

**2019 ANNUAL GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT**

**ALABAMA POWER COMPANY
PLANT BARRY
GYPSUM POND**

January 31, 2020

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 Barry 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.

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EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D) and the State of Alabama's ADEM Admin. Code Ch. 335-13-15, this 2019 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2019 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 following summarizes results obtained from 2019 groundwater monitoring activities at the Site:

- 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 the 2019 semiannual monitoring events and in accordance with § 257.95(d) and ADEM Admin. Code r. 335-13-15-.06(6)(d), APC will continue assessment monitoring.

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 2020 and submit first semi-annual groundwater monitoring report of 2020 to the Department by July 31, 2020.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
1.0 Introduction.....	1
2.0 Site Location and Description.....	2
2.1 Site Geology and Hydrogeology.....	2
2.1.1 Physical Setting.....	2
2.1.2 Geology and Hydrogeology	2
2.1.3 Uppermost Aquifer	4
2.1.4 Flow Interpretation.....	5
2.2 Groundwater Monitoring System.....	5
2.2.1 Monitoring Wells	5
2.2.1.1 Upgradient Wells	6
2.2.1.2 Downgradient Wells	6
2.2.1.3 Piezometers	6
2.2.1.4 Monitoring Variance	6
2.2.2 Groundwater Monitoring History	7
2.2.2.1 Available Monitoring Data	7
2.2.2.2 Historical Groundwater Flow.....	7
2.2.3 Groundwater Sampling and Analysis.....	8
2.2.3.1 Sampling Event Summary	8
2.2.3.2 Groundwater Sample Collection	8
2.2.3.3 Sample Preservation and Handling	9
2.2.3.4 Chain of Custody	9
2.2.3.5 Laboratory Analysis.....	9
3.0 Groundwater Data Evaluation.....	10

3.1	Groundwater Elevation Data Evaluation	10
3.2	Groundwater Flow Velocity Calculations.....	10
4.0	Evaluation of Groundwater Quality Data	12
4.1	Data Validation – Quality Assurance/Quality Control	12
4.2	Statistical Methodology and Tests	13
4.2.1	Appendix III Evaluation.....	13
4.2.2	Appendix IV Evaluation	14
4.3	Statistical Exceedances	15
4.3.1	Appendix III Constituents	15
4.3.2	Appendix IV Constituents.....	16
5.0	Monitoring Program Status.....	17
6.0	Summary and Conclusions	18
7.0	References.....	19

FIGURES

- Figure 1 Site Location Map
- Figure 2 Site Topographic Map
- Figure 3 Site Geologic Map
- Figure 4 Geologic Cross-Section A-A'
- Figure 5 Monitoring Well Location Map
- Figure 6 Potentiometric Surface Map (May 28, 2019)
- Figure 7 Potentiometric Surface Map (October 2, 2019)

TABLES

- Table 1 Groundwater Monitoring Well Network Details
- Table 2 Monitoring Parameters and Reporting Limits
- Table 3 Groundwater Elevations Summary
- Table 4 Horizontal Groundwater Flow Velocity Calculation
- Table 5 Relative Percent Difference Calculations
- Table 6 Summary of Background Levels and Groundwater Protection Standards
- Table 7 First Semi-Annual Monitoring Event Analytical Summary
- Table 8 Second Semi-Annual Monitoring Event Analytical Summary

APPENDICES

- Appendix A Groundwater Analytical Data
- Appendix B Laboratory and Field Records
- Appendix C Statistical Analysis

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
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's ADEM Admin. Code Ch. 335-13-15, this 2019 Annual Groundwater Monitoring and Corrective Action Report has been prepared to document 2019 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 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 and in between Sister's 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.

2.1 SITE GEOLOGY AND HYDROGEOLOGY

2.1.1 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 comprised 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). Elevations near the Gypsum Pond slope from west to east and range from approximately 30 feet above mean seal level (MSL) to 10 feet MSL, respectively. **Figure 2, Site Topographic Map**, provides the topography of the site.

2.1.2 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 comprised 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 consisting 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 very 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, whereas 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 has also been described as a clayey sand or clayey gravel. Borings conducted at the site, largely, did not penetrate the vertical extent of this clay unit; however, limited data suggests this unit to be 10 feet in thickness or greater beneath the site. **Figure 4, Geologic Cross-Section A-A'**, illustrates 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 five to 35 gallons per minute per foot of drawdown (Reed and McCain, 1972).

The Watercourse Aquifer is comprised 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 comprised 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).

2.1.3 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 via 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. However, locally semi-confined to confined conditions may be present when a sufficient aquitard separates the aquifers or sand units.

2.1.4 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 via porous or Darcian flow mechanics through sands of the Watercourse Aquifer. A potentiometric surface map for the site is presented in a later section.

2.2 GROUNDWATER MONITORING SYSTEM

Pursuant to § 257.91 and ADEM Admin. Code r. 335-13-15-.06(2), Plant Barry has installed a groundwater monitoring system to monitor groundwater within the uppermost aquifer. The certified groundwater monitoring system for the Plant Barry Gypsum Pond is designed to monitor groundwater passing the waste boundary of the CCR unit within the uppermost aquifer. Wells were located to serve as upgradient, or downgradient monitoring locations based on groundwater flow direction as determined by the potentiometric surface elevation contour maps. Monitoring wells were screened in the Watercourse Aquifer. The Watercourse Aquifer is comprised of Quaternary alluvial and low terrace deposits consisting of interbedded sand, gravel, and clay (USGS, 1988). The monitoring systems are designed to monitor water quality as groundwater flows laterally from south to north across the site. 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.

2.2.1 Monitoring Wells

The groundwater monitoring network is comprised of 10 monitoring wells and 2 piezometers. The piezometers are utilized to enhance groundwater potentiometric surfaces and constrain flow direction.

Monitoring well locations and piezometers are presented on **Figure 5, Monitoring Well Location Map. Table 1, Groundwater Monitoring Well Network Details**, summarizes the monitoring well construction details and design purpose for the Plant Barry Gypsum Pond.

2.2.1.1 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.

2.2.1.2 Downgradient Wells

Monitoring well locations BY-GSA-MW-5 through BY-GSA-MW-10 are utilized as downgradient locations for the Gypsum Pond. Downgradient locations are located lateral to and north of the Gypsum Pond as determined by water level monitoring and potentiometric surface maps constructed for the site.

2.2.1.3 Piezometers

Locations BY-GSA-PZ-11 and BY-GSA-PZ-12 are utilized as water-level only piezometers. These locations help constrain Site groundwater flow conditions and potentiometric surface contour maps.

2.2.1.4 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; and
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.

2.2.2 Groundwater Monitoring History

Background samples were collected over the period of February 2016 to June 2017. Semi-annual groundwater monitoring was initiated at the Gypsum Pond in September 2017.

2.2.2.1 Available Monitoring Data

In accordance with § 257.94(b) and ADEM Admin. Code r. 335-13-15-.06(5)(b), eight (8) 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 January 2018, within 90 days of initiating the assessment monitoring program. Semi-annual assessment sampling has continued with sampling events in May and November of 2018 and May and October of 2019.

Tables summarizing analytical data from all previous groundwater monitoring events are included within **Appendix A, Groundwater Analytical Data**.

2.2.2.2 Historical Groundwater Flow

Historical potentiometric data from the site show that groundwater flow generally is a subdued representation of topography. Groundwater flows from south to north across the site. East of the Gypsum Pond, groundwater flow bends towards the northeast and the Plant Barry discharge canal.

Groundwater elevations fluctuate in response to rainfall. Seasonal variations of 3 to 4 feet are typical at the site. These fluctuations are consistent in monitoring wells across the site indicating a uniform response to rainfall events. Groundwater elevation data indicates that water levels tend to be higher in the early spring and lower during the fall and winter seasons.

2.2.3 Groundwater Sampling and Analysis

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 § 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.

2.2.3.1 Sampling Event Summary

Semi-annual Assessment Monitoring sampling events occurred in May 2019 and October 2019. Groundwater samples were analyzed for the full list of Appendix III and Appendix IV parameters during each Assessment Monitoring event. Analytical data from the groundwater monitoring events is included as **Appendix B, Laboratory and Field Records**, in accordance with the requirements of § 257.90(e)(3) and ADEM Admin. Code r. 335-13-15-.06(1)(f)3.

2.2.3.2 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 whereby samples are collected when field water quality parameters (pH, turbidity, conductivity, and dissolved oxygen) were measured to determine stabilization. Groundwater samples were collected when the following stabilization criteria were 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 B, Laboratory and Field Records**.

2.2.3.3 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 4°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.

2.2.3.4 Chain of Custody

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

2.2.3.5 Laboratory Analysis

Laboratory analyses was performed by the APC Environmental Laboratory (APCEL) in Calera, Alabama or Eurofins TestAmerica of Pensacola, Florida and St. Louis, Missouri. Both APCEL and TAL 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 at the Site. Groundwater data and chain of custody records for the monitoring events are presented in **Appendix B**.

3.0 GROUNDWATER DATA EVALUATION

3.1 GROUNDWATER ELEVATION DATA EVALUATION

During the May 2019 sampling event, depths to water ranged from 8.03 to 29.00 feet below top of casing and groundwater elevations ranged from 4.41 to 7.02 feet above mean seal level (ft MSL). During the October 2019 sampling event, depths to water ranged from 9.41 to 30.29 ft BTOC and groundwater elevations ranged from 3.68 to 5.37 ft MSL. **Figure 6, Potentiometric Surface Contour Map (May 28, 2019)** and **Figure 7, Potentiometric Surface Contour Map (October 2, 2019)** depict groundwater elevations and inferred groundwater flow direction from higher elevation to lower. As shown on **Figures 6 and 7** groundwater flows from south to north across the Site consistent with previous events. All available groundwater elevation data recorded since 2016 have been tabulated and included in **Table 3, Groundwater Elevations Summary**.

3.2 GROUNDWATER FLOW VELOCITY CALCULATIONS

Groundwater flow rates at the site were calculated based on hydraulic gradients, hydraulic conductivity, pump 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 4.27×10^{-3} cm/sec, which is in good agreement with long duration pump testing of the Watercourse Aquifer which revealed an average hydraulic conductivity of 3.3×10^{-3} cm/sec. The hydraulic gradient was calculated between well pairs shown on **Table 4, Horizontal Groundwater Flow Velocity Calculation**. The pumping test derived hydraulic conductivity value of 3.3×10^{-3} cm/sec or 9.4 ft/day was used because the larger volume of aquifer allows averaging of small-scale heterogeneities. Whereas slug tests are smaller in scale and might 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 = Groundwater flow velocity $\left(\frac{feet}{day}\right)$

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

i = Horizontal hydraulic gradient

n_e = Effective porosity

Using this equation, horizontal groundwater flow velocity is calculated for various areas of the site and is tabulated on **Table 4**. **Table 4** presents the horizontal flow velocity calculated using groundwater elevation data from the sampling events in 2019.

4.0 EVALUATION OF GROUNDWATER QUALITY DATA

4.1 DATA VALIDATION – QUALITY ASSURANCE/QUALITY CONTROL

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every group of 10 well samples. Equipment blanks and duplicate samples were also collected during each sampling event.

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 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 5, Relative Percent Difference Calculations**, provides the relative percent differences for sample and sample duplicates during 2019 sampling events. All RPD's were below 20% for the 2019 sampling events.

4.2 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).

4.2.1 Appendix III Evaluation

Intrawell prediction limits, combined with a 1-of-2 verification strategy, are used for chloride and sulfate 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, calcium, fluoride, pH, and TDS. 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% nondetects in the background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects the Kaplan-Meier non-detect adjustment is applied to the background data
- Non-parametric prediction limits are used on data containing greater than 50% non-detects.

4.2.2 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 upon 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; and
 - (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 will be updated every two years beginning with the most recent event (Fall 2019). The next update to GWPS will occur no earlier than the Fall of 2021. Data from upgradient wells collected in between updates may still be used to support ASDs if merited.

4.3 STATISTICAL EXCEEDANCES

Analytical data from the 2019 semi-annual monitoring events in May and October were statistically analyzed in accordance with the PE-certified Statistical Analysis Plan (October 2017) and updated in September 2019 data screening evaluation 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.

4.3.1 Appendix III Constituents

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

- BY-GSA-MW-1: Chloride, Sulfate
- BY-GSA-MW-6: Boron, Calcium, pH, TDS
- BY-GSA-MW-7: Sulfate
- BY-GSA-MW-9: Chloride, Sulfate, pH, TDS
- BY-GSA-MW-10: pH

BY-GSA-MW-1, listed above, is an upgradient well location. The SSIs for chloride and sulfate in BY-GSA-MW-1 are representative of variable groundwater quality upgradient of the Site and not reflective of Site impacts to groundwater. This is supported by potentiometric surface contour maps presented in **Figures 6 and 7** as well low concentrations of Appendix IV constituents.

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

- BY-GSA-MW-5: pH
- BY-GSA-MW-6: Calcium, pH
- BY-GSA-MW-7: pH
- BY-GSA-MW-9: pH
- BY-GSA-MW-10: Sulfate

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

4.3.2 Appendix IV Constituents

Table 6, 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 C**.

A review of the Sanitas results presented in **Appendix C** did not identify any Appendix IV SSLs above the GWPS during the first and 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 2019 semi-annual sampling events. Statistical reporting output is included as **Appendix C**.

5.0 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 2018 and 2019 and the site remained in assessment monitoring. Since no SSLs of Appendix IV constituents were 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).

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 was resampled on a semi-annual basis in 2019. The groundwater samples were analyzed for all Appendix III & IV parameters. Statistical evaluations of the May and October 2019 assessment monitoring data identified no 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 first semi-annual assessment monitoring event is planned for first quarter of 2020 and a groundwater monitoring report summarizing this event will be submitted by July 31, 2020. Additionally, during this monitoring period piezometer BY-GSA-PZ-11 will be converted to a downgradient monitoring well. This change will be submitted to the Department in an updated groundwater monitoring plan by April 15, 2020.

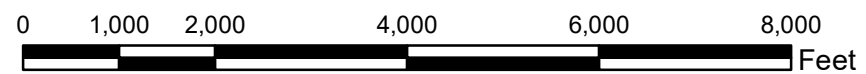
7.0 REFERENCES

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- 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
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- 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

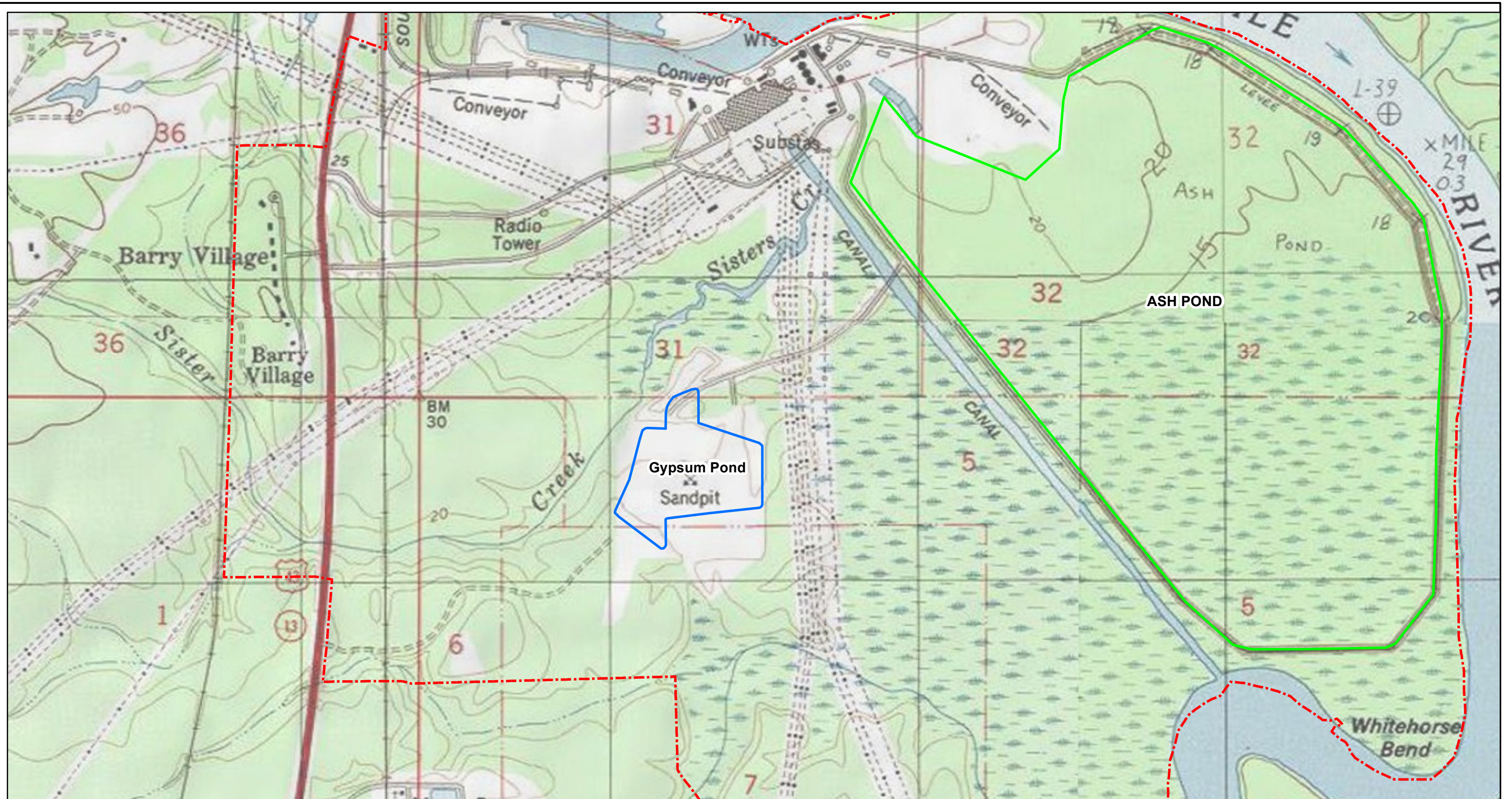


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CHECKED BY	GBD

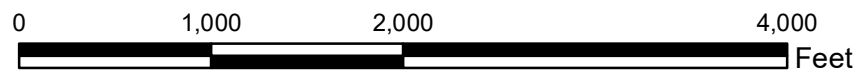
DRAWING TITLE
**SITE LOCATION MAP
 PLANT BARRY GYPSUM POND**

FIGURE NO
FIGURE 1





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



SCALE 1:12000

DATE 1/9/2020

DRAWN BY KWR

CHECKED BY GBD

DRAWING TITLE

SITE TOPOGRAPHIC MAP
PLANT BARRY GYPSUM POND

FIGURE NO

FIGURE 2





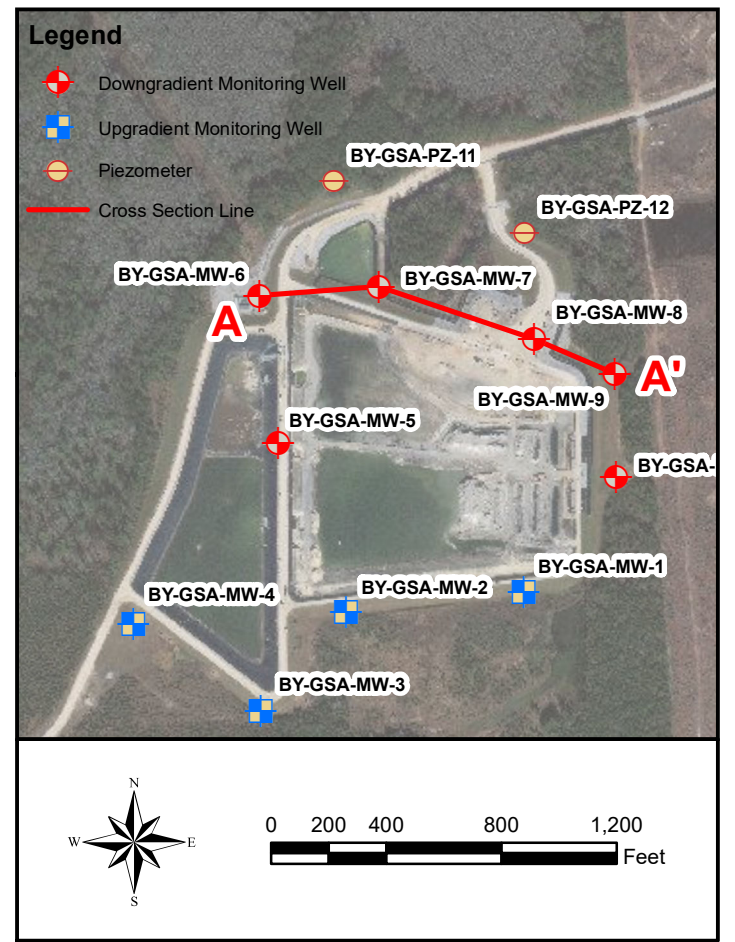
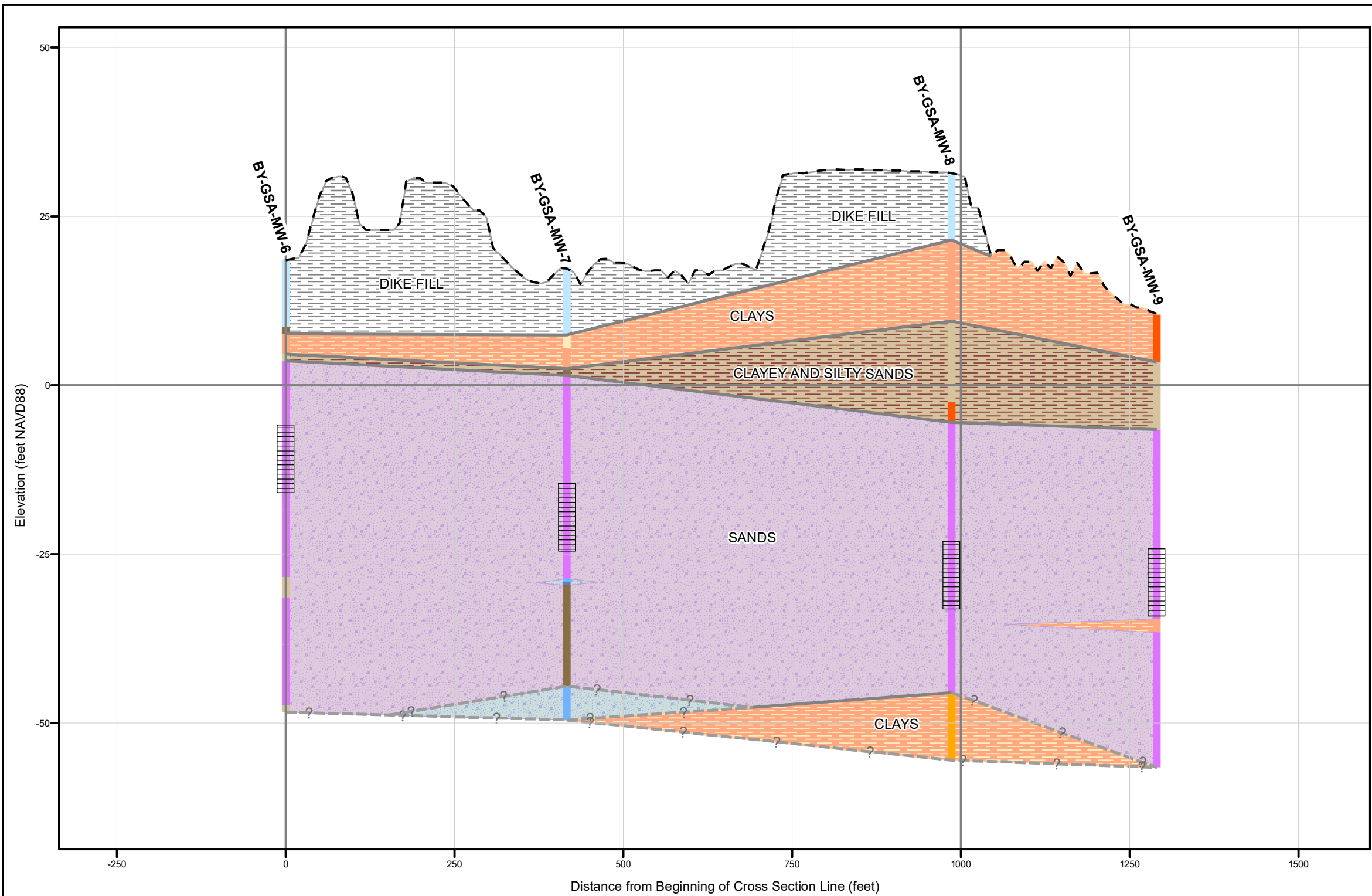
- Legend**
- Gypsum Pond
 - Property Boundary (Approximate)

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



SCALE	1:20000
DATE	12/12/2019
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE	
SITE GEOLOGIC MAP PLANT BARRY GYPSUM POND	
FIGURE NO	FIGURE 3
Southern Company	







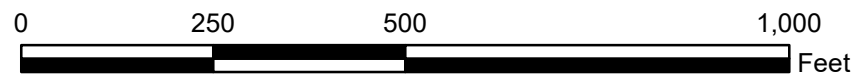
Notes: 1. Source of ground surface elevation data: Lidar
 2. NAVD88 indicates North American Vertical Datum of 1988.
 3. Vertical exaggeration: 25x.

