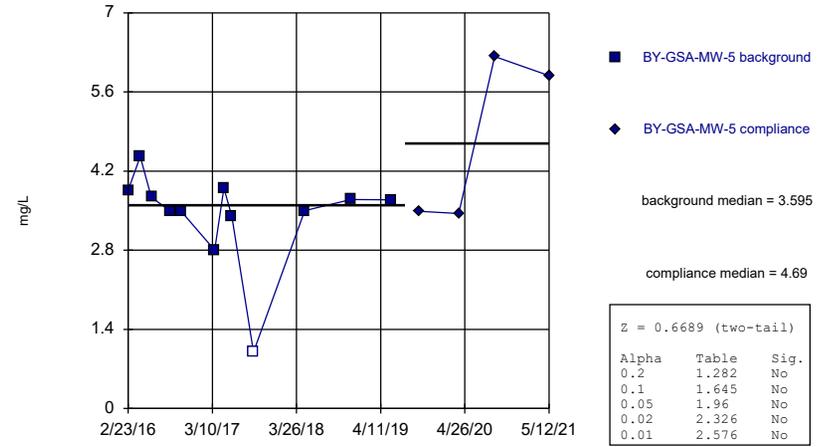
Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-4 (bg)



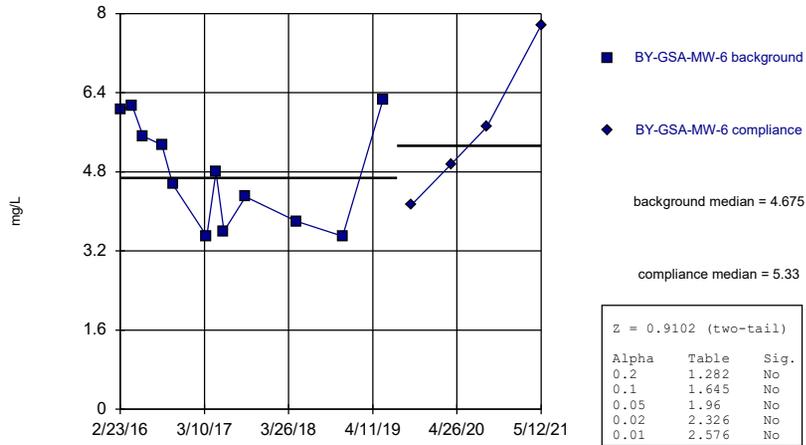
Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-5



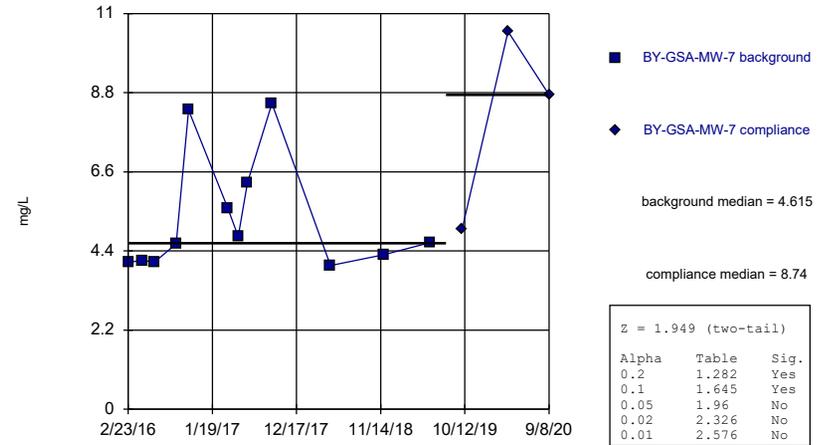
Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-6

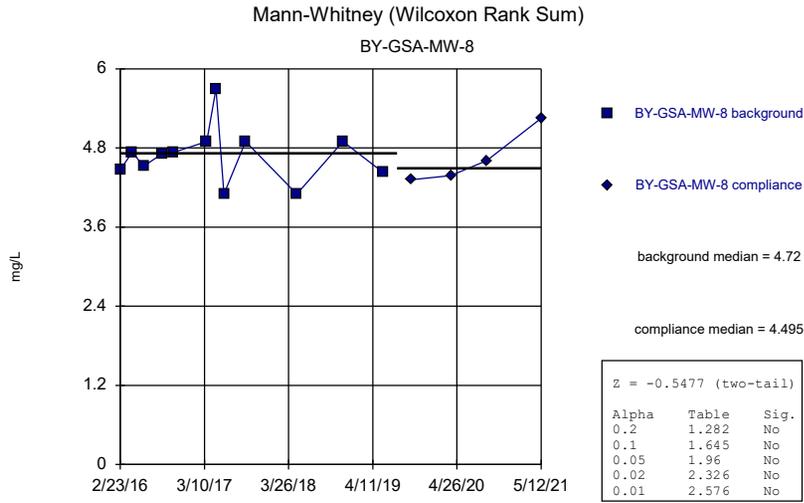


Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

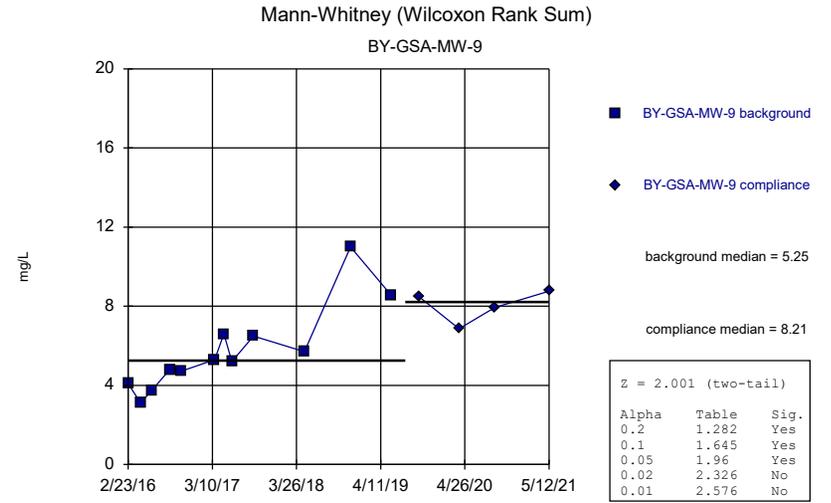
Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-7



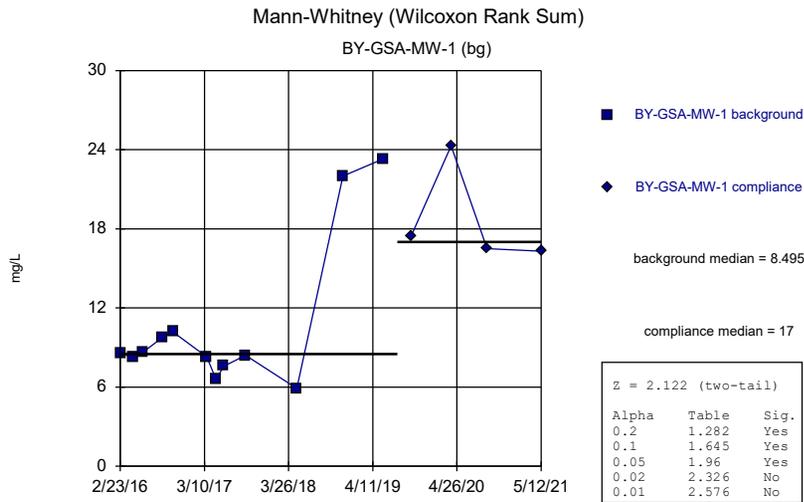
Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond



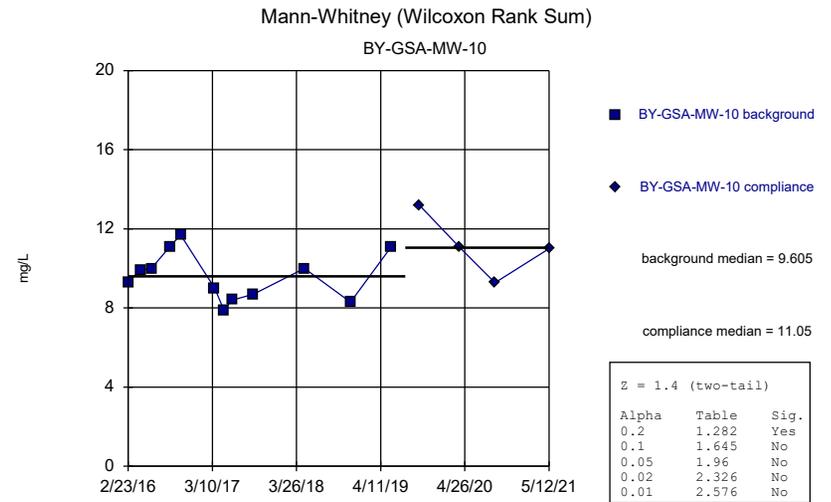
Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond



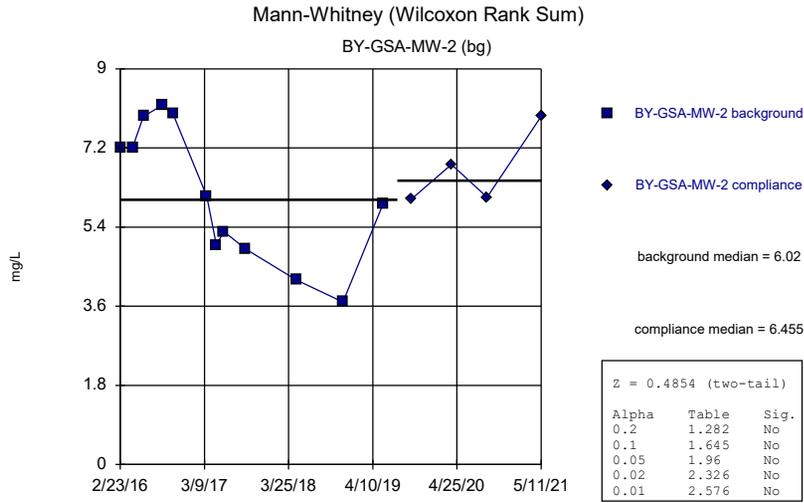
Constituent: Chloride, Total Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond



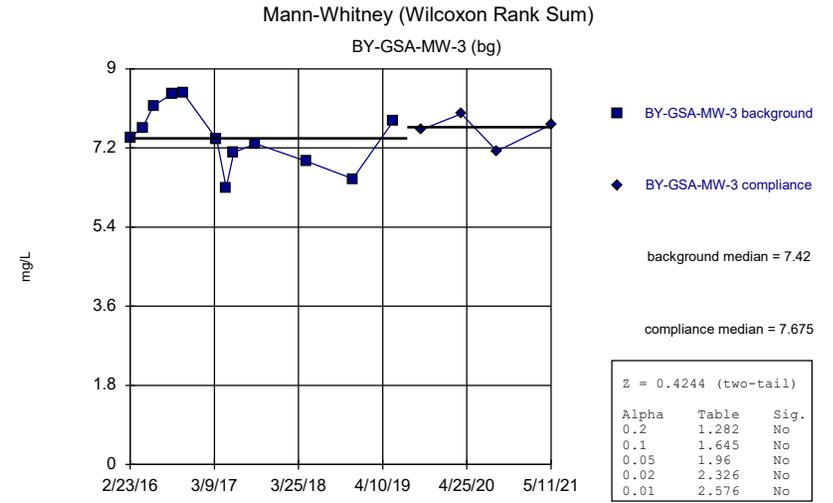
Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond



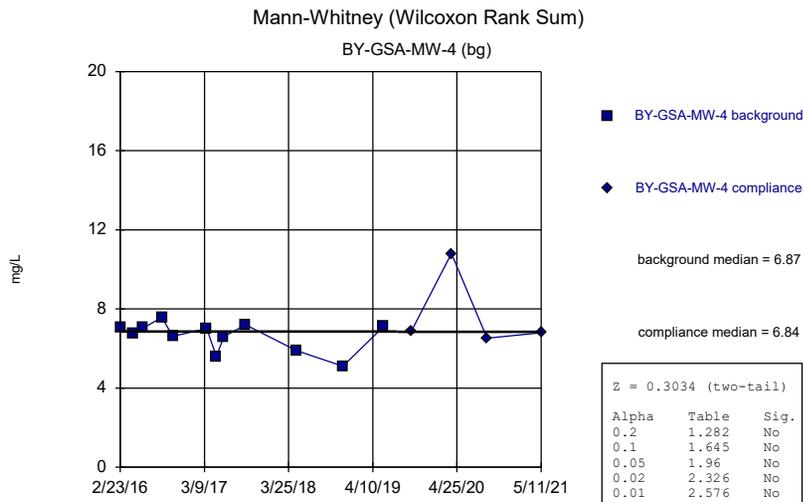
Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond



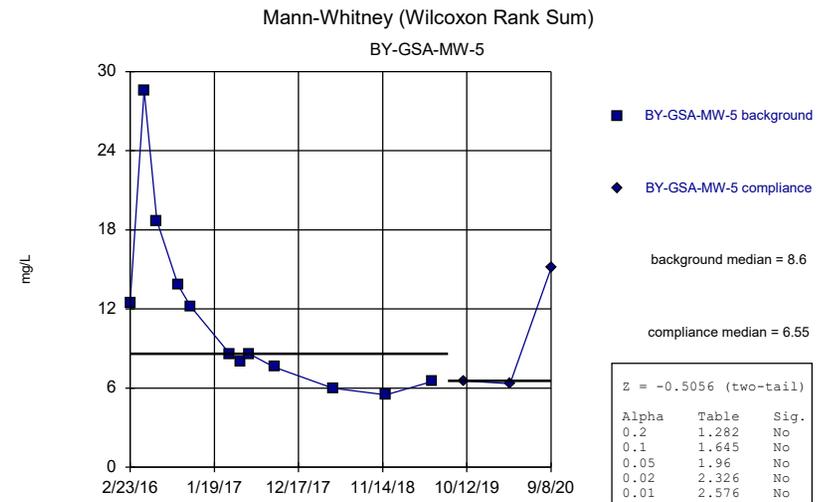
Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond



Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

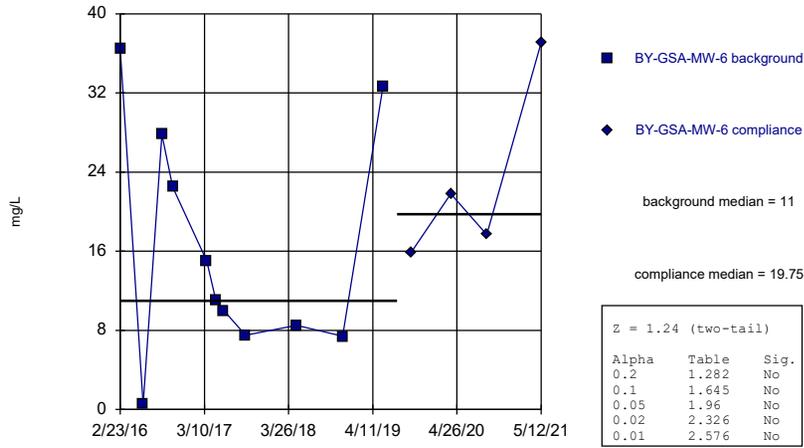


Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond



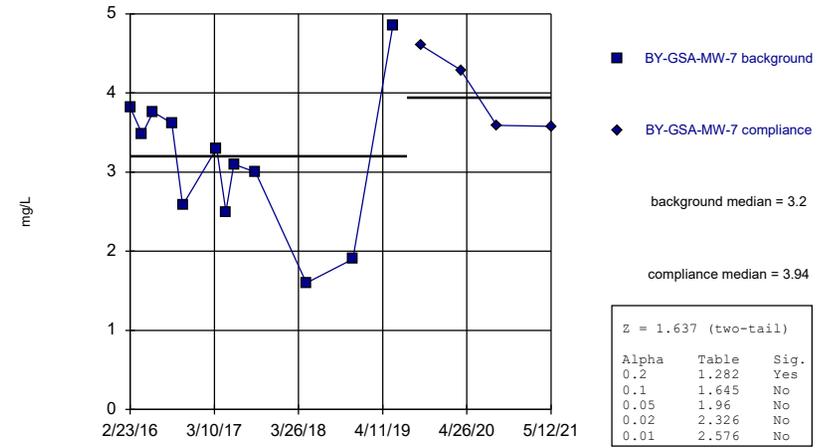
Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-6



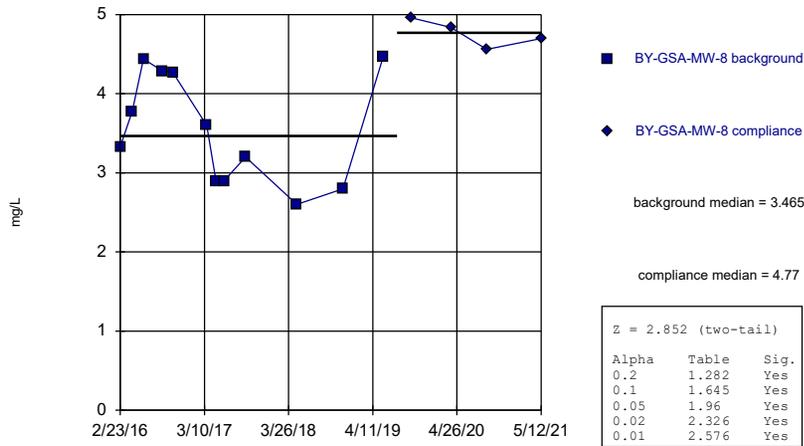
Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-7



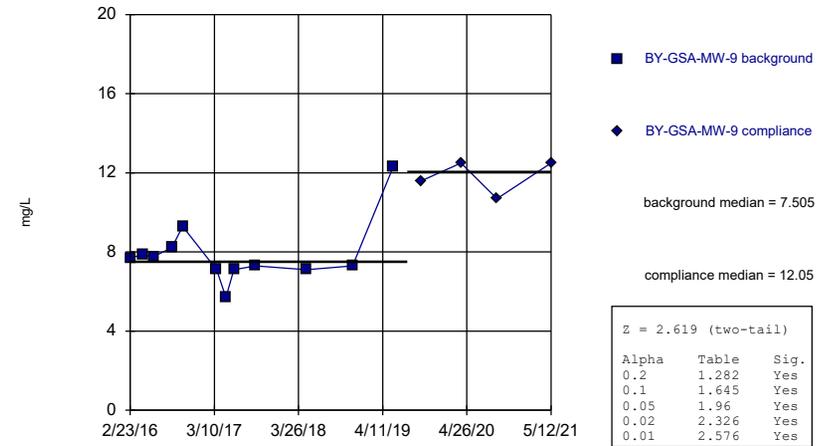
Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-8



Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Mann-Whitney (Wilcoxon Rank Sum)  
BY-GSA-MW-9



Constituent: Sulfate as SO4 Analysis Run 8/23/2021 4:09 PM View: Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-1	BY-GSA-MW-1
2/23/2016	3.59	
4/19/2016	2.89	
6/6/2016	3.12	
8/30/2016	3.91	
10/18/2016	3.9	
3/20/2017	3.5	
5/2/2017	3.5	
6/6/2017	3.1	
9/13/2017	<2 (U*)	
5/2/2018	9.9	
11/27/2018	4.7	
5/29/2019	5.48	
10/2/2019		3.65
3/31/2020		3.17
9/9/2020		2.92
5/12/2021		2.18

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: Inrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-10	BY-GSA-MW-10
2/23/2016	3.57	
4/19/2016	3.12	
6/7/2016	3.14	
8/30/2016	2.93	
10/18/2016	2.96	
3/21/2017	4.4	
5/2/2017	3.7	
6/7/2017	3.3	
9/13/2017	5.1	
5/1/2018	4	
11/26/2018	3.8	
5/29/2019	4.34	
10/2/2019		4.34
3/31/2020		3.89
9/9/2020		4.11
5/12/2021		3.94