Legend			Borehole Description			Geologic Unit			SCALE	DRAWING TITLE	
	Screened Interval		Hydroexcavation		Clayey Sand		Fill	As Shown	GEOLOGIC CROSS SECTION A - A' PLANT BARRY GYPSUM POND		
	Ground Surface Elevation		Fat Clay		Silty Sand		Clays	DATE			1/9/2020
	Unit Boundary (inferred)		Lean Clay		Well-graded and Poorly-graded Sand		Silts	DRAWN BY	KWR	FIGURE NO	
	Unit Boundary		Sandy Fat Clay		Clayey Gravel		Clayey and Silty Sands	CHECKED BY	GBD		FIGURE 4
			Sandy Lean Clay		Silty Gravel		Sands				
			Silt				Gravels				



Legend

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



SCALE 1:3000

DATE 12/18/2019

DRAWN BY KWR

CHECKED BY GBD

DRAWING TITLE

**MONITORING WELL LOCATION MAP
PLANT BARRY GYPSUM POND**







FIGURE NO

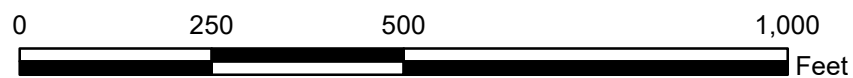
FIGURE 5






Legend

-  Downgradient Monitoring Well
-  Upgradient Monitoring Well
-  Piezometer
-  Potentiometric Surface Contour (ft NAVD)
-  Groundwater Flow Direction
-  Gypsum Pond









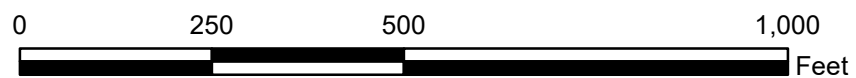
SCALE	1:3000
DATE	1/9/2020
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP MAY 28, 2019 PLANT BARRY GYPSUM POND	
FIGURE NO	FIGURE 6
 Southern Company	




Legend

-  Downgradient Monitoring Well
-  Upgradient Monitoring Well
-  Piezometer
-  Potentiometric Surface Contour (ft NAVD)
-  Groundwater Flow Direction
-  Gypsum Pond



SCALE	1:3000
DATE	12/18/2019
DRAWN BY	KWR
CHECKED BY	GBD

DRAWING TITLE	
POTENTIOMETRIC SURFACE CONTOUR MAP OCTOBER 2, 2019 PLANT BARRY GYPSUM POND	
FIGURE NO	FIGURE 7
	

Tables

**Table 1.
Groundwater Monitoring Well Network Details**

Well Name	Purpose	Installation Date	Northing	Easting	Ground Elevation	Top of Casing Elevation	Well Depth (ft.) Below Top of Casing	Top of Screen Elevation (feet MSL)	Bottom of Screen Elevation (feet MSL)	Screen Length
BY-GSA-MW-1	Upgradient	10/7/2015	362040.419	1808280.793	17.49	20.66	43.83	-15.94	-5.94	10
BY-GSA-MW-2	Upgradient	10/7/2015	361970.572	1807662.482	17.00	19.95	47.58	-20.18	-10.18	10
BY-GSA-MW-3	Upgradient	10/7/2015	361628.894	1807368.366	20.15	23.24	48.53	-17.98	-7.98	10
BY-GSA-MW-4	Upgradient	10/13/2015	361930.406	1806925.713	26.16	29.12	64.06	-27.50	-17.50	10
BY-GSA-MW-5	Downgradient	10/8/2015	362556.147	1807430.006	31.21	34.31	69.12	-27.51	-17.51	10
BY-GSA-MW-6	Downgradient	10/8/2015	363069.127	1807359.035	18.60	21.68	37.88	-8.88	1.12	10
BY-GSA-MW-7	Downgradient	10/8/2015	363103.505	1807778.082	17.46	20.59	45.53	-17.67	-7.67	10
BY-GSA-MW-8	Downgradient	10/8/2015	362919.540	1808314.524	31.51	34.36	68.84	-26.93	-16.93	10
BY-GSA-MW-9	Downgradient	10/8/2015	362798.723	1808598.555	10.44	13.32	46.14	-25.30	-15.30	10
BY-GSA-MW-10	Downgradient	10/8/2015	362443.556	1808600.090	14.65	17.61	44.69	-19.64	-9.64	10
BY-GSA-PZ-11*	Piezometer	10/8/2015	363464.097	1807619.818	23.56	25.92	57.92	-23.96	-13.96	10
BY-GSA-PZ-12*	Piezometer	10/8/2015	363285.151	1808280.669	14.14	17.43	43.48	-18.94	-8.94	10

Notes:

1. Northing and easting are in feet relative to the State Plane Alabama West North America Datum of 1983.
2. Elevations are in feet relative to the North American vertical Datum of 1988.
3. *Piezometers are utilized for water level readings only.
4. Top of screen and bottom of screen depths are calculated relative Top of Casing elevation and less the well sump length of 0.4'.
5. MSL - Mean Sea Level

**Table 2.
Monitoring Parameters and Reporting Limits**

Parameter	Analytical Method	Reporting Limit (mg/L)
Appendix III Parameters		
Boron	EPA 200.7/200.8	0.05
Calcium	EPA 200.7/200.8	0.25
Chloride	EPA 300.0	2
Fluoride	EPA 300.0	0.1
pH	None	None
Sulfate	EPA 300.0	5
Total Dissolved Solids (TDS)	SM 2540C	5
Appendix IV Parameters		
Antimony	EPA 200.7/200.8	0.0025
Arsenic	EPA 200.7/200.8	0.00125
Barium	EPA 200.7/200.8	0.0025
Beryllium	EPA 200.7/200.8	0.0025
Cadmium	EPA 200.7/200.8	0.0025
Chromium	EPA 200.7/200.8	0.0025
Cobalt	EPA 200.7/200.8	0.0025
Fluoride	EPA 300.0	0.1
Lead	EPA 200.7/200.8	0.00125
Lithium	EPA 200.7/200.8	0.0025
Mercury	EPA 7470A	0.0002
Molybdenum	EPA 200.7/200.8	0.015
Selenium	EPA 200.7/200.8	0.00125
Thallium	EPA 200.7/200.8	0.0005
Radium 226 & 228 combined	EPA 9315/9320	1 pCi/L

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter

**Table 3.
Groundwater Elevations Summary**

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
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
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
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
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
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
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
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
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
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
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
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
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

Notes:

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

**Table 4.
Horizontal Groundwater Flow Velocity Calculation**

SA01 2019								
Source	MW-2	MW-7	Distance	Hydraulic Gradient	Hydraulic Conductivity	Effective Porosity	Calculated Groundwater Flow Velocity	Calculated Groundwater Flow Velocity
5/28/2019	h ₁ (ft)	h ₂ (ft)	Δl (ft)	Δh/Δl (ft/ft)	K (ft/d)	n	(ft/d)	(ft/yr)
Pump Testing	6.32	4.84	1138.82	0.00130	9.40	0.25	0.049	17.8

SA02 2019								
Source	MW-2	MW-7	Distance	Hydraulic Gradient	Hydraulic Conductivity	Effective Porosity	Calculated Groundwater Flow Velocity	Calculated Groundwater Flow Velocity
10/2/2019	h ₁ (ft)	h ₂ (ft)	Δl (ft)	Δh/Δl (ft/ft)	K (ft/d)	n	(ft/d)	(ft/yr)
Pump Testing	4.71	3.84	1138.82	0.00076	9.40	0.25	0.029	10.5

Notes:

ft=feet

ft/d = feet/day

ft/ft = feet per foot

ft/yr = feet per year

**Table 5.
Relative Percent Difference Calculations**

2019 1st Semi-Annual Monitoring Event				
Parameter	Units	Monitoring Point Identification		Relative Percent Difference (RPD %)
		BY-GSA-MW-7	BY-GSA-MW-7 DUP	
Barium	mg/L	0.0524	0.0493	6.1
Calcium	mg/L	0.973	0.972	0.1
Chloride	mg/L	4.63	4.59	0.9
Sulfate	mg/L	4.86	4.74	2.5
TDS	mg/L	33.3	32.7	1.8

2019 2nd Semi-Annual Monitoring Event				
Parameter	Units	Monitoring Point Identification		Relative Percent Difference (RPD %)
		BY-GSA-MW-7	BY-GSA-MW-7 DUP	
Barium	mg/L	0.0492	0.0509	3.4
Calcium	mg/L	0.929	0.925	0.4
Chloride	mg/L	5.02	4.97	1.0
Sulfate	mg/L	4.60	4.63	0.7
TDS	mg/L	30.7	29.3	4.7

Table 6.
Summary of Background Levels and Groundwater Protection Standards

Analyte	Units	Background	Federal GWPS	State GWPS
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.01	0.01
Barium	mg/L	0.172; 0.183	2	2
Beryllium	mg/L	0.003	0.004	0.004
Cadmium	mg/L	0.001	0.005	0.005
Chromium	mg/L	0.01	0.1	0.1
Cobalt	mg/L	0.0157	0.006	0.0157
Combined Radium-226/228	pCi/L	3	5	5
Fluoride	mg/L	0.1	4	4
Lead	mg/L	0.005	0.015	0.015
Lithium	mg/L	0.02	0.04	0.04
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.1
Selenium	mg/L	0.01	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and ADEM Rule 335-13-15-.06(h)(i)
4. Where two numbers are present, they denote the different background levels for each of the two semiannual monitoring events in the order that they were determined.

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

		APPENDIX III						
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L
BY-GSA-MW-1	5/29/2019	0.188	1.85	5.48	0.0502(J)	4.65	23.3	58
BY-GSA-MW-2	5/29/2019	Non-Detect	1.59	2.93	Non-Detect	4.58	5.94	40
BY-GSA-MW-3	5/29/2019	Non-Detect	1.74	3.58	Non-Detect	4.8	7.81	37.3
BY-GSA-MW-4	5/28/2019	Non-Detect	1.6	3.6	Non-Detect	4.73	7.1	31.3
BY-GSA-MW-5	5/28/2019	Non-Detect	1.25	3.69	Non-Detect	4.8	6.5	26
BY-GSA-MW-6	5/28/2019	0.556	10	6.26	0.0591(J)	5.21	32.7	77.3
BY-GSA-MW-7	5/28/2019	Non-Detect	0.973	4.63	Non-Detect	4..83	4.86	33.3
BY-GSA-MW-8	5/28/2019	Non-Detect	0.789	4.43	Non-Detect	4.92	4.46	28.7
BY-GSA-MW-9	5/29/2019	0.141	1.8	8.56	Non-Detect	4.45	12.3	60
BY-GSA-MW-10	5/29/2019	0.0669(J)	1.07	4.34	Non-Detect	4.54	11.1	43.3

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. TDS - Total Dissolved Solids
5. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.

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

		APPENDIX IV						
WELL	SAMPLE DATE	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
GWPS		0.006	0.01	2	0.004	0.005	0.1	0.0157
UNITS		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
BY-GSA-MW-1	5/29/2019	Non-Detect	Non-Detect	0.166	Non-Detect	Non-Detect	Non-Detect	0.0109
BY-GSA-MW-2	5/29/2019	Non-Detect	Non-Detect	0.172	Non-Detect	Non-Detect	Non-Detect	0.00248(J)
BY-GSA-MW-3	5/29/2019	Non-Detect	Non-Detect	0.0831	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-4	5/28/2019	Non-Detect	Non-Detect	0.102	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-5	5/28/2019	Non-Detect	Non-Detect	0.0684	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-6	5/28/2019	Non-Detect	Non-Detect	0.17	Non-Detect	Non-Detect	0.00223(J)	0.00301(J)
BY-GSA-MW-7	5/28/2019	Non-Detect	Non-Detect	0.0524	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-8	5/28/2019	Non-Detect	Non-Detect	0.0412	Non-Detect	Non-Detect	0.00209(J)	Non-Detect
BY-GSA-MW-9	5/29/2019	Non-Detect	Non-Detect	0.155	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-10	5/29/2019	Non-Detect	Non-Detect	0.125	Non-Detect	Non-Detect	Non-Detect	0.00261(J)

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. TDS - Total Dissolved Solids
5. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.

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

APPENDIX IV									
WELL	SAMPLE DATE	Combined Radium 226 + 228	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		5	4	0.015	0.04	0.002	0.1	0.05	0.002
UNITS		pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
BY-GSA-MW-1	5/29/2019	1.57	0.0502(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-2	5/29/2019	0.579(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-3	5/29/2019	0.275(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-4	5/28/2019	0.474(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-5	5/28/2019	0.391(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-6	5/28/2019	2.08	0.0591(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0089(J)	Non-Detect
BY-GSA-MW-7	5/28/2019	-0.428 U	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-8	5/28/2019	0.311(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-9	5/29/2019	2.2	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-10	5/29/2019	0.548(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. TDS - Total Dissolved Solids
5. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.

**Table 8.
Second Semi-Annual Monitoring Event Analytical Summary**

		APPENDIX III						
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L
BY-GSA-MW-1	10/2/2019	0.097(J)	1.55	3.65	Non-Detect	4.57	17.5	46
BY-GSA-MW-2	10/2/2019	Non-Detect	1.7	2.75	Non-Detect	4.43	6.04	41.3
BY-GSA-MW-3	10/2/2019	Non-Detect	1.86	3.64	Non-Detect	4.52	7.62	36.7
BY-GSA-MW-4	10/2/2019	Non-Detect	1.7	3.5	Non-Detect	4.67	6.88	36
BY-GSA-MW-5	10/2/2019	Non-Detect	1.33	3.49	Non-Detect	4.44	6.55	34.7
BY-GSA-MW-6	10/2/2019	0.186	4.94	4.13	Non-Detect	5.4	15.9	50.7
BY-GSA-MW-7	10/2/2019	Non-Detect	0.929	5.02	Non-Detect	5.04	4.6	30.7
BY-GSA-MW-8	10/2/2019	Non-Detect	0.882	4.32	Non-Detect	4.86	4.96	37.3
BY-GSA-MW-9	10/2/2019	0.116	1.85	8.48	Non-Detect	4.49	11.6	46.7
BY-GSA-MW-10	10/2/2019	0.0671(J)	1.32	4.34	Non-Detect	4.6	13.2	36

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. TDS - Total Dissolved Solids
5. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.

Table 8.
Second Semi-Annual Monitoring Event Analytical Summary

		APPENDIX IV						
WELL	SAMPLE DATE	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
GWPS		0.006	0.01	2	0.004	0.005	0.1	0.0157
UNITS		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
BY-GSA-MW-1	10/2/2019	Non-Detect	Non-Detect	0.129	Non-Detect	Non-Detect	Non-Detect	0.0129
BY-GSA-MW-2	10/2/2019	Non-Detect	Non-Detect	0.183	Non-Detect	Non-Detect	Non-Detect	0.00244(J)
BY-GSA-MW-3	10/2/2019	Non-Detect	Non-Detect	0.089	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-4	10/2/2019	Non-Detect	Non-Detect	0.111	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-5	10/2/2019	Non-Detect	Non-Detect	0.0728	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-6	10/2/2019	Non-Detect	Non-Detect	0.0985	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-7	10/2/2019	Non-Detect	Non-Detect	0.0492	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-8	10/2/2019	Non-Detect	Non-Detect	0.0453	Non-Detect	Non-Detect	0.00223(J)	Non-Detect
BY-GSA-MW-9	10/2/2019	Non-Detect	Non-Detect	0.16	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-10	10/2/2019	Non-Detect	Non-Detect	0.136	Non-Detect	Non-Detect	Non-Detect	0.00262(J)

Notes:

1. J value indicates the result is greater that or equal to the Method Detection Limit (MDL) and less that the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. TDS - Total Dissolved Solids
5. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.

**Table 8.
Second Semi-Annual Monitoring Event Analytical Summary**

		APPENDIX IV							
WELL	SAMPLE DATE	Combined Radium 226 + 228	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		5	4	0.015	0.04	0.002	0.1	0.05	0.002
UNITS		pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
BY-GSA-MW-1	10/2/2019	0.905	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-2	10/2/2019	1.33	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-3	10/2/2019	0.458(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-4	10/2/2019	0.624(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-5	10/2/2019	0.954	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-6	10/2/2019	0.836	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00472(J)	Non-Detect
BY-GSA-MW-7	10/2/2019	0.430 U	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-8	10/2/2019	0.969	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-9	10/2/2019	2	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect
BY-GSA-MW-10	10/2/2019	2.19	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect

Notes:

1. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
2. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. TDS - Total Dissolved Solids
5. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.

Appendix A

Monitoring Network Status Summary

Well ID	Purpose	Summary of Sampling Events														
		February 23-24, 2016	April 18-19, 2016	June 6-8, 2016	August 30 - September 2, 2016	October 17-21, 2016	January 30 - February 2, 2017	March 20-24, 2017	May 2-5, 2017	June 5-9, 2017	September 12-15, 2017	January 22-27, 2018	April 30 - May 3, 2018	November 26-30, 2018	May 28-31, 2019	September 30 - October 4, 2019
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background Resample	Background	Background	Detection	Assessment	2018 Semi-Annual 01	2018 Semi-Annual 02	2019 Semi-Annual 01	2019 Semi-Annual 02
BY-GSA-MW-1	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-2	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-3	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-4	Upgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-5	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-6	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-7	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-8	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-9	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-MW-10	Downgradient	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-PZ-11*	Piezometer	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04
BY-GSA-PZ-12*	Piezometer	BKG01	BKG02	BKG03	BKG04	BKG05	BKG06	R06	BKG07	BKG08	DET01	S01	ASM01	ASM02	ASM03	ASM04

Abbreviations:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. N/A indicates the constituent was not analyzed during the sampling event.
4. J value indicates the result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL).
Values are displayed as less than the PQL with a J.
5. Non-Detect indicates the result was not detected above the MDL and is considered a non-detect.
6. GWPS is the Groundwater Protection Standard.
7. Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
8. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.

**Analytical Data Summary
Plant Barry Gypsum Pond
Alabama Power Company**

		APPENDIX III							APPENDIX IV														
WELL	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Combined Radium 226 + 228	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium
GWPS		N/R	N/R	N/R	4	N/R	N/R	N/R	0.006	0.01	2	0.004	0.005	0.1	0.0157	5	4	0.015	0.04	0.002	0.1	0.05	0.002
UNITS		mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
BY-GSA-MW-6	2/23/2016	0.638	18.3	6.06	0.06(J)	6.59	36.5	128	Non-Detect	Non-Detect	0.237	Non-Detect	Non-Detect	0.00209(J)	Non-Detect	1.2261	0.06(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0266	Non-Detect
BY-GSA-MW-6	4/18/2016	0.908	23.2	6.13	0.138(J)	6.21	80.2	166	Non-Detect	Non-Detect	0.263	0.000681(J)	Non-Detect	0.00324(J)	0.00338(J)	1.92351	0.138(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0529	Non-Detect
BY-GSA-MW-6	6/6/2016	0.733	19.7	5.52	0.148(J)	5.97	0.499(J)	131	0.000633(J)	Non-Detect	0.206	Non-Detect	Non-Detect	0.0031(J)	0.00361(J)	1.47	0.148(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0382	Non-Detect
BY-GSA-MW-6	8/30/2016	0.448	10.9	5.35	0.072(J)	5.99	27.8	86.7	Non-Detect	Non-Detect	0.165	Non-Detect	Non-Detect	0.00272(J)	Non-Detect	1.91	0.072(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.014	Non-Detect
BY-GSA-MW-6	10/18/2016	0.249	8.74	4.55	0.049(J)	5.94	22.5	67.3	Non-Detect	Non-Detect	0.148	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.966	0.049(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0103	Non-Detect
BY-GSA-MW-6	1/31/2017	0.121	7.89	n/a	n/a	5.92	n/a	60.7	0.000926(J)	Non-Detect	0.123	Non-Detect	Non-Detect	Non-Detect	Non-Detect	1.01	n/a	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.0104	Non-Detect
BY-GSA-MW-6	3/21/2017	n/a	n/a	3.3	Non-Detect	5.74	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Non-Detect	n/a	n/a	n/a	n/a	n/a	n/a
BY-GSA-MW-6	5/2/2017	0.0095(J)	5.81	4.8	Non-Detect	5.82	11	50	Non-Detect	Non-Detect	0.098	0.000704(J)	Non-Detect	Non-Detect	Non-Detect	1.41	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00778(J)	Non-Detect
BY-GSA-MW-6	6/6/2017	0.0509(J)	4.72	3.6	Non-Detect	5.77	10	47.3	Non-Detect	Non-Detect	0.0844	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.476	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00574(J)	Non-Detect
BY-GSA-MW-6	9/12/2017	0.0709(J)	4.39	4.3	Non-Detect	5.64	7.5	42.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Non-Detect	n/a	n/a	n/a	n/a	n/a	n/a
BY-GSA-MW-6	1/22/2018	n/a	n/a	n/a	Non-Detect	5.66	n/a	n/a	Non-Detect	Non-Detect	0.0593	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.814(U)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00287(J)	Non-Detect
BY-GSA-MW-6	5/1/2018	0.0365(J)	4.66	3.8	Non-Detect	5.71	8.5	44	Non-Detect	Non-Detect	0.081	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.931	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00367(J)	Non-Detect
BY-GSA-MW-6	11/26/2018	0.0836(J)	3.41	3.5	Non-Detect	5.58	7.4	38	Non-Detect	Non-Detect	0.0657	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.815	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00286(J)	Non-Detect
BY-GSA-MW-6	5/28/2019	0.556	10	6.20	0.0591(J)	5.21	32.7	77.3	Non-Detect	Non-Detect	0.17	Non-Detect	Non-Detect	0.00223(J)	0.00201(J)	2.06	0.0591(J)	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00891(J)	Non-Detect
BY-GSA-MW-6	10/2/2019	0.186	4.94	4.13	Non-Detect	5.4	15.9	50.7	Non-Detect	Non-Detect	0.0985	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.836	Non-Detect	Non-Detect	Non-Detect	Non-Detect	Non-Detect	0.00472(J)	Non-Detect

Appendix B

1st
Semi-Annual
Monitoring Event

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

Field Case Narrative



Plant Barry Gypsum Pond

2019 Compliance Event 1

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

Field quality control procedures were performed as follows:

- Blanks and Sample Duplicates were collected as described in the SAP.
- Calibration verification for all required field parameters were performed daily, before and after sample collection.

Alabama Power General Test Laboratory
744 County Road 87, GSC#8
Calera, AL 35040
(205) 664-6247 or 6171
FAX (205) 664-6108

Analytical Report



Sample Group : WMWBARG_1227

Project/Site : Barry Gypsum
Bucks, AL 36512

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

Attention : Dustin Brooks, Greg Dyer, & Lauren Parker

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

The following data has been reviewed and approved by:

Quality Control: Laura Midkiff
Digitally signed by Laura Midkiff
DN: cn=Laura Midkiff, o=Alabama Power
Company, ou=Environmental Affairs,
email=lbmidkif@southernco.com, c=US
Date: 2019.06.24 08:12:08 -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: 2019.06.26 08:35:20 -0500



Metals ICP

Barry Gypsum

WMWBARG_1227

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ12924	648147	WMWBARG_1227
AZ12925	648147	WMWBARG_1227
AZ12926	648147	WMWBARG_1227
AZ12927	648147	WMWBARG_1227
AZ12928	648147	WMWBARG_1227
AZ12929	648147	WMWBARG_1227
AZ12930	648147	WMWBARG_1227
AZ12931	648147	WMWBARG_1227
AZ12932	648147	WMWBARG_1227
AZ12933	648147	WMWBARG_1227
AZ12934	648148	WMWBARG_1227
AZ12935	648148	WMWBARG_1227
AZ12936	648148	WMWBARG_1227

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.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- 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.
 8. The raw data results are shown with dilution factors included.



Metals ICPMS

Barry Gypsum

WMWBARG_1227

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ12924	648272	WMWBARG_1227
AZ12925	648272	WMWBARG_1227
AZ12926	648272	WMWBARG_1227
AZ12927	648272	WMWBARG_1227
AZ12928	648272	WMWBARG_1227
AZ12929	648272	WMWBARG_1227
AZ12930	648272	WMWBARG_1227
AZ12931	648272	WMWBARG_1227
AZ12932	648272	WMWBARG_1227
AZ12933	648272	WMWBARG_1227
AZ12934	648273	WMWBARG_1227
AZ12935	648273	WMWBARG_1227
AZ12936	648273	WMWBARG_1227

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 at a x5.075 dilution to compensate for potential matrix effects.
 8. The raw data results are shown with dilution factors included.



Mercury

Barry Gypsum

WMWBARG_1227

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ12924	647860	WMWBARG_1227
AZ12925	647860	WMWBARG_1227
AZ12926	647860	WMWBARG_1227
AZ12927	647860	WMWBARG_1227
AZ12928	647860	WMWBARG_1227
AZ12929	647860	WMWBARG_1227
AZ12930	647860	WMWBARG_1227
AZ12931	647860	WMWBARG_1227
AZ12932	647860	WMWBARG_1227
AZ12933	647860	WMWBARG_1227
AZ12934	647861	WMWBARG_1227
AZ12935	647861	WMWBARG_1227
AZ12936	647861	WMWBARG_1227

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

General Quality Control Procedures:

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



- The method blank associated with each digestion batch was below the limit of quantitation for the requested analyte.
- All calibration met criteria for the requested analyte.
- All response signals were satisfactory.

Matrix Specific Quality Control Procedures:

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

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



TDS

Barry Gypsum

WMWBARG_1227

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ12924	648212	WMWBARG_1227
AZ12925	648212	WMWBARG_1227
AZ12926	648212	WMWBARG_1227
AZ12927	648213	WMWBARG_1227
AZ12928	648213	WMWBARG_1227
AZ12929	648213	WMWBARG_1227
AZ12930	648213	WMWBARG_1227
AZ12931	648213	WMWBARG_1227
AZ12932	648213	WMWBARG_1227
AZ12933	648213	WMWBARG_1227
AZ12934	648213	WMWBARG_1227
AZ12935	648213	WMWBARG_1227
AZ12936	648213	WMWBARG_1227

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:
 - AZ12927
 - AZ12936



Anions

Barry Gypsum

WMWBARG_1227

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ12924	648752, 648862, & 648919	WMWBARG_1227
AZ12925	648752, 648862, & 648919	WMWBARG_1227
AZ12926	648752, 648862, & 648919	WMWBARG_1227
AZ12927	648752, 648862, & 648919	WMWBARG_1227
AZ12928	648752, 648862, & 648919	WMWBARG_1227
AZ12929	648752, 648862, & 648919	WMWBARG_1227
AZ12930	648752, 648862, & 648919	WMWBARG_1227
AZ12931	648752, 648862, & 648919	WMWBARG_1227
AZ12932	648752, 648862, & 648919	WMWBARG_1227
AZ12933	648752, 648862, & 648919	WMWBARG_1227
AZ12934	648753, 648863, & 648920	WMWBARG_1227
AZ12935	648753, 648863, & 648920	WMWBARG_1227
AZ12936	648753, 648863, & 648920	WMWBARG_1227

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



- 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 a dilution.

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-6

Laboratory ID Number: AZ12924

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01		0.170	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1		0.556	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5		10.0	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	J	0.00301	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	J	0.00223	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U	Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	J	0.00890	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25		77.3	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1				05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500Cl E		1	0.50	1		6.26	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	J	0.0591	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1		32.7	mg/L
Field Measurements										
pH	AWG	5/28/2019							FA 5.21	SU

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.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-6

Laboratory ID Number: AZ12924

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115		96.3	70 to 130		1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115		99.1	70 to 130		0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115		104	70 to 130		2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15		95.2	70 to 130		0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75		96.4	70 to 130		0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115		98.0	70 to 130		0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115		107	70 to 130		0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115		101	70 to 130		0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046		101	70 to 130		3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23		97.9	70 to 130		0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115		93.3	70 to 130		0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115		96.1	70 to 130		0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115		98.0	70 to 130		0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115		105	70 to 130		1.70	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-6

Laboratory ID Number: AZ12924

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit
							Duplicate	LCS		Rec	Limit	
AZ12926	Solids, Dissolved	mg/L	-1.00	25			30.7	56.0	40 to 60			3.16 5
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917 20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75 20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428 20

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Laboratory certification ID: E571114

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CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-7

Laboratory ID Number: AZ12925

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.0524	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	0.973	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	33.3	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	4.63	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	4.86	mg/L
Field Measurements									
pH	AWG	5/28/2019						FA 4.83	SU

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-7

Laboratory ID Number: AZ12925

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115		96.3	70 to 130		1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115		99.1	70 to 130		0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115		104	70 to 130		2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15		95.2	70 to 130		0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75		96.4	70 to 130		0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115		98.0	70 to 130		0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115		107	70 to 130		0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115		101	70 to 130		0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046		101	70 to 130		3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23		97.9	70 to 130		0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115		93.3	70 to 130		0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115		96.1	70 to 130		0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115		98.0	70 to 130		0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115		105	70 to 130		1.70	20

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-7

Laboratory ID Number: AZ12925

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ12926	Solids, Dissolved	mg/L	-1.00	25			30.7	56.0	40 to 60			3.16	5
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-7 DUP

Laboratory ID Number: AZ12926

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.0493	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	0.972	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	32.7	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	4.59	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	4.74	mg/L
Field Measurements									
pH	AWG	5/28/2019						FA 4.83	SU

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.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-7 DUP

Laboratory ID Number: AZ12926

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115		96.3	70 to 130		1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115		99.1	70 to 130		0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115		104	70 to 130		2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15		95.2	70 to 130		0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75		96.4	70 to 130		0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115		98.0	70 to 130		0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115		107	70 to 130		0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115		101	70 to 130		0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046		101	70 to 130		3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23		97.9	70 to 130		0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115		93.3	70 to 130		0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115		96.1	70 to 130		0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115		98.0	70 to 130		0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115		105	70 to 130		1.70	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-7 DUP

Laboratory ID Number: AZ12926

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ12926	Solids, Dissolved	mg/L	-1.00	25			30.7	56.0	40 to 60			3.16	5
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARGFB
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum Field Blank

Laboratory ID Number: AZ12927

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U	Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	U	Not Detected	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U	Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	U	Not Detected	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1				05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500Cl E		1	0.50	1	U	Not Detected	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	U	Not Detected	mg/L

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARGFB
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum Field Blank

Laboratory ID Number: AZ12927

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS Limit	Rec		Prec	Prec Limit	
			MB	Limit					Rec	Limit			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115	96.3	70 to 130	1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115	99.1	70 to 130	0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115	104	70 to 130	2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15	95.2	70 to 130	0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75	96.4	70 to 130	0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115	98.0	70 to 130	0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115	107	70 to 130	0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115	101	70 to 130	0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046	101	70 to 130	3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23	97.9	70 to 130	0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115	93.3	70 to 130	0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115	96.1	70 to 130	0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115	98.0	70 to 130	0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	1.70	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARGFB
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum Field Blank

Laboratory ID Number: AZ12927

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-5

Laboratory ID Number: AZ12928

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.0684	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	1.25	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	26.0	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	3.69	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	6.50	mg/L
Field Measurements									
pH	AWG	5/28/2019						FA 4.8	SU

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.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-5

Laboratory ID Number: AZ12928

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115	96.3	70 to 130	1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115	99.1	70 to 130	0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115	104	70 to 130	2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15	95.2	70 to 130	0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75	96.4	70 to 130	0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115	98.0	70 to 130	0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115	107	70 to 130	0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115	101	70 to 130	0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046	101	70 to 130	3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23	97.9	70 to 130	0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115	93.3	70 to 130	0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115	96.1	70 to 130	0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115	98.0	70 to 130	0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	1.70	20

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-5

Laboratory ID Number: AZ12928

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5

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.

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-4

Laboratory ID Number: AZ12929

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.102	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	1.60	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	31.3	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	3.60	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	7.10	mg/L
Field Measurements									
pH	AWG	5/28/2019						FA 4.73	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-4

Laboratory ID Number: AZ12929

Sample	Analysis	Units	MB		MS	MSD	LCS	LCS	Rec		Prec	Limit	
			MB	Limit					Limit	Prec			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115	96.3	70 to 130	1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115	99.1	70 to 130	0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115	104	70 to 130	2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15	95.2	70 to 130	0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75	96.4	70 to 130	0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115	98.0	70 to 130	0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115	107	70 to 130	0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115	101	70 to 130	0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046	101	70 to 130	3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23	97.9	70 to 130	0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115	93.3	70 to 130	0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115	96.1	70 to 130	0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115	98.0	70 to 130	0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	1.70	20

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-4

Laboratory ID Number: AZ12929

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec		Prec	
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-8

Laboratory ID Number: AZ12930

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.0412	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	0.789	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	J 0.00209	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	28.7	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	4.43	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	4.46	mg/L
Field Measurements									
pH	AWG	5/28/2019						FA 4.92	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-8

Laboratory ID Number: AZ12930

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115		96.3	70 to 130		1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115		99.1	70 to 130		0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115		104	70 to 130		2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15		95.2	70 to 130		0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75		96.4	70 to 130		0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115		98.0	70 to 130		0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115		107	70 to 130		0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115		101	70 to 130		0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046		101	70 to 130		3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23		97.9	70 to 130		0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115		93.3	70 to 130		0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115		96.1	70 to 130		0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115		98.0	70 to 130		0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115		105	70 to 130		1.70	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 28-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-8

Laboratory ID Number: AZ12930

Sample	Analysis	Units	MB	MB			Sample		LCS	Rec		Prec	
				Limit	Spike	MS	Duplicate	LCS	Limit	Rec	Limit	Prec	Limit
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-3

Laboratory ID Number: AZ12931

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.0831	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	1.74	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	37.3	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	3.58	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	7.81	mg/L
Field Measurements									
pH	AWG	5/29/2019						FA 4.8	SU

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.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-3

Laboratory ID Number: AZ12931

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec
				Limit	Spike				Limit	Rec	Limit	Prec	
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115	96.3	70 to 130	1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115	99.1	70 to 130	0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115	104	70 to 130	2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15	95.2	70 to 130	0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75	96.4	70 to 130	0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115	98.0	70 to 130	0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115	107	70 to 130	0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115	101	70 to 130	0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046	101	70 to 130	3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23	97.9	70 to 130	0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115	93.3	70 to 130	0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115	102	70 to 130	0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115	96.1	70 to 130	0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115	98.0	70 to 130	0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115	105	70 to 130	1.70	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-3

Laboratory ID Number: AZ12931

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5

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* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-2

Laboratory ID Number: AZ12932

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.172	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	1.59	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	J 0.00248	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	40.0	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	2.93	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	5.94	mg/L
Field Measurements									
pH	AWG	5/29/2019						FA 4.58	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-2

Laboratory ID Number: AZ12932

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115		96.3	70 to 130		1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115		99.1	70 to 130		0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115		104	70 to 130		2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15		95.2	70 to 130		0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75		96.4	70 to 130		0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115		98.0	70 to 130		0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115		107	70 to 130		0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115		101	70 to 130		0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046		101	70 to 130		3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23		97.9	70 to 130		0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115		93.3	70 to 130		0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115		96.1	70 to 130		0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115		98.0	70 to 130		0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115		105	70 to 130		1.70	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-2

Laboratory ID Number: AZ12932

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-1

Laboratory ID Number: AZ12933

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01		0.166	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1		0.188	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5		1.85	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005		0.0109	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U	Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25		58.0	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1				05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1		5.48	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	J	0.0502	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1		23.3	mg/L
Field Measurements										
pH	AWG	5/29/2019							FA 4.65	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

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 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-1

Laboratory ID Number: AZ12933

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit	
				Limit	Spike				Limit	Rec	Limit	Prec			
AZ12933	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0963	0.0953	0.102	0.085 to 0.115		96.3	70 to 130		1.09	20
AZ12933	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.265	0.267	0.0927	0.085 to 0.115		99.1	70 to 130		0.776	20
AZ12933	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.104	0.107	0.108	0.085 to 0.115		104	70 to 130		2.57	20
AZ12933	Boron, Total	mg/L	0.00435	0.065025	1.00	1.14	1.15	0.969	0.85 to 1.15		95.2	70 to 130		0.518	20
AZ12933	Calcium, Total	mg/L	0.00429	0.216749	5.00	6.67	6.70	4.87	4.25 to 5.75		96.4	70 to 130		0.433	20
AZ12933	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0980	0.0974	0.0977	0.085 to 0.115		98.0	70 to 130		0.570	20
AZ12933	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.118	0.117	0.102	0.085 to 0.115		107	70 to 130		0.248	20
AZ12933	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.101	0.101	0.0989	0.085 to 0.115		101	70 to 130		0.342	20
AZ12933	Mercury, Total by CVAA	mg/L	0.0000237	0.0005	0.004	0.00403	0.00390	0.00412	0.0034 to 0.0046		101	70 to 130		3.19	20
AZ12933	Lithium, Total	mg/L	-0.0000797	0.019704	0.20	0.196	0.196	0.196	0.17 to 0.23		97.9	70 to 130		0.149	20
AZ12933	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0933	0.0936	0.0924	0.085 to 0.115		93.3	70 to 130		0.352	20
AZ12933	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.102	0.102	0.104	0.085 to 0.115		102	70 to 130		0.198	20
AZ12933	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0961	0.0959	0.0902	0.085 to 0.115		96.1	70 to 130		0.194	20
AZ12933	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0980	0.0973	0.107	0.085 to 0.115		98.0	70 to 130		0.754	20
AZ12933	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.105	0.103	0.105	0.085 to 0.115		105	70 to 130		1.70	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-1

Laboratory ID Number: AZ12933

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample		LCS Limit	Rec		Prec Limit	
							Duplicate	LCS		Rec	Limit		
AZ12933	Chloride	mg/L	-0.0686	0.50	10.0	15.8	5.43	9.89	9 to 11	103	80 to 120	0.917	20
AZ12933	Fluoride	mg/L	0.0346	0.05	2.50	2.21	0.0516	2.61	2.25 to 2.75	86.4	80 to 120	2.75	20
AZ12933	Sulfate	mg/L	-0.180	0.50	20.0	43.4	23.4	19.1	18 to 22	100	80 to 120	0.428	20
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis Alabama Power



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-9

Laboratory ID Number: AZ12934

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.155	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	0.141	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	1.80	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	60.0	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	8.56	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	12.3	mg/L
Field Measurements									
pH	AWG	5/29/2019						FA 4.45	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-9

Laboratory ID Number: AZ12934

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ12936	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0933	0.0950	0.102	0.085 to 0.115		93.3	70 to 130	1.81	20
AZ12936	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.0908	0.0932	0.0927	0.085 to 0.115		90.8	70 to 130	2.61	20
AZ12936	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.0998	0.104	0.108	0.085 to 0.115		99.8	70 to 130	4.12	20
AZ12936	Boron, Total	mg/L	0.00285	0.065025	1.00	0.972	0.961	0.964	0.85 to 1.15		97.2	70 to 130	1.15	20
AZ12936	Calcium, Total	mg/L	-0.00246	0.216749	5.00	4.88	4.86	4.85	4.25 to 5.75		97.5	70 to 130	0.419	20
AZ12936	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0949	0.0970	0.0977	0.085 to 0.115		94.9	70 to 130	2.19	20
AZ12936	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.103	0.103	0.102	0.085 to 0.115		103	70 to 130	0.00	20
AZ12936	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.0979	0.0985	0.0989	0.085 to 0.115		97.9	70 to 130	0.611	20
AZ12936	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00403	0.00413	0.00406	0.0034 to 0.0046		101	70 to 130	2.43	20
AZ12936	Lithium, Total	mg/L	-0.0000702	0.019704	0.20	0.197	0.196	0.197	0.17 to 0.23		98.7	70 to 130	0.786	20
AZ12936	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0904	0.0933	0.0924	0.085 to 0.115		90.4	70 to 130	3.16	20
AZ12936	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.100	0.104	0.104	0.085 to 0.115		100	70 to 130	3.92	20
AZ12936	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0914	0.0928	0.0902	0.085 to 0.115		91.4	70 to 130	1.52	20
AZ12936	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0961	0.0979	0.107	0.085 to 0.115		96.1	70 to 130	1.86	20
AZ12936	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.103	0.104	0.105	0.085 to 0.115		103	70 to 130	0.966	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-9

Laboratory ID Number: AZ12934

Sample	Analysis	Units	MB	MB	Spike	MS	Sample	LCS	LCS	Rec	Prec	Prec	
			Limit	Limit			Duplicate	LCS	Limit	Rec	Limit	Limit	
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5
AZ12936	Chloride	mg/L	-0.0241	0.50	10.0	9.92	0.174	9.91	9 to 11	99.2	80 to 120	0.00	20
AZ12936	Fluoride	mg/L	0.0302	0.05	2.50	2.58	0.0261	2.60	2.25 to 2.75	103	80 to 120	0.00	20
AZ12936	Sulfate	mg/L	-0.383	0.50	20.0	20.1	-0.390	19.1	18 to 22	100	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-10

Laboratory ID Number: AZ12935

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q Results	Units
Metals, Cyanide, Total Phenols									
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	0.125	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	J 0.0669	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	1.07	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	J 0.00261	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U Not Detected	mg/L
General Characteristics									
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	43.3	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1			05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500CI E		1	0.50	1	4.34	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	11.1	mg/L
Field Measurements									
pH	AWG	5/29/2019						FA 4.54	SU

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-10

Laboratory ID Number: AZ12935

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ12936	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0933	0.0950	0.102	0.085 to 0.115		93.3	70 to 130	1.81	20
AZ12936	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.0908	0.0932	0.0927	0.085 to 0.115		90.8	70 to 130	2.61	20
AZ12936	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.0998	0.104	0.108	0.085 to 0.115		99.8	70 to 130	4.12	20
AZ12936	Boron, Total	mg/L	0.00285	0.065025	1.00	0.972	0.961	0.964	0.85 to 1.15		97.2	70 to 130	1.15	20
AZ12936	Calcium, Total	mg/L	-0.00246	0.216749	5.00	4.88	4.86	4.85	4.25 to 5.75		97.5	70 to 130	0.419	20
AZ12936	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0949	0.0970	0.0977	0.085 to 0.115		94.9	70 to 130	2.19	20
AZ12936	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.103	0.103	0.102	0.085 to 0.115		103	70 to 130	0.00	20
AZ12936	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.0979	0.0985	0.0989	0.085 to 0.115		97.9	70 to 130	0.611	20
AZ12936	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00403	0.00413	0.00406	0.0034 to 0.0046		101	70 to 130	2.43	20
AZ12936	Lithium, Total	mg/L	-0.0000702	0.019704	0.20	0.197	0.196	0.197	0.17 to 0.23		98.7	70 to 130	0.786	20
AZ12936	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0904	0.0933	0.0924	0.085 to 0.115		90.4	70 to 130	3.16	20
AZ12936	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.100	0.104	0.104	0.085 to 0.115		100	70 to 130	3.92	20
AZ12936	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0914	0.0928	0.0902	0.085 to 0.115		91.4	70 to 130	1.52	20
AZ12936	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0961	0.0979	0.107	0.085 to 0.115		96.1	70 to 130	1.86	20
AZ12936	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.103	0.104	0.105	0.085 to 0.115		103	70 to 130	0.966	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARG
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum - MW-10

Laboratory ID Number: AZ12935

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	LCS	LCS Limit	Rec	Rec Limit	Prec	Prec Limit
AZ12935	Solids, Dissolved	mg/L	-1.00	25			39.3	56.0	40 to 60			4.84	5
AZ12936	Chloride	mg/L	-0.0241	0.50	10.0	9.92	0.174	9.91	9 to 11	99.2	80 to 120	0.00	20
AZ12936	Fluoride	mg/L	0.0302	0.05	2.50	2.58	0.0261	2.60	2.25 to 2.75	103	80 to 120	0.00	20
AZ12936	Sulfate	mg/L	-0.383	0.50	20.0	20.1	-0.390	19.1	18 to 22	100	80 to 120	0.00	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Certificate Of Analysis  **Alabama Power**



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARGE B
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum Equipment Blank

Laboratory ID Number: AZ12936

Name	Analyst	Test Date	Reference	Vio Spec	DF	MDL	RL	Q	Results	Units
Metals, Cyanide, Total Phenols										
* Arsenic, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Barium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Beryllium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0006	0.003	U	Not Detected	mg/L
* Boron, Total	RDA	6/7/2019	EPA 200.7		1.015	0.03	0.1	U	Not Detected	mg/L
* Calcium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.1	0.5	U	Not Detected	mg/L
* Cadmium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0003	0.001	U	Not Detected	mg/L
* Antimony, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0008	0.003	U	Not Detected	mg/L
* Cobalt, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.005	U	Not Detected	mg/L
* Chromium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Mercury, Total by CVAA	GAS	6/4/2019	EPA 245.1		1	0.0003	0.0005	U	Not Detected	mg/L
* Lithium, Total	RDA	6/7/2019	EPA 200.7		1.015	0.01	0.02	U	Not Detected	mg/L
* Molybdenum, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Lead, Total	ABB	6/5/2019	EPA 200.8		5.075	0.001	0.005	U	Not Detected	mg/L
* Selenium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.002	0.01	U	Not Detected	mg/L
* Thallium, Total	ABB	6/5/2019	EPA 200.8		5.075	0.0002	0.001	U	Not Detected	mg/L
General Characteristics										
* Solids, Dissolved	CRB	6/5/2019	SM 2540C		1		25	U	Not Detected	mg/L
Solids, Dissolved Filter Date	CRB	5/31/2019	SM 2540C		1				05/31/2019	Date
* Chloride	JCC	6/10/2019	SM4500Cl E		1	0.50	1	U	Not Detected	mg/L
* Fluoride	JCC	6/11/2019	SM4500F C		1	0.05	0.1	U	Not Detected	mg/L
* Sulfate	JCC	6/12/2019	SM4500SO4 E		1	0.50	1	U	Not Detected	mg/L

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Laboratory certification ID: E571114

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Comments:

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 Calera, AL 35040
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 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARGE B
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum Equipment Blank

Laboratory ID Number: AZ12936

Sample	Analysis	Units	MB	MB		MS	MSD	LCS	LCS		Rec		Prec	Limit
				Limit	Spike				Limit	Rec	Limit	Prec		
AZ12936	Arsenic, Total	mg/L	0.0000145	0.0022	0.10	0.0933	0.0950	0.102	0.085 to 0.115	93.3	70 to 130	1.81	20	
AZ12936	Barium, Total	mg/L	0.00000006	0.0044	0.10	0.0908	0.0932	0.0927	0.085 to 0.115	90.8	70 to 130	2.61	20	
AZ12936	Beryllium, Total	mg/L	0.0000323	0.00132	0.10	0.0998	0.104	0.108	0.085 to 0.115	99.8	70 to 130	4.12	20	
AZ12936	Boron, Total	mg/L	0.00285	0.065025	1.00	0.972	0.961	0.964	0.85 to 1.15	97.2	70 to 130	1.15	20	
AZ12936	Calcium, Total	mg/L	-0.00246	0.216749	5.00	4.88	4.86	4.85	4.25 to 5.75	97.5	70 to 130	0.419	20	
AZ12936	Cadmium, Total	mg/L	0.00000263	0.00066	0.10	0.0949	0.0970	0.0977	0.085 to 0.115	94.9	70 to 130	2.19	20	
AZ12936	Cobalt, Total	mg/L	0.00000240	0.0044	0.10	0.103	0.103	0.102	0.085 to 0.115	103	70 to 130	0.00	20	
AZ12936	Chromium, Total	mg/L	0.0000180	0.0044	0.10	0.0979	0.0985	0.0989	0.085 to 0.115	97.9	70 to 130	0.611	20	
AZ12936	Mercury, Total by CVAA	mg/L	0.0000140	0.0005	0.004	0.00403	0.00413	0.00406	0.0034 to 0.0046	101	70 to 130	2.43	20	
AZ12936	Lithium, Total	mg/L	-0.0000702	0.019704	0.20	0.197	0.196	0.197	0.17 to 0.23	98.7	70 to 130	0.786	20	
AZ12936	Molybdenum, Total	mg/L	0.0000104	0.0044	0.10	0.0904	0.0933	0.0924	0.085 to 0.115	90.4	70 to 130	3.16	20	
AZ12936	Lead, Total	mg/L	0.00000799	0.0022	0.10	0.100	0.104	0.104	0.085 to 0.115	100	70 to 130	3.92	20	
AZ12936	Antimony, Total	mg/L	0.0000734	0.00176	0.10	0.0914	0.0928	0.0902	0.085 to 0.115	91.4	70 to 130	1.52	20	
AZ12936	Selenium, Total	mg/L	0.0000486	0.0044	0.10	0.0961	0.0979	0.107	0.085 to 0.115	96.1	70 to 130	1.86	20	
AZ12936	Thallium, Total	mg/L	0.00000527	0.00044	0.10	0.103	0.104	0.105	0.085 to 0.115	103	70 to 130	0.966	20	

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.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

Alabama Power General Test Laboratory
 744 County Road 87, GSC#8
 Calera, AL 35040
 (205) 664-6247 or 6171
 FAX (205) 664-6108

Batch QC Summary



To: Dustin Brooks
 Greg Dyer
 Lauren Parker

Customer Account: WMWBARGEGB
 Sample Date: 29-May-19
 Customer ID:
 Delivery Date: 31-May-19

Description: Barry Gypsum Equipment Blank

Laboratory ID Number: AZ12936

Sample	Analysis	Units	MB	MB	Limit	Spike	MS	Sample	LCS	LCS	Limit	Rec	Prec	Prec	Limit
				Limit				Duplicate	LCS	Limit		Rec	Limit	Prec	Limit
AZ12935	Solids, Dissolved	mg/L	-1.00	25				39.3	56.0	40 to 60				4.84	5
AZ12936	Chloride	mg/L	-0.0241	0.50	10.0	9.92		0.174	9.91	9 to 11		99.2	80 to 120	0.00	20
AZ12936	Fluoride	mg/L	0.0302	0.05	2.50	2.58		0.0261	2.60	2.25 to 2.75		103	80 to 120	0.00	20
AZ12936	Sulfate	mg/L	-0.383	0.50	20.0	20.1		-0.390	19.1	18 to 22		100	80 to 120	0.00	20

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.

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

* Test results for these accredited parameters conform to the most current applicable TNI/NELAC requirements, with exceptions noted on this report.

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2020

Comments:

CC:



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
B	Analyte found in reagent blank. Indicates possible reagent or background contamination.
BA	Analyte found in reagent blank is = RL AND is > 1/10 the amount of the sample.
C	Analyte was verified by re-analysis.
D	All samples were stored at less than or equal to 6 °C and for no longer than 48 hours from time of sampling, unless otherwise noted.
E	Estimated reported value exceeded calibration range.
F	Water Field Group (WFG) qualifier; see comments for more information
FA	Field results were reviewed by the Water Field Group.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
J	Reported value is an estimate because concentration is less than reporting limit.
K	No MB or LCS were submitted with the sample for dissolved analysis.
L	Check standard is outside of specification limit.
LA	Analyte recovery in the check standard was above specification limit. Results may be biased high.
LL	Analyte recovery in the check standard was below specification limit. Results may be biased low.
M	LOQ verification analyzed with batch was outside of specification limit.
N	Organic constituents tentatively identified. Confirmation is needed.
P	Precision is out of specification limit.
R	Matrix spike recovery or matrix spike duplicate recovery is outside of specification limit.
RA	Matrix spike is invalid due to sample concentration.
S	Surrogate recovery is outside of specification limit.
T	Sample temperature is outside of specification limit.
U	Compound was analyzed, but not detected.



Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA **05/30/2019 15:00**

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer, Lauren Parker
Site Representative	Tamala Davis	Requested By	Lauren Parker
Collector	Anthony Goggins	Location	Barry Gypsum

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	4	Anions	250 mL	6	N/A	N/A	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-6	5/28/19	13:05	4	Groundwater		AZ12924
MW-7	05/28/2019	13:57	4	Groundwater		AZ12925
MW-7DUP	05/28/2019	13:57	4	Sample Duplicate		AZ12926
FB-1	05/28/2019	15:15	4	Field Blank		AZ12927
MW-5	05/28/2019	15:08	4	Groundwater		AZ12928
MW-4	05/28/2019	16:02	4	Groundwater		AZ12929
MW-8	05/28/2019	16:50	4	Groundwater		AZ12930
MW-3	05/29/2019	07:30	4	Groundwater		AZ12931
MW-2	05/29/2019	08:22	4	Groundwater		AZ12932
MW-1	05/29/2019	09:11	4	Groundwater		AZ12933
MW-9	05/29/2019	10:00	4	Groundwater		AZ12934
MW-10	05/29/2019	10:36	4	Groundwater		AZ12935
EB-1	05/29/2019	10:45	4	Equipment Blank		AZ12936

Relinquished By	Received By	Date/Time
		05/30/2019 14:36

SmarTroll ID	7151-38849-2-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	5160-26211-1-1	
Sample Event	1227	
Cooler Temp	1.0 degrees C	
Thermometer ID	5408-27568-2-2	
pH Strip ID	7267-39374-6-6	



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA 05/30/2019 15:00

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer, Lauren Parker
Site Representative	Tamala Davis	Requested By	Lauren Parker
Collector	Anthony Goggins	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: Radium Duplicate collected at MW6

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-6	5/28/19	13:05	3	Groundwater		AZ12937
MW-7	05/28/2019	13:57	1	Groundwater		AZ12938
MW-7DUP	05/28/2019	13:57	1	Sample Duplicate		AZ12939
FB-1	05/28/2019	15:15	1	Field Blank		AZ12940
MW-5	05/28/2019	15:08	1	Groundwater		AZ12941
MW-4	05/28/2019	16:02	1	Groundwater		AZ12942
MW-8	05/28/2019	16:50	1	Groundwater		AZ12943
MW-3	05/29/2019	07:30	1	Groundwater		AZ12944
MW-2	05/29/2019	08:22	1	Groundwater		AZ12945
MW-1	05/29/2019	09:11	1	Groundwater		AZ12946
MW-9	05/29/2019	10:00	1	Groundwater		AZ12947
MW-10	05/29/2019	10:36	1	Groundwater		AZ12948
EB-1	05/29/2019	10:45	1	Equipment Blank		AZ12949

Relinquished By	Received By	Date/Time
		05/30/2019 14:36

SmarTroll ID	7151-38849-2-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	5160-26211-1-1	Cooler Temp
Sample Event	1227	Thermometer ID
		pH Strip ID
		7267-39374-6-6

ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-171050-1
Laboratory Sample Delivery Group: Barry Gypsum 1227
Client Project/Site: CCR Plant Barry

For:
Alabama Power General Test Laboratory
744 County Rd 87
GSC #8
Calera, Alabama 35040

Attn: Laura Midkiff



Authorized for release by:
8/27/2019 6:03:06 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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results through
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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	20
Chronicle	21
QC Association	25
QC Sample Results	26
Chain of Custody	30
Receipt Checklists	31
Certification Summary	33

Case Narrative

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Job ID: 400-171050-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative 400-171050-1

RAD

Method(s) 9315: Ra-226 Prep Batch 160-431905. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ12937 MW-6 (400-171050-1), AZ12937 MW-6 (400-171050-1[DU]), AZ12938 MW-7 (400-171050-2), AZ12939 MW-7 DUP (400-171050-3), AZ12940 FB-1 (400-171050-4), (LCS 160-431905/1-A) and (MB 160-431905/23-A)

Method(s) 9315: Ra-226 Prep Batch 160-431835. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ12941 MW-5 (400-171050-5), AZ12942 MW-4 (400-171050-6), AZ12943 MW-8 (400-171050-7), AZ12944 MW-3 (400-171050-8), AZ12945 MW-2 (400-171050-9), AZ12946 MW-1 (400-171050-10), AZ12947 MW-9 (400-171050-11), AZ12948 MW-10 (400-171050-12), AZ12949 EB-1 (400-171050-13), (LCS 160-431835/1-A), (MB 160-431835/23-A), (400-171051-A-2-A) and (400-171051-B-2-A DU)

Method(s) 9320: Ra-228 Prep Batch 160-431909. The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences (see prep NCM 160-169951). The data have been reported with this narrative. AZ12938 MW-7 (400-171050-2)

Method(s) 9320: Ra-228 Batch 160-431909. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ12937 MW-6 (400-171050-1), AZ12937 MW-6 (400-171050-1[DU]), AZ12939 MW-7 DUP (400-171050-3), AZ12940 FB-1 (400-171050-4), (LCS 160-431909/1-A) and (MB 160-431909/23-A)

Method(s) 9320: Ra-228 Prep Batch 160-431846. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ12941 MW-5 (400-171050-5), AZ12942 MW-4 (400-171050-6), AZ12943 MW-8 (400-171050-7), AZ12944 MW-3 (400-171050-8), AZ12945 MW-2 (400-171050-9), AZ12946 MW-1 (400-171050-10), AZ12947 MW-9 (400-171050-11), AZ12948 MW-10 (400-171050-12), AZ12949 EB-1 (400-171050-13), (LCS 160-431846/1-A), (MB 160-431846/23-A), (400-171051-A-2-B) and (400-171051-B-2-B DU)

Method(s) PrecSep_0: Radium 228 Prep Batch 160- 431846. The following samples were prepared at a reduced aliquot due to limited volume: AZ12941 MW-5 (400-171050-5), AZ12942 MW-4 (400-171050-6), AZ12943 MW-8 (400-171050-7), AZ12944 MW-3 (400-171050-8), AZ12945 MW-2 (400-171050-9), AZ12946 MW-1 (400-171050-10), AZ12947 MW-9 (400-171050-11), AZ12948 MW-10 (400-171050-12) and AZ12949 EB-1 (400-171050-13).

Method(s) PrecSep_0: Radium 228 Prep Batch 160-431846. The analyst inadvertently spilled the following sample after the sample was weighed at 750 mL: AZ12942 MW-4 (400-171050-6). The sample was diluted to 1000 mL and about 100 mL was lost.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-431909. The following samples were prepared at a reduced aliquot due to limited volume: AZ12937 MW-6 (400-171050-1), AZ12937 MW-6 (400-171050-1[DU]), AZ12938 MW-7 (400-171050-2), AZ12939 MW-7 DUP (400-171050-3) and AZ12940 FB-1 (400-171050-4).

Method(s) PrecSep-21: Radium 226 Prep Batch 160- 431835. The following samples were prepared at a reduced aliquot due to limited volume: AZ12941 MW-5 (400-171050-5), AZ12942 MW-4 (400-171050-6), AZ12943 MW-8 (400-171050-7), AZ12944 MW-3 (400-171050-8), AZ12945 MW-2 (400-171050-9), AZ12946 MW-1 (400-171050-10), AZ12947 MW-9 (400-171050-11), AZ12948 MW-10 (400-171050-12) and AZ12949 EB-1 (400-171050-13).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-431905. The following samples were prepared at a reduced aliquot due to limited volume: AZ12937 MW-6 (400-171050-1), AZ12937 MW-6 (400-171050-1[DU]), AZ12938 MW-7 (400-171050-2), AZ12939 MW-7 DUP (400-171050-3) and AZ12940 FB-1 (400-171050-4).