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: Inrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-2	BY-GSA-MW-2
2/23/2016	3.99	
4/19/2016	4.08	
6/7/2016	4.28	
8/30/2016	4.26	
10/18/2016	4.26	
3/20/2017	4.1	
5/2/2017	5	
6/6/2017	3.9	
9/13/2017	<2 (U*)	
5/1/2018	3.7	
11/27/2018	3.2	
5/29/2019	2.93	
10/2/2019		2.75
3/31/2020		2.72
9/9/2020		2.32
5/11/2021		2.16

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-3	BY-GSA-MW-3
2/23/2016	3.68	
4/19/2016	3.72	
6/7/2016	3.66	
8/30/2016	3.7	
10/18/2016	3.77	
3/20/2017	3.7	
5/2/2017	4.6	
6/6/2017	3.4	
9/13/2017	<2 (U*)	
5/1/2018	4.1	
11/27/2018	3.5	
5/29/2019	3.58	
10/2/2019		3.64
3/31/2020		3.47
9/9/2020		3.47
5/11/2021		3.42

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-4	BY-GSA-MW-4
2/23/2016	3.5	
4/19/2016	3.63	
6/6/2016	3.6	
8/30/2016	3.54	
10/18/2016	3.68	
3/20/2017	4.6	
5/2/2017	3.9	
6/6/2017	3.4	
9/12/2017	4.3	
5/1/2018	3.8	
11/26/2018	3.6	
5/28/2019	3.6	
10/2/2019		3.5
3/31/2020		3.34
9/8/2020		3.29
5/11/2021		3.33

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-5	BY-GSA-MW-5
2/23/2016	3.86	
4/18/2016	4.46	
6/7/2016	3.74	
8/30/2016	3.5	
10/18/2016	3.5	
3/21/2017	2.8	
5/2/2017	3.9	
6/6/2017	3.4	
9/13/2017	<2 (U*)	
5/2/2018	3.5	
11/27/2018	3.7	
5/28/2019	3.69	
10/2/2019		3.49
3/30/2020		3.45
9/8/2020		6.23
5/12/2021		5.89

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-6	BY-GSA-MW-6
2/23/2016	6.06	
4/18/2016	6.13	
6/6/2016	5.52	
8/30/2016	5.35	
10/18/2016	4.55	
3/21/2017	3.5	
5/2/2017	4.8	
6/6/2017	3.6	
9/12/2017	4.3	
5/1/2018	3.8	
11/26/2018	3.5	
5/28/2019	6.26	
10/2/2019		4.13
3/30/2020		4.95
9/8/2020		5.71
5/12/2021		7.77

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-7	BY-GSA-MW-7
2/23/2016	4.08	
4/18/2016	4.14	
6/6/2016	4.09	
8/30/2016	4.6	
10/18/2016	8.32	
3/21/2017	5.6	
5/2/2017	4.8	
6/7/2017	6.3	
9/12/2017	8.5	
5/1/2018	4	
11/27/2018	4.3	
5/28/2019	4.63	
10/2/2019		5.02
3/30/2020		10.5
9/8/2020		8.74
5/12/2021	17.2 (o)	

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-8	BY-GSA-MW-8
2/23/2016	4.47	
4/18/2016	4.74	
6/7/2016	4.52	
8/30/2016	4.71	
10/18/2016	4.73	
3/21/2017	4.9	
5/2/2017	5.7	
6/7/2017	4.1	
9/13/2017	4.9	
5/2/2018	4.1	
11/27/2018	4.9	
5/28/2019	4.43	
10/2/2019		4.32
3/30/2020		4.38
9/8/2020		4.61
5/12/2021		5.25

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Chloride, Total (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9	BY-GSA-MW-9
2/23/2016	4.1	
4/19/2016	3.11	
6/7/2016	3.72	
8/30/2016	4.8	
10/18/2016	4.71	
3/21/2017	5.3	
5/2/2017	6.6	
6/7/2017	5.2	
9/13/2017	6.5	
5/1/2018	5.7	
11/26/2018	11	
5/29/2019	8.56	
10/2/2019		8.48
3/31/2020		6.87
9/9/2020		7.94
5/12/2021		8.77

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

---

	BY-GSA-MW-1	BY-GSA-MW-1
2/23/2016	8.59	
4/19/2016	8.27	
6/6/2016	8.66	
8/30/2016	9.74	
10/18/2016	10.2	
3/20/2017	8.3	
5/2/2017	6.6	
6/6/2017	7.6	
9/13/2017	8.4	
5/2/2018	5.9	
11/27/2018	22	
5/29/2019	23.3	
10/2/2019		17.5
3/31/2020		24.3
9/9/2020		16.5
5/12/2021		16.3

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: Inrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-10	BY-GSA-MW-10
2/23/2016	9.29	
4/19/2016	9.92	
6/7/2016	10	
8/30/2016	11.1	
10/18/2016	11.7	
3/21/2017	9	
5/2/2017	7.9	
6/7/2017	8.4	
9/13/2017	8.7	
5/1/2018	10	
11/26/2018	8.3	
5/29/2019	11.1	
10/2/2019		13.2
3/31/2020		11.1
9/9/2020		9.28
5/12/2021		11

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-2	BY-GSA-MW-2
2/23/2016	7.2	
4/19/2016	7.22	
6/7/2016	7.92	
8/30/2016	8.17	
10/18/2016	7.99	
3/20/2017	6.1	
5/2/2017	5	
6/6/2017	5.3	
9/13/2017	4.9 (J)	
5/1/2018	4.2 (J)	
11/27/2018	3.7 (J)	
5/29/2019	5.94	
10/2/2019		6.04
3/31/2020		6.83
9/9/2020		6.08
5/11/2021		7.92

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-3	BY-GSA-MW-3
2/23/2016	7.44	
4/19/2016	7.66	
6/7/2016	8.16	
8/30/2016	8.43	
10/18/2016	8.47	
3/20/2017	7.4	
5/2/2017	6.3	
6/6/2017	7.1	
9/13/2017	7.3	
5/1/2018	6.9	
11/27/2018	6.5	
5/29/2019	7.81	
10/2/2019		7.62
3/31/2020		7.98
9/9/2020		7.13
5/11/2021		7.73

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-4	BY-GSA-MW-4
2/23/2016	7.04	
4/19/2016	6.74	
6/6/2016	7.04	
8/30/2016	7.57	
10/18/2016	6.62	
3/20/2017	7	
5/2/2017	5.6	
6/6/2017	6.6	
9/12/2017	7.2	
5/1/2018	5.9	
11/26/2018	5.1	
5/28/2019	7.1	
10/2/2019		6.88
3/31/2020		10.8
9/8/2020		6.52
5/11/2021		6.8

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-5	BY-GSA-MW-5
2/23/2016	12.5	
4/18/2016	28.6	
6/7/2016	18.7	
8/30/2016	13.8	
10/18/2016	12.2	
3/21/2017	8.6	
5/2/2017	8	
6/6/2017	8.6	
9/13/2017	7.6	
5/2/2018	6	
11/27/2018	5.5	
5/28/2019	6.5	
10/2/2019		6.55
3/30/2020		6.34
9/8/2020		15.1
5/12/2021	38.2 (o)	

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-6	BY-GSA-MW-6
2/23/2016	36.5	
4/18/2016	80.2 (O)	
6/6/2016	0.498 (J)	
8/30/2016	27.8	
10/18/2016	22.5	
3/21/2017	15	
5/2/2017	11	
6/6/2017	10	
9/12/2017	7.5	
5/1/2018	8.5	
11/26/2018	7.4	
5/28/2019	32.7	
10/2/2019		15.9
3/30/2020		21.8
9/8/2020		17.7
5/12/2021		37.1

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-7	BY-GSA-MW-7
2/23/2016	3.82	
4/18/2016	3.48	
6/6/2016	3.76	
8/30/2016	3.62	
10/18/2016	2.58	
3/21/2017	3.3 (J)	
5/2/2017	2.5 (J)	
6/7/2017	3.1 (J)	
9/12/2017	3 (J)	
5/1/2018	1.6 (J)	
11/27/2018	1.9 (J)	
5/28/2019	4.86	
10/2/2019		4.6
3/30/2020		4.29
9/8/2020		3.59
5/12/2021		3.58

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-8	BY-GSA-MW-8
2/23/2016	3.33	
4/18/2016	3.78	
6/7/2016	4.44	
8/30/2016	4.29	
10/18/2016	4.27	
3/21/2017	3.6 (J)	
5/2/2017	2.9 (J)	
6/7/2017	2.9 (J)	
9/13/2017	3.2 (J)	
5/2/2018	2.6 (J)	
11/27/2018	2.8 (J)	
5/28/2019	4.46	
10/2/2019		4.96
3/30/2020		4.84
9/8/2020		4.56
5/12/2021		4.7

# Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Sulfate as SO4 (mg/L) Analysis Run 8/23/2021 4:13 PM View: IntraWell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9	BY-GSA-MW-9
2/23/2016	7.71	
4/19/2016	7.85	
6/7/2016	7.76	
8/30/2016	8.22	
10/18/2016	9.29	
3/21/2017	7.1	
5/2/2017	5.7	
6/7/2017	7.1	
9/13/2017	7.3	
5/1/2018	7.1	
11/26/2018	7.3	
5/29/2019	12.3	
10/2/2019		11.6
3/31/2020		12.5
9/9/2020		10.7
5/12/2021		12.5

FIGURE E.

# Trend Test - Significant Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 1/11/2022, 5:26 PM

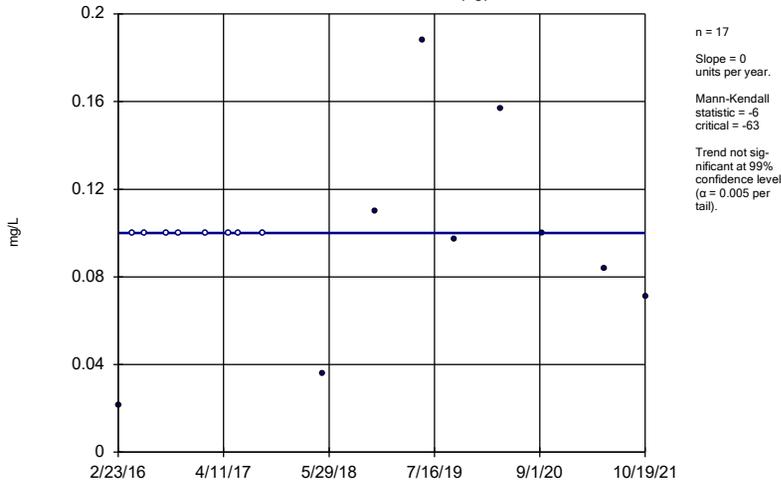
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	BY-GSA-MW-3 (bg)	0.07902	75	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-4 (bg)	0.1292	94	63	Yes	17	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	BY-GSA-MW-2 (bg)	0.01343	75	68	Yes	18	44.44	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-2 (bg)	-0.06075	-104	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-3 (bg)	-0.05703	-94	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-4 (bg)	-0.0473	-79	-74	Yes	19	0	n/a	n/a	0.01	NP
TDS (mg/L)	BY-GSA-MW-1 (bg)	3.935	80	63	Yes	17	5.882	n/a	n/a	0.01	NP
TDS (mg/L)	BY-GSA-MW-2 (bg)	2.208	66	63	Yes	17	11.76	n/a	n/a	0.01	NP
TDS (mg/L)	BY-GSA-MW-4 (bg)	4.058	85	63	Yes	17	23.53	n/a	n/a	0.01	NP

# Trend Test - All Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 1/11/2022, 5:26 PM

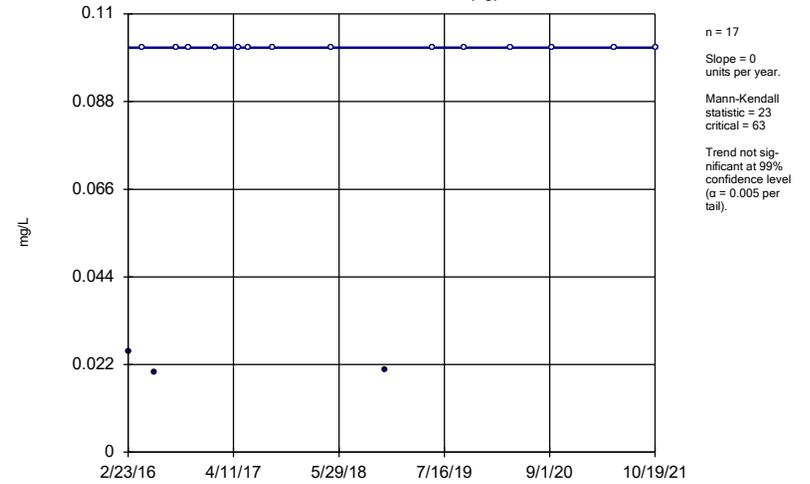
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	BY-GSA-MW-1 (bg)	0	-6	-63	No	17	47.06	n/a	n/a	0.01	NP
Boron (mg/L)	BY-GSA-MW-2 (bg)	0	23	63	No	17	82.35	n/a	n/a	0.01	NP
Boron (mg/L)	BY-GSA-MW-3 (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Boron (mg/L)	BY-GSA-MW-4 (bg)	0	23	63	No	17	88.24	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-1 (bg)	0.04642	27	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-2 (bg)	0.08591	62	63	No	17	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>BY-GSA-MW-3 (bg)</b>	<b>0.07902</b>	<b>75</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>BY-GSA-MW-4 (bg)</b>	<b>0.1292</b>	<b>94</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Fluoride (mg/L)	BY-GSA-MW-1 (bg)	0.009144	64	68	No	18	50	n/a	n/a	0.01	NP
<b>Fluoride (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>0.01343</b>	<b>75</b>	<b>68</b>	<b>Yes</b>	<b>18</b>	<b>44.44</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Fluoride (mg/L)	BY-GSA-MW-3 (bg)	0	67	68	No	18	72.22	n/a	n/a	0.01	NP
Fluoride (mg/L)	BY-GSA-MW-4 (bg)	0	67	68	No	18	72.22	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-1 (bg)	0	5	74	No	19	0	n/a	n/a	0.01	NP
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>-0.06075</b>	<b>-104</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-3 (bg)</b>	<b>-0.05703</b>	<b>-94</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-4 (bg)</b>	<b>-0.0473</b>	<b>-79</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
TDS (mg/L)	BY-GSA-MW-1 (bg)	3.935	80	63	Yes	17	5.882	n/a	n/a	0.01	NP
TDS (mg/L)	BY-GSA-MW-2 (bg)	2.208	66	63	Yes	17	11.76	n/a	n/a	0.01	NP
TDS (mg/L)	BY-GSA-MW-3 (bg)	1.786	49	63	No	17	0	n/a	n/a	0.01	NP
TDS (mg/L)	BY-GSA-MW-4 (bg)	4.058	85	63	Yes	17	23.53	n/a	n/a	0.01	NP

Sen's Slope Estimator  
BY-GSA-MW-1 (bg)



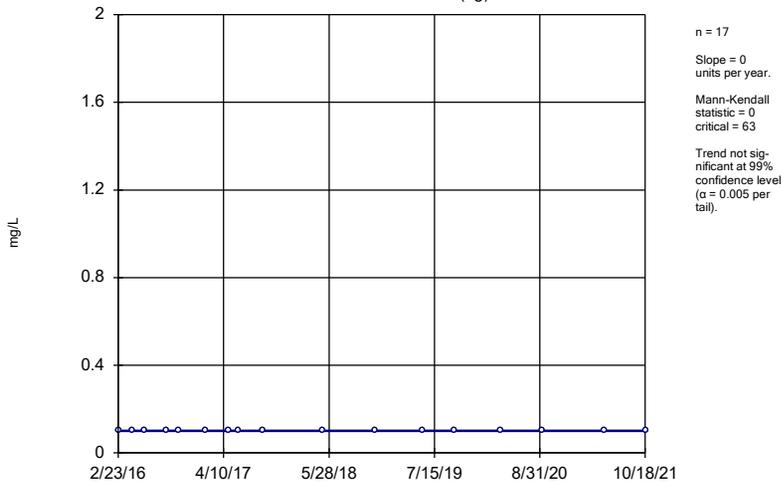
Constituent: Boron Analysis Run 1/11/2022 5:24 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator  
BY-GSA-MW-2 (bg)



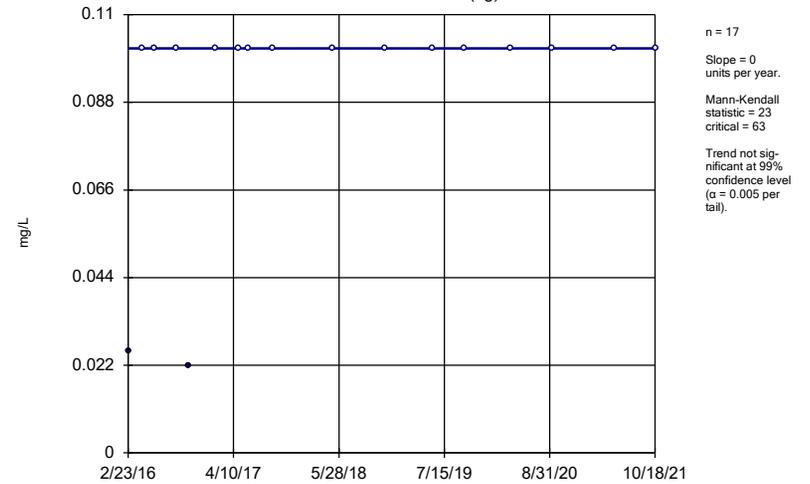
Constituent: Boron Analysis Run 1/11/2022 5:24 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator  
BY-GSA-MW-3 (bg)



Constituent: Boron Analysis Run 1/11/2022 5:24 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

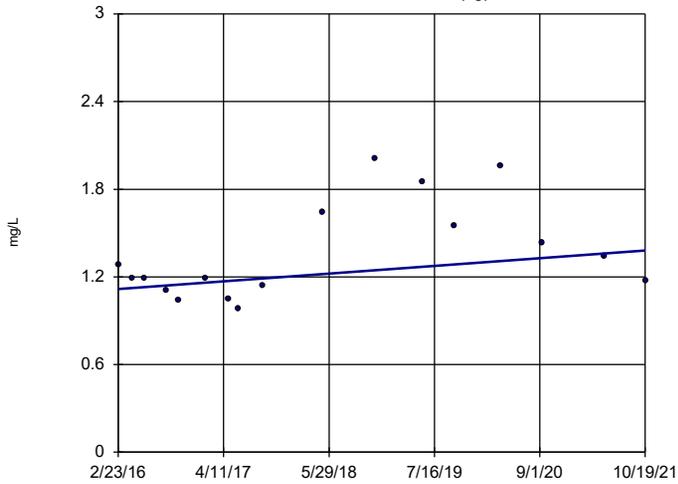
Sen's Slope Estimator  
BY-GSA-MW-4 (bg)



Constituent: Boron Analysis Run 1/11/2022 5:24 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

BY-GSA-MW-1 (bg)

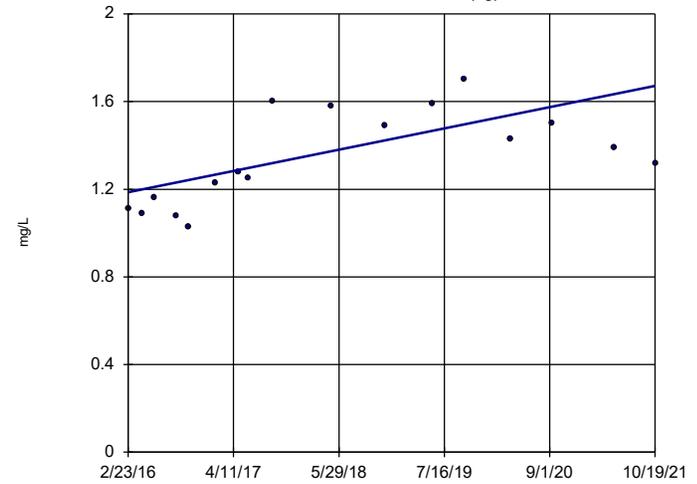


n = 17  
 Slope = 0.04642  
 units per year.  
 Mann-Kendall  
 statistic = 27  
 critical = 63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Calcium Analysis Run 1/11/2022 5:24 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