Case Narrative

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Job ID: 400-171050-1 (Continued)

Laboratory: Eurofins TestAmerica, Pensacola (Continued)

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Method Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-171050-1	AZ12937 MW-6	Water	05/28/19 13:05	06/04/19 12:45	
400-171050-2	AZ12938 MW-7	Water	05/28/19 13:57	06/04/19 12:45	
400-171050-3	AZ12939 MW-7 DUP	Water	05/28/19 13:57	06/04/19 12:45	
400-171050-4	AZ12940 FB-1	Water	05/28/19 15:15	06/04/19 12:45	
400-171050-5	AZ12941 MW-5	Water	05/28/19 15:08	06/04/19 12:45	
400-171050-6	AZ12942 MW-4	Water	05/28/19 16:02	06/04/19 12:45	
400-171050-7	AZ12943 MW-8	Water	05/28/19 16:50	06/04/19 12:45	
400-171050-8	AZ12944 MW-3	Water	05/29/19 07:30	06/04/19 12:45	
400-171050-9	AZ12945 MW-2	Water	05/29/19 08:22	06/04/19 12:45	
400-171050-10	AZ12946 MW-1	Water	05/29/19 09:11	06/04/19 12:45	
400-171050-11	AZ12947 MW-9	Water	05/29/19 10:00	06/04/19 12:45	
400-171050-12	AZ12948 MW-10	Water	05/29/19 10:36	06/04/19 12:45	
400-171050-13	AZ12949 EB-1	Water	05/29/19 10:45	06/04/19 12:45	

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12937 MW-6

Lab Sample ID: 400-171050-1

Date Collected: 05/28/19 13:05

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.625		0.175	0.183	1.00	0.162	pCi/L	06/17/19 16:24	08/19/19 06:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.7		40 - 110					06/17/19 16:24	08/19/19 06:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.46		0.645	0.658	1.00	0.920	pCi/L	06/17/19 18:47	07/24/19 14:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.7		40 - 110					06/17/19 18:47	07/24/19 14:31	1
Y Carrier	62.4		40 - 110					06/17/19 18:47	07/24/19 14:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.08		0.668	0.683	5.00	0.920	pCi/L		08/21/19 10:52	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12938 MW-7

Lab Sample ID: 400-171050-2

Date Collected: 05/28/19 13:57

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.182		0.111	0.112	1.00	0.151	pCi/L	06/17/19 16:24	08/16/19 06:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					06/17/19 16:24	08/16/19 06:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.610	U G	0.550	0.553	1.00	1.09	pCi/L	06/17/19 18:47	07/24/19 14:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					06/17/19 18:47	07/24/19 14:24	1
Y Carrier	50.1		40 - 110					06/17/19 18:47	07/24/19 14:24	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.428	U	0.561	0.564	5.00	1.09	pCi/L		08/21/19 10:52	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12939 MW-7 DUP

Lab Sample ID: 400-171050-3

Date Collected: 05/28/19 13:57

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.151		0.0929	0.0939	1.00	0.125	pCi/L	06/17/19 16:24	08/16/19 06:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					06/17/19 16:24	08/16/19 06:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.353	U	0.479	0.480	1.00	0.798	pCi/L	06/17/19 18:47	07/24/19 14:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					06/17/19 18:47	07/24/19 14:40	1
Y Carrier	60.2		40 - 110					06/17/19 18:47	07/24/19 14:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.503	U	0.488	0.489	5.00	0.798	pCi/L		08/21/19 10:52	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12940 FB-1

Lab Sample ID: 400-171050-4

Date Collected: 05/28/19 15:15

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00170	U	0.0800	0.0800	1.00	0.158	pCi/L	06/17/19 16:24	08/16/19 07:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					06/17/19 16:24	08/16/19 07:34	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.189	U	0.555	0.555	1.00	0.959	pCi/L	06/17/19 18:47	07/24/19 14:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					06/17/19 18:47	07/24/19 14:40	1
Y Carrier	55.3		40 - 110					06/17/19 18:47	07/24/19 14:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.187	U	0.561	0.561	5.00	0.959	pCi/L		08/21/19 10:53	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12941 MW-5

Lab Sample ID: 400-171050-5

Date Collected: 05/28/19 15:08

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.160	U	0.114	0.115	1.00	0.169	pCi/L	06/17/19 08:46	08/16/19 05:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					06/17/19 08:46	08/16/19 05:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.231	U	0.501	0.502	1.00	0.857	pCi/L	06/17/19 10:01	07/25/19 14:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					06/17/19 10:01	07/25/19 14:04	1
Y Carrier	59.4		40 - 110					06/17/19 10:01	07/25/19 14:04	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.391	U	0.514	0.515	5.00	0.857	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12942 MW-4

Lab Sample ID: 400-171050-6

Date Collected: 05/28/19 16:02

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.179	U	0.126	0.127	1.00	0.187	pCi/L	06/17/19 08:46	08/15/19 13:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					06/17/19 08:46	08/15/19 13:26	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.295	U	0.435	0.435	1.00	0.730	pCi/L	06/17/19 10:01	07/25/19 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					06/17/19 10:01	07/25/19 14:05	1
Y Carrier	67.3		40 - 110					06/17/19 10:01	07/25/19 14:05	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.474	U	0.453	0.453	5.00	0.730	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12943 MW-8

Lab Sample ID: 400-171050-7

Date Collected: 05/28/19 16:50

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.281		0.120	0.122	1.00	0.139	pCi/L	06/17/19 08:46	08/15/19 13:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					06/17/19 08:46	08/15/19 13:26	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0300	U	0.454	0.454	1.00	0.807	pCi/L	06/17/19 10:01	07/25/19 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					06/17/19 10:01	07/25/19 14:05	1
Y Carrier	64.7		40 - 110					06/17/19 10:01	07/25/19 14:05	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.311	U	0.470	0.470	5.00	0.807	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12944 MW-3

Lab Sample ID: 400-171050-8

Date Collected: 05/29/19 07:30

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.286		0.123	0.125	1.00	0.138	pCi/L	06/17/19 08:46	08/15/19 13:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					06/17/19 08:46	08/15/19 13:26	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0116	U	0.421	0.421	1.00	0.752	pCi/L	06/17/19 10:01	07/25/19 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					06/17/19 10:01	07/25/19 14:05	1
Y Carrier	71.0		40 - 110					06/17/19 10:01	07/25/19 14:05	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.275	U	0.439	0.439	5.00	0.752	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12945 MW-2

Lab Sample ID: 400-171050-9

Date Collected: 05/29/19 08:22

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.609		0.173	0.181	1.00	0.173	pCi/L	06/17/19 08:46	08/15/19 13:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.2		40 - 110					06/17/19 08:46	08/15/19 13:26	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0295	U	0.431	0.431	1.00	0.776	pCi/L	06/17/19 10:01	07/25/19 14:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.2		40 - 110					06/17/19 10:01	07/25/19 14:08	1
Y Carrier	68.4		40 - 110					06/17/19 10:01	07/25/19 14:08	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.579	U	0.464	0.467	5.00	0.776	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12946 MW-1

Lab Sample ID: 400-171050-10

Date Collected: 05/29/19 09:11

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.908		0.202	0.218	1.00	0.175	pCi/L	06/17/19 08:46	08/15/19 15:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110					06/17/19 08:46	08/15/19 15:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.662	U	0.444	0.448	1.00	0.688	pCi/L	06/17/19 10:01	07/25/19 14:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110					06/17/19 10:01	07/25/19 14:08	1
Y Carrier	77.0		40 - 110					06/17/19 10:01	07/25/19 14:08	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.57		0.488	0.498	5.00	0.688	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12947 MW-9

Lab Sample ID: 400-171050-11

Date Collected: 05/29/19 10:00

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.871		0.187	0.203	1.00	0.135	pCi/L	06/17/19 08:46	08/15/19 15:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					06/17/19 08:46	08/15/19 15:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.32		0.483	0.498	1.00	0.662	pCi/L	06/17/19 10:01	07/25/19 14:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					06/17/19 10:01	07/25/19 14:08	1
Y Carrier	76.3		40 - 110					06/17/19 10:01	07/25/19 14:08	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.20		0.518	0.538	5.00	0.662	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12948 MW-10

Lab Sample ID: 400-171050-12

Date Collected: 05/29/19 10:36

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0340	U	0.0699	0.0700	1.00	0.126	pCi/L	06/17/19 08:46	08/15/19 15:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					06/17/19 08:46	08/15/19 15:02	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.514	U	0.414	0.417	1.00	0.656	pCi/L	06/17/19 10:01	07/25/19 14:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					06/17/19 10:01	07/25/19 14:08	1
Y Carrier	72.5		40 - 110					06/17/19 10:01	07/25/19 14:08	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.548	U	0.420	0.423	5.00	0.656	pCi/L		08/26/19 08:59	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12949 EB-1

Lab Sample ID: 400-171050-13

Date Collected: 05/29/19 10:45

Matrix: Water

Date Received: 06/04/19 12:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.592		0.164	0.173	1.00	0.155	pCi/L	06/17/19 08:46	08/15/19 15:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					06/17/19 08:46	08/15/19 15:03	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.06		0.456	0.467	1.00	0.643	pCi/L	06/17/19 10:01	07/25/19 14:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					06/17/19 10:01	07/25/19 14:08	1
Y Carrier	71.8		40 - 110					06/17/19 10:01	07/25/19 14:08	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.66		0.485	0.498	5.00	0.643	pCi/L		08/26/19 08:59	1

Definitions/Glossary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

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

Lab Chronicle

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Client Sample ID: AZ12937 MW-6

Lab Sample ID: 400-171050-1

Date Collected: 05/28/19 13:05

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431905	06/17/19 16:24	ORM	TAL SL
Total/NA	Analysis	9315		1	439859	08/19/19 06:48	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431909	06/17/19 18:47	ORM	TAL SL
Total/NA	Analysis	9320		1	436168	07/24/19 14:31	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440144	08/21/19 10:52	SMP	TAL SL

Client Sample ID: AZ12938 MW-7

Lab Sample ID: 400-171050-2

Date Collected: 05/28/19 13:57

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431905	06/17/19 16:24	ORM	TAL SL
Total/NA	Analysis	9315		1	439724	08/16/19 06:27	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431909	06/17/19 18:47	ORM	TAL SL
Total/NA	Analysis	9320		1	436188	07/24/19 14:24	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440144	08/21/19 10:52	SMP	TAL SL

Client Sample ID: AZ12939 MW-7 DUP

Lab Sample ID: 400-171050-3

Date Collected: 05/28/19 13:57

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431905	06/17/19 16:24	ORM	TAL SL
Total/NA	Analysis	9315		1	439724	08/16/19 06:27	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431909	06/17/19 18:47	ORM	TAL SL
Total/NA	Analysis	9320		1	436188	07/24/19 14:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440144	08/21/19 10:52	SMP	TAL SL

Client Sample ID: AZ12940 FB-1

Lab Sample ID: 400-171050-4

Date Collected: 05/28/19 15:15

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431905	06/17/19 16:24	ORM	TAL SL
Total/NA	Analysis	9315		1	439719	08/16/19 07:34	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431909	06/17/19 18:47	ORM	TAL SL
Total/NA	Analysis	9320		1	436188	07/24/19 14:40	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440144	08/21/19 10:53	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Client Sample ID: AZ12941 MW-5

Lab Sample ID: 400-171050-5

Date Collected: 05/28/19 15:08

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439719	08/16/19 05:57	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 14:04	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Client Sample ID: AZ12942 MW-4

Lab Sample ID: 400-171050-6

Date Collected: 05/28/19 16:02

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 13:26	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 14:05	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Client Sample ID: AZ12943 MW-8

Lab Sample ID: 400-171050-7

Date Collected: 05/28/19 16:50

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 13:26	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 14:05	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Client Sample ID: AZ12944 MW-3

Lab Sample ID: 400-171050-8

Date Collected: 05/29/19 07:30

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 13:26	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436505	07/25/19 14:05	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Client Sample ID: AZ12945 MW-2

Lab Sample ID: 400-171050-9

Date Collected: 05/29/19 08:22

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 13:26	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436506	07/25/19 14:08	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Client Sample ID: AZ12946 MW-1

Lab Sample ID: 400-171050-10

Date Collected: 05/29/19 09:11

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 15:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436506	07/25/19 14:08	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Client Sample ID: AZ12947 MW-9

Lab Sample ID: 400-171050-11

Date Collected: 05/29/19 10:00

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 15:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436506	07/25/19 14:08	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Client Sample ID: AZ12948 MW-10

Lab Sample ID: 400-171050-12

Date Collected: 05/29/19 10:36

Matrix: Water

Date Received: 06/04/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 15:02	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436506	07/25/19 14:08	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-171050-1
SDG: Barry Gypsum 1227

Client Sample ID: AZ12949 EB-1

Lab Sample ID: 400-171050-13

Date Collected: 05/29/19 10:45

Matrix: Water

Date Received: 06/04/19 12:45

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	PrecSep-21			431835	06/17/19 08:46	KAW	TAL SL
Total/NA	Analysis	9315		1	439623	08/15/19 15:03	CDR	TAL SL
Total/NA	Prep	PrecSep_0			431846	06/17/19 10:01	KAW	TAL SL
Total/NA	Analysis	9320		1	436506	07/25/19 14:08	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	440471	08/26/19 08:59	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Rad

Prep Batch: 431835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-171050-5	AZ12941 MW-5	Total/NA	Water	PrecSep-21	
400-171050-6	AZ12942 MW-4	Total/NA	Water	PrecSep-21	
400-171050-7	AZ12943 MW-8	Total/NA	Water	PrecSep-21	
400-171050-8	AZ12944 MW-3	Total/NA	Water	PrecSep-21	
400-171050-9	AZ12945 MW-2	Total/NA	Water	PrecSep-21	
400-171050-10	AZ12946 MW-1	Total/NA	Water	PrecSep-21	
400-171050-11	AZ12947 MW-9	Total/NA	Water	PrecSep-21	
400-171050-12	AZ12948 MW-10	Total/NA	Water	PrecSep-21	
400-171050-13	AZ12949 EB-1	Total/NA	Water	PrecSep-21	
MB 160-431835/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-431835/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-171051-B-2-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 431846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-171050-5	AZ12941 MW-5	Total/NA	Water	PrecSep_0	
400-171050-6	AZ12942 MW-4	Total/NA	Water	PrecSep_0	
400-171050-7	AZ12943 MW-8	Total/NA	Water	PrecSep_0	
400-171050-8	AZ12944 MW-3	Total/NA	Water	PrecSep_0	
400-171050-9	AZ12945 MW-2	Total/NA	Water	PrecSep_0	
400-171050-10	AZ12946 MW-1	Total/NA	Water	PrecSep_0	
400-171050-11	AZ12947 MW-9	Total/NA	Water	PrecSep_0	
400-171050-12	AZ12948 MW-10	Total/NA	Water	PrecSep_0	
400-171050-13	AZ12949 EB-1	Total/NA	Water	PrecSep_0	
MB 160-431846/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-431846/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-171051-B-2-B DU	Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 431905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-171050-1	AZ12937 MW-6	Total/NA	Water	PrecSep-21	
400-171050-2	AZ12938 MW-7	Total/NA	Water	PrecSep-21	
400-171050-3	AZ12939 MW-7 DUP	Total/NA	Water	PrecSep-21	
400-171050-4	AZ12940 FB-1	Total/NA	Water	PrecSep-21	
MB 160-431905/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-431905/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-171050-1 DU	AZ12937 MW-6	Total/NA	Water	PrecSep-21	

Prep Batch: 431909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-171050-1	AZ12937 MW-6	Total/NA	Water	PrecSep_0	
400-171050-2	AZ12938 MW-7	Total/NA	Water	PrecSep_0	
400-171050-3	AZ12939 MW-7 DUP	Total/NA	Water	PrecSep_0	
400-171050-4	AZ12940 FB-1	Total/NA	Water	PrecSep_0	
MB 160-431909/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-431909/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-171050-1 DU	AZ12937 MW-6	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-431835/23-A
Matrix: Water
Analysis Batch: 439623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431835

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.06055	U	0.0568	0.0570	1.00	0.137	pCi/L	06/17/19 08:46	08/15/19 17:23	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					06/17/19 08:46	08/15/19 17:23	1
	81.9									

Lab Sample ID: LCS 160-431835/1-A
Matrix: Water
Analysis Batch: 439719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431835

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits		
				Uncert. (2σ+/-)							
Radium-226	11.4	9.328		0.978	1.00	0.113	pCi/L	82	75 - 125		
Carrier	LCS	LCS									
Ba Carrier	%Yield	Qualifier	Limits								
	85.6		40 - 110								

Lab Sample ID: 400-171051-B-2-A DU
Matrix: Water
Analysis Batch: 440196

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 431835

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit	
	Result	Qual	Result	Qual	Uncert. (2σ+/-)						
Radium-226	0.0367	U	0.1296	U	0.102	1.00	0.147	pCi/L	0.53	1	
Carrier	DU DU		Limits								
Ba Carrier	%Yield	Qualifier	40 - 110								
	77.4										

Lab Sample ID: MB 160-431905/23-A
Matrix: Water
Analysis Batch: 439719

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431905

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.002224	U	0.0515	0.0515	1.00	0.106	pCi/L	06/17/19 16:24	08/16/19 07:34	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					06/17/19 16:24	08/16/19 07:34	1
	76.3									

Lab Sample ID: LCS 160-431905/1-A
Matrix: Water
Analysis Batch: 439665

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431905

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.447		0.980	1.00	0.0703	pCi/L	83	75 - 125

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-431905/1-A
 Matrix: Water
 Analysis Batch: 439665

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 431905

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.5		40 - 110

Lab Sample ID: 400-171050-1 DU
 Matrix: Water
 Analysis Batch: 439859

Client Sample ID: AZ12937 MW-6
 Prep Type: Total/NA
 Prep Batch: 431905

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	
									RER	Limit
Radium-226	0.625		0.7206		0.205	1.00	0.190	pCi/L	0.25	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	76.8		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-431846/23-A
 Matrix: Water
 Analysis Batch: 436360

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 431846

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.9		40 - 110	06/17/19 10:01	07/25/19 14:13	1
Y Carrier	72.5		40 - 110	06/17/19 10:01	07/25/19 14:13	1

Lab Sample ID: LCS 160-431846/1-A
 Matrix: Water
 Analysis Batch: 436505

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 431846

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
									Radium-228	8.99

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	85.6		40 - 110
Y Carrier	68.0		40 - 110

Lab Sample ID: 400-171051-B-2-B DU
 Matrix: Water
 Analysis Batch: 436506

Client Sample ID: Duplicate
 Prep Type: Total/NA
 Prep Batch: 431846

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	
									RER	Limit
Radium-228	0.207	U	0.1689	U	0.403	1.00	0.695	pCi/L	0.04	1

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 400-171051-B-2-B DU
Matrix: Water
Analysis Batch: 436506

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 431846

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	77.4		40 - 110
Y Carrier	79.3		40 - 110

Lab Sample ID: MB 160-431909/23-A
Matrix: Water
Analysis Batch: 436188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431909

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	-0.2710	U	0.341	0.342	1.00	0.664	pCi/L	06/17/19 18:47	07/24/19 14:40	1
Carrier	%Yield	Qualifier	Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	76.3		40 - 110			06/17/19 18:47	07/24/19 14:40	1		
Y Carrier	68.8		40 - 110			06/17/19 18:47	07/24/19 14:40	1		

Lab Sample ID: LCS 160-431909/1-A
Matrix: Water
Analysis Batch: 436168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431909

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
									%Rec	Limits
Radium-228	9.00	8.686		1.15	1.00	0.605	pCi/L	97	75 - 125	
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	93.5		40 - 110							
Y Carrier	60.9		40 - 110							

Lab Sample ID: 400-171050-1 DU
Matrix: Water
Analysis Batch: 436168

Client Sample ID: AZ12937 MW-6
Prep Type: Total/NA
Prep Batch: 431909

Analyte	Sample Sample		DU DU		Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual						
Radium-228	1.46		0.5916	U	0.617	1.00	1.00	pCi/L	0.68	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	76.8		40 - 110							
Y Carrier	58.3		40 - 110							

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-171050-1 DU
Matrix: Water
Analysis Batch: 440144

Client Sample ID: AZ12937 MW-6
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)						
Combined Radium 226 + 228	2.08		1.312		0.650	5.00	1.00	pCi/L		0.58	

Lab Sample ID: 400-171051-A-2 DU
Matrix: Water
Analysis Batch: 440471

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.244	U	0.2985	U	0.416	5.00	0.695	pCi/L		0.06	

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TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING



Client Information (Sub Contract Lab)		Lab PM: Anthony Goggins		Carrier Tracking Note:								
Client Contact: Laura Midkitt		E-Mail: Cheyenne.whitmore@testamericainc.com		State of Origin: Alabama								
Company: Alabama Power General Test Laboratory		Address: 744 County Rd 87 GSC#8		City: Calera								
State, Zip: AL, 35040		Phone: 205-664-6197		E-mail: lmidkitt@southernco.com								
Project Name: CCR		Project #: 40007143		SSOM#: Barry Gypsum 1227								
Due Date Requested:		TAT Requested (days): Routine		Analysis Requested:								
Sample ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Overstabil, G=grab)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM 4500 F.C	SM 4500 ClE	SM 4500 SO4 E	9315 Ra226, 9320 Ra228, Ra226Ra228, GPPC	Accreditations Required (See note):
AZ12937	5/28/19	13:05	G	Water	X	X						
AZ12938	5/28/19	13:57	G	Water								
AZ12939	5/28/19	13:57	G	Water								
AZ12940	5/28/19	15:15	G	Water								
AZ12941	5/28/19	15:08	G	Water								
AZ12942	5/28/19	16:02	G	Water								
AZ12943	5/28/19	16:50	G	Water								
AZ12944	5/28/19	07:30	G	Water								
AZ12945	5/29/19	08:22	G	Water								
AZ12946	5/29/19	09:11	G	Water								
AZ12947	5/29/19	10:00	G	Water								
AZ12948	5/29/19	10:36	G	Water								
AZ12949	5/29/19	10:45	G	Water								
<p>Special Instructions/Note:</p> <p>3 MW-6</p> <p>1 MW-7</p> <p>1 MW-7 DUP (Sample Duplicate)</p> <p>1 FB-1 (Field Blank)</p> <p>1 MW-5</p> <p>1 MW-4</p> <p>1 MW-8</p> <p>1 MW-3</p> <p>1 MW-2</p> <p>1 MW-1</p> <p>1 MW-9</p> <p>1 MW-10</p> <p>1 EB-1 (Equipment Blank)</p>												
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Deliverable Requested: I, II, III, IV, Other (specify) _____</p>												
<p>Empty Kit Relinquished by: Laura Midkitt</p> <p>Relinquished by: _____</p> <p>Relinquished by: _____</p> <p>Relinquished by: _____</p> <p>Custody Seals Intact: <input type="checkbox"/> Custody Seal No.:</p>												
<p>Received by: _____</p> <p>Received by: _____</p> <p>Received by: <i>Kathy Rivers</i></p> <p>Date/Time: 6/4-15-2015</p> <p>Date/Time: _____</p> <p>Date/Time: _____</p> <p>Company: _____</p> <p>Company: _____</p> <p>Company: TA</p>												

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the responsibility of method, sample & accreditation compliance upon our subcontract laboratories. The sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analytes/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

26.087K7



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-171050-1
SDG Number: Barry Gypsum 1227

Login Number: 171050

List Source: Eurofins TestAmerica, Pensacola

List Number: 1

Creator: Whitmire, Cheyenne R

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	26.0°C, IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-171050-1
SDG Number: Barry Gypsum 1227

Login Number: 171050

List Number: 2

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 06/07/19 01:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	19.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	07-01-20
Alabama	State Program	40150	06-30-20
ANAB	ISO/IEC 17025	L2471	02-22-20
ANAB	ISO/IEC 17025	L2471	02-22-20
Arizona	State	AZ0710	01-12-20
Arizona	State Program	AZ0710	01-12-20
Arkansas DEQ	State Program	88-0689	09-01-19
California	State Program	2510	06-30-20
Florida	NELAP	E81010	06-30-20
Florida	NELAP	E81010	06-30-20
Georgia	State Program	E81010 (FL)	06-30-20
Illinois	NELAP	200041	10-09-19
Illinois	NELAP	004586	10-09-19
Iowa	State Program	367	08-01-20
Kansas	NELAP	E-10253	10-31-19
Kentucky (UST)	State Program	53	06-30-20
Kentucky (WW)	State Program	98030	12-31-19
Louisiana	NELAP	30976	06-30-20
Louisiana (DW)	NELAP	LA017	12-31-19
Maryland	State Program	233	09-30-20
Massachusetts	State Program	M-FL094	06-30-20
Michigan	State	9912	05-06-20
Michigan	State Program	9912	05-06-20
New Jersey	NELAP	FL006	06-30-20
New Jersey	NELAP	FL006	07-30-20
North Carolina (WW/SW)	State Program	314	12-31-19
Oklahoma	State	9810-186	08-31-19
Oklahoma	State Program	9810	08-31-19
Pennsylvania	NELAP	68-00467	01-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Rhode Island	State Program	LAO00307	12-30-19
South Carolina	State Program	96026	06-30-19 *
Tennessee	State	TN02907	06-30-20
Tennessee	State Program	TN02907	06-30-20
Texas	NELAP	T104704286-18-15	09-30-19
Texas	NELAP	T104704286	09-30-19
US Fish & Wildlife	Federal	LE058448-0	07-31-20
USDA	Federal	P330-18-00148	05-17-21
Virginia	NELAP	460166	06-14-20
Washington	State	C915	05-15-20
Washington	State Program	C915	05-15-20
West Virginia DEP	State Program	136	07-31-19 *

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

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-171050-1
 SDG: Barry Gypsum 1227

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	DoD	L2305	04-06-22
ANAB	DOE	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-19
Arizona	State Program	AZ0813	12-08-19
California	State	2886	06-30-20
California	State Program	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Connecticut	State Program	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
Florida	NELAP	E87689	06-30-20
Hawaii	State Program	NA	06-30-20
Illinois	NELAP	200023	11-30-19
Illinois	NELAP	004553	11-30-19
Iowa	State Program	373	12-01-20
Kansas	NELAP	E-10236	10-31-19
Kentucky (DW)	State	KY90125	12-31-19
Kentucky (DW)	State Program	KY90125	12-31-19
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	NELAP	LA011	12-31-19
Louisiana (DW)	State	LA011	12-31-19
Maryland	State	310	09-30-20
Maryland	State Program	310	09-30-20
Michigan	State Program	9005	06-30-20
Missouri	State	780	06-30-22
Missouri	State Program	780	06-30-20
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	03-31-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
North Dakota	State Program	R207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-19
Oklahoma	State Program	9997	08-31-19 *
Pennsylvania	NELAP	68-00540	02-28-20
Pennsylvania	NELAP	68-00540	02-28-20
South Carolina	State Program	85002001	06-30-20
Texas	NELAP	T104704193-19-14	07-31-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	Federal	058448	07-31-20
USDA	Federal	P330-17-0028	02-02-20
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	460230	06-14-20
Virginia	NELAP	10310	06-14-20
Washington	State Program	C592	08-30-19
West Virginia DEP	State Program	381	08-31-19 *