BY-GSA-MW-2 (bg)

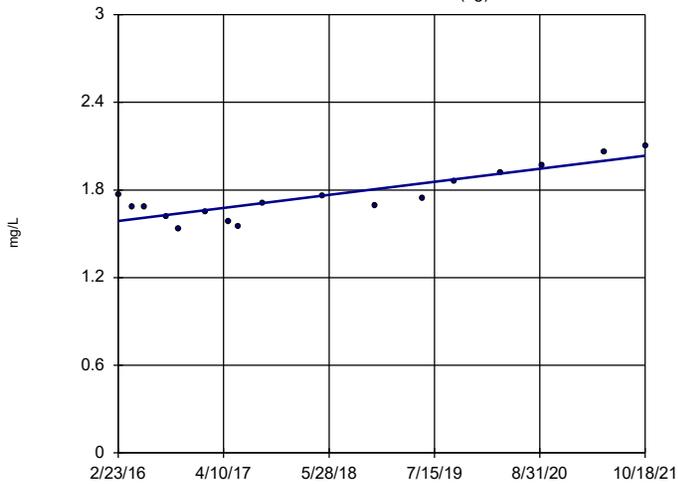


n = 17  
 Slope = 0.08591  
 units per year.  
 Mann-Kendall  
 statistic = 62  
 critical = 63  
 Trend not sig-  
 nificant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Calcium Analysis Run 1/11/2022 5:24 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

BY-GSA-MW-3 (bg)

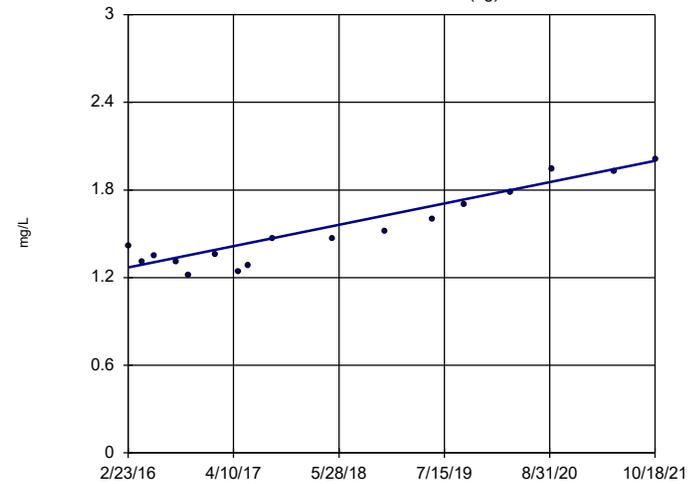


n = 17  
 Slope = 0.07902  
 units per year.  
 Mann-Kendall  
 statistic = 75  
 critical = 63  
 Increasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Calcium Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

BY-GSA-MW-4 (bg)

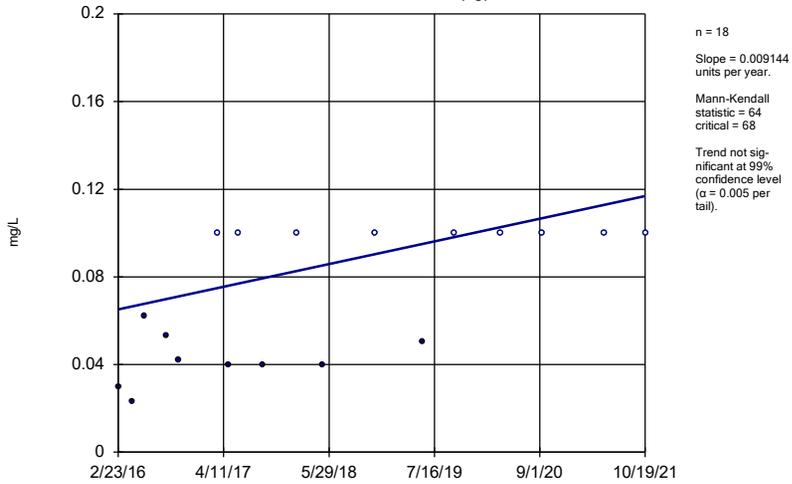


n = 17  
 Slope = 0.1292  
 units per year.  
 Mann-Kendall  
 statistic = 94  
 critical = 63  
 Increasing trend  
 significant at 99%  
 confidence level  
 ( $\alpha = 0.005$  per  
 tail).

Constituent: Calcium Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator

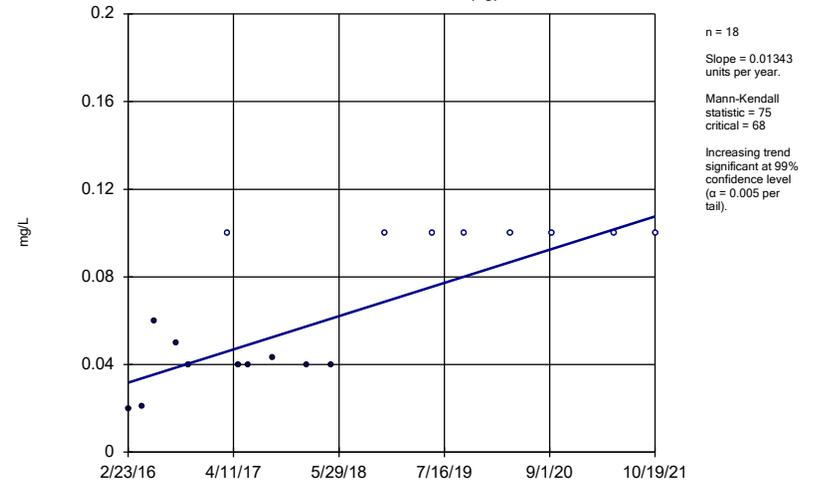
BY-GSA-MW-1 (bg)



Constituent: Fluoride Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator

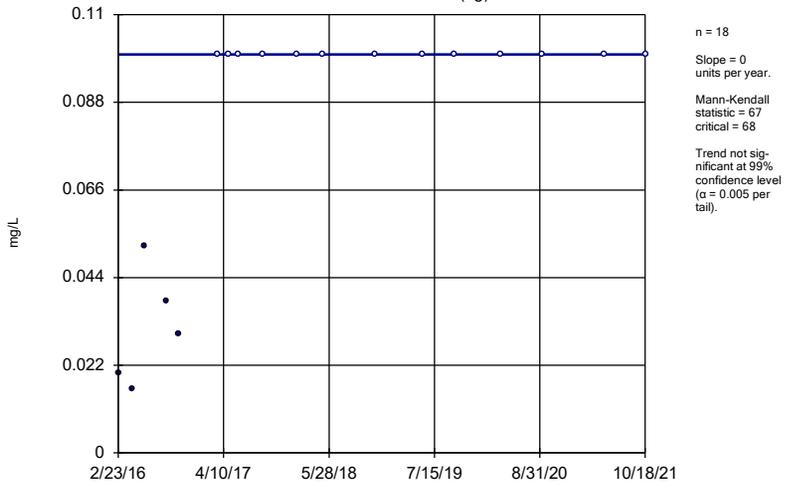
BY-GSA-MW-2 (bg)



Constituent: Fluoride Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator

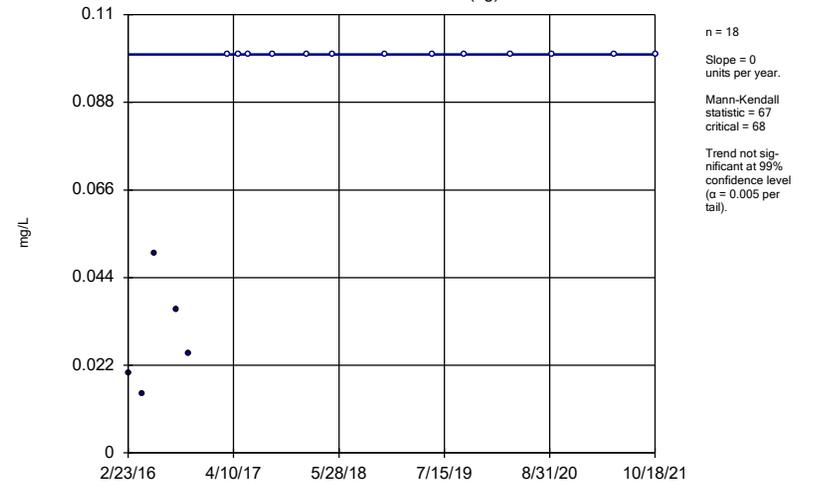
BY-GSA-MW-3 (bg)



Constituent: Fluoride Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Sen's Slope Estimator

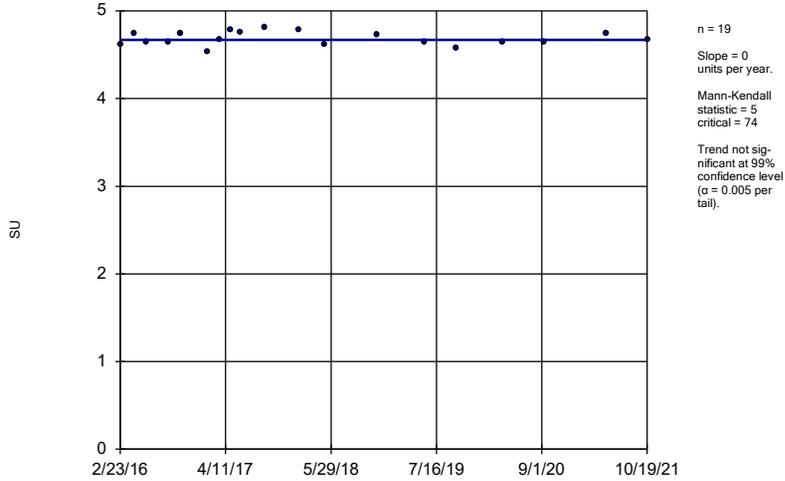
BY-GSA-MW-4 (bg)



Constituent: Fluoride Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

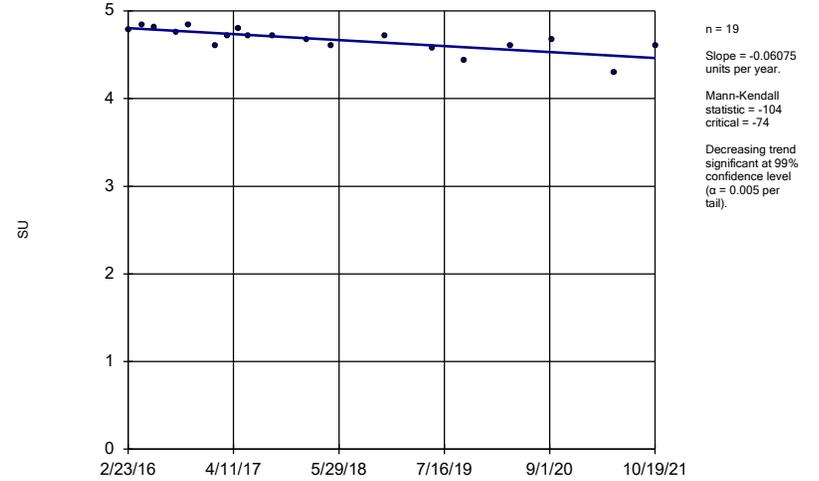
BY-GSA-MW-1 (bg)



Constituent: pH, Field Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

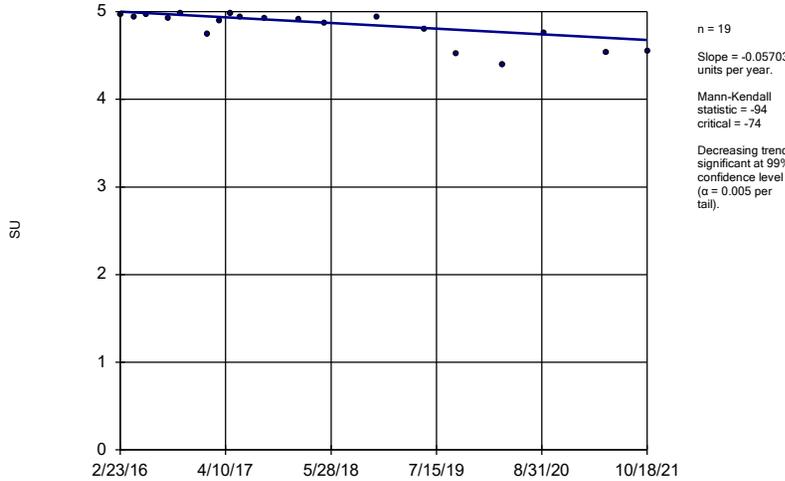
BY-GSA-MW-2 (bg)



Constituent: pH, Field Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

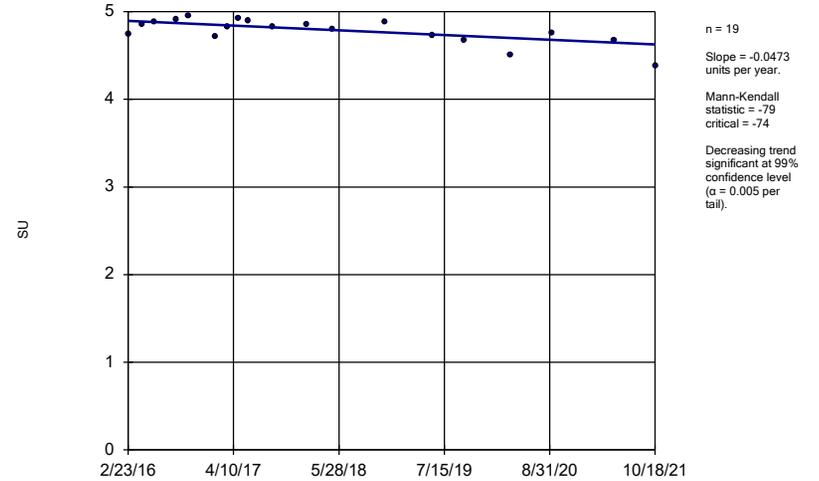
BY-GSA-MW-3 (bg)



Constituent: pH, Field Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

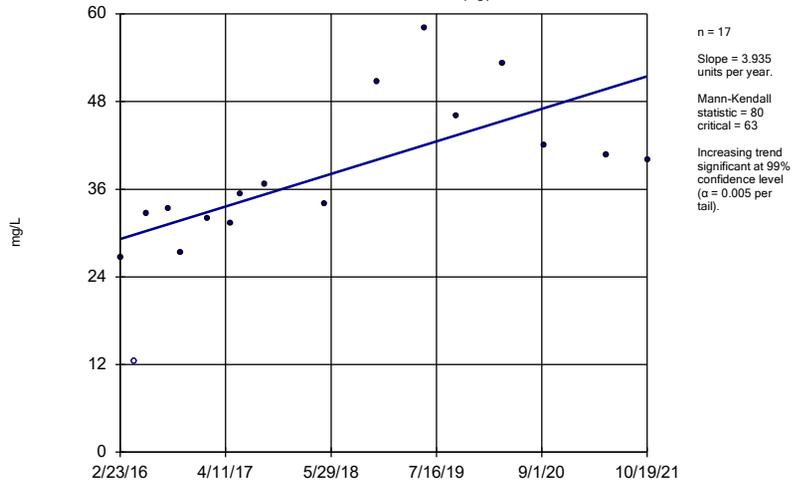
BY-GSA-MW-4 (bg)



Constituent: pH, Field Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

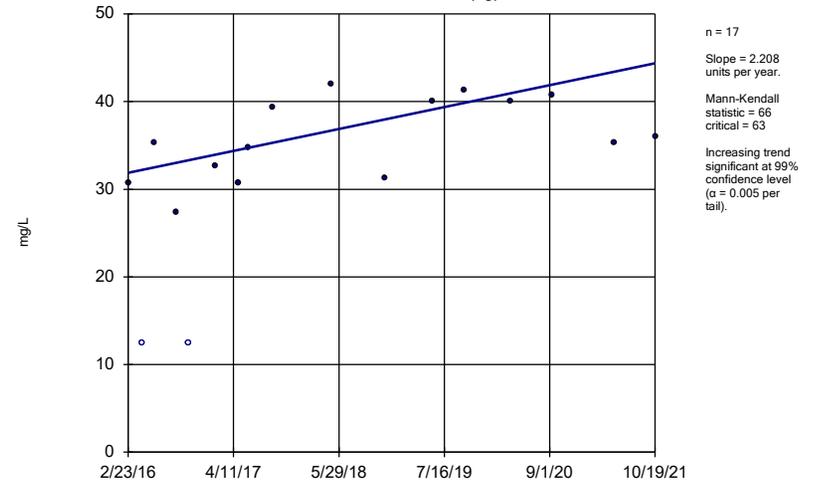
BY-GSA-MW-1 (bg)



Constituent: TDS Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

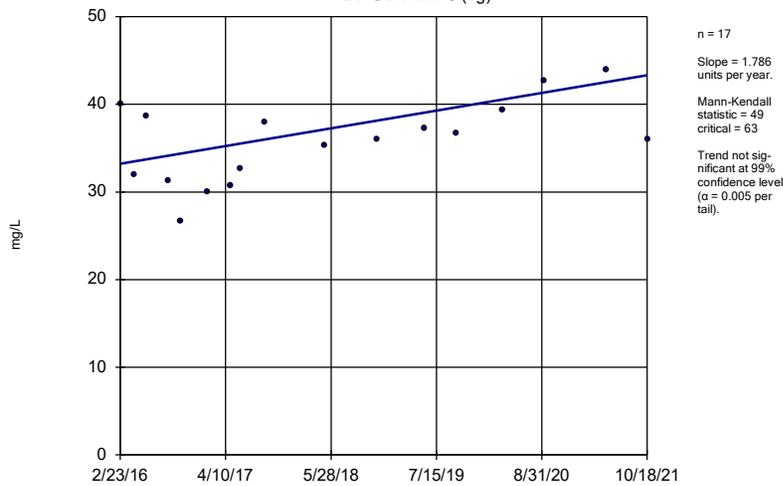
BY-GSA-MW-2 (bg)



Constituent: TDS Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

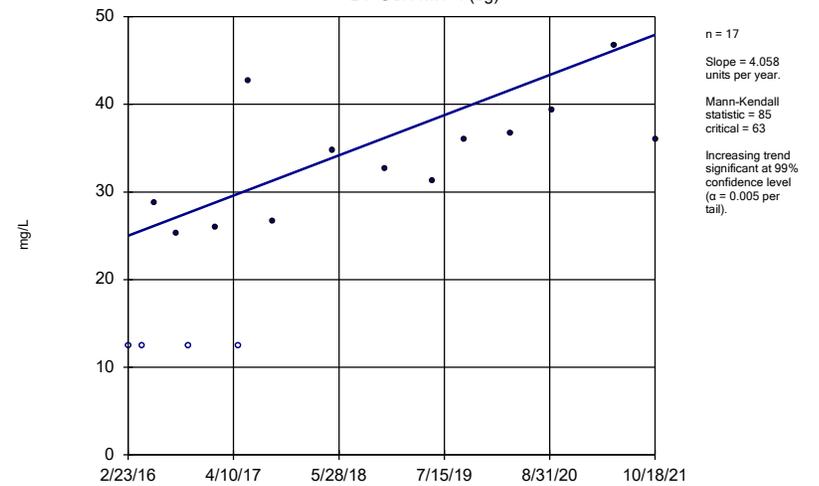
BY-GSA-MW-3 (bg)



Constituent: TDS Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

BY-GSA-MW-4 (bg)



Constituent: TDS Analysis Run 1/11/2022 5:25 PM View: Trend Testing - Upgradient Wells  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

FIGURE F.