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



**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-1	5/29/2019 8:54	Conductivity	88.7	uS/cm
BY-GSA-MW-1	5/29/2019 8:54	DO	0.41	mg/L
BY-GSA-MW-1	5/29/2019 8:54	Depth to Water Detail	14.21	ft
BY-GSA-MW-1	5/29/2019 8:54	Oxidation Reduction Potention	210.1	mv
BY-GSA-MW-1	5/29/2019 8:54	pH	4.66	pH
BY-GSA-MW-1	5/29/2019 8:54	Temperature	21.35	C
BY-GSA-MW-1	5/29/2019 8:54	Turbidity	4.42	NTU
BY-GSA-MW-1	5/29/2019 8:59	Conductivity	89.8	uS/cm
BY-GSA-MW-1	5/29/2019 8:59	DO	0.33	mg/L
BY-GSA-MW-1	5/29/2019 8:59	Depth to Water Detail	14.21	ft
BY-GSA-MW-1	5/29/2019 8:59	Oxidation Reduction Potention	214	mv
BY-GSA-MW-1	5/29/2019 8:59	pH	4.66	pH
BY-GSA-MW-1	5/29/2019 8:59	Temperature	21.26	C
BY-GSA-MW-1	5/29/2019 8:59	Turbidity	3.1	NTU
BY-GSA-MW-1	5/29/2019 9:04	Conductivity	88.6	uS/cm
BY-GSA-MW-1	5/29/2019 9:04	DO	0.3	mg/L
BY-GSA-MW-1	5/29/2019 9:04	Depth to Water Detail	14.21	ft
BY-GSA-MW-1	5/29/2019 9:04	Oxidation Reduction Potention	219.1	mv
BY-GSA-MW-1	5/29/2019 9:04	pH	4.65	pH
BY-GSA-MW-1	5/29/2019 9:04	Temperature	21.34	C
BY-GSA-MW-1	5/29/2019 9:04	Turbidity	3.03	NTU
BY-GSA-MW-1	5/29/2019 9:09	Conductivity	87.9	uS/cm
BY-GSA-MW-1	5/29/2019 9:09	DO	0.28	mg/L
BY-GSA-MW-1	5/29/2019 9:09	Depth to Water Detail	14.21	ft
BY-GSA-MW-1	5/29/2019 9:09	Oxidation Reduction Potention	222.4	mv
BY-GSA-MW-1	5/29/2019 9:09	pH	4.65	pH
BY-GSA-MW-1	5/29/2019 9:09	Temperature	21.17	C
BY-GSA-MW-1	5/29/2019 9:09	Turbidity	3.23	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-2	5/29/2019 7:55	Conductivity	67.6	uS/cm
BY-GSA-MW-2	5/29/2019 7:55	DO	6.57	mg/L
BY-GSA-MW-2	5/29/2019 7:55	Depth to Water Detail	13.71	ft
BY-GSA-MW-2	5/29/2019 7:55	Oxidation Reduction Potention	256.2	mv
BY-GSA-MW-2	5/29/2019 7:55	pH	4.54	pH
BY-GSA-MW-2	5/29/2019 7:55	Temperature	20.59	C
BY-GSA-MW-2	5/29/2019 7:55	Turbidity	1.34	NTU
BY-GSA-MW-2	5/29/2019 8:00	Conductivity	66.2	uS/cm
BY-GSA-MW-2	5/29/2019 8:00	DO	6.49	mg/L
BY-GSA-MW-2	5/29/2019 8:00	Depth to Water Detail	13.71	ft
BY-GSA-MW-2	5/29/2019 8:00	Oxidation Reduction Potention	257.1	mv
BY-GSA-MW-2	5/29/2019 8:00	pH	4.56	pH
BY-GSA-MW-2	5/29/2019 8:00	Temperature	20.58	C
BY-GSA-MW-2	5/29/2019 8:00	Turbidity	1.43	NTU
BY-GSA-MW-2	5/29/2019 8:05	Conductivity	65	uS/cm
BY-GSA-MW-2	5/29/2019 8:05	DO	0	mg/L
BY-GSA-MW-2	5/29/2019 8:05	Depth to Water Detail	13.71	ft
BY-GSA-MW-2	5/29/2019 8:05	Oxidation Reduction Potention	259	mv
BY-GSA-MW-2	5/29/2019 8:05	pH	4.56	pH
BY-GSA-MW-2	5/29/2019 8:05	Temperature	20.64	C
BY-GSA-MW-2	5/29/2019 8:05	Turbidity	1.73	NTU
BY-GSA-MW-2	5/29/2019 8:10	Conductivity	64.7	uS/cm
BY-GSA-MW-2	5/29/2019 8:10	DO	6.37	mg/L
BY-GSA-MW-2	5/29/2019 8:10	Depth to Water Detail	13.71	ft
BY-GSA-MW-2	5/29/2019 8:10	Oxidation Reduction Potention	263.1	mv
BY-GSA-MW-2	5/29/2019 8:10	pH	4.57	pH
BY-GSA-MW-2	5/29/2019 8:10	Temperature	20.64	C
BY-GSA-MW-2	5/29/2019 8:10	Turbidity	1.45	NTU
BY-GSA-MW-2	5/29/2019 8:15	Conductivity	64	uS/cm
BY-GSA-MW-2	5/29/2019 8:15	DO	6.35	mg/L
BY-GSA-MW-2	5/29/2019 8:15	Depth to Water Detail	13.71	ft
BY-GSA-MW-2	5/29/2019 8:15	Oxidation Reduction Potention	266.2	mv
BY-GSA-MW-2	5/29/2019 8:15	pH	4.58	pH
BY-GSA-MW-2	5/29/2019 8:15	Temperature	20.66	C
BY-GSA-MW-2	5/29/2019 8:15	Turbidity	1.01	NTU
BY-GSA-MW-2	5/29/2019 8:20	Conductivity	63.1	uS/cm
BY-GSA-MW-2	5/29/2019 8:20	DO	6.34	mg/L
BY-GSA-MW-2	5/29/2019 8:20	Depth to Water Detail	13.71	ft
BY-GSA-MW-2	5/29/2019 8:20	Oxidation Reduction Potention	272	mv
BY-GSA-MW-2	5/29/2019 8:20	pH	4.58	pH
BY-GSA-MW-2	5/29/2019 8:20	Temperature	20.73	C
BY-GSA-MW-2	5/29/2019 8:20	Turbidity	1.11	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-3	5/29/2019 7:13	Conductivity	49.3	uS/cm
BY-GSA-MW-3	5/29/2019 7:13	DO	5.97	mg/L
BY-GSA-MW-3	5/29/2019 7:13	Depth to Water Detail	16.31	ft
BY-GSA-MW-3	5/29/2019 7:13	Oxidation Reduction Potention	227.9	mv
BY-GSA-MW-3	5/29/2019 7:13	pH	4.81	pH
BY-GSA-MW-3	5/29/2019 7:13	Temperature	20.24	C
BY-GSA-MW-3	5/29/2019 7:13	Turbidity	1.42	NTU
BY-GSA-MW-3	5/29/2019 7:18	Conductivity	49.3	uS/cm
BY-GSA-MW-3	5/29/2019 7:18	DO	5.89	mg/L
BY-GSA-MW-3	5/29/2019 7:18	Depth to Water Detail	16.31	ft
BY-GSA-MW-3	5/29/2019 7:18	Oxidation Reduction Potention	228.5	mv
BY-GSA-MW-3	5/29/2019 7:18	pH	4.8	pH
BY-GSA-MW-3	5/29/2019 7:18	Temperature	20.29	C
BY-GSA-MW-3	5/29/2019 7:18	Turbidity	1.71	NTU
BY-GSA-MW-3	5/29/2019 7:23	Conductivity	49.2	uS/cm
BY-GSA-MW-3	5/29/2019 7:23	DO	5.85	mg/L
BY-GSA-MW-3	5/29/2019 7:23	Depth to Water Detail	16.31	ft
BY-GSA-MW-3	5/29/2019 7:23	Oxidation Reduction Potention	229.1	mv
BY-GSA-MW-3	5/29/2019 7:23	pH	4.78	pH
BY-GSA-MW-3	5/29/2019 7:23	Temperature	20.37	C
BY-GSA-MW-3	5/29/2019 7:23	Turbidity	1.43	NTU
BY-GSA-MW-3	5/29/2019 7:28	Conductivity	48.9	uS/cm
BY-GSA-MW-3	5/29/2019 7:28	DO	5.81	mg/L
BY-GSA-MW-3	5/29/2019 7:28	Depth to Water Detail	16.31	ft
BY-GSA-MW-3	5/29/2019 7:28	Oxidation Reduction Potention	227.9	mv
BY-GSA-MW-3	5/29/2019 7:28	pH	4.8	pH
BY-GSA-MW-3	5/29/2019 7:28	Temperature	20.41	C
BY-GSA-MW-3	5/29/2019 7:28	Turbidity	1.24	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-4	5/28/2019 15:45	Conductivity	48.4	uS/cm
BY-GSA-MW-4	5/28/2019 15:45	DO	6.22	mg/L
BY-GSA-MW-4	5/28/2019 15:45	Depth to Water Detail	22.58	ft
BY-GSA-MW-4	5/28/2019 15:45	Oxidation Reduction Potention	311.8	mv
BY-GSA-MW-4	5/28/2019 15:45	pH	4.71	pH
BY-GSA-MW-4	5/28/2019 15:45	Temperature	22.56	C
BY-GSA-MW-4	5/28/2019 15:45	Turbidity	7.64	NTU
BY-GSA-MW-4	5/28/2019 15:50	Conductivity	48.1	uS/cm
BY-GSA-MW-4	5/28/2019 15:50	DO	6.22	mg/L
BY-GSA-MW-4	5/28/2019 15:50	Depth to Water Detail	22.58	ft
BY-GSA-MW-4	5/28/2019 15:50	Oxidation Reduction Potention	308.9	mv
BY-GSA-MW-4	5/28/2019 15:50	pH	4.72	pH
BY-GSA-MW-4	5/28/2019 15:50	Temperature	22.29	C
BY-GSA-MW-4	5/28/2019 15:50	Turbidity	2.94	NTU
BY-GSA-MW-4	5/28/2019 15:55	Conductivity	47.8	uS/cm
BY-GSA-MW-4	5/28/2019 15:55	DO	6.19	mg/L
BY-GSA-MW-4	5/28/2019 15:55	Depth to Water Detail	22.58	ft
BY-GSA-MW-4	5/28/2019 15:55	Oxidation Reduction Potention	310.7	mv
BY-GSA-MW-4	5/28/2019 15:55	pH	4.73	pH
BY-GSA-MW-4	5/28/2019 15:55	Temperature	22.33	C
BY-GSA-MW-4	5/28/2019 15:55	Turbidity	1.86	NTU
BY-GSA-MW-4	5/28/2019 16:00	Conductivity	47.7	uS/cm
BY-GSA-MW-4	5/28/2019 16:00	DO	6.19	mg/L
BY-GSA-MW-4	5/28/2019 16:00	Depth to Water Detail	22.58	ft
BY-GSA-MW-4	5/28/2019 16:00	Oxidation Reduction Potention	304.2	mv
BY-GSA-MW-4	5/28/2019 16:00	pH	4.73	pH
BY-GSA-MW-4	5/28/2019 16:00	Temperature	22.35	C
BY-GSA-MW-4	5/28/2019 16:00	Turbidity	1.68	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-5	5/28/2019 14:51	Conductivity	40.4	uS/cm
BY-GSA-MW-5	5/28/2019 14:51	DO	5.62	mg/L
BY-GSA-MW-5	5/28/2019 14:51	Depth to Water Detail	28.69	ft
BY-GSA-MW-5	5/28/2019 14:51	Oxidation Reduction Potention	316.2	mv
BY-GSA-MW-5	5/28/2019 14:51	pH	4.79	pH
BY-GSA-MW-5	5/28/2019 14:51	Temperature	23.6	C
BY-GSA-MW-5	5/28/2019 14:51	Turbidity	2.47	NTU
BY-GSA-MW-5	5/28/2019 14:56	Conductivity	40.6	uS/cm
BY-GSA-MW-5	5/28/2019 14:56	DO	5.58	mg/L
BY-GSA-MW-5	5/28/2019 14:56	Depth to Water Detail	28.69	ft
BY-GSA-MW-5	5/28/2019 14:56	Oxidation Reduction Potention	326.3	mv
BY-GSA-MW-5	5/28/2019 14:56	pH	4.79	pH
BY-GSA-MW-5	5/28/2019 14:56	Temperature	23.51	C
BY-GSA-MW-5	5/28/2019 14:56	Turbidity	2.67	NTU
BY-GSA-MW-5	5/28/2019 15:01	Conductivity	40.9	uS/cm
BY-GSA-MW-5	5/28/2019 15:01	DO	5.58	mg/L
BY-GSA-MW-5	5/28/2019 15:01	Depth to Water Detail	28.69	ft
BY-GSA-MW-5	5/28/2019 15:01	Oxidation Reduction Potention	328.6	mv
BY-GSA-MW-5	5/28/2019 15:01	pH	4.78	pH
BY-GSA-MW-5	5/28/2019 15:01	Temperature	23.32	C
BY-GSA-MW-5	5/28/2019 15:01	Turbidity	1.6	NTU
BY-GSA-MW-5	5/28/2019 15:06	Conductivity	40.7	uS/cm
BY-GSA-MW-5	5/28/2019 15:06	DO	5.55	mg/L
BY-GSA-MW-5	5/28/2019 15:06	Depth to Water Detail	28.69	ft
BY-GSA-MW-5	5/28/2019 15:06	Oxidation Reduction Potention	331.3	mv
BY-GSA-MW-5	5/28/2019 15:06	pH	4.8	pH
BY-GSA-MW-5	5/28/2019 15:06	Temperature	23.21	C
BY-GSA-MW-5	5/28/2019 15:06	Turbidity	1.13	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-6	5/28/2019 12:48	Conductivity	126	uS/cm
BY-GSA-MW-6	5/28/2019 12:48	DO	4.96	mg/L
BY-GSA-MW-6	5/28/2019 12:48	Depth to Water Detail	16.94	ft
BY-GSA-MW-6	5/28/2019 12:48	Oxidation Reduction Potention	231	mv
BY-GSA-MW-6	5/28/2019 12:48	pH	5.17	pH
BY-GSA-MW-6	5/28/2019 12:48	Temperature	23.61	C
BY-GSA-MW-6	5/28/2019 12:48	Turbidity	1.27	NTU
BY-GSA-MW-6	5/28/2019 12:53	Conductivity	123.2	uS/cm
BY-GSA-MW-6	5/28/2019 12:53	DO	4.96	mg/L
BY-GSA-MW-6	5/28/2019 12:53	Depth to Water Detail	16.94	ft
BY-GSA-MW-6	5/28/2019 12:53	Oxidation Reduction Potention	242.1	mv
BY-GSA-MW-6	5/28/2019 12:53	pH	5.2	pH
BY-GSA-MW-6	5/28/2019 12:53	Temperature	23.5	C
BY-GSA-MW-6	5/28/2019 12:53	Turbidity	1.17	NTU
BY-GSA-MW-6	5/28/2019 12:58	Conductivity	122.2	uS/cm
BY-GSA-MW-6	5/28/2019 12:58	DO	4.95	mg/L
BY-GSA-MW-6	5/28/2019 12:58	Depth to Water Detail	16.94	ft
BY-GSA-MW-6	5/28/2019 12:58	Oxidation Reduction Potention	251.3	mv
BY-GSA-MW-6	5/28/2019 12:58	pH	5.2	pH
BY-GSA-MW-6	5/28/2019 12:58	Temperature	23.41	C
BY-GSA-MW-6	5/28/2019 12:58	Turbidity	1.1	NTU
BY-GSA-MW-6	5/28/2019 13:03	Conductivity	120.4	uS/cm
BY-GSA-MW-6	5/28/2019 13:03	DO	4.9	mg/L
BY-GSA-MW-6	5/28/2019 13:03	Depth to Water Detail	16.94	ft
BY-GSA-MW-6	5/28/2019 13:03	Oxidation Reduction Potention	256.8	mv
BY-GSA-MW-6	5/28/2019 13:03	pH	5.21	pH
BY-GSA-MW-6	5/28/2019 13:03	Temperature	23.46	C
BY-GSA-MW-6	5/28/2019 13:03	Turbidity	1.06	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-7	5/28/2019 13:40	Conductivity	38.9	uS/cm
BY-GSA-MW-7	5/28/2019 13:40	DO	2.87	mg/L
BY-GSA-MW-7	5/28/2019 13:40	Depth to Water Detail	15.76	ft
BY-GSA-MW-7	5/28/2019 13:40	Oxidation Reduction Potention	283.8	mv
BY-GSA-MW-7	5/28/2019 13:40	pH	4.82	pH
BY-GSA-MW-7	5/28/2019 13:40	Temperature	22.72	C
BY-GSA-MW-7	5/28/2019 13:40	Turbidity	5.96	NTU
BY-GSA-MW-7	5/28/2019 13:45	Conductivity	38.6	uS/cm
BY-GSA-MW-7	5/28/2019 13:45	DO	2.88	mg/L
BY-GSA-MW-7	5/28/2019 13:45	Depth to Water Detail	15.76	ft
BY-GSA-MW-7	5/28/2019 13:45	Oxidation Reduction Potention	286.9	mv
BY-GSA-MW-7	5/28/2019 13:45	pH	4.82	pH
BY-GSA-MW-7	5/28/2019 13:45	Temperature	22.81	C
BY-GSA-MW-7	5/28/2019 13:45	Turbidity	3.75	NTU
BY-GSA-MW-7	5/28/2019 13:50	Conductivity	38.9	uS/cm
BY-GSA-MW-7	5/28/2019 13:50	DO	2.91	mg/L
BY-GSA-MW-7	5/28/2019 13:50	Depth to Water Detail	15.76	ft
BY-GSA-MW-7	5/28/2019 13:50	Oxidation Reduction Potention	293.1	mv
BY-GSA-MW-7	5/28/2019 13:50	pH	4.83	pH
BY-GSA-MW-7	5/28/2019 13:50	Temperature	22.71	C
BY-GSA-MW-7	5/28/2019 13:50	Turbidity	2.74	NTU
BY-GSA-MW-7	5/28/2019 13:55	Conductivity	39.2	uS/cm
BY-GSA-MW-7	5/28/2019 13:55	DO	2.99	mg/L
BY-GSA-MW-7	5/28/2019 13:55	Depth to Water Detail	15.76	ft
BY-GSA-MW-7	5/28/2019 13:55	Oxidation Reduction Potention	299.6	mv
BY-GSA-MW-7	5/28/2019 13:55	pH	4.83	pH
BY-GSA-MW-7	5/28/2019 13:55	Temperature	22.67	C
BY-GSA-MW-7	5/28/2019 13:55	Turbidity	2.46	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-8	5/28/2019 16:32	Conductivity	41.6	uS/cm
BY-GSA-MW-8	5/28/2019 16:32	DO	1.24	mg/L
BY-GSA-MW-8	5/28/2019 16:32	Depth to Water Detail	29	ft
BY-GSA-MW-8	5/28/2019 16:32	Oxidation Reduction Potention	273.7	mv
BY-GSA-MW-8	5/28/2019 16:32	pH	4.92	pH
BY-GSA-MW-8	5/28/2019 16:32	Temperature	22.96	C
BY-GSA-MW-8	5/28/2019 16:32	Turbidity	2.52	NTU
BY-GSA-MW-8	5/28/2019 16:37	Conductivity	41.2	uS/cm
BY-GSA-MW-8	5/28/2019 16:37	DO	1.11	mg/L
BY-GSA-MW-8	5/28/2019 16:37	Depth to Water Detail	29	ft
BY-GSA-MW-8	5/28/2019 16:37	Oxidation Reduction Potention	281.6	mv
BY-GSA-MW-8	5/28/2019 16:37	pH	4.92	pH
BY-GSA-MW-8	5/28/2019 16:37	Temperature	22.81	C
BY-GSA-MW-8	5/28/2019 16:37	Turbidity	2.53	NTU
BY-GSA-MW-8	5/28/2019 16:42	Conductivity	41.2	uS/cm
BY-GSA-MW-8	5/28/2019 16:42	DO	1.06	mg/L
BY-GSA-MW-8	5/28/2019 16:42	Depth to Water Detail	29	ft
BY-GSA-MW-8	5/28/2019 16:42	Oxidation Reduction Potention	287.3	mv
BY-GSA-MW-8	5/28/2019 16:42	pH	4.92	pH
BY-GSA-MW-8	5/28/2019 16:42	Temperature	22.8	C
BY-GSA-MW-8	5/28/2019 16:42	Turbidity	2.03	NTU
BY-GSA-MW-8	5/28/2019 16:47	Conductivity	41.3	uS/cm
BY-GSA-MW-8	5/28/2019 16:47	DO	1.05	mg/L
BY-GSA-MW-8	5/28/2019 16:47	Depth to Water Detail	29	ft
BY-GSA-MW-8	5/28/2019 16:47	Oxidation Reduction Potention	283.6	mv
BY-GSA-MW-8	5/28/2019 16:47	pH	4.92	pH
BY-GSA-MW-8	5/28/2019 16:47	Temperature	22.82	C
BY-GSA-MW-8	5/28/2019 16:47	Turbidity	1.97	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-9	5/29/2019 9:42	Conductivity	77.2	uS/cm
BY-GSA-MW-9	5/29/2019 9:42	DO	2.97	mg/L
BY-GSA-MW-9	5/29/2019 9:42	Depth to Water Detail	8.15	ft
BY-GSA-MW-9	5/29/2019 9:42	Oxidation Reduction Potention	300.3	mv
BY-GSA-MW-9	5/29/2019 9:42	pH	4.45	pH
BY-GSA-MW-9	5/29/2019 9:42	Temperature	21.89	C
BY-GSA-MW-9	5/29/2019 9:42	Turbidity	1.43	NTU
BY-GSA-MW-9	5/29/2019 9:47	Conductivity	77.1	uS/cm
BY-GSA-MW-9	5/29/2019 9:47	DO	2.9	mg/L
BY-GSA-MW-9	5/29/2019 9:47	Depth to Water Detail	8.15	ft
BY-GSA-MW-9	5/29/2019 9:47	Oxidation Reduction Potention	291.6	mv
BY-GSA-MW-9	5/29/2019 9:47	pH	4.45	pH
BY-GSA-MW-9	5/29/2019 9:47	Temperature	21.89	C
BY-GSA-MW-9	5/29/2019 9:47	Turbidity	1.49	NTU
BY-GSA-MW-9	5/29/2019 9:52	Conductivity	76.9	uS/cm
BY-GSA-MW-9	5/29/2019 9:52	DO	2.9	mg/L
BY-GSA-MW-9	5/29/2019 9:52	Depth to Water Detail	8.15	ft
BY-GSA-MW-9	5/29/2019 9:52	Oxidation Reduction Potention	284.7	mv
BY-GSA-MW-9	5/29/2019 9:52	pH	4.45	pH
BY-GSA-MW-9	5/29/2019 9:52	Temperature	21.93	C
BY-GSA-MW-9	5/29/2019 9:52	Turbidity	1.27	NTU
BY-GSA-MW-9	5/29/2019 9:57	Conductivity	76.5	uS/cm
BY-GSA-MW-9	5/29/2019 9:57	DO	2.87	mg/L
BY-GSA-MW-9	5/29/2019 9:57	Depth to Water Detail	8.15	ft
BY-GSA-MW-9	5/29/2019 9:57	Oxidation Reduction Potention	285.6	mv
BY-GSA-MW-9	5/29/2019 9:57	pH	4.45	pH
BY-GSA-MW-9	5/29/2019 9:57	Temperature	22.15	C
BY-GSA-MW-9	5/29/2019 9:57	Turbidity	1.43	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-10	5/29/2019 10:19	Conductivity	61.7	uS/cm
BY-GSA-MW-10	5/29/2019 10:19	DO	5.09	mg/L
BY-GSA-MW-10	5/29/2019 10:19	Depth to Water Detail	11.88	ft
BY-GSA-MW-10	5/29/2019 10:19	Oxidation Reduction Potention	307.6	mv
BY-GSA-MW-10	5/29/2019 10:19	pH	4.53	pH
BY-GSA-MW-10	5/29/2019 10:19	Temperature	21.48	C
BY-GSA-MW-10	5/29/2019 10:19	Turbidity	1.22	NTU
BY-GSA-MW-10	5/29/2019 10:24	Conductivity	61.3	uS/cm
BY-GSA-MW-10	5/29/2019 10:24	DO	5.06	mg/L
BY-GSA-MW-10	5/29/2019 10:24	Depth to Water Detail	11.88	ft
BY-GSA-MW-10	5/29/2019 10:24	Oxidation Reduction Potention	308	mv
BY-GSA-MW-10	5/29/2019 10:24	pH	4.53	pH
BY-GSA-MW-10	5/29/2019 10:24	Temperature	21.53	C
BY-GSA-MW-10	5/29/2019 10:24	Turbidity	1.28	NTU
BY-GSA-MW-10	5/29/2019 10:29	Conductivity	61	uS/cm
BY-GSA-MW-10	5/29/2019 10:29	DO	5.06	mg/L
BY-GSA-MW-10	5/29/2019 10:29	Depth to Water Detail	11.88	ft
BY-GSA-MW-10	5/29/2019 10:29	Oxidation Reduction Potention	309.7	mv
BY-GSA-MW-10	5/29/2019 10:29	pH	4.54	pH
BY-GSA-MW-10	5/29/2019 10:29	Temperature	21.51	C
BY-GSA-MW-10	5/29/2019 10:29	Turbidity	1.23	NTU
BY-GSA-MW-10	5/29/2019 10:34	Conductivity	59.7	uS/cm
BY-GSA-MW-10	5/29/2019 10:34	DO	5.04	mg/L
BY-GSA-MW-10	5/29/2019 10:34	Depth to Water Detail	11.88	ft
BY-GSA-MW-10	5/29/2019 10:34	Oxidation Reduction Potention	309.2	mv
BY-GSA-MW-10	5/29/2019 10:34	pH	4.54	pH
BY-GSA-MW-10	5/29/2019 10:34	Temperature	21.39	C
BY-GSA-MW-10	5/29/2019 10:34	Turbidity	0.79	NTU

2nd
Semi-Annual
Monitoring Event

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

Field Case Narrative



Plant Barry Gypsum Pond

2019 Compliance Event 2

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

Field quality control procedures were performed as follows:

- Blanks and Sample Duplicates were collected as described in the SAP.
- Calibration verification for all required field parameters were performed daily, before and after sample collection.

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

Analytical Report



Sample Group : WMWBARG_1244

Project/Site : Barry Gypsum
Bucks, AL 36512

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

Attention : Dustin Brooks, Greg Dyer, & Lauren Parker

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

October 31, 2019

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on October 04, 2019. 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, 2020

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=lmidkiff@southernco.com, c=US
Date: 2019.10.31 16:04:34 -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@southernco.com,
c=US
Date: 2019.11.01 15:57:17 -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.



Metals ICP

Barry Gypsum

WMWBARG_1244

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ22707	657687	WMWBARG_1244
AZ22708	657687	WMWBARG_1244
AZ22709	657687	WMWBARG_1244
AZ22710	657687	WMWBARG_1244
AZ22711	657687	WMWBARG_1244
AZ22712	657687	WMWBARG_1244
AZ22713	657687	WMWBARG_1244
AZ22714	657687	WMWBARG_1244
AZ22715	657687	WMWBARG_1244
AZ22716	657687	WMWBARG_1244
AZ22717	657688	WMWBARG_1244
AZ22718	657688	WMWBARG_1244
AZ22719	657688	WMWBARG_1244

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.

- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- All sample internal standard criteria were met.
- The high standard readbacks associated with EPA 200.7 were within acceptance criteria.
- 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.

Metals ICPMS

Barry Gypsum

WMWBARG_1244

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ22707	658319	WMWBARG_1244
AZ22708	658319	WMWBARG_1244
AZ22709	658319	WMWBARG_1244
AZ22710	658319	WMWBARG_1244
AZ22711	658319	WMWBARG_1244
AZ22712	658319	WMWBARG_1244
AZ22713	658319	WMWBARG_1244
AZ22714	658319	WMWBARG_1244
AZ22715	658319	WMWBARG_1244
AZ22716	658319	WMWBARG_1244
AZ22717	658320	WMWBARG_1244
AZ22718	658320	WMWBARG_1244
AZ22719	658320	WMWBARG_1244

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.

Mercury

Barry Gypsum

WMWBARG_1244

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ22707	657842	WMWBARG_1244
AZ22708	657842	WMWBARG_1244
AZ22709	657842	WMWBARG_1244
AZ22710	657842	WMWBARG_1244
AZ22711	657842	WMWBARG_1244
AZ22712	657842	WMWBARG_1244
AZ22713	657842	WMWBARG_1244
AZ22714	657842	WMWBARG_1244
AZ22715	657842	WMWBARG_1244
AZ22716	657842	WMWBARG_1244
AZ22717	657843	WMWBARG_1244
AZ22718	657843	WMWBARG_1244
AZ22719	657843	WMWBARG_1244

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_1244

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ22707	657740	WMWBARG_1244
AZ22708	657740	WMWBARG_1244
AZ22709	657740	WMWBARG_1244
AZ22710	657740	WMWBARG_1244
AZ22711	657740	WMWBARG_1244
AZ22712	657740	WMWBARG_1244
AZ22713	657740	WMWBARG_1244
AZ22714	657740	WMWBARG_1244
AZ22715	657740	WMWBARG_1244
AZ22716	657740	WMWBARG_1244
AZ22717	657741	WMWBARG_1244
AZ22718	657741	WMWBARG_1244
AZ22719	657741	WMWBARG_1244

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:
 - AZ22709
 - AZ22714

Anions

Barry Gypsum

WMWBARG_1244

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 are NIST/ISO/IEC/Guide 34 traceable and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
AZ22707	657668, 657826, & 658093	WMWBARG_1244
AZ22708	657668, 657826, & 658093	WMWBARG_1244
AZ22709	657668, 657826, & 658093	WMWBARG_1244
AZ22710	657668, 657826, & 658093	WMWBARG_1244
AZ22711	657668, 657826, & 658093	WMWBARG_1244
AZ22712	657668, 657826, & 658093	WMWBARG_1244
AZ22713	657668, 657826, & 658093	WMWBARG_1244
AZ22714	657668, 657826, & 658093	WMWBARG_1244
AZ22715	657668, 657826, & 658093	WMWBARG_1244
AZ22716	657668, 657826, & 658093	WMWBARG_1244
AZ22717	657669, 657734, & 658094	WMWBARG_1244
AZ22718	657669, 657734, & 658094	WMWBARG_1244
AZ22719	657669, 657734, & 658094	WMWBARG_1244

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 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.

- 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 a dilution factor.