# Intrawell Prediction Limit - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method	
Chloride (mg/L)	BY-GSA-MW-6	7.663	n/a	10/18/2021	10	Yes	16	4.996	1.21	0	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-7	15.21	n/a	10/18/2021	16.8	Yes	16	1.782	0.4263	0	None	ln(x)	0.001254	Param Intra 1 of 2

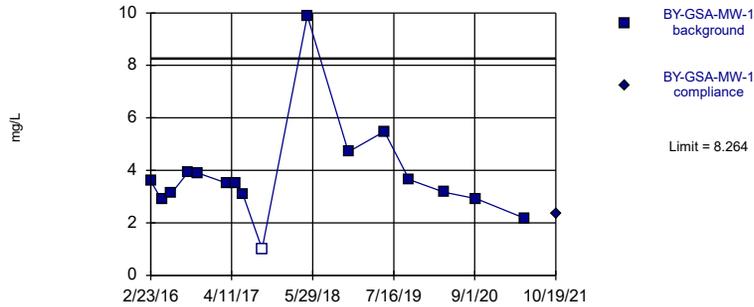
# Intrawell Prediction Limit - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:00 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chloride (mg/L)	BY-GSA-MW-1	8.264	n/a	10/19/2021	2.37	No	16	1.897	0.4435	6.25	None	sqrt(x)	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-10	5.122	n/a	10/19/2021	3.79	No	16	3.79	0.6038	0	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-2	5.698	n/a	10/19/2021	2.08	No	16	3.416	1.035	6.25	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-3	4.6	n/a	10/18/2021	3.45	No	16	n/a	n/a	6.25	n/a	n/a	0.006456	NP Intra (normality) 1 of 2
Chloride (mg/L)	BY-GSA-MW-4	4.448	n/a	10/18/2021	3.32	No	16	1.912	0.08933	0	None	sqrt(x)	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-5	6.23	n/a	10/19/2021	4.81	No	16	n/a	n/a	6.25	n/a	n/a	0.006456	NP Intra (normality) 1 of 2
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>7.663</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>10</b>	<b>Yes</b>	<b>16</b>	<b>4.996</b>	<b>1.21</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254</b>	<b>Param Intra 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>15.21</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>16.8</b>	<b>Yes</b>	<b>16</b>	<b>1.782</b>	<b>0.4263</b>	<b>0</b>	<b>None</b>	<b>ln(x)</b>	<b>0.001254</b>	<b>Param Intra 1 of 2</b>
Chloride (mg/L)	BY-GSA-MW-8	5.581	n/a	10/19/2021	5.34	No	16	4.673	0.412	0	None	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-9	11.11	n/a	10/19/2021	6.33	No	16	6.335	2.163	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-1	28.44	n/a	10/19/2021	15.5	No	16	3.458	0.85	0	None	sqrt(x)	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-10	13.19	n/a	10/19/2021	10.1	No	16	9.999	1.445	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-2	9.382	n/a	10/19/2021	7.48	No	16	6.282	1.406	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-3	8.868	n/a	10/18/2021	7.36	No	16	7.496	0.6224	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-4	10.8	n/a	10/18/2021	6.58	No	16	n/a	n/a	0	n/a	n/a	0.006456	NP Intra (normality) 1 of 2
Sulfate (mg/L)	BY-GSA-MW-5	34.74	n/a	10/19/2021	12.3	No	16	2.238	0.4647	0	None	x^(1/3)	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-6	43.64	n/a	10/18/2021	24.7	No	15	18.13	11.34	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-7	5.32	n/a	10/18/2021	2.54	No	16	3.349	0.8938	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-8	5.631	n/a	10/19/2021	4.2	No	16	3.852	0.8066	0	None	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-9	13.89	n/a	10/19/2021	12.6	No	16	8.877	2.273	0	None	No	0.001254	Param Intra 1 of 2

Within Limit

Prediction Limit  
Intrawell Parametric

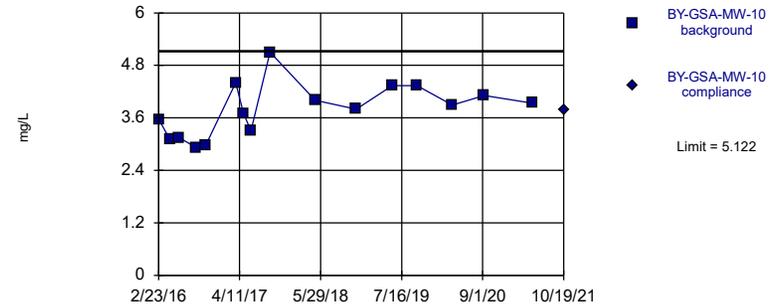


Background Data Summary (based on square root transformation): Mean=1.897, Std. Dev.=0.4435, n=16, 6.25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8589, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

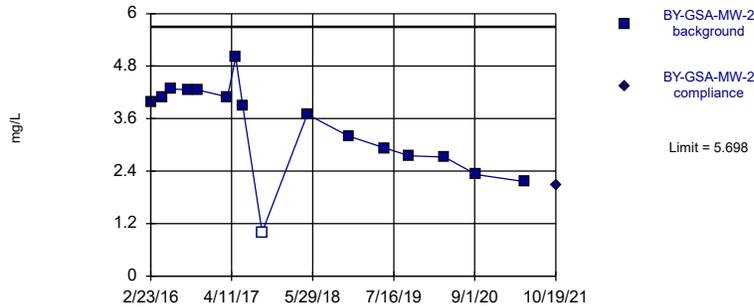


Background Data Summary: Mean=3.79, Std. Dev.=0.6038, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9569, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

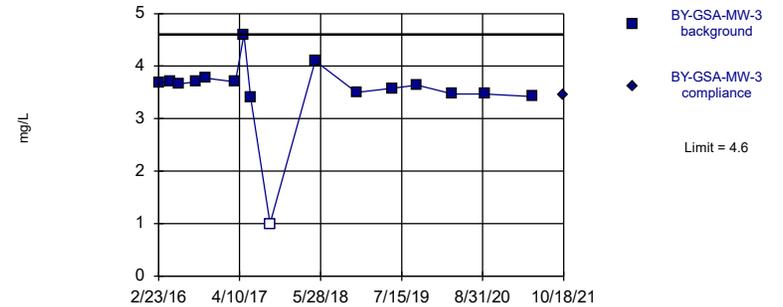


Background Data Summary: Mean=3.416, Std. Dev.=1.035, n=16, 6.25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9322, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Non-parametric

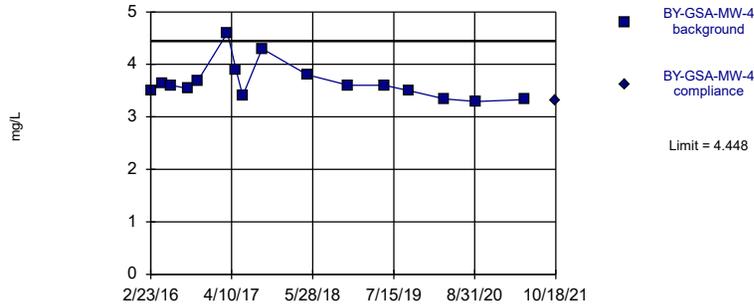


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. 6.25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Chloride Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Parametric

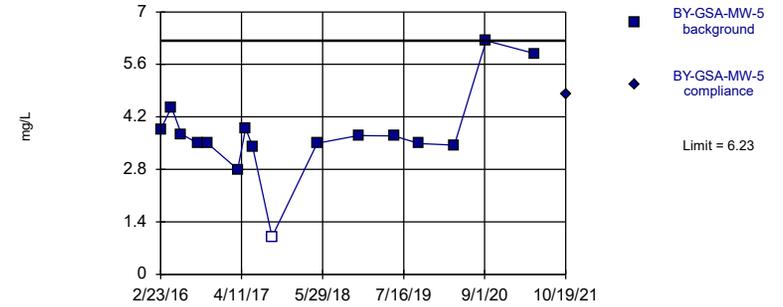


Background Data Summary (based on square root transformation): Mean=1.912, Std. Dev.=0.08933, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8449, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

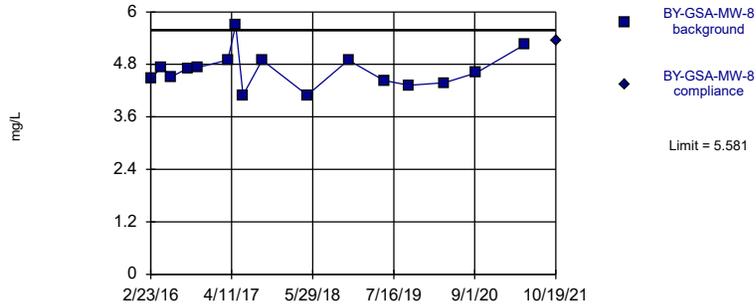
Constituent: Chloride Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Intrawell Non-parametric



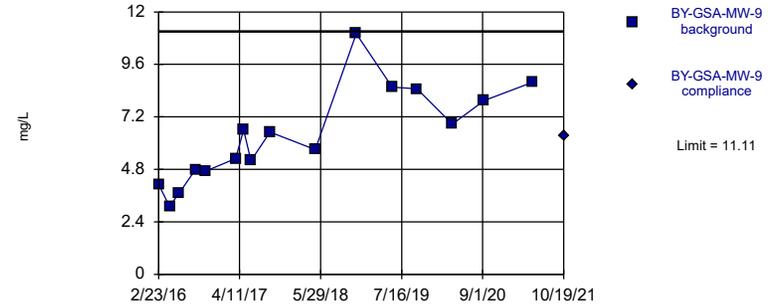
Within Limit Prediction Limit  
Intrawell Parametric



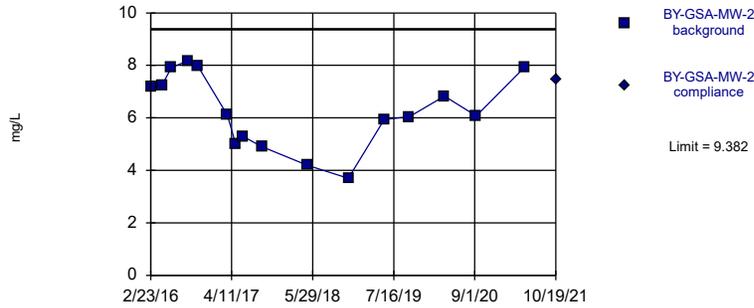
Background Data Summary: Mean=4.673, Std. Dev.=0.412, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9362, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit Prediction Limit  
Intrawell Parametric



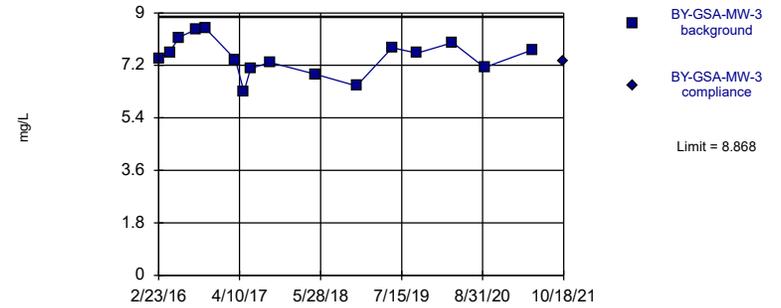
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=6.282, Std. Dev.=1.406, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9428, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

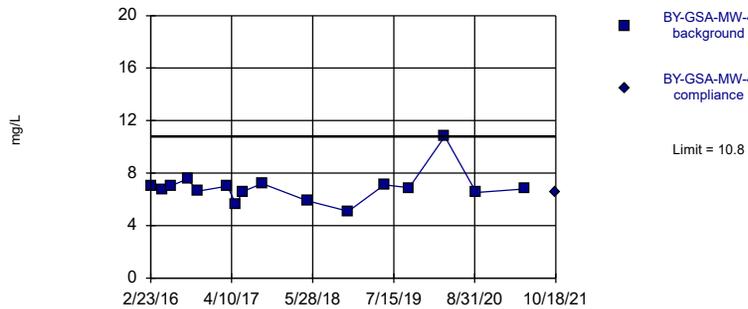
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=7.496, Std. Dev.=0.6224, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9756, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

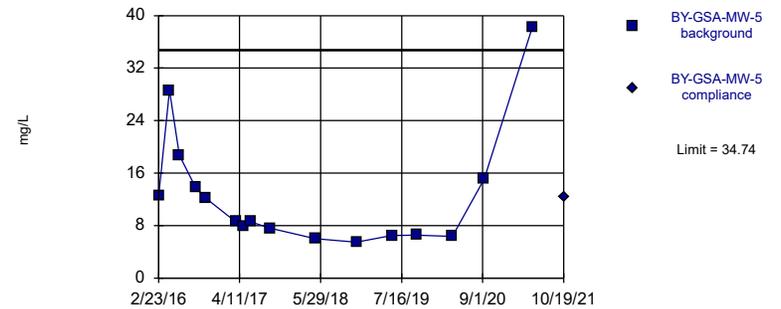
Within Limit Prediction Limit  
Intrawell Non-parametric



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. Limit is highest of 16 background values. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

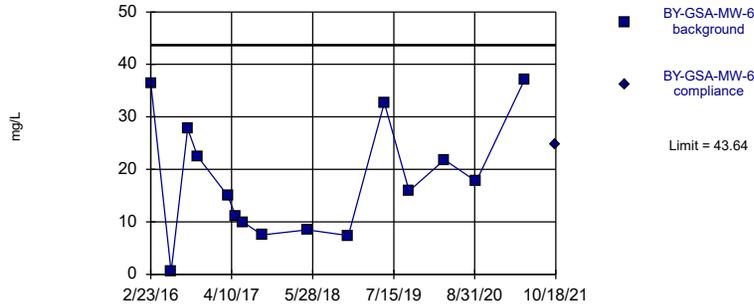
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary (based on cube root transformation): Mean=2.238, Std. Dev.=0.4647, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8593, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

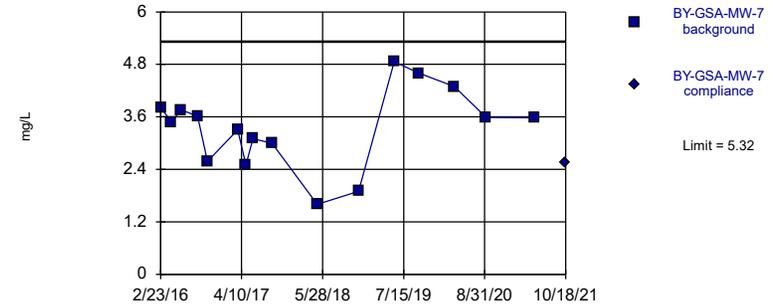
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=18.13, Std. Dev.=11.34, n=15. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9407, critical = 0.835. Kappa = 2.25 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

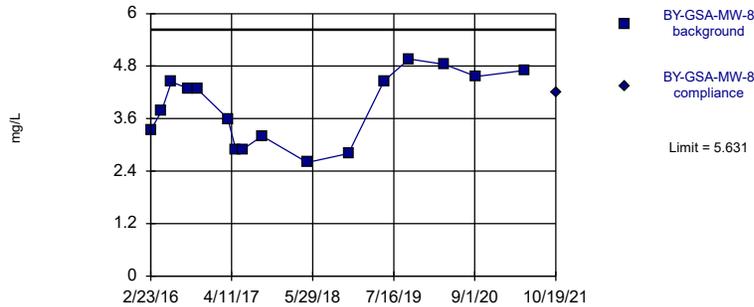
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=3.349, Std. Dev.=0.8938, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9701, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

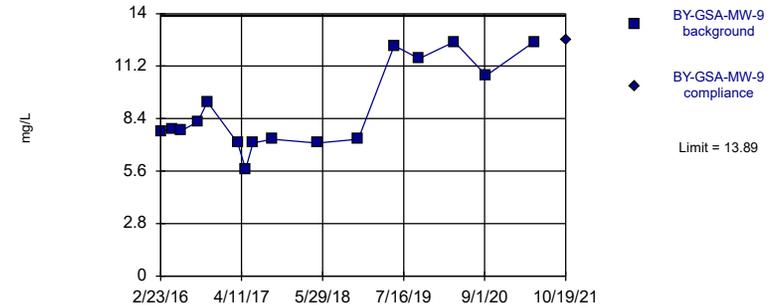
Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=3.852, Std. Dev.=0.8066, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9127, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=8.877, Std. Dev.=2.273, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8511, critical = 0.844. Kappa = 2.205 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/11/2022 4:56 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-1	BY-GSA-MW-1
2/23/2016	3.59	
4/19/2016	2.89	
6/6/2016	3.12	
8/30/2016	3.91	
10/18/2016	3.9	
3/20/2017	3.5	
5/2/2017	3.5	
6/6/2017	3.1	
9/13/2017	<2 (U*)	
5/2/2018	9.9	
11/27/2018	4.7	
5/29/2019	5.48	
10/2/2019	3.65	
3/31/2020	3.17	
9/9/2020	2.92	
5/12/2021	2.18	
10/19/2021		2.37

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-10	BY-GSA-MW-10
2/23/2016	3.57	
4/19/2016	3.12	
6/7/2016	3.14	
8/30/2016	2.93	
10/18/2016	2.96	
3/21/2017	4.4	
5/2/2017	3.7	
6/7/2017	3.3	
9/13/2017	5.1	
5/1/2018	4	
11/26/2018	3.8	
5/29/2019	4.34	
10/2/2019	4.34	
3/31/2020	3.89	
9/9/2020	4.11	
5/12/2021	3.94	
10/19/2021		3.79

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-2	BY-GSA-MW-2
2/23/2016	3.99	
4/19/2016	4.08	
6/7/2016	4.28	
8/30/2016	4.26	
10/18/2016	4.26	
3/20/2017	4.1	
5/2/2017	5	
6/6/2017	3.9	
9/13/2017	<2 (U*)	
5/1/2018	3.7	
11/27/2018	3.2	
5/29/2019	2.93	
10/2/2019	2.75	
3/31/2020	2.72	
9/9/2020	2.32	
5/11/2021	2.16	
10/19/2021		2.08

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-3	BY-GSA-MW-3
2/23/2016	3.68	
4/19/2016	3.72	
6/7/2016	3.66	
8/30/2016	3.7	
10/18/2016	3.77	
3/20/2017	3.7	
5/2/2017	4.6	
6/6/2017	3.4	
9/13/2017	<2 (U*)	
5/1/2018	4.1	
11/27/2018	3.5	
5/29/2019	3.58	
10/2/2019	3.64	
3/31/2020	3.47	
9/9/2020	3.47	
5/11/2021	3.42	
10/18/2021		3.45

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-4	BY-GSA-MW-4
2/23/2016	3.5	
4/19/2016	3.63	
6/6/2016	3.6	
8/30/2016	3.54	
10/18/2016	3.68	
3/20/2017	4.6	
5/2/2017	3.9	
6/6/2017	3.4	
9/12/2017	4.3	
5/1/2018	3.8	
11/26/2018	3.6	
5/28/2019	3.6	
10/2/2019	3.5	
3/31/2020	3.34	
9/8/2020	3.29	
5/11/2021	3.33	
10/18/2021		3.32

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-5	BY-GSA-MW-5
2/23/2016	3.86	
4/18/2016	4.46	
6/7/2016	3.74	
8/30/2016	3.5	
10/18/2016	3.5	
3/21/2017	2.8	
5/2/2017	3.9	
6/6/2017	3.4	
9/13/2017	<2 (U*)	
5/2/2018	3.5	
11/27/2018	3.7	
5/28/2019	3.69	
10/2/2019	3.49	
3/30/2020	3.45	
9/8/2020	6.23	
5/12/2021	5.89	
10/19/2021		4.81

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-6	BY-GSA-MW-6
2/23/2016	6.06	
4/18/2016	6.13	
6/6/2016	5.52	
8/30/2016	5.35	
10/18/2016	4.55	
3/21/2017	3.5	
5/2/2017	4.8	
6/6/2017	3.6	
9/12/2017	4.3	
5/1/2018	3.8	
11/26/2018	3.5	
5/28/2019	6.26	
10/2/2019	4.13	
3/30/2020	4.95	
9/8/2020	5.71	
5/12/2021	7.77	
10/18/2021		10

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-7	BY-GSA-MW-7
2/23/2016	4.08	
4/18/2016	4.14	
6/6/2016	4.09	
8/30/2016	4.6	
10/18/2016	8.32	
3/21/2017	5.6	
5/2/2017	4.8	
6/7/2017	6.3	
9/12/2017	8.5	
5/1/2018	4	
11/27/2018	4.3	
5/28/2019	4.63	
10/2/2019	5.02	
3/30/2020	10.5	
9/8/2020	8.74	
5/12/2021	17.2	
10/18/2021		16.8

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-8	BY-GSA-MW-8
2/23/2016	4.47	
4/18/2016	4.74	
6/7/2016	4.52	
8/30/2016	4.71	
10/18/2016	4.73	
3/21/2017	4.9	
5/2/2017	5.7	
6/7/2017	4.1	
9/13/2017	4.9	
5/2/2018	4.1	
11/27/2018	4.9	
5/28/2019	4.43	
10/2/2019	4.32	
3/30/2020	4.38	
9/8/2020	4.61	
5/12/2021	5.25	
10/19/2021		5.34

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9	BY-GSA-MW-9
2/23/2016	4.1	
4/19/2016	3.11	
6/7/2016	3.72	
8/30/2016	4.8	
10/18/2016	4.71	
3/21/2017	5.3	
5/2/2017	6.6	
6/7/2017	5.2	
9/13/2017	6.5	
5/1/2018	5.7	
11/26/2018	11	
5/29/2019	8.56	
10/2/2019	8.48	
3/31/2020	6.87	
9/9/2020	7.94	
5/12/2021	8.77	
10/19/2021		6.33

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-1	BY-GSA-MW-1
2/23/2016	8.59	
4/19/2016	8.27	
6/6/2016	8.66	
8/30/2016	9.74	
10/18/2016	10.2	
3/20/2017	8.3	
5/2/2017	6.6	
6/6/2017	7.6	
9/13/2017	8.4	
5/2/2018	5.9	
11/27/2018	22	
5/29/2019	23.3	
10/2/2019	17.5	
3/31/2020	24.3	
9/9/2020	16.5	
5/12/2021	16.3	
10/19/2021		15.5

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-10	BY-GSA-MW-10
2/23/2016	9.29	
4/19/2016	9.92	
6/7/2016	10	
8/30/2016	11.1	
10/18/2016	11.7	
3/21/2017	9	
5/2/2017	7.9	
6/7/2017	8.4	
9/13/2017	8.7	
5/1/2018	10	
11/26/2018	8.3	
5/29/2019	11.1	
10/2/2019	13.2	
3/31/2020	11.1	
9/9/2020	9.28	
5/12/2021	11	
10/19/2021		10.1

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-2	BY-GSA-MW-2
2/23/2016	7.2	
4/19/2016	7.22	
6/7/2016	7.92	
8/30/2016	8.17	
10/18/2016	7.99	
3/20/2017	6.1	
5/2/2017	5	
6/6/2017	5.3	
9/13/2017	4.9 (J)	
5/1/2018	4.2 (J)	
11/27/2018	3.7 (J)	
5/29/2019	5.94	
10/2/2019	6.04	
3/31/2020	6.83	
9/9/2020	6.08	
5/11/2021	7.92	
10/19/2021		7.48

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-3	BY-GSA-MW-3
2/23/2016	7.44	
4/19/2016	7.66	
6/7/2016	8.16	
8/30/2016	8.43	
10/18/2016	8.47	
3/20/2017	7.4	
5/2/2017	6.3	
6/6/2017	7.1	
9/13/2017	7.3	
5/1/2018	6.9	
11/27/2018	6.5	
5/29/2019	7.81	
10/2/2019	7.62	
3/31/2020	7.98	
9/9/2020	7.13	
5/11/2021	7.73	
10/18/2021		7.36

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-4	BY-GSA-MW-4
2/23/2016	7.04	
4/19/2016	6.74	
6/6/2016	7.04	
8/30/2016	7.57	
10/18/2016	6.62	
3/20/2017	7	
5/2/2017	5.6	
6/6/2017	6.6	
9/12/2017	7.2	
5/1/2018	5.9	
11/26/2018	5.1	
5/28/2019	7.1	
10/2/2019	6.88	
3/31/2020	10.8	
9/8/2020	6.52	
5/11/2021	6.8	
10/18/2021		6.58

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-5	BY-GSA-MW-5
2/23/2016	12.5	
4/18/2016	28.6	
6/7/2016	18.7	
8/30/2016	13.8	
10/18/2016	12.2	
3/21/2017	8.6	
5/2/2017	8	
6/6/2017	8.6	
9/13/2017	7.6	
5/2/2018	6	
11/27/2018	5.5	
5/28/2019	6.5	
10/2/2019	6.55	
3/30/2020	6.34	
9/8/2020	15.1	
5/12/2021	38.2	
10/19/2021		12.3

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-6	BY-GSA-MW-6
2/23/2016	36.5	
4/18/2016	80.2 (O)	
6/6/2016	0.498 (J)	
8/30/2016	27.8	
10/18/2016	22.5	
3/21/2017	15	
5/2/2017	11	
6/6/2017	10	
9/12/2017	7.5	
5/1/2018	8.5	
11/26/2018	7.4	
5/28/2019	32.7	
10/2/2019	15.9	
3/30/2020	21.8	
9/8/2020	17.7	
5/12/2021	37.1	
10/18/2021		24.7

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-7	BY-GSA-MW-7
2/23/2016	3.82	
4/18/2016	3.48	
6/6/2016	3.76	
8/30/2016	3.62	
10/18/2016	2.58	
3/21/2017	3.3 (J)	
5/2/2017	2.5 (J)	
6/7/2017	3.1 (J)	
9/12/2017	3 (J)	
5/1/2018	1.6 (J)	
11/27/2018	1.9 (J)	
5/28/2019	4.86	
10/2/2019	4.6	
3/30/2020	4.29	
9/8/2020	3.59	
5/12/2021	3.58	
10/18/2021		2.54

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-8	BY-GSA-MW-8
2/23/2016	3.33	
4/18/2016	3.78	
6/7/2016	4.44	
8/30/2016	4.29	
10/18/2016	4.27	
3/21/2017	3.6 (J)	
5/2/2017	2.9 (J)	
6/7/2017	2.9 (J)	
9/13/2017	3.2 (J)	
5/2/2018	2.6 (J)	
11/27/2018	2.8 (J)	
5/28/2019	4.46	
10/2/2019	4.96	
3/30/2020	4.84	
9/8/2020	4.56	
5/12/2021	4.7	
10/19/2021		4.2

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/11/2022 5:00 PM View: PLs Intrawell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9	BY-GSA-MW-9
2/23/2016	7.71	
4/19/2016	7.85	
6/7/2016	7.76	
8/30/2016	8.22	
10/18/2016	9.29	
3/21/2017	7.1	
5/2/2017	5.7	
6/7/2017	7.1	
9/13/2017	7.3	
5/1/2018	7.1	
11/26/2018	7.3	
5/29/2019	12.3	
10/2/2019	11.6	
3/31/2020	12.5	
9/9/2020	10.7	
5/12/2021	12.5	
10/19/2021		12.6

FIGURE G.

# Interwell Prediction Limit - Significant Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 1/11/2022, 5:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method	
Boron (mg/L)	BY-GSA-MW-5	0.188	n/a	10/19/2021	0.243	Yes	68	n/a	n/a	79.41	n/a	n/a	0.0004142	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-6	0.188	n/a	10/18/2021	0.987	Yes	68	n/a	n/a	79.41	n/a	n/a	0.0004142	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BY-GSA-MW-5	2.049	n/a	10/19/2021	2.75	Yes	68	1.496	0.2959	0	None	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-6	2.049	n/a	10/18/2021	9.06	Yes	68	1.496	0.2959	0	None	No	0.001254	Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-6	5.021	4.454	10/18/2021	5.28	Yes	76	4.738	0.1522	0	None	No	0.0006268	Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-7	5.021	4.454	10/18/2021	5.05	Yes	76	4.738	0.1522	0	None	No	0.0006268	Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-9	5.021	4.454	10/19/2021	4.34	Yes	76	4.738	0.1522	0	None	No	0.0006268	Param Inter 1 of 2
TDS (mg/L)	BY-GSA-MW-6	58	n/a	10/18/2021	77.3	Yes	68	n/a	n/a	10.29	n/a	n/a	0.0004142	NP Inter (normality) 1 of 2

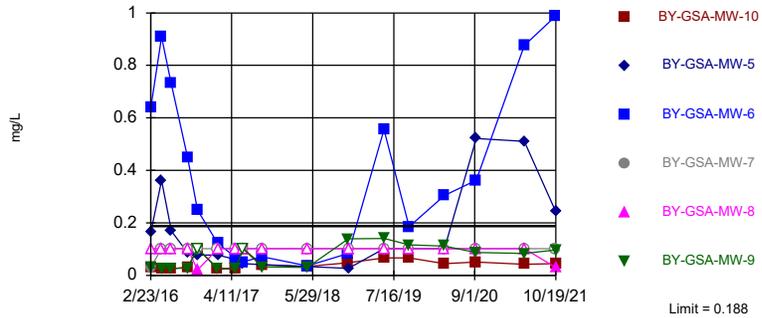
# Interwell Prediction Limit - All Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	TransformAlpha	Method
Boron (mg/L)	BY-GSA-MW-10	0.188	n/a	10/19/2021	0.0444J	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>0.188</b>	<b>n/a</b>	<b>10/19/2021</b>	<b>0.243</b>	<b>Yes</b>	<b>68</b>	<b>n/a</b>	<b>n/a</b>	<b>79.41</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0004142 NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>0.188</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>0.987</b>	<b>Yes</b>	<b>68</b>	<b>n/a</b>	<b>n/a</b>	<b>79.41</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0004142 NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	BY-GSA-MW-7	0.188	n/a	10/18/2021	0.1015ND	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-8	0.188	n/a	10/19/2021	0.0303J	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-9	0.188	n/a	10/19/2021	0.0966J	No	68	n/a	n/a	79.41	n/a	n/a	0.0004142 NP Inter (NDs) 1 of 2
Calcium (mg/L)	BY-GSA-MW-10	2.049	n/a	10/19/2021	0.977	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
<b>Calcium (mg/L)</b>	<b>BY-GSA-MW-5</b>	<b>2.049</b>	<b>n/a</b>	<b>10/19/2021</b>	<b>2.75</b>	<b>Yes</b>	<b>68</b>	<b>1.496</b>	<b>0.2959</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254 Param Inter 1 of 2</b>
<b>Calcium (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>2.049</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>9.06</b>	<b>Yes</b>	<b>68</b>	<b>1.496</b>	<b>0.2959</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.001254 Param Inter 1 of 2</b>
Calcium (mg/L)	BY-GSA-MW-7	2.049	n/a	10/18/2021	1.53	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-8	2.049	n/a	10/19/2021	1.01	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-9	2.049	n/a	10/19/2021	1.75	No	68	1.496	0.2959	0	None	No	0.001254 Param Inter 1 of 2
Fluoride (mg/L)	BY-GSA-MW-10	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-5	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-6	0.1	n/a	10/18/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-7	0.1	n/a	10/18/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-8	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
Fluoride (mg/L)	BY-GSA-MW-9	0.1	n/a	10/19/2021	0.1ND	No	72	n/a	n/a	59.72	n/a	n/a	0.0003696 NP Inter (NDs) 1 of 2
pH, Field (SU)	BY-GSA-MW-10	5.021	4.454	10/19/2021	4.48	No	76	4.738	0.1522	0	None	No	0.0006268 Param Inter 1 of 2
pH, Field (SU)	BY-GSA-MW-5	5.021	4.454	10/19/2021	4.79	No	76	4.738	0.1522	0	None	No	0.0006268 Param Inter 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>5.021</b>	<b>4.454</b>	<b>10/18/2021</b>	<b>5.28</b>	<b>Yes</b>	<b>76</b>	<b>4.738</b>	<b>0.1522</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268 Param Inter 1 of 2</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-7</b>	<b>5.021</b>	<b>4.454</b>	<b>10/18/2021</b>	<b>5.05</b>	<b>Yes</b>	<b>76</b>	<b>4.738</b>	<b>0.1522</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268 Param Inter 1 of 2</b>
pH, Field (SU)	BY-GSA-MW-8	5.021	4.454	10/19/2021	4.77	No	76	4.738	0.1522	0	None	No	0.0006268 Param Inter 1 of 2
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>5.021</b>	<b>4.454</b>	<b>10/19/2021</b>	<b>4.34</b>	<b>Yes</b>	<b>76</b>	<b>4.738</b>	<b>0.1522</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006268 Param Inter 1 of 2</b>
TDS (mg/L)	BY-GSA-MW-10	58	n/a	10/19/2021	39.3	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
TDS (mg/L)	BY-GSA-MW-5	58	n/a	10/19/2021	48.7	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
<b>TDS (mg/L)</b>	<b>BY-GSA-MW-6</b>	<b>58</b>	<b>n/a</b>	<b>10/18/2021</b>	<b>77.3</b>	<b>Yes</b>	<b>68</b>	<b>n/a</b>	<b>n/a</b>	<b>10.29</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0004142 NP Inter (normality) 1 of 2</b>
TDS (mg/L)	BY-GSA-MW-7	58	n/a	10/18/2021	42.7	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
TDS (mg/L)	BY-GSA-MW-8	58	n/a	10/19/2021	33.3	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2
TDS (mg/L)	BY-GSA-MW-9	58	n/a	10/19/2021	48	No	68	n/a	n/a	10.29	n/a	n/a	0.0004142 NP Inter (normality) 1 of 2

Exceeds Limit: BY-GSA-MW-5, BY-GSA-MW-6

Prediction Limit  
Interwell Non-parametric

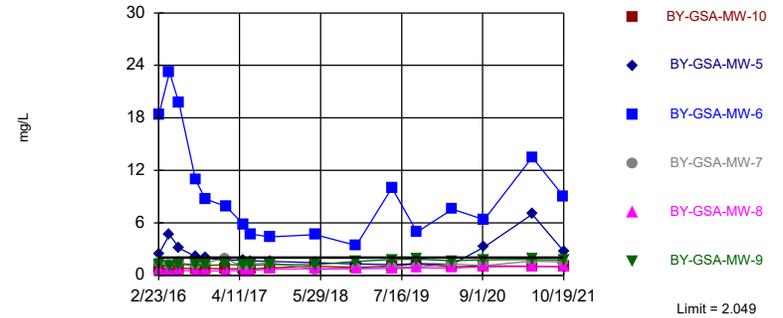


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 68 background values. 79.41% NDs. Annual per-constituent alpha = 0.004959. Individual comparison alpha = 0.0004142 (1 of 2). Comparing 6 points to limit.

Constituent: Boron Analysis Run 1/11/2022 5:22 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limit: BY-GSA-MW-5, BY-GSA-MW-6

Prediction Limit  
Interwell Parametric

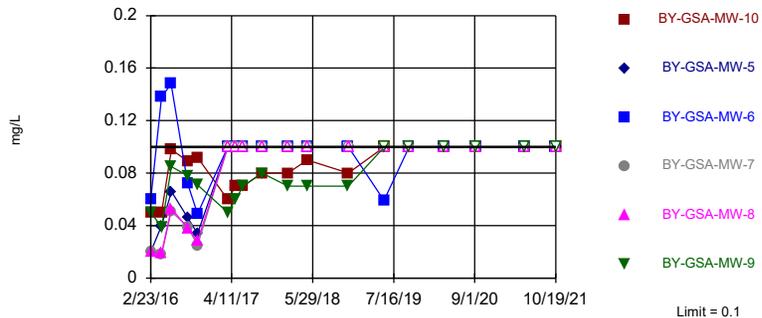


Background Data Summary: Mean=1.496, Std. Dev.=0.2959, n=68. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9808, critical = 0.95. Kappa = 1.871 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001254. Comparing 6 points to limit.

Constituent: Calcium Analysis Run 1/11/2022 5:22 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Within Limit

Prediction Limit  
Interwell Non-parametric

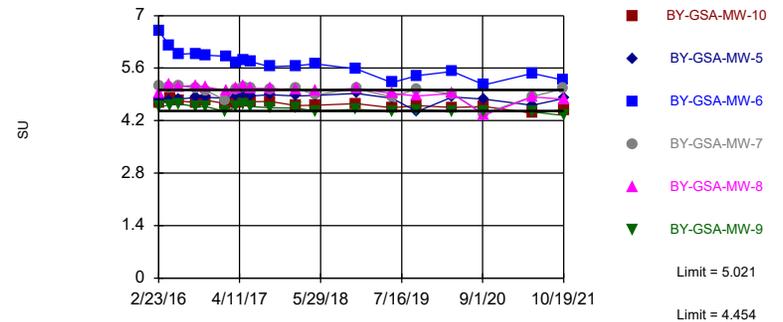


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 72 background values. 59.72% NDs. Annual per-constituent alpha = 0.004426. Individual comparison alpha = 0.0003696 (1 of 2). Comparing 6 points to limit.

Constituent: Fluoride Analysis Run 1/11/2022 5:22 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limits: BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-9

Prediction Limit  
Interwell Parametric

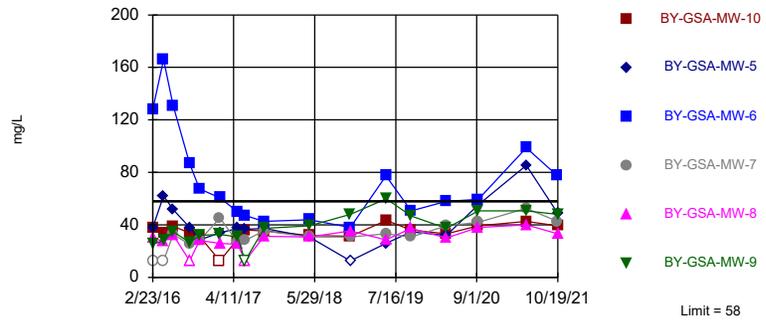


Background Data Summary: Mean=4.738, Std. Dev.=0.1522, n=76. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.972, critical = 0.957. Kappa = 1.861 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0006268. Comparing 6 points to limit.

Constituent: pH, Field Analysis Run 1/11/2022 5:22 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

Exceeds Limit: BY-GSA-MW-6

### Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 68 background values. 10.29% NDs. Annual per-constituent alpha = 0.004959. Individual comparison alpha = 0.0004142 (1 of 2). Comparing 6 points to limit.