Certificate Of Analysis

Description: Barry Gypsum - MW-7

Location Code: WMWBARG
Collected: 10/2/19 09:30
Customer ID:
Submittal Date: 10/4/19 11:06

Laboratory ID Number: AZ22707

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:27		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 10:27		1.015	0.929	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:27		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:38		1.015	0.0492	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 16:38		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 12:52		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	30.7	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:36	10/4/19 14:36		1	5.02	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:43	10/7/19 16:43		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:34	10/8/19 17:34		1	4.60	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	10/2/19 09:26	10/2/19 09:26			37.95	uS/cm			FA
pH	10/2/19 09:26	10/2/19 09:26			5.04	SU			FA
Temperature	10/2/19 09:26	10/2/19 09:26			22.29	C			FA
Turbidity	10/2/19 09:26	10/2/19 09:26			1.88	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 09:30
Customer ID:
Delivery Date: 10/4/19 11:06

Description: Barry Gypsum - MW-7

Laboratory ID Number: AZ22707

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20

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.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 09:30
Customer ID:
Delivery Date: 10/4/19 11:06

Description: Barry Gypsum - MW-7

Laboratory ID Number: AZ22707

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-7 DUP

Location Code: WMWBARG
Collected: 10/2/19 09:30
Customer ID:
Submittal Date: 10/4/19 11:07

Laboratory ID Number: AZ22708

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:30		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 10:30		1.015	0.925	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:30		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:41		1.015	0.0509	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 16:41		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 12:54		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	29.3	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:37	10/4/19 14:37		1	4.97	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:45	10/7/19 16:45		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:35	10/8/19 17:35		1	4.63	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	10/2/19 09:26	10/2/19 09:26			37.95	uS/cm			FA
pH	10/2/19 09:26	10/2/19 09:26			5.04	SU			FA
Temperature	10/2/19 09:26	10/2/19 09:26			22.29	C			FA
Turbidity	10/2/19 09:26	10/2/19 09:26			1.88	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 09:30
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-7 DUP

Laboratory ID Number: AZ22708

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 09:30
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-7 DUP

Laboratory ID Number: AZ22708

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum Field Blank

Location Code: WMWBARGFB
Collected: 10/2/19 10:10
Customer ID:
Submittal Date: 10/4/19 11:07

Laboratory ID Number: AZ22709

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:33		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 10:33		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/7/19 13:00	10/8/19 10:33		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 16:44		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 12:57		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	Not Detected	mg/L		25	U
Analytical Method: SM4500CI E		Analyst: JCC							
* Chloride	10/4/19 14:38	10/4/19 14:38		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:46	10/7/19 16:46		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:36	10/8/19 17:36		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: 10/2/19 10:10
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum Field Blank

Laboratory ID Number: AZ22709

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20

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Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARGFB

Sample Date: 10/2/19 10:10

Customer ID:

Delivery Date: 10/4/19 11:07

Description: Barry Gypsum Field Blank

Laboratory ID Number: AZ22709

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-6

Location Code: WMWBARG
Collected: 10/2/19 10:22
Customer ID:
Submittal Date: 10/4/19 11:07

Laboratory ID Number: AZ22710

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:36		1.015	0.186	mg/L	0.03	0.1	
* Calcium, Total	10/7/19 13:00	10/8/19 10:36		1.015	4.94	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:36		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:47		1.015	0.0985	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:47		1.015	0.00472	mg/L	0.002	0.01	J
* Thallium, Total	10/7/19 12:15	10/8/19 16:47		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 12:59		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	50.7	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:39	10/4/19 14:39		1	4.13	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:47	10/7/19 16:47		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:38	10/8/19 17:38		1	15.9	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	10/2/19 10:19	10/2/19 10:19			73.53	uS/cm			FA
pH	10/2/19 10:19	10/2/19 10:19			5.40	SU			FA
Temperature	10/2/19 10:19	10/2/19 10:19			23.84	C			FA
Turbidity	10/2/19 10:19	10/2/19 10:19			1.66	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 10:22
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-6

Laboratory ID Number: AZ22710

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 10:22
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-6

Laboratory ID Number: AZ22710

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-4

Location Code: WMWBARG
Collected: 10/2/19 11:03
Customer ID:
Submittal Date: 10/4/19 11:07

Laboratory ID Number: AZ22711

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:39		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 10:39		1.015	1.70	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:39		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:49		1.015	0.111	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 16:49		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:01		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	36.0	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:40	10/4/19 14:40		1	3.50	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:48	10/7/19 16:48		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:39	10/8/19 17:39		1	6.88	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	10/2/19 10:59	10/2/19 10:59			49.60	uS/cm			FA
pH	10/2/19 10:59	10/2/19 10:59			4.67	SU			FA
Temperature	10/2/19 10:59	10/2/19 10:59			22.41	C			FA
Turbidity	10/2/19 10:59	10/2/19 10:59			1.39	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 11:03
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-4

Laboratory ID Number: AZ22711

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 11:03
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-4

Laboratory ID Number: AZ22711

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-9

Location Code: WMWBARG
Collected: 10/2/19 11:52
Customer ID:
Submittal Date: 10/4/19 11:07

Laboratory ID Number: AZ22712

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:42		1.015	0.116	mg/L	0.03	0.1	
* Calcium, Total	10/7/19 13:00	10/8/19 10:42		1.015	1.85	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:42		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:52		1.015	0.160	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 16:52		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:04		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	46.7	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:42	10/4/19 14:42		1	8.48	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:49	10/7/19 16:49		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:40	10/8/19 17:40		1	11.6	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	10/2/19 11:50	10/2/19 11:50			76.25	uS/cm			FA
pH	10/2/19 11:50	10/2/19 11:50			4.49	SU			FA
Temperature	10/2/19 11:50	10/2/19 11:50			22.67	C			FA
Turbidity	10/2/19 11:50	10/2/19 11:50			1.31	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 11:52
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-9

Laboratory ID Number: AZ22712

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 11:52
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-9

Laboratory ID Number: AZ22712

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-10

Location Code: WMWBARG
Collected: 10/2/19 12:35
Customer ID:
Submittal Date: 10/4/19 11:07

Laboratory ID Number: AZ22713

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: RDA		Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:45		1.015	0.0671	mg/L	0.03	0.1	J
* Calcium, Total	10/7/19 13:00	10/8/19 10:45		1.015	1.32	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:45		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:54		1.015	0.136	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:54		1.015	0.00262	mg/L	0.002	0.005	J
* Lead, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 16:54		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1			Analyst: ABB						
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:06		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C			Analyst: TJW						
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	36.0	mg/L		25	
Analytical Method: SM4500Cl E			Analyst: JCC						
* Chloride	10/4/19 14:43	10/4/19 14:43		1	4.34	mg/L	0.50	1	
Analytical Method: SM4500F G 2017			Analyst: JCC						
* Fluoride	10/7/19 16:51	10/7/19 16:51		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E			Analyst: JCC						
* Sulfate	10/8/19 17:41	10/8/19 17:41		1	13.2	mg/L	0.50	1	
Analytical Method: Field Measurements			Analyst: AWG						
Conductivity	10/2/19 12:31	10/2/19 12:31			63.50	uS/cm			FA
pH	10/2/19 12:31	10/2/19 12:31			4.60	SU			FA
Temperature	10/2/19 12:31	10/2/19 12:31			22.23	C			FA
Turbidity	10/2/19 12:31	10/2/19 12:31			1.37	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 12:35
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-10

Laboratory ID Number: AZ22713

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 12:35
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum - MW-10

Laboratory ID Number: AZ22713

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum Equipment Blank

Location Code: WMWBARGE B
Collected: 10/2/19 12:50
Customer ID:
Submittal Date: 10/4/19 11:07

Laboratory ID Number: AZ22714

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:48		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 10:48		1.015	Not Detected	mg/L	0.1	0.5	U
* Lithium, Total	10/7/19 13:00	10/8/19 10:48		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Beryllium, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 16:57		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:09		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	Not Detected	mg/L		25	U
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:44	10/4/19 14:44		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:52	10/7/19 16:52		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:42	10/8/19 17:42		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: 10/2/19 12:50
Customer ID:
Delivery Date: 10/4/19 11:07

Description: Barry Gypsum Equipment Blank

Laboratory ID Number: AZ22714

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20

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Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARGEB

Sample Date: 10/2/19 12:50

Customer ID:

Delivery Date: 10/4/19 11:07

Description: Barry Gypsum Equipment Blank

Laboratory ID Number: AZ22714

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-1

Location Code: WMWBARG
Collected: 10/2/19 09:33
Customer ID:
Submittal Date: 10/4/19 11:11

Laboratory ID Number: AZ22715

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:51		1.015	0.0970	mg/L	0.03	0.1	J
* Calcium, Total	10/7/19 13:00	10/8/19 10:51		1.015	1.55	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:51		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 17:00		1.015	0.129	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 17:00		1.015	0.0129	mg/L	0.002	0.005	
* Lead, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 17:00		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:11		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	46.0	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:45	10/4/19 14:45		1	3.65	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:53	10/7/19 16:53		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:44	10/8/19 17:44		1	17.5	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/2/19 09:29	10/2/19 09:29			70.44	uS/cm			FA
pH	10/2/19 09:29	10/2/19 09:29			4.57	SU			FA
Temperature	10/2/19 09:29	10/2/19 09:29			21.58	C			FA
Turbidity	10/2/19 09:29	10/2/19 09:29			0.55	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 09:33
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-1

Laboratory ID Number: AZ22715

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 09:33
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-1

Laboratory ID Number: AZ22715

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-2

Location Code: WMWBARG
Collected: 10/2/19 10:19
Customer ID:
Submittal Date: 10/4/19 11:11

Laboratory ID Number: AZ22716

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 10:54		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 10:54		1.015	1.70	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 10:54		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 17:03		1.015	0.183	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 17:03		1.015	0.00244	mg/L	0.002	0.005	J
* Lead, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 17:03		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:13		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	41.3	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:46	10/4/19 14:46		1	2.75	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/7/19 16:54	10/7/19 16:54		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:45	10/8/19 17:45		1	6.04	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/2/19 10:16	10/2/19 10:16			66.06	uS/cm			FA
pH	10/2/19 10:16	10/2/19 10:16			4.43	SU			FA
Temperature	10/2/19 10:16	10/2/19 10:16			20.93	C			FA
Turbidity	10/2/19 10:16	10/2/19 10:16			0.42	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 10:19
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-2

Laboratory ID Number: AZ22716

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ22716	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.862	20
AZ22716	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.75	6.97	5.10	4.25 to 5.75	101	70 to 130	3.16	20
AZ22716	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.104	0.102	0.105	0.085 to 0.115	104	70 to 130	1.57	20
AZ22716	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.281	0.286	0.102	0.085 to 0.115	97.5	70 to 130	1.94	20
AZ22716	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0980	0.0999	0.0983	0.085 to 0.115	98.0	70 to 130	1.86	20
AZ22716	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.63	20
AZ22716	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.976	1.01	0.981	0.85 to 1.15	97.6	70 to 130	3.59	20
AZ22716	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.851	20
AZ22716	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.103	0.102	0.101	0.085 to 0.115	103	70 to 130	0.989	20
AZ22716	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.103	0.103	0.105	0.085 to 0.115	103	70 to 130	0.314	20
AZ22716	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.106	0.105	0.105	0.085 to 0.115	103	70 to 130	0.482	20
AZ22716	Mercury, Total by CVAA	mg/L	0.0000103	0.0005	0.004	0.00390	0.00392	0.00404	0.0034 to 0.0046	97.5	70 to 130	0.578	20
AZ22716	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.201	0.206	0.201	0.17 to 0.23	101	70 to 130	2.47	20
AZ22716	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.108	0.106	0.109	0.085 to 0.115	108	70 to 130	2.10	20
AZ22716	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.103	0.103	0.103	0.085 to 0.115	103	70 to 130	0.102	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 10:19
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-2

Laboratory ID Number: AZ22716

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ22716	Sulfate	mg/L	-0.216	0.50	20.0	24.7	6.08	19.5	18 to 22	93.3	80 to 120	0.660	20
AZ22716	Chloride	mg/L	0.0495	0.50	10.0	13.0	2.78	9.93	9 to 11	102	80 to 120	1.08	20
AZ22716	Fluoride	mg/L	0.048	0.05	2.50	2.31	0.0324	2.51	2.25 to 2.75	92.4	80 to 120	0.00	20
AZ22716	Solids, Dissolved	mg/L	0.0000	25			43.3	54.0	40 to 60			2.36	5

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-3

Location Code: WMWBARG
Collected: 10/2/19 11:08
Customer ID:
Submittal Date: 10/4/19 11:11

Laboratory ID Number: AZ22717

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 11:09		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 11:09		1.015	1.86	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 11:09		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 17:18		1.015	0.0890	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 17:18		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:30		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	36.7	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 14:59	10/4/19 14:59		1	3.64	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/4/19 17:21	10/4/19 17:21		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:57	10/8/19 17:57		1	7.62	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/2/19 11:05	10/2/19 11:05			50.76	uS/cm			FA
pH	10/2/19 11:05	10/2/19 11:05			4.52	SU			FA
Temperature	10/2/19 11:05	10/2/19 11:05			21.52	C			FA
Turbidity	10/2/19 11:05	10/2/19 11:05			0.4	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 11:08
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-3

Laboratory ID Number: AZ22717

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ22719	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.106	0.108	0.109	0.085 to 0.115	106	70 to 130	1.75	20
AZ22719	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.102	0.102	0.105	0.085 to 0.115	102	70 to 130	0.135	20
AZ22719	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.104	0.105	0.105	0.085 to 0.115	104	70 to 130	1.77	20
AZ22719	Mercury, Total by CVAA	mg/L	0.0000117	0.0005	0.004	0.00407	0.00413	0.00411	0.0034 to 0.0046	102	70 to 130	1.28	20
AZ22719	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.143	0.144	0.102	0.085 to 0.115	97.9	70 to 130	0.486	20
AZ22719	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.0989	0.0998	0.101	0.085 to 0.115	98.9	70 to 130	0.956	20
AZ22719	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.204	0.201	0.201	0.17 to 0.23	102	70 to 130	1.09	20
AZ22719	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.102	0.102	0.103	0.085 to 0.115	102	70 to 130	0.486	20
AZ22719	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.101	0.102	0.105	0.085 to 0.115	101	70 to 130	0.497	20
AZ22719	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0975	0.0990	0.0983	0.085 to 0.115	97.5	70 to 130	1.53	20
AZ22719	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.998	0.985	0.981	0.85 to 1.15	99.8	70 to 130	1.33	20
AZ22719	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.07	5.97	5.10	4.25 to 5.75	104	70 to 130	1.60	20
AZ22719	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.61	20
AZ22719	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.822	20
AZ22719	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.104	0.105	0.103	0.085 to 0.115	102	70 to 130	1.61	20

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 11:08
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-3

Laboratory ID Number: AZ22717

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ22719	Solids, Dissolved	mg/L	0.0000	25			39.3	54.0	40 to 60			2.61	5
AZ22719	Fluoride	mg/L	0.0438	0.05	2.50	2.41	0.0302	2.61	2.25 to 2.75	96.4	80 to 120	0.00	20
AZ22719	Sulfate	mg/L	-0.381	0.50	20.0	23.5	4.97	19.5	18 to 22	92.7	80 to 120	0.201	20
AZ22719	Chloride	mg/L	0.0378	0.50	10.0	14.5	4.36	9.84	9 to 11	102	80 to 120	0.922	20

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

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-5

Location Code: WMWBARG
Collected: 10/2/19 12:14
Customer ID:
Submittal Date: 10/4/19 11:11

Laboratory ID Number: AZ22718

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 11:12		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 11:12		1.015	1.33	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 11:12		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 17:21		1.015	0.0728	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.002	0.01	U
* Cobalt, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 17:21		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:32		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	34.7	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 15:01	10/4/19 15:01		1	3.49	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/4/19 17:22	10/4/19 17:22		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 17:59	10/8/19 17:59		1	6.55	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/2/19 12:10	10/2/19 12:10			41.13	uS/cm			FA
pH	10/2/19 12:10	10/2/19 12:10			4.44	SU			FA
Temperature	10/2/19 12:10	10/2/19 12:10			22.88	C			FA
Turbidity	10/2/19 12:10	10/2/19 12:10			0.54	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 12:14
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-5

Laboratory ID Number: AZ22718

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Prec		
AZ22719	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.106	0.108	0.109	0.085 to 0.115	106	70 to 130	1.75	20
AZ22719	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.204	0.201	0.201	0.17 to 0.23	102	70 to 130	1.09	20
AZ22719	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.102	0.102	0.103	0.085 to 0.115	102	70 to 130	0.486	20
AZ22719	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.143	0.144	0.102	0.085 to 0.115	97.9	70 to 130	0.486	20
AZ22719	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.0989	0.0998	0.101	0.085 to 0.115	98.9	70 to 130	0.956	20
AZ22719	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.101	0.102	0.105	0.085 to 0.115	101	70 to 130	0.497	20
AZ22719	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0975	0.0990	0.0983	0.085 to 0.115	97.5	70 to 130	1.53	20
AZ22719	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.822	20
AZ22719	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.104	0.105	0.103	0.085 to 0.115	102	70 to 130	1.61	20
AZ22719	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.102	0.102	0.105	0.085 to 0.115	102	70 to 130	0.135	20
AZ22719	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.104	0.105	0.105	0.085 to 0.115	104	70 to 130	1.77	20
AZ22719	Mercury, Total by CVAA	mg/L	0.0000117	0.0005	0.004	0.00407	0.00413	0.00411	0.0034 to 0.0046	102	70 to 130	1.28	20
AZ22719	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.998	0.985	0.981	0.85 to 1.15	99.8	70 to 130	1.33	20
AZ22719	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.07	5.97	5.10	4.25 to 5.75	104	70 to 130	1.60	20
AZ22719	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.61	20

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.

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

* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114
 Issued By: State of Florida, Department of Health
 Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 12:14
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-5

Laboratory ID Number: AZ22718

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
AZ22719	Chloride	mg/L	0.0378	0.50	10.0	14.5	4.36	9.84	9 to 11	102	80 to 120	0.922	20
AZ22719	Solids, Dissolved	mg/L	0.0000	25			39.3	54.0	40 to 60			2.61	5
AZ22719	Fluoride	mg/L	0.0438	0.05	2.50	2.41	0.0302	2.61	2.25 to 2.75	96.4	80 to 120	0.00	20
AZ22719	Sulfate	mg/L	-0.381	0.50	20.0	23.5	4.97	19.5	18 to 22	92.7	80 to 120	0.201	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

Comments:

Certificate Of Analysis

Description: Barry Gypsum - MW-8

Location Code: WMWBARG
Collected: 10/2/19 13:32
Customer ID:
Submittal Date: 10/4/19 11:11

Laboratory ID Number: AZ22719

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: RDA			Preparation Method: EPA 1638				
* Boron, Total	10/7/19 13:00	10/8/19 11:15		1.015	Not Detected	mg/L	0.03	0.1	U
* Calcium, Total	10/7/19 13:00	10/8/19 11:15		1.015	0.882	mg/L	0.1	0.5	
* Lithium, Total	10/7/19 13:00	10/8/19 11:15		1.015	Not Detected	mg/L	0.01	0.02	U
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.0008	0.003	U
* Arsenic, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.001	0.005	U
* Barium, Total	10/7/19 12:15	10/8/19 17:24		1.015	0.0453	mg/L	0.002	0.01	
* Beryllium, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.0006	0.003	U
* Cadmium, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.0003	0.001	U
* Chromium, Total	10/7/19 12:15	10/8/19 17:24		1.015	0.00223	mg/L	0.002	0.01	J
* Cobalt, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.002	0.005	U
* Lead, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.001	0.005	U
* Molybdenum, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.002	0.01	U
* Selenium, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.002	0.01	U
* Thallium, Total	10/7/19 12:15	10/8/19 17:24		1.015	Not Detected	mg/L	0.0002	0.001	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	10/8/19 11:17	10/10/19 13:35		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: SM 2540C		Analyst: TJW							
* Solids, Dissolved	10/7/19 12:40	10/8/19 16:30		1	37.3	mg/L		25	
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	10/4/19 15:02	10/4/19 15:02		1	4.32	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	10/4/19 17:23	10/4/19 17:23		1	Not Detected	mg/L	0.05	0.1	U
Analytical Method: SM4500SO4 E		Analyst: JCC							
* Sulfate	10/8/19 18:00	10/8/19 18:00		1	4.96	mg/L	0.50	1	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	10/2/19 13:28	10/2/19 13:28			41.88	uS/cm			FA
pH	10/2/19 13:28	10/2/19 13:28			4.86	SU			FA
Temperature	10/2/19 13:28	10/2/19 13:28			22.09	C			FA
Turbidity	10/2/19 13:28	10/2/19 13:28			1.08	NTU			FA

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

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 13:32
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-8

Laboratory ID Number: AZ22719

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
			MB	Limit						Rec	Limit		
AZ22719	Lead, Total	mg/L	0.0000197	0.0001474	0.10	0.106	0.108	0.109	0.085 to 0.115	106	70 to 130	1.75	20
AZ22719	Cadmium, Total	mg/L	-0.00000527	0.0001474	0.10	0.101	0.102	0.105	0.085 to 0.115	101	70 to 130	0.497	20
AZ22719	Molybdenum, Total	mg/L	0.0000205	0.0001474	0.10	0.0975	0.0990	0.0983	0.085 to 0.115	97.5	70 to 130	1.53	20
AZ22719	Beryllium, Total	mg/L	0.0000260	0.00088	0.10	0.101	0.102	0.101	0.085 to 0.115	101	70 to 130	0.822	20
AZ22719	Chromium, Total	mg/L	0.0000409	0.00044	0.10	0.104	0.105	0.103	0.085 to 0.115	102	70 to 130	1.61	20
AZ22719	Barium, Total	mg/L	-0.0000208	0.0002	0.10	0.143	0.144	0.102	0.085 to 0.115	97.9	70 to 130	0.486	20
AZ22719	Antimony, Total	mg/L	0.000185	0.00066	0.10	0.0989	0.0998	0.101	0.085 to 0.115	98.9	70 to 130	0.956	20
AZ22719	Lithium, Total	mg/L	0.000000553	0.0154	0.20	0.204	0.201	0.201	0.17 to 0.23	102	70 to 130	1.09	20
AZ22719	Selenium, Total	mg/L	-0.0000201	0.00066	0.10	0.102	0.102	0.103	0.085 to 0.115	102	70 to 130	0.486	20
AZ22719	Arsenic, Total	mg/L	0.0000196	0.0001474	0.10	0.102	0.102	0.105	0.085 to 0.115	102	70 to 130	0.135	20
AZ22719	Cobalt, Total	mg/L	-0.0000012	0.0001474	0.10	0.104	0.105	0.105	0.085 to 0.115	104	70 to 130	1.77	20
AZ22719	Mercury, Total by CVAA	mg/L	0.0000117	0.0005	0.004	0.00407	0.00413	0.00411	0.0034 to 0.0046	102	70 to 130	1.28	20
AZ22719	Boron, Total	mg/L	0.00180	0.0650254	1.00	0.998	0.985	0.981	0.85 to 1.15	99.8	70 to 130	1.33	20
AZ22719	Calcium, Total	mg/L	0.000185	0.1518	5.00	6.07	5.97	5.10	4.25 to 5.75	104	70 to 130	1.60	20
AZ22719	Thallium, Total	mg/L	0.00000981	0.0001474	0.10	0.110	0.108	0.111	0.085 to 0.115	110	70 to 130	1.61	20

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* Test results for these accredited parameters meet all 2003 NELAC and 2009 TNI requirements, with exceptions noted on this report

Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2018

Comments:

Batch QC Summary

Customer Account: WMWBARG
Sample Date: 10/2/19 13:32
Customer ID:
Delivery Date: 10/4/19 11:11

Description: Barry Gypsum - MW-8

Laboratory ID Number: AZ22719

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
AZ22719	Solids, Dissolved	mg/L	0.0000	25			39.3	54.0	40 to 60			2.61	5
AZ22719	Chloride	mg/L	0.0378	0.50	10.0	14.5	4.36	9.84	9 to 11	102	80 to 120	0.922	20
AZ22719	Fluoride	mg/L	0.0438	0.05	2.50	2.41	0.0302	2.61	2.25 to 2.75	96.4	80 to 120	0.00	20
AZ22719	Sulfate	mg/L	-0.381	0.50	20.0	23.5	4.97	19.5	18 to 22	92.7	80 to 120	0.201	20

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Laboratory certification ID: E571114

Issued By: State of Florida, Department of Health

Expiration: June 30, 2017

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.