Constituent: TDS Analysis Run 1/11/2022 5:22 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-2 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-10	BY-GSA-MW-9
2/23/2016	0.0212 (J)	<0.1015	0.163	0.638	0.0252 (J)	0.0314 (J)	<0.1015	0.0294 (J)	0.0297 (J)
4/18/2016			0.361	0.908		<0.1015	<0.1015		
4/19/2016	<0.1015	<0.1015			<0.1015			0.0257 (J)	0.0269 (J)
6/6/2016	<0.1015			0.733		<0.1015			
6/7/2016		<0.1015	0.169		0.0202 (J)		<0.1015	0.0257 (J)	0.0271 (J)
8/30/2016	<0.1015	<0.1015	0.0858 (J)	0.448	<0.1015	<0.1015	<0.1015	0.0317 (J)	0.0272 (J)
10/18/2016	<0.1015	<0.1015	0.0778 (J)	0.249	<0.1015	<0.1015	0.0207 (J)	<0.1015	<0.1015
1/30/2017						<0.1015		0.0243 (J)	0.0269 (J)
1/31/2017	<0.1015	<0.1015	0.077 (J)	0.121	<0.1015		<0.1015		
5/2/2017	<0.1015	<0.1015	0.0602 (J)	0.0695 (J)	<0.1015	<0.1015	<0.1015	0.0259 (J)	0.027 (J)
6/6/2017	<0.1015	<0.1015	0.0442 (J)	0.0509 (J)	<0.1015				
6/7/2017						<0.1015	<0.1015	<0.1015	<0.1015
9/12/2017				0.0709 (J)		<0.1015			
9/13/2017	<0.1015	<0.1015	0.0411 (J)		<0.1015		<0.1015	0.0394 (J)	0.032 (J)
5/1/2018		<0.1015		0.0365 (J)	<0.1015	<0.1015		0.0338 (J)	0.0302 (J)
5/2/2018	0.0362 (J)		0.0334 (J)				<0.1015		
11/26/2018				0.0836 (J)				0.0484 (J)	0.139
11/27/2018	0.11	<0.1015	0.0265 (J)		0.0207 (J)	<0.1015	<0.1015		
5/28/2019			<0.1015	0.556		<0.1015	<0.1015		
5/29/2019	0.188	<0.1015			<0.1015			0.0669 (J)	0.141
10/2/2019	0.097 (J)	<0.1015	<0.1015	0.186	<0.1015	<0.1015	<0.1015	0.0671 (J)	0.116
3/30/2020			<0.1015	0.304		<0.1015	<0.1015		
3/31/2020	0.157	<0.1015			<0.1015			0.0442 (J)	0.112
9/8/2020			0.521	0.362		<0.1015	<0.1015		
9/9/2020	0.0999 (J)	<0.1015			<0.1015			0.0509 (J)	0.0873 (J)
5/11/2021		<0.1015			<0.1015				
5/12/2021	0.0841 (J)		0.511	0.876		<0.1015	<0.1015	0.0423 (J)	0.0834 (J)
10/18/2021		<0.1015		0.987		<0.1015			
10/19/2021	0.0708 (J)		0.243		<0.1015		0.0303 (J)	0.0444 (J)	0.0966 (J)

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-4 (bg)
2/23/2016	0.0257 (J)
4/18/2016	
4/19/2016	<0.1015
6/6/2016	<0.1015
6/7/2016	
8/30/2016	<0.1015
10/18/2016	0.022 (J)
1/30/2017	
1/31/2017	<0.1015
5/2/2017	<0.1015
6/6/2017	<0.1015
6/7/2017	
9/12/2017	<0.1015
9/13/2017	
5/1/2018	<0.1015
5/2/2018	
11/26/2018	<0.1015
11/27/2018	
5/28/2019	<0.1015
5/29/2019	
10/2/2019	<0.1015
3/30/2020	
3/31/2020	<0.1015
9/8/2020	<0.1015
9/9/2020	
5/11/2021	<0.1015
5/12/2021	
10/18/2021	<0.1015
10/19/2021	

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-2 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-10	BY-GSA-MW-9
2/23/2016	1.28	1.77	2.42	18.3	1.11	1.4	0.618	0.795	1.15
4/18/2016			4.65	23.2		1.2	0.505		
4/19/2016	1.19	1.68			1.09			0.761	1.04
6/6/2016	1.19			19.7		1.48			
6/7/2016		1.68	3.1		1.16		0.587	0.799	1.22
8/30/2016	1.11	1.62	2.19	10.9	1.08	1.13	0.495 (J)	0.788	1.18
10/18/2016	1.04	1.53	1.97	8.74	1.03	1.45	0.503	0.788	1.12
1/30/2017						1.95		0.755	1.23
1/31/2017	1.19	1.65	1.73	7.89	1.23		0.554		
5/2/2017	1.05	1.58	1.74	5.81	1.28	0.908	0.548	0.763	1.2
6/6/2017	0.978	1.55	1.66	4.72	1.25				
6/7/2017						1.29	0.545	0.706	1.17
9/12/2017				4.39		1.44			
9/13/2017	1.14	1.71	1.61		1.6		0.723	0.873	1.25
5/1/2018		1.76		4.66	1.58	0.695		1.05	1.25
5/2/2018	1.64		1.44				0.751		
11/26/2018				3.41				0.922	1.61
11/27/2018	2.01	1.69	1.3		1.49	0.798	0.743		
5/28/2019			1.25	10		0.973	0.789		
5/29/2019	1.85	1.74			1.59			1.07	1.8
10/2/2019	1.55	1.86	1.33	4.94	1.7	0.929	0.882	1.32	1.85
3/30/2020			1.26	7.56		1.32	0.841		
3/31/2020	1.96	1.92			1.43			0.98	1.67
9/8/2020			3.24	6.38		1.12	0.981		
9/9/2020	1.43	1.97			1.5			1.1	1.79
5/11/2021		2.06			1.39				
5/12/2021	1.34		7	13.5		1.63	1.02	1.06	1.82
10/18/2021		2.1		9.06		1.53			
10/19/2021	1.17		2.75		1.32		1.01	0.977	1.75

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-4 (bg)
2/23/2016	1.42
4/18/2016	
4/19/2016	1.31
6/6/2016	1.35
6/7/2016	
8/30/2016	1.31
10/18/2016	1.22
1/30/2017	
1/31/2017	1.36
5/2/2017	1.24
6/6/2017	1.28
6/7/2017	
9/12/2017	1.47
9/13/2017	
5/1/2018	1.47
5/2/2018	
11/26/2018	1.52
11/27/2018	
5/28/2019	1.6
5/29/2019	
10/2/2019	1.7
3/30/2020	
3/31/2020	1.78
9/8/2020	1.94
9/9/2020	
5/11/2021	1.93
5/12/2021	
10/18/2021	2.01
10/19/2021	

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-2 (bg)	BY-GSA-MW-10	BY-GSA-MW-7	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-9	BY-GSA-MW-8
2/23/2016	0.03 (J)	0.02 (J)	0.05 (J)	0.02 (J)	0.02 (J)	0.02 (J)	0.06 (J)	0.05 (J)	0.02 (J)
4/18/2016				0.018 (J)		0.04 (J)	0.138 (J)		0.019 (J)
4/19/2016	0.023 (J)	0.021 (J)	0.05 (J)		0.015 (J)			0.039 (J)	
6/6/2016	0.062 (J)			0.051 (J)	0.05 (J)		0.148 (J)		
6/7/2016		0.06 (J)	0.098 (J)			0.066 (J)		0.085 (J)	0.053 (J)
8/30/2016	0.053 (J)	0.05 (J)	0.089 (J)	0.039 (J)	0.036 (J)	0.046 (J)	0.072 (J)	0.078 (J)	0.038 (J)
10/18/2016	0.042 (J)	0.04 (J)	0.092 (J)	0.025 (J)	0.025 (J)	0.034 (J)	0.049 (J)	0.071 (J)	0.028 (J)
3/20/2017	<0.1	<0.1			<0.1				
3/21/2017			0.06 (J)	<0.1		<0.1	<0.1	0.05 (J)	<0.1
5/2/2017	0.04 (J)	0.04 (J)	0.07 (J)	<0.1	<0.1	<0.1	<0.1	0.06 (J)	<0.1
6/6/2017	<0.1	0.04 (J)			<0.1	<0.1	<0.1		
6/7/2017			0.07 (J)	<0.1				0.07 (J)	<0.1
9/12/2017				<0.1	<0.1		<0.1		
9/13/2017	0.04 (J)	0.043 (J)	0.08 (J)			<0.1		0.08 (J)	<0.1
1/22/2018				<0.1			<0.1		
1/23/2018	<0.1	0.04 (J)	0.08 (J)		<0.1			0.07 (J)	
1/24/2018						<0.1			<0.1
5/1/2018		0.04 (J)	0.09 (J)	<0.1	<0.1		<0.1	0.07 (J)	
5/2/2018	0.04 (J)					<0.1			<0.1
11/26/2018			0.08 (J)		<0.1		<0.1	0.07 (J)	
11/27/2018	<0.1	<0.1		<0.1		<0.1			<0.1
5/28/2019				<0.1	<0.1	<0.1	0.0591 (J)		<0.1
5/29/2019	0.0502 (J)	<0.1	<0.1					<0.1	
10/2/2019	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3/30/2020				<0.1		<0.1	<0.1		<0.1
3/31/2020	<0.1	<0.1	<0.1		<0.1			<0.1	
9/8/2020				<0.1	<0.1	<0.1	<0.1		<0.1
9/9/2020	<0.1	<0.1	<0.1					<0.1	
5/11/2021		<0.1			<0.1				
5/12/2021	<0.1		<0.1	<0.1		<0.1	<0.1	<0.1	<0.1
10/18/2021				<0.1	<0.1		<0.1		
10/19/2021	<0.1	<0.1	<0.1			<0.1		<0.1	<0.1

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-3 (bg)
2/23/2016	0.02 (J)
4/18/2016	
4/19/2016	0.016 (J)
6/6/2016	
6/7/2016	0.052 (J)
8/30/2016	0.038 (J)
10/18/2016	0.03 (J)
3/20/2017	<0.1
3/21/2017	
5/2/2017	<0.1
6/6/2017	<0.1
6/7/2017	
9/12/2017	
9/13/2017	<0.1
1/22/2018	
1/23/2018	<0.1
1/24/2018	
5/1/2018	<0.1
5/2/2018	
11/26/2018	
11/27/2018	<0.1
5/28/2019	
5/29/2019	<0.1
10/2/2019	<0.1
3/30/2020	
3/31/2020	<0.1
9/8/2020	
9/9/2020	<0.1
5/11/2021	<0.1
5/12/2021	
10/18/2021	<0.1
10/19/2021	

# Prediction Limit

Constituent: pH, Field (SU) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-2 (bg)	BY-GSA-MW-5	BY-GSA-MW-3 (bg)	BY-GSA-MW-6	BY-GSA-MW-8	BY-GSA-MW-7	BY-GSA-MW-10	BY-GSA-MW-4 (bg)
2/23/2016	4.62	4.79	4.76	4.96	6.59	4.92	5.12	4.67	4.74
4/18/2016			4.75		6.21	5.16	5.11		
4/19/2016	4.74	4.84		4.94				4.79	4.86
6/6/2016	4.65				5.97		5.14		4.88
6/7/2016		4.81	4.77	4.96		5.11		4.73	
8/30/2016	4.64	4.76	4.82	4.92	5.99	5.14	5.06	4.68	4.91
10/18/2016	4.74	4.84	4.82	4.98	5.94	5.09	5.01	4.75	4.95
1/30/2017							4.74	4.65	
1/31/2017	4.54	4.6	4.8	4.74	5.92	5.01			4.71
3/20/2017	4.67	4.71		4.9					4.83
3/21/2017			4.86		5.74	5.07	5.04	4.68	
5/2/2017	4.79	4.8	4.89	4.98	5.82	5.13	5.08	4.75	4.93
6/6/2017	4.76	4.72	4.86	4.94	5.77				4.9
6/7/2017						5.05	5.07	4.7	
9/12/2017					5.64		5.03		4.82
9/13/2017	4.81	4.71	4.89	4.93		5.06		4.71	
1/22/2018					5.66		5.06		
1/23/2018	4.79	4.67		4.91				4.6	4.85
1/24/2018			4.86			5.02			
5/1/2018		4.61		4.87	5.71		4.89	4.61	4.8
5/2/2018	4.62		4.87			4.99			
11/26/2018					5.58			4.65	4.88
11/27/2018	4.73	4.72	4.92	4.94		5.06	5.05		
5/28/2019			4.8		5.21	4.92	4.83		4.73
5/29/2019	4.65	4.58		4.8				4.54	
10/2/2019	4.57	4.43	4.44	4.52	5.4	4.86	5.04	4.6	4.67
3/30/2020			4.83		5.51	4.92	4.91		
3/31/2020	4.64	4.6		4.4				4.55	4.51
9/8/2020			4.77		5.15	4.35	4.39		4.75
9/9/2020	4.65	4.67		4.76				4.58	
5/11/2021		4.29		4.53					4.67
5/12/2021	4.74		4.61		5.46	4.83	4.84	4.4	
10/18/2021				4.55	5.28		5.05		4.38
10/19/2021	4.67	4.6	4.79			4.77		4.48	

# Prediction Limit

Constituent: pH, Field (SU) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-9
2/23/2016	4.56
4/18/2016	
4/19/2016	4.62
6/6/2016	
6/7/2016	4.64
8/30/2016	4.58
10/18/2016	4.58
1/30/2017	4.44
1/31/2017	
3/20/2017	
3/21/2017	4.57
5/2/2017	4.64
6/6/2017	
6/7/2017	4.58
9/12/2017	
9/13/2017	4.54
1/22/2018	
1/23/2018	4.53
1/24/2018	
5/1/2018	4.46
5/2/2018	
11/26/2018	4.5
11/27/2018	
5/28/2019	
5/29/2019	4.45
10/2/2019	4.49
3/30/2020	
3/31/2020	4.45
9/8/2020	
9/9/2020	4.46
5/11/2021	
5/12/2021	4.43
10/18/2021	
10/19/2021	4.34

# Prediction Limit

Constituent: TDS (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell

Plant Barry Client: Southern Company Data: Barry Gypsum Pond

	BY-GSA-MW-1 (bg)	BY-GSA-MW-3 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-2 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-10	BY-GSA-MW-9
2/23/2016	26.7	40	38	128	30.7	<25	30	37.3	25.3
4/18/2016			62	166		<25	27.3		
4/19/2016	<25	32			<25			34	28
6/6/2016	32.7			131		32.7			
6/7/2016		38.7	51.3		35.3		32	38.7	34.7
8/30/2016	33.3	31.3	38	86.7	27.3	25.3	<25	34	26.7
10/18/2016	27.3	26.7	28.7	67.3	<25	28	28	31.3	32
1/30/2017						45.3		<25	32.7
1/31/2017	32	30	34	60.7	32.7		26		
5/2/2017	31.3	30.7	37.3	50	30.7	26.7	25.3	29.3	30.7
6/6/2017	35.3	32.7	36.7	47.3	34.7				
6/7/2017						28	<25	36	<25
9/12/2017				42.7		35.3			
9/13/2017	36.7	38	37.3		39.3		31.3	35.3	37.3
5/1/2018		35.3		44	42	30.7		32	39.3
5/2/2018	34		30.7				30.7		
11/26/2018				38				31.3	48
11/27/2018	50.7	36	<25		31.3	30.7	35.3		
5/28/2019			26	77.3		33.3	28.7		
5/29/2019	58	37.3			40			43.3	60
10/2/2019	46	36.7	34.7	50.7	41.3	30.7	37.3	36	46.7
3/30/2020			32	58		39.3	30		
3/31/2020	53.3	39.3			40			33.3	37.3
9/8/2020			55.3	59.3		42	38		
9/9/2020	42	42.7			40.7			39.3	50.7
5/11/2021		44			35.3				
5/12/2021	40.7		85.3	98.7		52.7	40	42.7	50.7
10/18/2021		36		77.3		42.7			
10/19/2021	40		48.7		36		33.3	39.3	48

# Prediction Limit

Constituent: TDS (mg/L) Analysis Run 1/11/2022 5:24 PM View: PLs Interwell  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

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	BY-GSA-MW-4 (bg)
2/23/2016	<25
4/18/2016	
4/19/2016	<25
6/6/2016	28.7
6/7/2016	
8/30/2016	25.3
10/18/2016	<25
1/30/2017	
1/31/2017	26
5/2/2017	<25
6/6/2017	42.7
6/7/2017	
9/12/2017	26.7
9/13/2017	
5/1/2018	34.7
5/2/2018	
11/26/2018	32.7
11/27/2018	
5/28/2019	31.3
5/29/2019	
10/2/2019	36
3/30/2020	
3/31/2020	36.7
9/8/2020	39.3
9/9/2020	
5/11/2021	46.7
5/12/2021	
10/18/2021	36
10/19/2021	

FIGURE H.

# Trend Test (Prediction Limit Exceedances) - Significant Results

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 5:33 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Chloride (mg/L)	BY-GSA-MW-2 (bg)	-0.4174	-89	-63	Yes	17	5.882	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-7	1.213	74	63	Yes	17	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-6	-0.1869	-143	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-7	-0.04186	-76	-74	Yes	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	BY-GSA-MW-9	-0.03751	-107	-74	Yes	19	0	n/a	n/a	0.01	NP

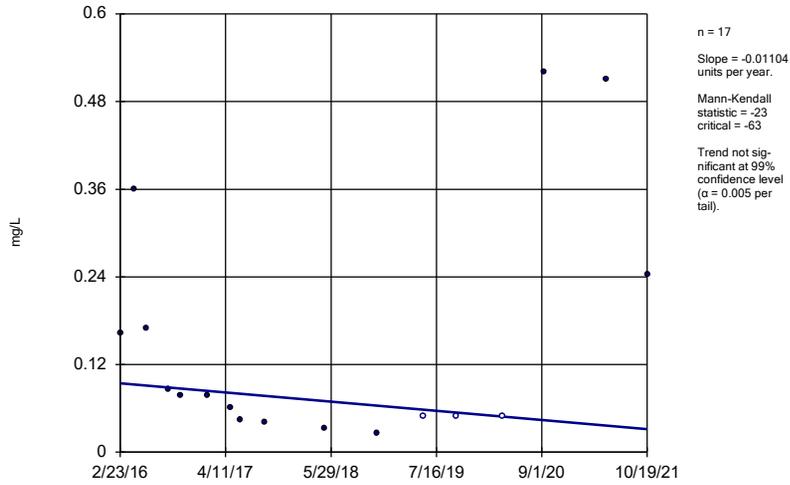
# Trend Test (Prediction Limit Exceedances) - All Results

Plant Barry    Client: Southern Company    Data: Barry Gypsum Pond    Printed 1/11/2022, 5:33 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)	BY-GSA-MW-5	-0.01104	-23	-63	No	17	17.65	n/a	n/a	0.01	NP
Boron (mg/L)	BY-GSA-MW-6	0.006412	2	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-5	-0.2139	-44	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-6	-1.581	-40	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-1 (bg)	-0.111	-23	-63	No	17	5.882	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-2 (bg)</b>	<b>-0.4174</b>	<b>-89</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>5.882</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	BY-GSA-MW-3 (bg)	-0.04943	-52	-63	No	17	5.882	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-4 (bg)	-0.06007	-54	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	BY-GSA-MW-6	0.1027	11	63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>BY-GSA-MW-7</b>	<b>1.213</b>	<b>74</b>	<b>63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-6</b>	<b>-0.1869</b>	<b>-143</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-7</b>	<b>-0.04186</b>	<b>-76</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>pH, Field (SU)</b>	<b>BY-GSA-MW-9</b>	<b>-0.03751</b>	<b>-107</b>	<b>-74</b>	<b>Yes</b>	<b>19</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
TDS (mg/L)	BY-GSA-MW-6	-8.487	-35	-63	No	17	0	n/a	n/a	0.01	NP

### Sen's Slope Estimator

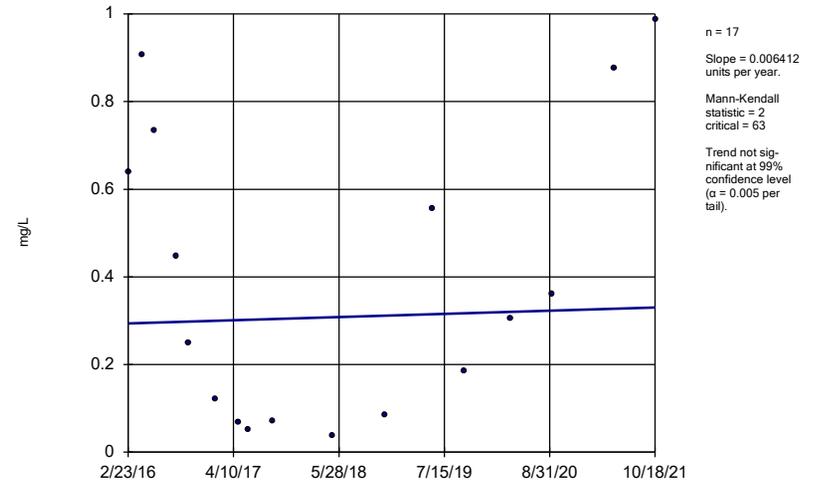
BY-GSA-MW-5



Constituent: Boron Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLs  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

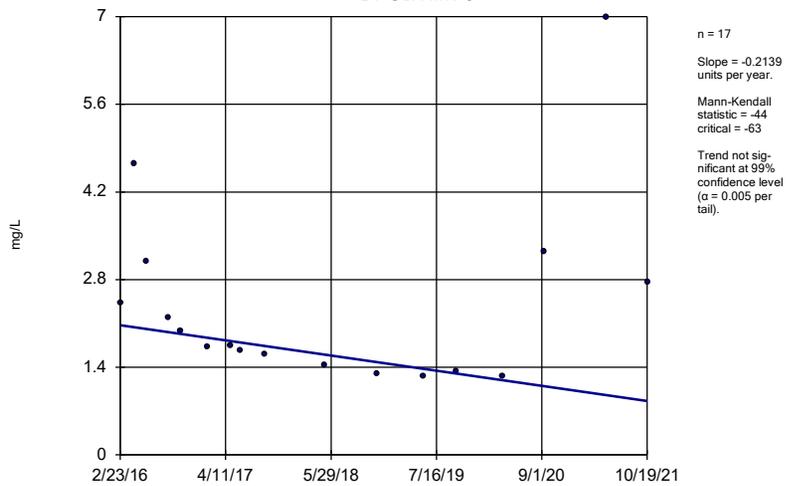
BY-GSA-MW-6



Constituent: Boron Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLs  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

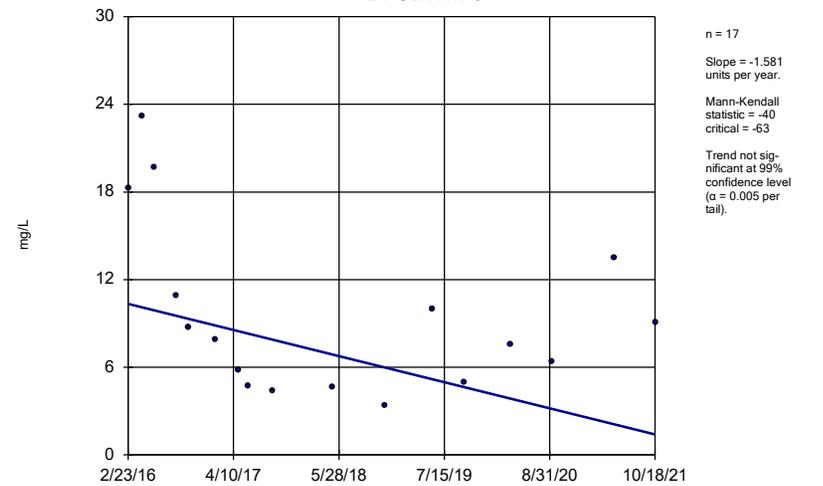
BY-GSA-MW-5



Constituent: Calcium Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLs  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

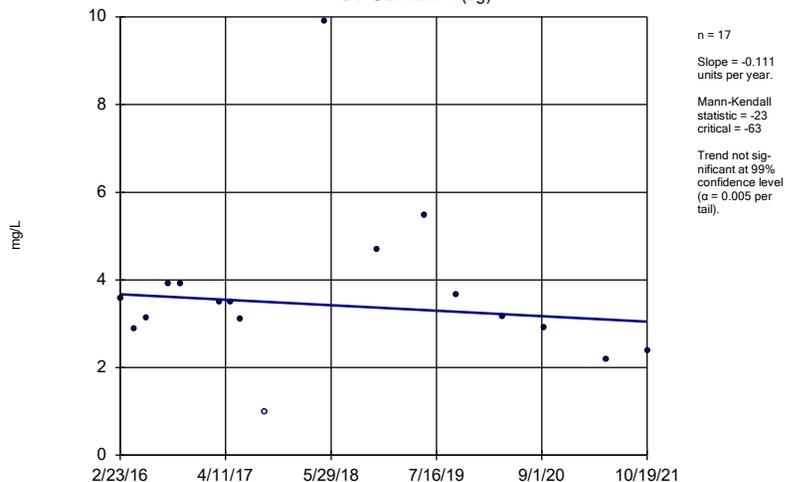
BY-GSA-MW-6



Constituent: Calcium Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLs  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

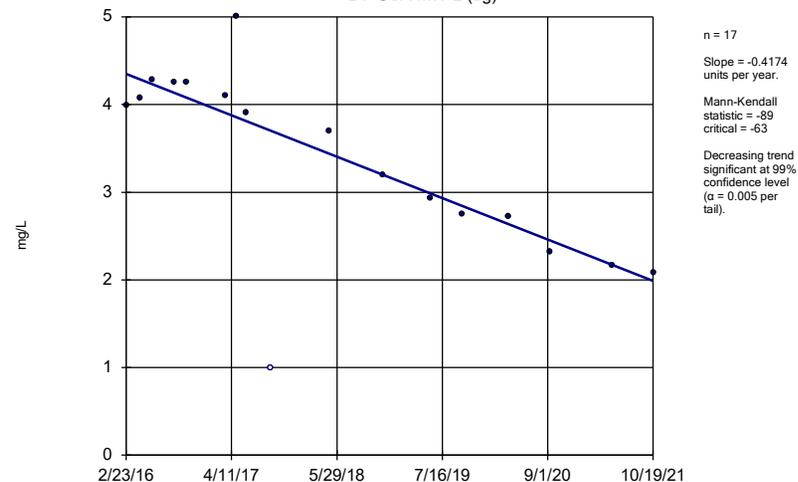
BY-GSA-MW-1 (bg)



Constituent: Chloride Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

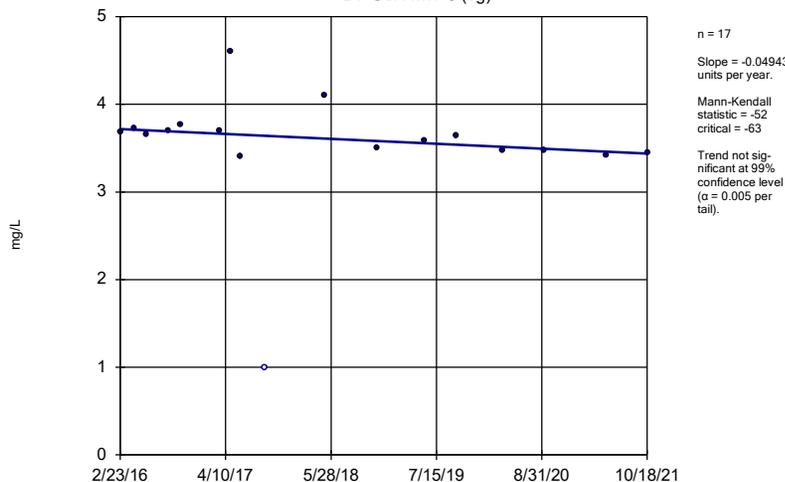
BY-GSA-MW-2 (bg)



Constituent: Chloride Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

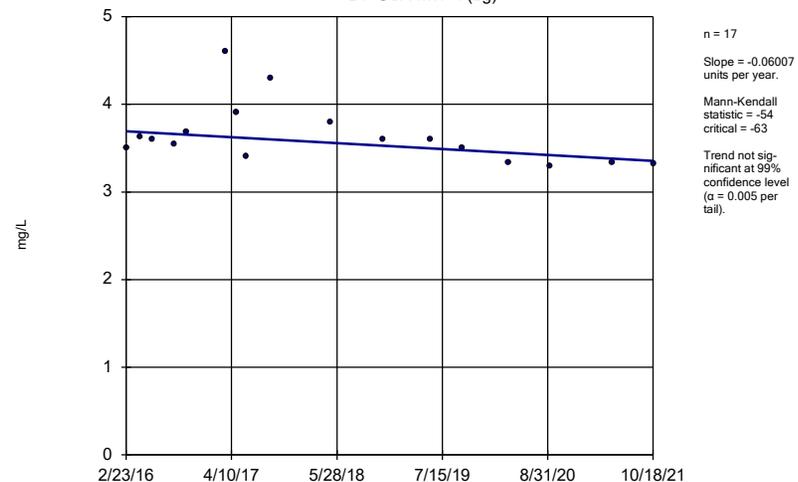
BY-GSA-MW-3 (bg)



Constituent: Chloride Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

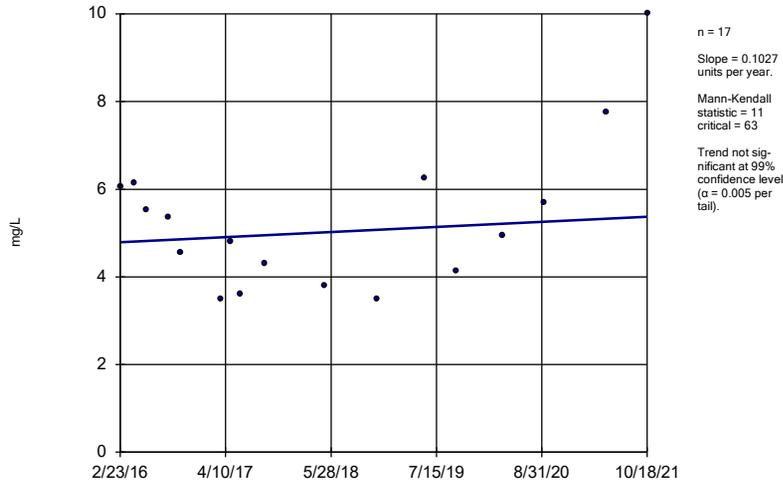
BY-GSA-MW-4 (bg)



Constituent: Chloride Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

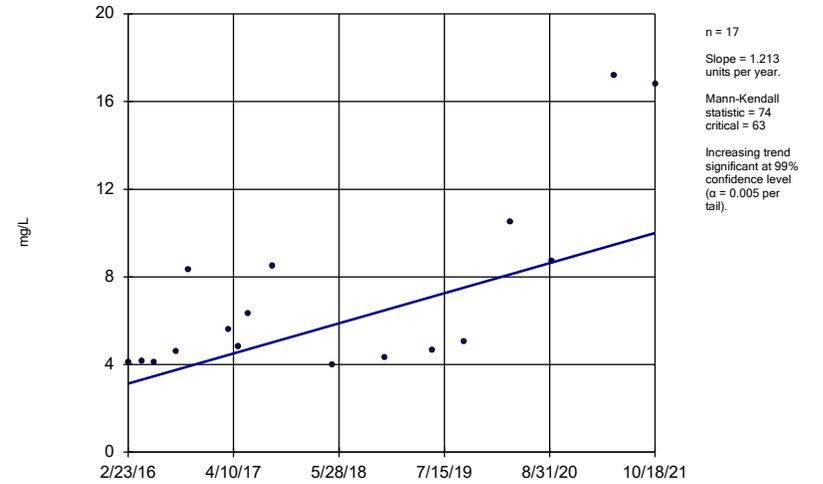
BY-GSA-MW-6



Constituent: Chloride Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

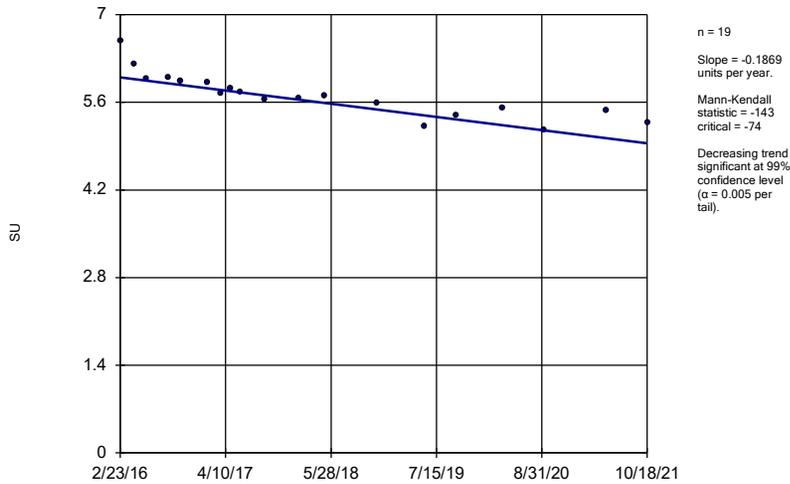
BY-GSA-MW-7



Constituent: Chloride Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

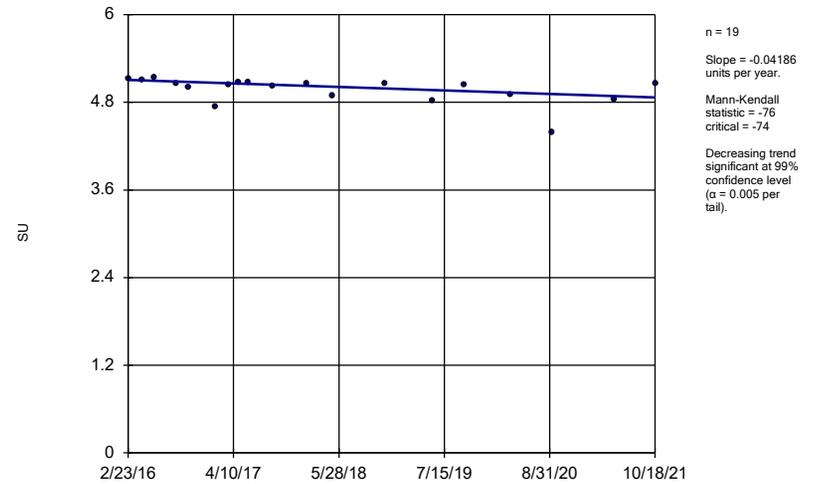
BY-GSA-MW-6



Constituent: pH, Field Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

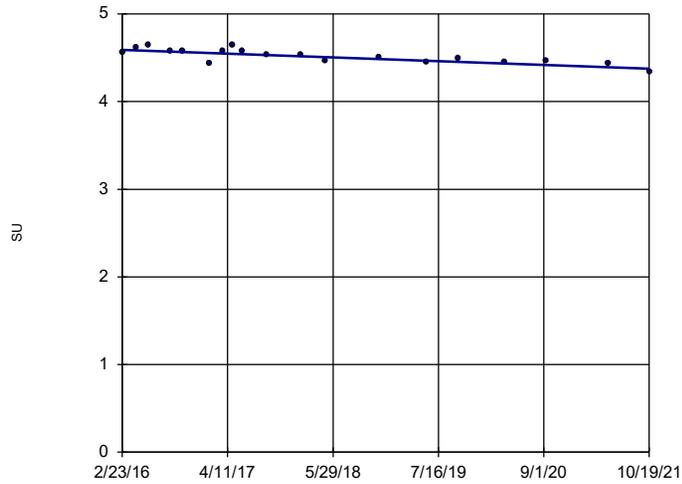
BY-GSA-MW-7



Constituent: pH, Field Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

BY-GSA-MW-9

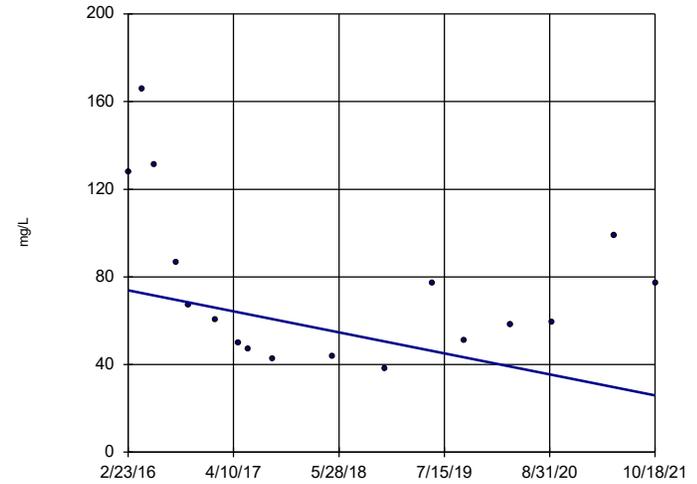


n = 19  
Slope = -0.03751  
units per year.  
Mann-Kendall  
statistic = -107  
critical = -74  
Decreasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: pH, Field Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Sen's Slope Estimator

BY-GSA-MW-6



n = 17  
Slope = -8.487  
units per year.  
Mann-Kendall  
statistic = -35  
critical = -63  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: TDS Analysis Run 1/11/2022 5:31 PM View: Trend Testing - PLS  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

FIGURE I.

# Upper Tolerance Limits Summary Table

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 4:06 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.00102	68	n/a	n/a	92.65	n/a	n/a	0.03056	NP Inter
Arsenic (mg/L)	0.0017	68	n/a	n/a	88.24	n/a	n/a	0.03056	NP Inter
Barium (mg/L)	0.183	68	n/a	n/a	0	n/a	n/a	0.03056	NP Inter
Beryllium (mg/L)	0.00102	68	n/a	n/a	91.18	n/a	n/a	0.03056	NP Inter
Cadmium (mg/L)	0.0002	68	n/a	n/a	98.53	n/a	n/a	0.03056	NP Inter
Chromium (mg/L)	0.01	68	n/a	n/a	83.82	n/a	n/a	0.03056	NP Inter
Cobalt (mg/L)	0.0157	68	n/a	n/a	57.35	n/a	n/a	0.03056	NP Inter
Combined Radium 226 + 228 (pCi/L)	3	68	n/a	n/a	0	n/a	n/a	0.03056	NP Inter
Fluoride (mg/L)	0.1	72	n/a	n/a	59.72	n/a	n/a	0.02489	NP Inter
Lead (mg/L)	0.00126	68	n/a	n/a	89.71	n/a	n/a	0.03056	NP Inter
Lithium (mg/L)	0.02	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter
Mercury (mg/L)	0.0005	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter
Molybdenum (mg/L)	0.0002	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter
Selenium (mg/L)	0.00102	68	n/a	n/a	98.53	n/a	n/a	0.03056	NP Inter
Thallium (mg/L)	0.0002	68	n/a	n/a	100	n/a	n/a	0.03056	NP Inter

FIGURE J.

<b>BARRY GYPSUM 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	0.0017	0.01
Barium	mg/L	0.183	2
Beryllium	mg/L	0.00102	0.004
Cadmium	mg/L	0.0002	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.0157	0.006
Combined Radium-226/228	pCi/L	3	5
Fluoride	mg/L	0.1	4
Lead	mg/L	0.00126	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.0002	0.1
Selenium	mg/L	0.00102	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 second semi-annual sampling event in 2021.

FIGURE K.