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA 10/03/2019 12:00

Requested Complete Date	Routine	Results To	Dustin Brooks,Greg Dyer,Lauren Parker
Site Representative	Tamala Davis	Requested By	Lauren Parker
Collector	Anthony Goggins	Location	Barry Gypsum

Bottles	1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
	2	Hg	250 mL	4	Anions	250 mL	6	N/A	N/A	8	N/A	N/A

Comments Relinquished to secured shipping lab 10032019 1400 Project Manager out of office. AWG

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-7	10/2/19	09:30	4	Groundwater		AZ22707
MW-7DUP	10/02/2019	09:30	4	Sample Duplicate		AZ22708
FB-1	10/02/2019	10:10	4	Field Blank		AZ22709
MW-6	10/02/2019	10:22	4	Groundwater		AZ22710
MW-4	10/02/2019	11:03	4	Groundwater		AZ22711
MW-9	10/02/2019	11:52	4	Groundwater		AZ22712
MW-10	10/02/2019	12:35	4	Groundwater		AZ22713
EB-1	10/02/2019	12:50	4	Equipment Blank		AZ22714

Relinquished By	Received By	Date/Time
	Laura Midkiff <small>Digitally signed by Laura Midkiff DN: cn=Laura Midkiff, ou=Alabama Power Company, ou=Environmental Affairs, email=lmidkiff@southernco.com, c=US Date: 2019.10.04 09:10:42 -05'00'</small>	10/04/2019 09:10

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
Turbidity ID	5160-26211-1-1	Cooler Temp	0.7 degrees C
Sample Event	1244	Thermometer ID	5408-27568-2-2
		pH Strip ID	7452-40646-4-2



Chain of Custody

Groundwater

APC General Testing Laboratory

 Field Complete

 Outside Lab

 Lab Complete

 Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer, Lauren Parker
Site Representative	Tamala Davis	Requested By	Lauren Parker
Collector	Dallas Gentry	Location	Barry Gypsum

1	Metals	500 mL	3	TDS	500 mL	5	N/A	N/A	7	N/A	N/A
2	Hg	250 mL	4	Anions	250 mL	6	N/A	N/A	8	N/A	N/A

Comments Samples relinquished to shipping Lab at 1430 on 10/3/19. Project manager out of office. DFG

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	10/2/19	09:33	4	Groundwater		AZ22715
MW-2	10/02/2019	10:19	4	Groundwater		AZ22716
MW-3	10/02/2019	11:08	4	Groundwater		AZ22717
MW-5	10/02/2019	12:14	4	Groundwater		AZ22718
MW-8	10/02/2019	13:32	4	Groundwater		AZ22719

Relinquished By	Received By	Date/Time
	Laura Midkiff <small>Digitally signed by Laura Midkiff, DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lmidkiff@southernco.com, c=US Date: 2019.10.04 09:09:27 -0500</small>	10/04/2019 09:09

SmarTroll ID	7586-41446-5-5	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	7081-38476-1-1	Cooler Temp
Sample Event	1244	Thermometer ID
		pH Strip ID



Chain of Custody
Groundwater
APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA **10/03/2019 12:00**

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer, Lauren Parker
Site Representative	Tamala Davis	Requested By	Lauren Parker
Collector	Anthony Goggins	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: Relinquished to secured shipping lab 10032019 1400 Project Manager out of office. AWG

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-7	10/2/19	09:30	1	Groundwater		AZ22720
MW-7DUP	10/02/2019	09:30	1	Sample Duplicate		AZ22721
FB-1	10/02/2019	10:10	1	Field Blank		AZ22722
MW-6	10/02/2019	10:22	1	Groundwater		AZ22723
MW-4	10/02/2019	11:03	1	Groundwater		AZ22724
MW-9	10/02/2019	11:52	1	Groundwater		AZ22725
MW-10	10/02/2019	12:35	1	Groundwater		AZ22726
EB-1	10/02/2019	12:50	1	Equipment Blank		AZ22727

Relinquished By	Received By	Date/Time
	Laura Midkiff <small>Digitally signed by Laura Midkiff DN: cn=Laura Midkiff, ou=Alabama Power Company, ou=Environmental Affairs, email=lmidkiff@southernco.com, c=US Date: 2019.10.04 09:06:23 -05'00'</small>	10/04/2019 09:06

SmarTroll ID	7586-41442-5-1	All metals and radiological bottles have pH < 2 <input checked="" type="checkbox"/>
Turbidity ID	5160-26211-1-1	
Sample Event	1244	
Cooler Temp	N/A	
Thermometer ID	N/A	
pH Strip ID	7452-40646-4-2	



Chain of Custody Groundwater

APC General Testing Laboratory

Field Complete

Outside Lab

Lab Complete

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks,Greg Dyer,Lauren Parker
Site Representative	Tamala Davis	Requested By	Lauren Parker
Collector	Dallas Gentry	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: Radium duplicate collected at MW-5. Samples relinquished to shipping Lab at 1430 on 10/3/19. Project manager out of office. DFG

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-1	10/2/19	09:33	1	Groundwater		AZ22728
MW-2	10/02/2019	10:19	1	Groundwater		AZ22729
MW-3	10/02/2019	11:08	1	Groundwater		AZ22730
MW-5	10/02/2019	12:14	3	Groundwater		AZ22731
MW-8	10/02/2019	13:32	1	Groundwater		AZ22732

Relinquished By	Received By	Date/Time
	Laura Midkiff	10/04/2019 09:07
	<small>Digitally signed by Laura Midkiff, DN: cn=Laura Midkiff, o=Alabama Power Company, ou=Environmental Affairs, email=lmidkiff@southernco.com, c=US Date: 2019.10.04 09:07:38 -05'00'</small>	

SmarTroll ID	7586-41446-5-5	All metals and radiological bottles have pH < 2	<input checked="" type="checkbox"/>
Turbidity ID	7081-38476-1-1	Cooler Temp	N/A
Sample Event	1244	Thermometer ID	N/A
		pH Strip ID	7452-40646-4-2

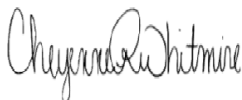
ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-177659-1
Laboratory Sample Delivery Group: Barry Gypsum 1244
Client Project/Site: CCR Plant Barry

For:
Alabama Power General Test Laboratory
744 County Rd 87
GSC #8
Calera, Alabama 35040

Attn: Laura Midkiff



Authorized for release by:
11/6/2019 9:24:45 AM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	19
Chronicle	20
QC Association	24
QC Sample Results	25
Chain of Custody	27
Receipt Checklists	29
Certification Summary	31

Case Narrative

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Job ID: 400-177659-1

Laboratory: Eurofins TestAmerica, Pensacola

Narrative

Job Narrative 400-177659-1

RAD

Methods 9315: Radium-226 Prep Batch 160-445904. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ22720 MW-7 (400-177659-1), AZ22721 MW-7 DUP (400-177659-2), AZ22722 FB-1 (400-177659-3), AZ22723 MW-6 (400-177659-4), AZ22724 MW-4 (400-177659-5), AZ22725 MW-9 (400-177659-6), AZ22726 MW-10 (400-177659-7), AZ22727 EB-1 (400-177659-8), AZ22728 MW-1 (400-177659-9), AZ22729 MW-2 (400-177659-10), AZ22730 MW-3 (400-177659-11), AZ22731 MW-5 (400-177659-12), AZ22731 MW-5 (400-177659-12[DU]), AZ22732 MW-8 (400-177659-13), (LCS 160-445904/1-A) and (MB 160-445904/17-A)

Methods 9320: Ra-228 Prep Batch 160-445906. Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. AZ22720 MW-7 (400-177659-1), AZ22721 MW-7 DUP (400-177659-2), AZ22722 FB-1 (400-177659-3), AZ22723 MW-6 (400-177659-4), AZ22724 MW-4 (400-177659-5), AZ22725 MW-9 (400-177659-6), AZ22726 MW-10 (400-177659-7), AZ22727 EB-1 (400-177659-8), AZ22728 MW-1 (400-177659-9), AZ22729 MW-2 (400-177659-10), AZ22730 MW-3 (400-177659-11), AZ22731 MW-5 (400-177659-12), AZ22731 MW-5 (400-177659-12[DU]), AZ22732 MW-8 (400-177659-13), (LCS 160-445906/1-A) and (MB 160-445906/17-A)

Method PrecSep_0: Radium 228 Prep Batch 160-445906. The following samples were prepared at a reduced aliquot: AZ22720 MW-7 (400-177659-1), AZ22721 MW-7 DUP (400-177659-2), AZ22722 FB-1 (400-177659-3), AZ22723 MW-6 (400-177659-4), AZ22724 MW-4 (400-177659-5), AZ22725 MW-9 (400-177659-6), AZ22726 MW-10 (400-177659-7), AZ22727 EB-1 (400-177659-8), AZ22728 MW-1 (400-177659-9), AZ22729 MW-2 (400-177659-10), AZ22730 MW-3 (400-177659-11), AZ22731 MW-5 (400-177659-12), AZ22731 MW-5 (400-177659-12[DU]) and AZ22732 MW-8 (400-177659-13). Sample 440-251904-E-1 was reduced due to yellow discoloration with suspended solids. The other following samples were reduced due to insufficient volume available.

Method PrecSep-21: Radium 226 Prep Batch 160-445904. The following samples were prepared at a reduced aliquot: AZ22720 MW-7 (400-177659-1), AZ22721 MW-7 DUP (400-177659-2), AZ22722 FB-1 (400-177659-3), AZ22723 MW-6 (400-177659-4), AZ22724 MW-4 (400-177659-5), AZ22725 MW-9 (400-177659-6), AZ22726 MW-10 (400-177659-7), AZ22727 EB-1 (400-177659-8), AZ22728 MW-1 (400-177659-9), AZ22729 MW-2 (400-177659-10), AZ22730 MW-3 (400-177659-11), AZ22731 MW-5 (400-177659-12), AZ22731 MW-5 (400-177659-12[DU]) and AZ22732 MW-8 (400-177659-13). Sample 440-251904-E-1 was reduced due to yellow discoloration with suspended solids. The other following samples were reduced due to insufficient volume available.

Method Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
400-177659-1	AZ22720 MW-7	Water	10/02/19 09:30	10/08/19 14:54	
400-177659-2	AZ22721 MW-7 DUP	Water	10/02/19 09:30	10/08/19 14:54	
400-177659-3	AZ22722 FB-1	Water	10/02/19 10:10	10/08/19 14:54	
400-177659-4	AZ22723 MW-6	Water	10/02/19 10:22	10/08/19 14:54	
400-177659-5	AZ22724 MW-4	Water	10/02/19 11:03	10/08/19 14:54	
400-177659-6	AZ22725 MW-9	Water	10/02/19 11:52	10/08/19 14:54	
400-177659-7	AZ22726 MW-10	Water	10/02/19 12:35	10/08/19 14:54	
400-177659-8	AZ22727 EB-1	Water	10/02/19 12:50	10/08/19 14:54	
400-177659-9	AZ22728 MW-1	Water	10/02/19 09:33	10/08/19 14:54	
400-177659-10	AZ22729 MW-2	Water	10/02/19 10:19	10/08/19 14:54	
400-177659-11	AZ22730 MW-3	Water	10/02/19 11:08	10/08/19 14:54	
400-177659-12	AZ22731 MW-5	Water	10/02/19 12:14	10/08/19 14:54	
400-177659-13	AZ22732 MW-8	Water	10/02/19 13:32	10/08/19 14:54	

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22720 MW-7

Lab Sample ID: 400-177659-1

Date Collected: 10/02/19 09:30

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.314		0.157	0.159	1.00	0.203	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.116	U	0.309	0.310	1.00	0.534	pCi/L	10/11/19 14:08	10/30/19 17:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110					10/11/19 14:08	10/30/19 17:27	1
Y Carrier	77.8		40 - 110					10/11/19 14:08	10/30/19 17:27	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.430	U	0.347	0.348	5.00	0.534	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22721 MW-7 DUP

Lab Sample ID: 400-177659-2

Date Collected: 10/02/19 09:30

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.336		0.177	0.180	1.00	0.229	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.284	U	0.384	0.385	1.00	0.640	pCi/L	10/11/19 14:08	10/30/19 17:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110					10/11/19 14:08	10/30/19 17:27	1
Y Carrier	83.0		40 - 110					10/11/19 14:08	10/30/19 17:27	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.619	U	0.423	0.425	5.00	0.640	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22722 FB-1

Lab Sample ID: 400-177659-3

Date Collected: 10/02/19 10:10

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.203		0.136	0.137	1.00	0.188	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.247	U	0.299	0.300	1.00	0.494	pCi/L	10/11/19 14:08	10/30/19 17:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					10/11/19 14:08	10/30/19 17:27	1
Y Carrier	89.3		40 - 110					10/11/19 14:08	10/30/19 17:27	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.450	U	0.328	0.330	5.00	0.494	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22723 MW-6

Lab Sample ID: 400-177659-4

Date Collected: 10/02/19 10:22

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.467		0.178	0.183	1.00	0.199	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.370	U	0.386	0.387	1.00	0.631	pCi/L	10/11/19 14:08	10/30/19 17:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					10/11/19 14:08	10/30/19 17:30	1
Y Carrier	87.1		40 - 110					10/11/19 14:08	10/30/19 17:30	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.836		0.425	0.428	5.00	0.631	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22724 MW-4

Lab Sample ID: 400-177659-5

Date Collected: 10/02/19 11:03

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.492		0.166	0.172	1.00	0.153	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.131	U	0.399	0.399	1.00	0.687	pCi/L	10/11/19 14:08	10/30/19 17:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/11/19 14:08	10/30/19 17:30	1
Y Carrier	71.8		40 - 110					10/11/19 14:08	10/30/19 17:30	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.624	U	0.432	0.434	5.00	0.687	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22725 MW-9

Lab Sample ID: 400-177659-6

Date Collected: 10/02/19 11:52

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.799		0.216	0.228	1.00	0.203	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.21		0.429	0.443	1.00	0.600	pCi/L	10/11/19 14:08	10/30/19 17:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					10/11/19 14:08	10/30/19 17:30	1
Y Carrier	86.4		40 - 110					10/11/19 14:08	10/30/19 17:30	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.00		0.480	0.498	5.00	0.600	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22726 MW-10

Lab Sample ID: 400-177659-7

Date Collected: 10/02/19 12:35

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.883		0.241	0.254	1.00	0.214	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.30		0.480	0.495	1.00	0.686	pCi/L	10/11/19 14:08	10/30/19 17:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110					10/11/19 14:08	10/30/19 17:30	1
Y Carrier	86.7		40 - 110					10/11/19 14:08	10/30/19 17:30	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.19		0.537	0.556	5.00	0.686	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22727 EB-1

Lab Sample ID: 400-177659-8

Date Collected: 10/02/19 12:50

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.146	U	0.139	0.140	1.00	0.216	pCi/L	10/11/19 13:16	11/04/19 06:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		40 - 110					10/11/19 13:16	11/04/19 06:51	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.601	U	0.406	0.410	1.00	0.633	pCi/L	10/11/19 14:08	10/30/19 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		40 - 110					10/11/19 14:08	10/30/19 17:31	1
Y Carrier	85.2		40 - 110					10/11/19 14:08	10/30/19 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.747		0.429	0.433	5.00	0.633	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22728 MW-1

Lab Sample ID: 400-177659-9

Date Collected: 10/02/19 09:33

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.653		0.208	0.216	1.00	0.211	pCi/L	10/11/19 13:16	11/04/19 06:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					10/11/19 13:16	11/04/19 06:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.252	U	0.359	0.360	1.00	0.599	pCi/L	10/11/19 14:08	10/30/19 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					10/11/19 14:08	10/30/19 17:31	1
Y Carrier	89.0		40 - 110					10/11/19 14:08	10/30/19 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.905		0.415	0.420	5.00	0.599	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22729 MW-2

Lab Sample ID: 400-177659-10

Date Collected: 10/02/19 10:19

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.778		0.229	0.240	1.00	0.236	pCi/L	10/11/19 13:16	11/04/19 06:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					10/11/19 13:16	11/04/19 06:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.549	U	0.392	0.396	1.00	0.618	pCi/L	10/11/19 14:08	10/30/19 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					10/11/19 14:08	10/30/19 17:31	1
Y Carrier	86.4		40 - 110					10/11/19 14:08	10/30/19 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.33		0.454	0.463	5.00	0.618	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22730 MW-3

Lab Sample ID: 400-177659-11

Date Collected: 10/02/19 11:08

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.230		0.160	0.161	1.00	0.230	pCi/L	10/11/19 13:16	11/04/19 06:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					10/11/19 13:16	11/04/19 06:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.228	U	0.405	0.406	1.00	0.684	pCi/L	10/11/19 14:08	10/30/19 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					10/11/19 14:08	10/30/19 17:31	1
Y Carrier	86.4		40 - 110					10/11/19 14:08	10/30/19 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.458	U	0.435	0.437	5.00	0.684	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22731 MW-5

Lab Sample ID: 400-177659-12

Date Collected: 10/02/19 12:14

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.423		0.181	0.185	1.00	0.214	pCi/L	10/11/19 13:16	11/04/19 06:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.6		40 - 110					10/11/19 13:16	11/04/19 06:52	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.531	U	0.352	0.355	1.00	0.544	pCi/L	10/11/19 14:08	10/30/19 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.6		40 - 110					10/11/19 14:08	10/30/19 17:31	1
Y Carrier	85.2		40 - 110					10/11/19 14:08	10/30/19 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.954		0.396	0.400	5.00	0.544	pCi/L		11/06/19 07:33	1

Client Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22732 MW-8

Lab Sample ID: 400-177659-13

Date Collected: 10/02/19 13:32

Matrix: Water

Date Received: 10/08/19 14:54

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.600		0.196	0.203	1.00	0.196	pCi/L	10/11/19 13:16	11/04/19 06:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					10/11/19 13:16	11/04/19 06:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.368	U	0.344	0.346	1.00	0.556	pCi/L	10/11/19 14:08	10/30/19 17:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					10/11/19 14:08	10/30/19 17:31	1
Y Carrier	86.7		40 - 110					10/11/19 14:08	10/30/19 17:31	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.969		0.396	0.401	5.00	0.556	pCi/L		11/06/19 07:33	1

Definitions/Glossary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

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

Lab Chronicle

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Client Sample ID: AZ22720 MW-7

Lab Sample ID: 400-177659-1

Date Collected: 10/02/19 09:30

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448357	10/30/19 17:27	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22721 MW-7 DUP

Lab Sample ID: 400-177659-2

Date Collected: 10/02/19 09:30

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448357	10/30/19 17:27	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22722 FB-1

Lab Sample ID: 400-177659-3

Date Collected: 10/02/19 10:10

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448357	10/30/19 17:27	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22723 MW-6

Lab Sample ID: 400-177659-4

Date Collected: 10/02/19 10:22

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:30	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Client Sample ID: AZ22724 MW-4

Lab Sample ID: 400-177659-5

Date Collected: 10/02/19 11:03

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:30	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22725 MW-9

Lab Sample ID: 400-177659-6

Date Collected: 10/02/19 11:52

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:30	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22726 MW-10

Lab Sample ID: 400-177659-7

Date Collected: 10/02/19 12:35

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:30	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22727 EB-1

Lab Sample ID: 400-177659-8

Date Collected: 10/02/19 12:50

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:51	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:31	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Client Sample ID: AZ22728 MW-1

Lab Sample ID: 400-177659-9

Date Collected: 10/02/19 09:33

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:31	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22729 MW-2

Lab Sample ID: 400-177659-10

Date Collected: 10/02/19 10:19

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:31	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22730 MW-3

Lab Sample ID: 400-177659-11

Date Collected: 10/02/19 11:08

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:31	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Client Sample ID: AZ22731 MW-5

Lab Sample ID: 400-177659-12

Date Collected: 10/02/19 12:14

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448682	11/04/19 06:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:31	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Lab Chronicle

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Client Sample ID: AZ22732 MW-8

Lab Sample ID: 400-177659-13

Date Collected: 10/02/19 13:32

Matrix: Water

Date Received: 10/08/19 14:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			445904	10/11/19 13:16	ORM	TAL SL
Total/NA	Analysis	9315		1	448714	11/04/19 06:54	KLS	TAL SL
Total/NA	Prep	PrecSep_0			445906	10/11/19 14:08	ORM	TAL SL
Total/NA	Analysis	9320		1	448358	10/30/19 17:31	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	449096	11/06/19 07:33	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Association Summary

Client: Alabama Power General Test Laboratory
Project/Site: CCR Plant Barry

Job ID: 400-177659-1
SDG: Barry Gypsum 1244

Rad

Prep Batch: 445904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-177659-1	AZ22720 MW-7	Total/NA	Water	PrecSep-21	
400-177659-2	AZ22721 MW-7 DUP	Total/NA	Water	PrecSep-21	
400-177659-3	AZ22722 FB-1	Total/NA	Water	PrecSep-21	
400-177659-4	AZ22723 MW-6	Total/NA	Water	PrecSep-21	
400-177659-5	AZ22724 MW-4	Total/NA	Water	PrecSep-21	
400-177659-6	AZ22725 MW-9	Total/NA	Water	PrecSep-21	
400-177659-7	AZ22726 MW-10	Total/NA	Water	PrecSep-21	
400-177659-8	AZ22727 EB-1	Total/NA	Water	PrecSep-21	
400-177659-9	AZ22728 MW-1	Total/NA	Water	PrecSep-21	
400-177659-10	AZ22729 MW-2	Total/NA	Water	PrecSep-21	
400-177659-11	AZ22730 MW-3	Total/NA	Water	PrecSep-21	
400-177659-12	AZ22731 MW-5	Total/NA	Water	PrecSep-21	
400-177659-13	AZ22732 MW-8	Total/NA	Water	PrecSep-21	
MB 160-445904/17-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-445904/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-177659-12 DU	AZ22731 MW-5	Total/NA	Water	PrecSep-21	

Prep Batch: 445906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-177659-1	AZ22720 MW-7	Total/NA	Water	PrecSep_0	
400-177659-2	AZ22721 MW-7 DUP	Total/NA	Water	PrecSep_0	
400-177659-3	AZ22722 FB-1	Total/NA	Water	PrecSep_0	
400-177659-4	AZ22723 MW-6	Total/NA	Water	PrecSep_0	
400-177659-5	AZ22724 MW-4	Total/NA	Water	PrecSep_0	
400-177659-6	AZ22725 MW-9	Total/NA	Water	PrecSep_0	
400-177659-7	AZ22726 MW-10	Total/NA	Water	PrecSep_0	
400-177659-8	AZ22727 EB-1	Total/NA	Water	PrecSep_0	
400-177659-9	AZ22728 MW-1	Total/NA	Water	PrecSep_0	
400-177659-10	AZ22729 MW-2	Total/NA	Water	PrecSep_0	
400-177659-11	AZ22730 MW-3	Total/NA	Water	PrecSep_0	
400-177659-12	AZ22731 MW-5	Total/NA	Water	PrecSep_0	
400-177659-13	AZ22732 MW-8	Total/NA	Water	PrecSep_0	
MB 160-445906/17-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-445906/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-177659-12 DU	AZ22731 MW-5	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-445904/17-A
Matrix: Water
Analysis Batch: 448682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 445904

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.2250		0.145	0.146	1.00	0.202	pCi/L	10/11/19 13:16	11/04/19 12:48	1
Carrier	MB	MB	Limits				Prepared		Analyzed	
Ba Carrier	%Yield	Qualifier	40 - 110				10/11/19 13:16		11/04/19 12:48	
	94.1									

Lab Sample ID: LCS 160-445904/1-A
Matrix: Water
Analysis Batch: 448682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 445904

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	
				Uncert. (2σ+/-)						
Radium-226	15.1	11.72		1.29	1.00	0.199	pCi/L	77	75 - 125	
Carrier	LCS	LCS	Limits							
Ba Carrier	%Yield	Qualifier	40 - 110							
	98.6									

Lab Sample ID: 400-177659-12 DU
Matrix: Water
Analysis Batch: 448714

Client Sample ID: AZ22731 MW-5
Prep Type: Total/NA
Prep Batch: 445904

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.423		0.2761		0.154	1.00	0.205	pCi/L	0.43	1
Carrier	DU	DU	Limits							
Ba Carrier	%Yield	Qualifier	40 - 110							
	104									

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-445906/17-A
Matrix: Water
Analysis Batch: 448358

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 445906

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3394	U	0.357	0.358	1.00	0.583	pCi/L	10/11/19 14:08	10/30/19 17:31	1
Carrier	MB	MB	Limits				Prepared		Analyzed	
Ba Carrier	%Yield	Qualifier	40 - 110				10/11/19 14:08		10/30/19 17:31	
	94.1									
Y Carrier	84.5		40 - 110				10/11/19 14:08		10/30/19 17:31	

QC Sample Results

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-445906/1-A
Matrix: Water
Analysis Batch: 448357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 445906

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	12.6	13.29		1.54	1.00	0.506	pCi/L	106	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.6		40 - 110
Y Carrier	83.0		40 - 110

Lab Sample ID: 400-177659-12 DU
Matrix: Water
Analysis Batch: 448358

Client Sample ID: AZ22731 MW-5
Prep Type: Total/NA
Prep Batch: 445906

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.531	U	0.2966	U	0.310	1.00	0.503	pCi/L	0.35	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	85.2		40 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 400-177659-12 DU
Matrix: Water
Analysis Batch: 449096

Client Sample ID: AZ22731 MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.954		0.5727		0.346	5.00	0.503	pCi/L	0.51	

Chain of Custody Record



400-177659 COC

Client Information (Sub Contract Lab) Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC#8 City: Calera State, Zip: AL, 35040 Phone: 205-664-6197 Email: lbmicki@southernco.com Project Name: CCR Site: Barry Gypsum 1244		Due Date Requested: TAT Requested (days): Routine		Lab PM: Whitmire, Chyenne R E-Mail: chyanne.whitmire@testamericainc.com Accreditations Required (See Note):		Carrier Tracking Note: State of Origin: Alabama		COC No: 400-56525-24537.1 Page: Page 1 of 2 Job #:	
Client Contact: Laura Micki		Sampler: Anthony Goggins Phone:		Analysis Requested: 315 Ra226, 9320 Ra228, Ra226Ra228, GPPC SM 4500 SO4 F SM 4500 Cl F SM 4500 F C		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NH4OH F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Special Instructions/Note: MW-7 MW-7 DUP (Sample Duplicate) FB-1 (Field Blank) MW-6 MW-4 MW-9 MW-10 EB-1 (Equipment Blank)	
Sample Identification - Client ID (Lab ID)		Field Filtered Sample (Yes or No)		Perform ME/MSD (Yes or No)		Total Number of Containers		Preservation Codes: M - Hexane N - None O - Ash/NO2 P - Nitric Acid Q - NaOH R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - other (specify)	
AZ22720	10/2/19	09:30	G	Water	X	X	1	MW-7	
AZ22721	10/2/19	09:30	G	Water	X	X	1	MW-7 DUP (Sample Duplicate)	
AZ22722	10/2/19	10:10	G	Water	X	X	1	FB-1 (Field Blank)	
AZ22723	10/2/19	10:22	G	Water	X	X	1	MW-6	
AZ22724	10/2/19	11:03	G	Water	X	X	1	MW-4	
AZ22725	10/2/19	11:52	G	Water	X	X	1	MW-9	
AZ22726	10/2/19	12:35	G	Water	X	X	1	MW-10	
AZ22727	10/2/19	12:50	G	Water	X	X	1	EB-1 (Equipment Blank)	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyzer & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not have the accreditation for the method, analyzer or accreditation compliance, the laboratory must provide a signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) 43599 (Special Instructions/OC Requirements)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Laura Micki	Date/Time: 10/04/19 14:00	Water	APC
Relinquished by:	Date/Time:	Company:	Company:
Relinquished by:	Date/Time:	Company:	Company:

Custody Seals Intact: Custody Seal No.:
 Cooler Temperature: °C and Other Remarks: 21.3°C JAR 8
 Ver: 09/20/2016



Chain of Custody Record

Client Information (Sub Contract Lab) Client Contact: Laura Midkiff Company: Alabama Power General Test Laboratory Address: 744 County Rd 87 GSC#8 City: Calera State, Zip: AL 35040 Phone: 205-864-6197 Email: lmidkiff@southal.com Project Name: CCR Site: Barry Gypsum 1244		Sampler: Dallas Gentry Phone: Lab PM: Whitney Cheyenne R E-Mail: cheyenne.whitnie@testamericainc.com Accreditations Required (See Note):		Carrier Tracking Note: 400-56525-24537.1 Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): Routine		Analysis Requested 9315_Ra228, 9320_Ra228, Ra228Ra228, Ra228Ra228, GFCP SM 4500 Cl.E SM 4500 F.C SM 4500 SO4.E Perform M9/M9D (Yes or No)			
Sample Identification - Client ID (Lab ID) A222728 A222729 A222730 A222731 A222732		Sample Date 10/2/19 10/2/19 10/2/19 10/2/19 10/2/19		Sample Time 09:33 10:19 11:08 12:14 13:32	
Sample Type (C=Comp, G=grab) G G G G G		Matrix (Water, Solid, Other) Water Water Water Water Water		Preservation Code: MW-1 MW-2 MW-3 MW-5 MW-8	
Special Instructions/Note: Total Number of Containers		1 1 1 3 1		MW-1 MW-2 MW-3 MW-5 MW-8	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the state of origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody agreement to said compliance to TestAmerica Laboratories, Inc.</p> <p>Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ 435991 Special Instructions/QC Requirements:</p> <p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Employ Kit Relinquished by: Laura Midkiff Date/Time: 10/04/19 14:00 Date/Time: _____ Date/Time: _____ Date/Time: _____</p> <p>Received by: _____ Date/Time: 10/8/19 17:54 Date/Time: _____ Date/Time: _____</p> <p>Custody Seals Intact: _____ Custody Seal No.: _____</p>					



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-177659-1
SDG Number: Barry Gypsum 1244

Login Number: 177659
List Number: 1
Creator: Perez, Trina M

List Source: Eurofins TestAmerica, Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	21.3°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: Alabama Power General Test Laboratory

Job Number: 400-177659-1
SDG Number: Barry Gypsum 1244

Login Number: 177659

List Number: 2

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 10/10/19 03:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	21.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	07-01-20
ANAB	ISO/IEC 17025	L2471	02-22-20
Arizona	State	AZ0710	01-12-20
Arkansas DEQ	State	88-0689	09-01-20
California	State	2510	07-01-20
Florida	NELAP	E81010	06-30-20
Georgia	State	E81010(FL)	06-30-20
Iowa	State	367	08-01-20
Iowa	State Program	367	08-01-20
Kansas	NELAP	E-10253	08-16-20
Kentucky (UST)	State	53	06-30-20
Kentucky (UST)	State Program	53	06-30-20
Kentucky (WW)	State	KY98030	12-30-19
Louisiana	NELAP	30976	06-30-20
Louisiana	NELAP	30976	06-30-20
Louisiana (DW)	NELAP	LA017	12-31-19
Louisiana (DW)	State	<cert No.>	12-31-19
Maryland	State	233	09-30-20
Massachusetts	State	M-FL094	06-30-20
Michigan	State	9912	05-06-20
Minnesota	NELAP	012-999-481	12-31-19
New Jersey	NELAP	FL006	07-30-20
North Carolina (WW/SW)	State	314	12-31-19
North Carolina (WW/SW)	State Program	314	12-31-19
Oklahoma	State	9810-186	08-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Rhode Island	State	LAO00307	12-30-19
Rhode Island	State Program	LAO00307	12-30-19
South Carolina	State	96026002	06-30-20
South Carolina	State Program	96026	06-30-20
Tennessee	State	TN02907	06-30-20
Texas	NELAP	T104704286	09-30-20
US Fish & Wildlife	Federal	LE058448-0	07-31-20
US Fish & Wildlife	US Federal Programs	LE058448	06-07-20
USDA	Federal	P330-18-00148	05-17-21
USDA	US Federal Programs	P330-18-00148	05-17-21
Virginia	NELAP	460166	06-14-20
Washington	State	C915	05-15-20
West Virginia DEP	State	136	06-30-20

Accreditation/Certification Summary

Client: Alabama Power General Test Laboratory
 Project/Site: CCR Plant Barry

Job ID: 400-177659-1
 SDG: Barry Gypsum 1244

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-19
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-19
Iowa	State	373	09-17-20
Iowa	State Program	373	12-01-20
Kansas	NELAP	E-10236	10-31-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-19
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-19
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-20
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-20
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	02-02-20
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
Washington	State Program	C592	08-30-20
West Virginia DEP	State	381	12-01-19
West Virginia DEP	State Program	381	12-31-19