# Confidence Interval - All Results (No Significant)

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 4:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	BY-GSA-MW-10	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-5	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-6	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-7	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-8	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-9	0.00102	0.00102	0.006	No	8	0.00102	0	100	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-10	0.0002	0.000129	0.01	No	8	0.0001824	0.00003264	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-5	0.000501	0.0002	0.01	No	8	0.0002376	0.0001064	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-6	0.000821	0.0002	0.01	No	8	0.0002926	0.0002176	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-7	0.00023	0.000177	0.01	No	8	0.0002009	0.00001426	75	None	No	0.004	NP (normality)
Arsenic (mg/L)	BY-GSA-MW-8	0.0002	0.00016	0.01	No	8	0.000195	0.00001414	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-9	0.0002	0.000173	0.01	No	8	0.0001966	0.000009546	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	BY-GSA-PZ-11	0.0003569	0.00001893	0.01	No	4	0.0001602	0.00004655	50	Cohen's	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-10	0.132	0.115	2	No	8	0.1235	0.007982	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-5	0.181	0.0684	2	No	8	0.0946	0.03762	0	None	No	0.004	NP (normality)
Barium (mg/L)	BY-GSA-MW-6	0.1613	0.07881	2	No	8	0.12	0.0389	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-7	0.08712	0.04051	2	No	8	0.06381	0.02199	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-8	0.04827	0.03995	2	No	8	0.04411	0.003926	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-9	0.174	0.145	2	No	8	0.1595	0.01368	0	None	No	0.01	Param.
Barium (mg/L)	BY-GSA-PZ-11	0.0599	0.0499	2	No	4	0.05488	0.005688	0	None	No	0.0625	NP (normality)
Beryllium (mg/L)	BY-GSA-MW-5	0.00102	0.000575	0.004	No	8	0.0009644	0.0001573	87.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-6	0.00102	0.000763	0.004	No	8	0.0009879	0.00009086	87.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-7	0.00102	0.000464	0.004	No	8	0.0009505	0.0001966	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-5	0.001	0.0000867	0.005	No	8	0.0007783	0.0004107	75	None	No	0.004	NP (normality)
Cadmium (mg/L)	BY-GSA-MW-6	0.001	0.00011	0.005	No	8	0.000783	0.000402	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-10	0.01	0.000695	0.1	No	8	0.007686	0.004285	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-5	0.01	0.00221	0.1	No	8	0.007151	0.003934	62.5	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-6	0.01	0.00223	0.1	No	8	0.00551	0.003741	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-7	0.01	0.00131	0.1	No	8	0.007837	0.004004	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-8	0.01	0.00202	0.1	No	8	0.003246	0.002739	12.5	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-MW-9	0.01	0.000783	0.1	No	8	0.007699	0.00426	75	None	No	0.004	NP (normality)
Chromium (mg/L)	BY-GSA-PZ-11	0.003708	0.001887	0.1	No	4	0.002798	0.0004011	0	None	No	0.01	Param.
Cobalt (mg/L)	BY-GSA-MW-10	0.00258	0.002165	0.006	No	8	0.002373	0.0001958	0	None	No	0.01	Param.
Cobalt (mg/L)	BY-GSA-MW-5	0.005	0.00217	0.006	No	8	0.004255	0.001264	62.5	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-6	0.00552	0.00296	0.006	No	8	0.004374	0.001135	37.5	None	No	0.004	NP (Cohens/xfrm)
Cobalt (mg/L)	BY-GSA-MW-7	0.005	0.00164	0.006	No	8	0.004195	0.001492	75	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-8	0.005	0.000437	0.006	No	8	0.003866	0.0021	75	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-9	0.005	0.00156	0.006	No	8	0.004166	0.001545	75	None	No	0.004	NP (normality)
Cobalt (mg/L)	BY-GSA-PZ-11	0.005	0.00101	0.006	No	4	0.003045	0.002258	50	None	No	0.0625	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-10	1.936	0.7539	5	No	8	1.345	0.5574	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-5	0.8352	0.3925	5	No	8	0.6139	0.2088	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-6	2.179	0.5969	5	No	8	1.388	0.7463	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-7	1.135	0.012	5	No	8	0.5738	0.53	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-8	1.282	0.2035	5	No	8	0.7426	0.5086	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-9	2.635	1.355	5	No	8	1.995	0.6036	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-PZ-11	1.275	0.1359	5	No	4	0.7053	0.2508	0	None	No	0.01	Param.
Fluoride (mg/L)	BY-GSA-MW-10	0.1	0.08	4	No	8	0.09625	0.00744	75	None	No	0.004	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-5	0.1	0.1	4	No	8	0.1	0	100	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-6	0.1	0.0591	4	No	8	0.09489	0.01446	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-7	0.1	0.1	4	No	8	0.1	0	100	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-8	0.1	0.1	4	No	8	0.1	0	100	None	No	0.004	NP (NDs)
Fluoride (mg/L)	BY-GSA-MW-9	0.1	0.07	4	No	8	0.0925	0.01389	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-10	0.005	0.0001	0.015	No	8	0.003777	0.002265	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-5	0.005	0.0000994	0.015	No	8	0.003795	0.002232	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-6	0.005	0.00011	0.015	No	8	0.00379	0.00224	75	None	No	0.004	NP (normality)

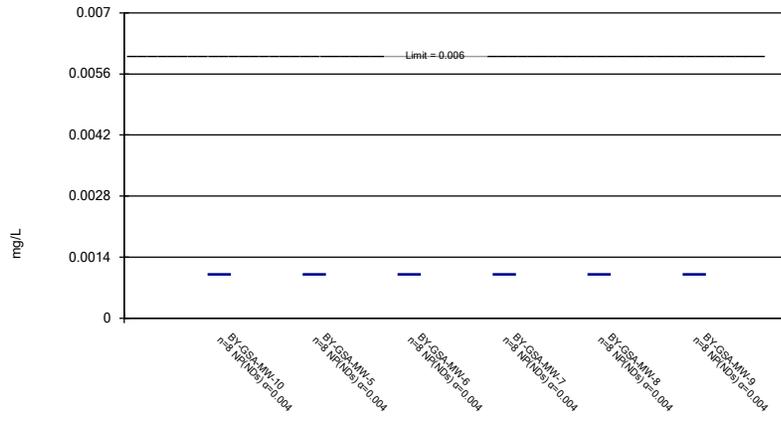
# Confidence Interval - All Results (No Significant)

Plant Barry Client: Southern Company Data: Barry Gypsum Pond Printed 1/11/2022, 4:24 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	BY-GSA-MW-7	0.005	0.0000798	0.015	No	8	0.00377	0.002278	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-MW-9	0.005	0.00025	0.015	No	8	0.003817	0.00219	75	None	No	0.004	NP (normality)
Lead (mg/L)	BY-GSA-PZ-11	0.005	0.00014	0.015	No	4	0.002587	0.002786	50	None	No	0.0625	NP (normality)
Mercury (mg/L)	BY-GSA-MW-8	0.0005	0.0005	0.002	No	8	0.0005	0	100	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-5	0.000203	0.0001	0.1	No	8	0.0001901	0.00003642	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-8	0.000203	0.00008	0.1	No	8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-10	0.001015	0.000778	0.05	No	8	0.0009623	0.00009866	75	None	No	0.004	NP (normality)
Selenium (mg/L)	BY-GSA-MW-5	0.0163	0.001015	0.05	No	8	0.003684	0.005314	62.5	None	No	0.004	NP (normality)
Selenium (mg/L)	BY-GSA-MW-6	0.009609	0.003128	0.05	No	8	0.006369	0.003057	0	None	No	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-8	0.001015	0.00052	0.05	No	8	0.0009531	0.000175	87.5	None	No	0.004	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-9	0.00128	0.001015	0.05	No	8	0.001069	0.0001031	75	None	No	0.004	NP (normality)
Selenium (mg/L)	BY-GSA-PZ-11	0.001267	0.0007962	0.05	No	4	0.00107	0.00006468	50	Cohen's	No	0.01	Param.

### Non-Parametric Confidence Interval

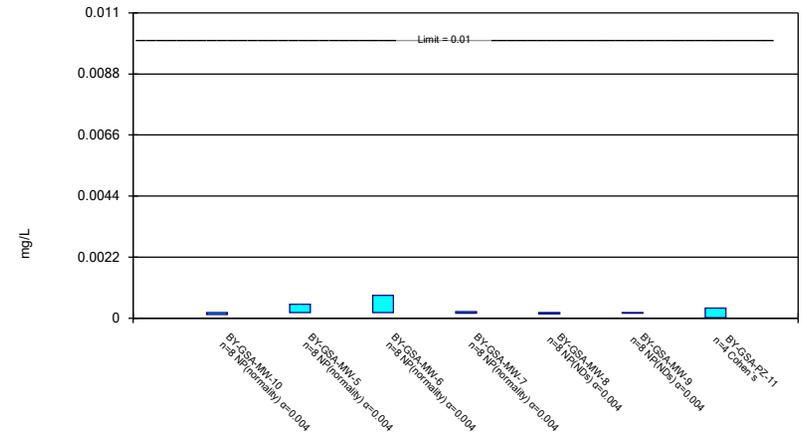
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric and Non-Parametric (NP) Confidence Interval

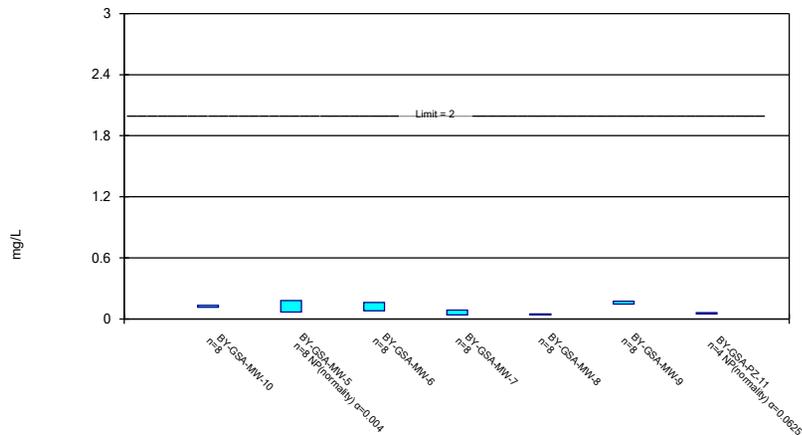
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric and Non-Parametric (NP) Confidence Interval

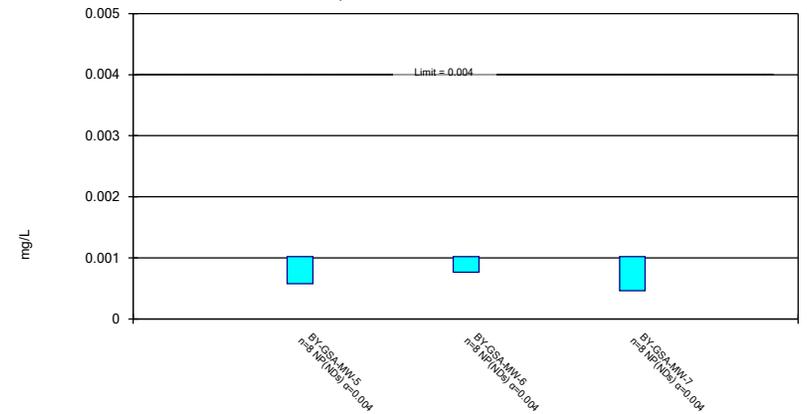
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

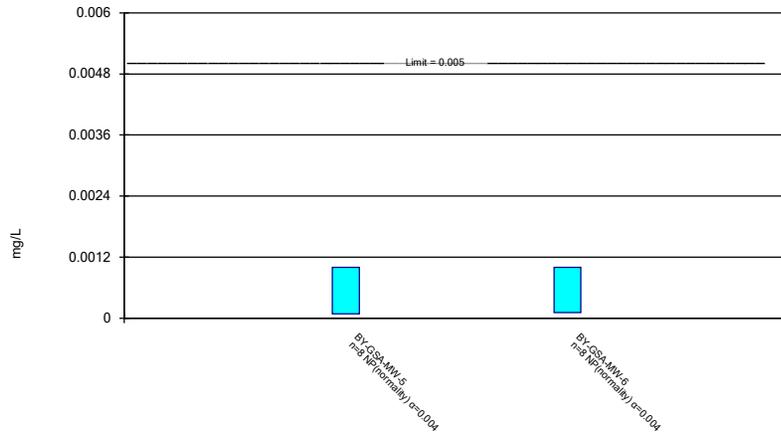
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

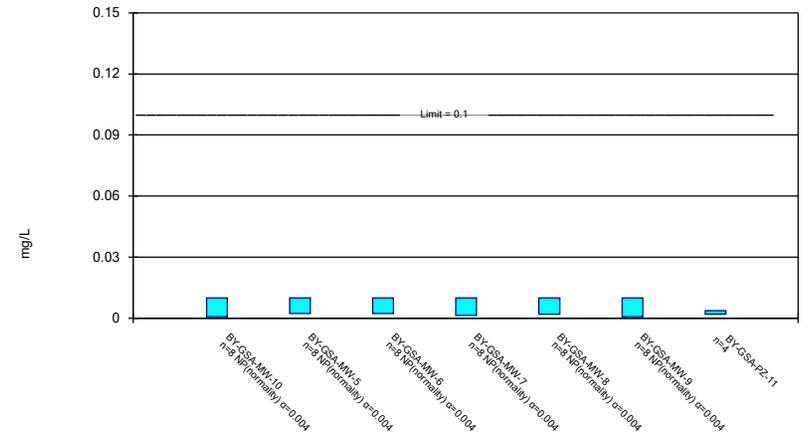
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric and Non-Parametric (NP) Confidence Interval

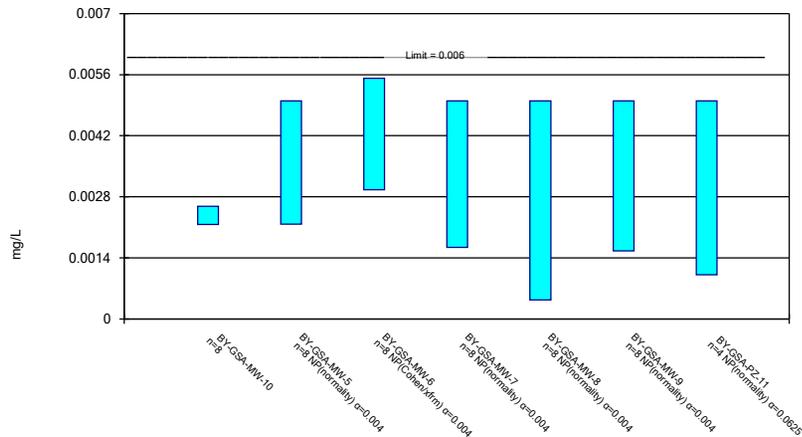
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric and Non-Parametric (NP) Confidence Interval

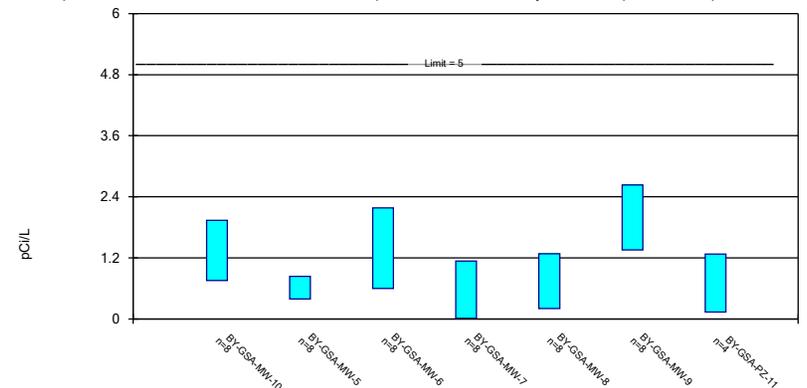
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric Confidence Interval

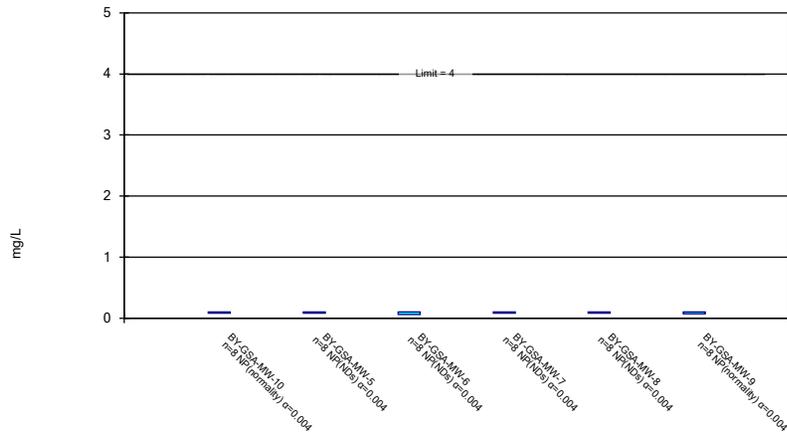
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

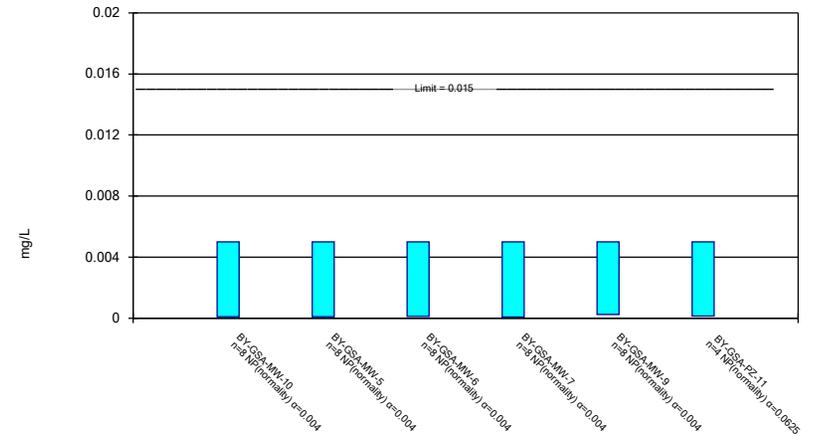
Compliance Limit is not exceeded.



Constituent: Fluoride Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

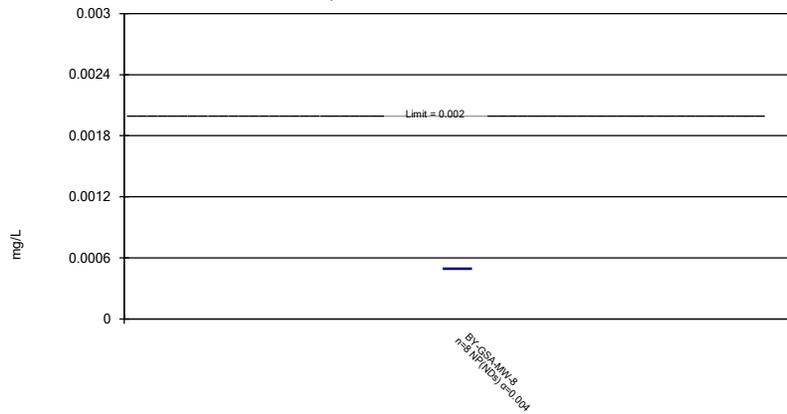
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

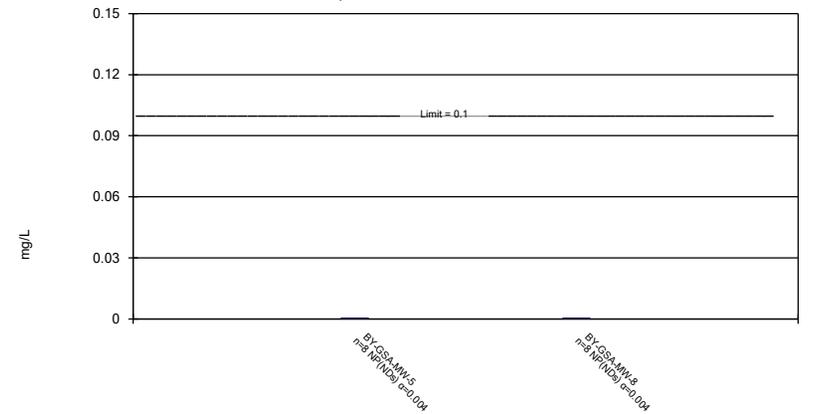
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Non-Parametric Confidence Interval

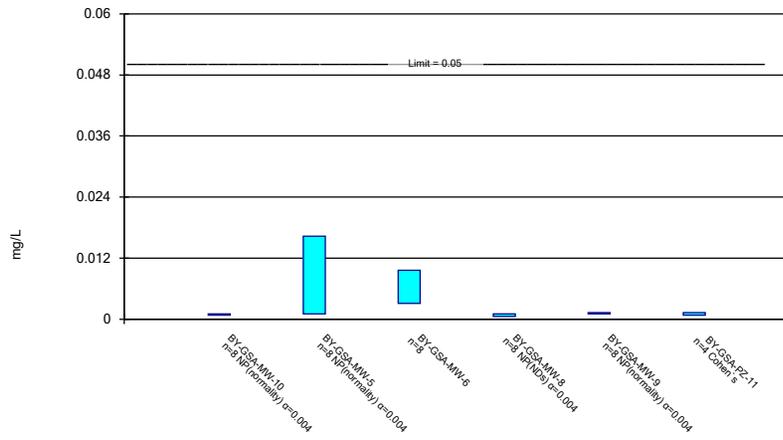
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
 Plant Barry Client: Southern Company Data: Barry Gypsum Pond

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 1/11/2022 4:23 PM View: Confidence Intervals  
Plant Barry Client: Southern Company Data: Barry Gypsum Pond