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-1	10/2/2019 9:14	Conductivity	71.93	uS/cm
BY-GSA-MW-1	10/2/2019 9:14	DO	0.38	mg/L
BY-GSA-MW-1	10/2/2019 9:14	Depth to Water Detail	15.88	ft
BY-GSA-MW-1	10/2/2019 9:14	Oxidation Reduction Potention	123.48	mv
BY-GSA-MW-1	10/2/2019 9:14	pH	4.58	pH
BY-GSA-MW-1	10/2/2019 9:14	Temperature	21.54	C
BY-GSA-MW-1	10/2/2019 9:14	Turbidity	5.16	NTU
BY-GSA-MW-1	10/2/2019 9:19	Conductivity	70.6	uS/cm
BY-GSA-MW-1	10/2/2019 9:19	DO	0.31	mg/L
BY-GSA-MW-1	10/2/2019 9:19	Depth to Water Detail	15.88	ft
BY-GSA-MW-1	10/2/2019 9:19	Oxidation Reduction Potention	129.86	mv
BY-GSA-MW-1	10/2/2019 9:19	pH	4.59	pH
BY-GSA-MW-1	10/2/2019 9:19	Temperature	21.54	C
BY-GSA-MW-1	10/2/2019 9:19	Turbidity	2.12	NTU
BY-GSA-MW-1	10/2/2019 9:24	Conductivity	70.67	uS/cm
BY-GSA-MW-1	10/2/2019 9:24	DO	0.27	mg/L
BY-GSA-MW-1	10/2/2019 9:24	Depth to Water Detail	15.88	ft
BY-GSA-MW-1	10/2/2019 9:24	Oxidation Reduction Potention	131.09	mv
BY-GSA-MW-1	10/2/2019 9:24	pH	4.64	pH
BY-GSA-MW-1	10/2/2019 9:24	Temperature	21.54	C
BY-GSA-MW-1	10/2/2019 9:24	Turbidity	1.27	NTU
BY-GSA-MW-1	10/2/2019 9:29	Conductivity	70.44	uS/cm
BY-GSA-MW-1	10/2/2019 9:29	DO	0.26	mg/L
BY-GSA-MW-1	10/2/2019 9:29	Depth to Water Detail	15.88	ft
BY-GSA-MW-1	10/2/2019 9:29	Oxidation Reduction Potention	139.02	mv
BY-GSA-MW-1	10/2/2019 9:29	pH	4.57	pH
BY-GSA-MW-1	10/2/2019 9:29	Temperature	21.58	C
BY-GSA-MW-1	10/2/2019 9:29	Turbidity	0.55	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-2	10/2/2019 10:01	Conductivity	69.72	uS/cm
BY-GSA-MW-2	10/2/2019 10:01	DO	6.87	mg/L
BY-GSA-MW-2	10/2/2019 10:01	Depth to Water Detail	15.26	ft
BY-GSA-MW-2	10/2/2019 10:01	Oxidation Reduction Potention	161.67	mv
BY-GSA-MW-2	10/2/2019 10:01	pH	4.39	pH
BY-GSA-MW-2	10/2/2019 10:01	Temperature	20.9	C
BY-GSA-MW-2	10/2/2019 10:01	Turbidity	0.84	NTU
BY-GSA-MW-2	10/2/2019 10:06	Conductivity	67.62	uS/cm
BY-GSA-MW-2	10/2/2019 10:06	DO	6.8	mg/L
BY-GSA-MW-2	10/2/2019 10:06	Depth to Water Detail	15.26	ft
BY-GSA-MW-2	10/2/2019 10:06	Oxidation Reduction Potention	172.73	mv
BY-GSA-MW-2	10/2/2019 10:06	pH	4.37	pH
BY-GSA-MW-2	10/2/2019 10:06	Temperature	20.91	C
BY-GSA-MW-2	10/2/2019 10:06	Turbidity	0.57	NTU
BY-GSA-MW-2	10/2/2019 10:11	Conductivity	66.73	uS/cm
BY-GSA-MW-2	10/2/2019 10:11	DO	6.76	mg/L
BY-GSA-MW-2	10/2/2019 10:11	Depth to Water Detail	15.26	ft
BY-GSA-MW-2	10/2/2019 10:11	Oxidation Reduction Potention	172.52	mv
BY-GSA-MW-2	10/2/2019 10:11	pH	4.48	pH
BY-GSA-MW-2	10/2/2019 10:11	Temperature	20.87	C
BY-GSA-MW-2	10/2/2019 10:11	Turbidity	0.41	NTU
BY-GSA-MW-2	10/2/2019 10:16	Conductivity	66.06	uS/cm
BY-GSA-MW-2	10/2/2019 10:16	DO	6.69	mg/L
BY-GSA-MW-2	10/2/2019 10:16	Depth to Water Detail	15.26	ft
BY-GSA-MW-2	10/2/2019 10:16	Oxidation Reduction Potention	177.95	mv
BY-GSA-MW-2	10/2/2019 10:16	pH	4.43	pH
BY-GSA-MW-2	10/2/2019 10:16	Temperature	20.93	C
BY-GSA-MW-2	10/2/2019 10:16	Turbidity	0.42	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-3	10/2/2019 10:50	Conductivity	51.16	uS/cm
BY-GSA-MW-3	10/2/2019 10:50	DO	5.88	mg/L
BY-GSA-MW-3	10/2/2019 10:50	Depth to Water Detail	17.87	ft
BY-GSA-MW-3	10/2/2019 10:50	Oxidation Reduction Potention	182.38	mv
BY-GSA-MW-3	10/2/2019 10:50	pH	4.48	pH
BY-GSA-MW-3	10/2/2019 10:50	Temperature	21.44	C
BY-GSA-MW-3	10/2/2019 10:50	Turbidity	0.39	NTU
BY-GSA-MW-3	10/2/2019 10:55	Conductivity	51.04	uS/cm
BY-GSA-MW-3	10/2/2019 10:55	DO	5.75	mg/L
BY-GSA-MW-3	10/2/2019 10:55	Depth to Water Detail	17.87	ft
BY-GSA-MW-3	10/2/2019 10:55	Oxidation Reduction Potention	193.27	mv
BY-GSA-MW-3	10/2/2019 10:55	pH	4.37	pH
BY-GSA-MW-3	10/2/2019 10:55	Temperature	21.44	C
BY-GSA-MW-3	10/2/2019 10:55	Turbidity	0.42	NTU
BY-GSA-MW-3	10/2/2019 11:00	Conductivity	50.92	uS/cm
BY-GSA-MW-3	10/2/2019 11:00	DO	5.7	mg/L
BY-GSA-MW-3	10/2/2019 11:00	Depth to Water Detail	17.87	ft
BY-GSA-MW-3	10/2/2019 11:00	Oxidation Reduction Potention	192.94	mv
BY-GSA-MW-3	10/2/2019 11:00	pH	4.45	pH
BY-GSA-MW-3	10/2/2019 11:00	Temperature	21.5	C
BY-GSA-MW-3	10/2/2019 11:00	Turbidity	0.38	NTU
BY-GSA-MW-3	10/2/2019 11:05	Conductivity	50.76	uS/cm
BY-GSA-MW-3	10/2/2019 11:05	DO	5.68	mg/L
BY-GSA-MW-3	10/2/2019 11:05	Depth to Water Detail	17.87	ft
BY-GSA-MW-3	10/2/2019 11:05	Oxidation Reduction Potention	192.82	mv
BY-GSA-MW-3	10/2/2019 11:05	pH	4.52	pH
BY-GSA-MW-3	10/2/2019 11:05	Temperature	21.52	C
BY-GSA-MW-3	10/2/2019 11:05	Turbidity	0.4	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-5	10/2/2019 11:40	Conductivity	41.22	uS/cm
BY-GSA-MW-5	10/2/2019 11:40	DO	5.61	mg/L
BY-GSA-MW-5	10/2/2019 11:40	Depth to Water Detail	29.96	ft
BY-GSA-MW-5	10/2/2019 11:40	Oxidation Reduction Potention	198.7	mv
BY-GSA-MW-5	10/2/2019 11:40	pH	4.57	pH
BY-GSA-MW-5	10/2/2019 11:40	Temperature	23.07	C
BY-GSA-MW-5	10/2/2019 11:40	Turbidity	1.43	NTU
BY-GSA-MW-5	10/2/2019 11:45	Conductivity	41.21	uS/cm
BY-GSA-MW-5	10/2/2019 11:45	DO	5.58	mg/L
BY-GSA-MW-5	10/2/2019 11:45	Depth to Water Detail	29.96	ft
BY-GSA-MW-5	10/2/2019 11:45	Oxidation Reduction Potention	219.93	mv
BY-GSA-MW-5	10/2/2019 11:45	pH	4.3	pH
BY-GSA-MW-5	10/2/2019 11:45	Temperature	22.94	C
BY-GSA-MW-5	10/2/2019 11:45	Turbidity	0.91	NTU
BY-GSA-MW-5	10/2/2019 11:50	Conductivity	41.12	uS/cm
BY-GSA-MW-5	10/2/2019 11:50	DO	5.57	mg/L
BY-GSA-MW-5	10/2/2019 11:50	Depth to Water Detail	29.96	ft
BY-GSA-MW-5	10/2/2019 11:50	Oxidation Reduction Potention	239.71	mv
BY-GSA-MW-5	10/2/2019 11:50	pH	4.01	pH
BY-GSA-MW-5	10/2/2019 11:50	Temperature	22.87	C
BY-GSA-MW-5	10/2/2019 11:50	Turbidity	0.85	NTU
BY-GSA-MW-5	10/2/2019 11:55	Conductivity	41.09	uS/cm
BY-GSA-MW-5	10/2/2019 11:55	DO	5.58	mg/L
BY-GSA-MW-5	10/2/2019 11:55	Depth to Water Detail	29.96	ft
BY-GSA-MW-5	10/2/2019 11:55	Oxidation Reduction Potention	241.98	mv
BY-GSA-MW-5	10/2/2019 11:55	pH	4.12	pH
BY-GSA-MW-5	10/2/2019 11:55	Temperature	22.89	C
BY-GSA-MW-5	10/2/2019 11:55	Turbidity	0.57	NTU
BY-GSA-MW-5	10/2/2019 12:00	Conductivity	41.17	uS/cm
BY-GSA-MW-5	10/2/2019 12:00	DO	5.57	mg/L
BY-GSA-MW-5	10/2/2019 12:00	Depth to Water Detail	29.96	ft
BY-GSA-MW-5	10/2/2019 12:00	Oxidation Reduction Potention	239.61	mv
BY-GSA-MW-5	10/2/2019 12:00	pH	4.28	pH
BY-GSA-MW-5	10/2/2019 12:00	Temperature	23.14	C
BY-GSA-MW-5	10/2/2019 12:00	Turbidity	0.55	NTU
BY-GSA-MW-5	10/2/2019 12:05	Conductivity	41.08	uS/cm
BY-GSA-MW-5	10/2/2019 12:05	DO	5.6	mg/L
BY-GSA-MW-5	10/2/2019 12:05	Depth to Water Detail	29.96	ft
BY-GSA-MW-5	10/2/2019 12:05	Oxidation Reduction Potention	238.35	mv
BY-GSA-MW-5	10/2/2019 12:05	pH	4.37	pH
BY-GSA-MW-5	10/2/2019 12:05	Temperature	22.93	C
BY-GSA-MW-5	10/2/2019 12:05	Turbidity	0.48	NTU
BY-GSA-MW-5	10/2/2019 12:10	Conductivity	41.13	uS/cm
BY-GSA-MW-5	10/2/2019 12:10	DO	5.61	mg/L

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-5	10/2/2019 12:10	Depth to Water Detail	29.96	ft
BY-GSA-MW-5	10/2/2019 12:10	Oxidation Reduction Potention	238.65	mv
BY-GSA-MW-5	10/2/2019 12:10	pH	4.44	pH
BY-GSA-MW-5	10/2/2019 12:10	Temperature	22.88	C
BY-GSA-MW-5	10/2/2019 12:10	Turbidity	0.54	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-8	10/2/2019 12:53	Conductivity	42.47	uS/cm
BY-GSA-MW-8	10/2/2019 12:53	DO	1.16	mg/L
BY-GSA-MW-8	10/2/2019 12:53	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 12:53	Oxidation Reduction Potention	221.9	mv
BY-GSA-MW-8	10/2/2019 12:53	pH	4.79	pH
BY-GSA-MW-8	10/2/2019 12:53	Temperature	22.23	C
BY-GSA-MW-8	10/2/2019 12:53	Turbidity	3.14	NTU
BY-GSA-MW-8	10/2/2019 12:58	Conductivity	41.93	uS/cm
BY-GSA-MW-8	10/2/2019 12:58	DO	1.08	mg/L
BY-GSA-MW-8	10/2/2019 12:58	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 12:58	Oxidation Reduction Potention	232.98	mv
BY-GSA-MW-8	10/2/2019 12:58	pH	4.62	pH
BY-GSA-MW-8	10/2/2019 12:58	Temperature	22.14	C
BY-GSA-MW-8	10/2/2019 12:58	Turbidity	1.91	NTU
BY-GSA-MW-8	10/2/2019 13:03	Conductivity	41.89	uS/cm
BY-GSA-MW-8	10/2/2019 13:03	DO	1.01	mg/L
BY-GSA-MW-8	10/2/2019 13:03	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 13:03	Oxidation Reduction Potention	266.08	mv
BY-GSA-MW-8	10/2/2019 13:03	pH	4.09	pH
BY-GSA-MW-8	10/2/2019 13:03	Temperature	22.23	C
BY-GSA-MW-8	10/2/2019 13:03	Turbidity	1.47	NTU
BY-GSA-MW-8	10/2/2019 13:08	Conductivity	42.15	uS/cm
BY-GSA-MW-8	10/2/2019 13:08	DO	1.01	mg/L
BY-GSA-MW-8	10/2/2019 13:08	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 13:08	Oxidation Reduction Potention	262.09	mv
BY-GSA-MW-8	10/2/2019 13:08	pH	4.26	pH
BY-GSA-MW-8	10/2/2019 13:08	Temperature	22.21	C
BY-GSA-MW-8	10/2/2019 13:08	Turbidity	1.61	NTU
BY-GSA-MW-8	10/2/2019 13:13	Conductivity	41.86	uS/cm
BY-GSA-MW-8	10/2/2019 13:13	DO	1.01	mg/L
BY-GSA-MW-8	10/2/2019 13:13	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 13:13	Oxidation Reduction Potention	244.74	mv
BY-GSA-MW-8	10/2/2019 13:13	pH	4.58	pH
BY-GSA-MW-8	10/2/2019 13:13	Temperature	22.15	C
BY-GSA-MW-8	10/2/2019 13:13	Turbidity	1.45	NTU
BY-GSA-MW-8	10/2/2019 13:18	Conductivity	41.92	uS/cm
BY-GSA-MW-8	10/2/2019 13:18	DO	1.02	mg/L
BY-GSA-MW-8	10/2/2019 13:18	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 13:18	Oxidation Reduction Potention	239.4	mv
BY-GSA-MW-8	10/2/2019 13:18	pH	4.71	pH
BY-GSA-MW-8	10/2/2019 13:18	Temperature	22.1	C
BY-GSA-MW-8	10/2/2019 13:18	Turbidity	1.41	NTU
BY-GSA-MW-8	10/2/2019 13:23	Conductivity	41.89	uS/cm
BY-GSA-MW-8	10/2/2019 13:23	DO	1.01	mg/L

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-8	10/2/2019 13:23	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 13:23	Oxidation Reduction Potention	237.77	mv
BY-GSA-MW-8	10/2/2019 13:23	pH	4.8	pH
BY-GSA-MW-8	10/2/2019 13:23	Temperature	22.06	C
BY-GSA-MW-8	10/2/2019 13:23	Turbidity	1.17	NTU
BY-GSA-MW-8	10/2/2019 13:28	Conductivity	41.88	uS/cm
BY-GSA-MW-8	10/2/2019 13:28	DO	1.02	mg/L
BY-GSA-MW-8	10/2/2019 13:28	Depth to Water Detail	30.29	ft
BY-GSA-MW-8	10/2/2019 13:28	Oxidation Reduction Potention	236.51	mv
BY-GSA-MW-8	10/2/2019 13:28	pH	4.86	pH
BY-GSA-MW-8	10/2/2019 13:28	Temperature	22.09	C
BY-GSA-MW-8	10/2/2019 13:28	Turbidity	1.08	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-4	10/2/2019 10:44	Conductivity	50.97	uS/cm
BY-GSA-MW-4	10/2/2019 10:44	DO	6.2	mg/L
BY-GSA-MW-4	10/2/2019 10:44	Depth to Water Detail	23.96	ft
BY-GSA-MW-4	10/2/2019 10:44	Oxidation Reduction Potention	375.46	mv
BY-GSA-MW-4	10/2/2019 10:44	pH	4.8	pH
BY-GSA-MW-4	10/2/2019 10:44	Temperature	22.44	C
BY-GSA-MW-4	10/2/2019 10:44	Turbidity	1.36	NTU
BY-GSA-MW-4	10/2/2019 10:49	Conductivity	50.45	uS/cm
BY-GSA-MW-4	10/2/2019 10:49	DO	6.19	mg/L
BY-GSA-MW-4	10/2/2019 10:49	Depth to Water Detail	23.96	ft
BY-GSA-MW-4	10/2/2019 10:49	Oxidation Reduction Potention	387.12	mv
BY-GSA-MW-4	10/2/2019 10:49	pH	4.69	pH
BY-GSA-MW-4	10/2/2019 10:49	Temperature	22.35	C
BY-GSA-MW-4	10/2/2019 10:49	Turbidity	1.36	NTU
BY-GSA-MW-4	10/2/2019 10:54	Conductivity	49.92	uS/cm
BY-GSA-MW-4	10/2/2019 10:54	DO	6.13	mg/L
BY-GSA-MW-4	10/2/2019 10:54	Depth to Water Detail	23.96	ft
BY-GSA-MW-4	10/2/2019 10:54	Oxidation Reduction Potention	391.86	mv
BY-GSA-MW-4	10/2/2019 10:54	pH	4.68	pH
BY-GSA-MW-4	10/2/2019 10:54	Temperature	22.28	C
BY-GSA-MW-4	10/2/2019 10:54	Turbidity	1.51	NTU
BY-GSA-MW-4	10/2/2019 10:59	Conductivity	49.6	uS/cm
BY-GSA-MW-4	10/2/2019 10:59	DO	6.07	mg/L
BY-GSA-MW-4	10/2/2019 10:59	Depth to Water Detail	23.96	ft
BY-GSA-MW-4	10/2/2019 10:59	Oxidation Reduction Potention	394.04	mv
BY-GSA-MW-4	10/2/2019 10:59	pH	4.67	pH
BY-GSA-MW-4	10/2/2019 10:59	Temperature	22.41	C
BY-GSA-MW-4	10/2/2019 10:59	Turbidity	1.39	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-6	10/2/2019 10:04	Conductivity	70.38	uS/cm
BY-GSA-MW-6	10/2/2019 10:04	DO	5.34	mg/L
BY-GSA-MW-6	10/2/2019 10:04	Depth to Water Detail	17.83	ft
BY-GSA-MW-6	10/2/2019 10:04	Oxidation Reduction Potention	323.63	mv
BY-GSA-MW-6	10/2/2019 10:04	pH	5.25	pH
BY-GSA-MW-6	10/2/2019 10:04	Temperature	23.9	C
BY-GSA-MW-6	10/2/2019 10:04	Turbidity	1.48	NTU
BY-GSA-MW-6	10/2/2019 10:09	Conductivity	72.14	uS/cm
BY-GSA-MW-6	10/2/2019 10:09	DO	5.24	mg/L
BY-GSA-MW-6	10/2/2019 10:09	Depth to Water Detail	17.83	ft
BY-GSA-MW-6	10/2/2019 10:09	Oxidation Reduction Potention	321.49	mv
BY-GSA-MW-6	10/2/2019 10:09	pH	5.28	pH
BY-GSA-MW-6	10/2/2019 10:09	Temperature	23.89	C
BY-GSA-MW-6	10/2/2019 10:09	Turbidity	1.38	NTU
BY-GSA-MW-6	10/2/2019 10:14	Conductivity	72.5	uS/cm
BY-GSA-MW-6	10/2/2019 10:14	DO	5.16	mg/L
BY-GSA-MW-6	10/2/2019 10:14	Depth to Water Detail	17.83	ft
BY-GSA-MW-6	10/2/2019 10:14	Oxidation Reduction Potention	319.12	mv
BY-GSA-MW-6	10/2/2019 10:14	pH	5.33	pH
BY-GSA-MW-6	10/2/2019 10:14	Temperature	24.03	C
BY-GSA-MW-6	10/2/2019 10:14	Turbidity	1.44	NTU
BY-GSA-MW-6	10/2/2019 10:19	Conductivity	73.53	uS/cm
BY-GSA-MW-6	10/2/2019 10:19	DO	5.15	mg/L
BY-GSA-MW-6	10/2/2019 10:19	Depth to Water Detail	17.83	ft
BY-GSA-MW-6	10/2/2019 10:19	Oxidation Reduction Potention	319.24	mv
BY-GSA-MW-6	10/2/2019 10:19	pH	5.4	pH
BY-GSA-MW-6	10/2/2019 10:19	Temperature	23.84	C
BY-GSA-MW-6	10/2/2019 10:19	Turbidity	1.66	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-7	10/2/2019 9:11	Conductivity	37.09	uS/cm
BY-GSA-MW-7	10/2/2019 9:11	DO	5.34	mg/L
BY-GSA-MW-7	10/2/2019 9:11	Depth to Water Detail	16.75	ft
BY-GSA-MW-7	10/2/2019 9:11	Oxidation Reduction Potention	278.46	mv
BY-GSA-MW-7	10/2/2019 9:11	pH	5.02	pH
BY-GSA-MW-7	10/2/2019 9:11	Temperature	22.19	C
BY-GSA-MW-7	10/2/2019 9:11	Turbidity	7.4	NTU
BY-GSA-MW-7	10/2/2019 9:16	Conductivity	36.64	uS/cm
BY-GSA-MW-7	10/2/2019 9:16	DO	5.13	mg/L
BY-GSA-MW-7	10/2/2019 9:16	Depth to Water Detail	16.75	ft
BY-GSA-MW-7	10/2/2019 9:16	Oxidation Reduction Potention	296.28	mv
BY-GSA-MW-7	10/2/2019 9:16	pH	5.04	pH
BY-GSA-MW-7	10/2/2019 9:16	Temperature	22.25	C
BY-GSA-MW-7	10/2/2019 9:16	Turbidity	4.01	NTU
BY-GSA-MW-7	10/2/2019 9:21	Conductivity	37.6	uS/cm
BY-GSA-MW-7	10/2/2019 9:21	DO	5.14	mg/L
BY-GSA-MW-7	10/2/2019 9:21	Depth to Water Detail	16.75	ft
BY-GSA-MW-7	10/2/2019 9:21	Oxidation Reduction Potention	294	mv
BY-GSA-MW-7	10/2/2019 9:21	pH	5.03	pH
BY-GSA-MW-7	10/2/2019 9:21	Temperature	22.26	C
BY-GSA-MW-7	10/2/2019 9:21	Turbidity	2.3	NTU
BY-GSA-MW-7	10/2/2019 9:26	Conductivity	37.95	uS/cm
BY-GSA-MW-7	10/2/2019 9:26	DO	5.08	mg/L
BY-GSA-MW-7	10/2/2019 9:26	Depth to Water Detail	16.75	ft
BY-GSA-MW-7	10/2/2019 9:26	Oxidation Reduction Potention	303.76	mv
BY-GSA-MW-7	10/2/2019 9:26	pH	5.04	pH
BY-GSA-MW-7	10/2/2019 9:26	Temperature	22.29	C
BY-GSA-MW-7	10/2/2019 9:26	Turbidity	1.88	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-9	10/2/2019 11:30	Conductivity	74.18	uS/cm
BY-GSA-MW-9	10/2/2019 11:30	DO	2.94	mg/L
BY-GSA-MW-9	10/2/2019 11:30	Depth to Water Detail	9.41	ft
BY-GSA-MW-9	10/2/2019 11:30	Oxidation Reduction Potention	409.57	mv
BY-GSA-MW-9	10/2/2019 11:30	pH	4.5	pH
BY-GSA-MW-9	10/2/2019 11:30	Temperature	22.7	C
BY-GSA-MW-9	10/2/2019 11:30	Turbidity	1.76	NTU
BY-GSA-MW-9	10/2/2019 11:35	Conductivity	72.27	uS/cm
BY-GSA-MW-9	10/2/2019 11:35	DO	2.75	mg/L
BY-GSA-MW-9	10/2/2019 11:35	Depth to Water Detail	9.41	ft
BY-GSA-MW-9	10/2/2019 11:35	Oxidation Reduction Potention	416.96	mv
BY-GSA-MW-9	10/2/2019 11:35	pH	4.46	pH
BY-GSA-MW-9	10/2/2019 11:35	Temperature	22.78	C
BY-GSA-MW-9	10/2/2019 11:35	Turbidity	1.5	NTU
BY-GSA-MW-9	10/2/2019 11:40	Conductivity	76.46	uS/cm
BY-GSA-MW-9	10/2/2019 11:40	DO	2.72	mg/L
BY-GSA-MW-9	10/2/2019 11:40	Depth to Water Detail	9.41	ft
BY-GSA-MW-9	10/2/2019 11:40	Oxidation Reduction Potention	419.22	mv
BY-GSA-MW-9	10/2/2019 11:40	pH	4.46	pH
BY-GSA-MW-9	10/2/2019 11:40	Temperature	22.69	C
BY-GSA-MW-9	10/2/2019 11:40	Turbidity	1.34	NTU
BY-GSA-MW-9	10/2/19 11:45	Conductivity	76.47	uS/cm
BY-GSA-MW-9	10/2/19 11:45	DO	2.68	mg/L
BY-GSA-MW-9	10/2/19 11:45	Depth to Water Detail	9.41	ft
BY-GSA-MW-9	10/2/19 11:45	Oxidation Reduction Potention	419.75	mv
BY-GSA-MW-9	10/2/19 11:45	pH	4.48	pH
BY-GSA-MW-9	10/2/19 11:45	Temperature	22.82	C
BY-GSA-MW-9	10/2/19 11:45	Turbidity	1.28	NTU
BY-GSA-MW-9	10/2/19 11:50	Conductivity	76.25	uS/cm
BY-GSA-MW-9	10/2/19 11:50	DO	2.68	mg/L
BY-GSA-MW-9	10/2/19 11:50	Depth to Water Detail	9.41	ft
BY-GSA-MW-9	10/2/19 11:50	Oxidation Reduction Potention	420.59	mv
BY-GSA-MW-9	10/2/19 11:50	pH	4.49	pH
BY-GSA-MW-9	10/2/19 11:50	Temperature	22.67	C
BY-GSA-MW-9	10/2/19 11:50	Turbidity	1.31	NTU

**Alabama Power Company
Plant Barry Gypsum Pond**

WELL ID	READING TIME	DESCRIPTION	VALUE	UNIT
BY-GSA-MW-10	10/2/19 12:16	Conductivity	65.71	uS/cm
BY-GSA-MW-10	10/2/19 12:16	DO	4.08	mg/L
BY-GSA-MW-10	10/2/19 12:16	Depth to Water Detail	13.3	ft
BY-GSA-MW-10	10/2/19 12:16	Oxidation Reduction Potention	413.48	mv
BY-GSA-MW-10	10/2/19 12:16	pH	4.59	pH
BY-GSA-MW-10	10/2/19 12:16	Temperature	22.45	C
BY-GSA-MW-10	10/2/19 12:16	Turbidity	1.48	NTU
BY-GSA-MW-10	10/2/19 12:21	Conductivity	65.62	uS/cm
BY-GSA-MW-10	10/2/19 12:21	DO	4.04	mg/L
BY-GSA-MW-10	10/2/19 12:21	Depth to Water Detail	13.3	ft
BY-GSA-MW-10	10/2/19 12:21	Oxidation Reduction Potention	411.75	mv
BY-GSA-MW-10	10/2/19 12:21	pH	4.59	pH
BY-GSA-MW-10	10/2/19 12:21	Temperature	22.31	C
BY-GSA-MW-10	10/2/19 12:21	Turbidity	1.29	NTU
BY-GSA-MW-10	10/2/19 12:26	Conductivity	64.26	uS/cm
BY-GSA-MW-10	10/2/19 12:26	DO	4.04	mg/L
BY-GSA-MW-10	10/2/19 12:26	Depth to Water Detail	13.3	ft
BY-GSA-MW-10	10/2/19 12:26	Oxidation Reduction Potention	410.65	mv
BY-GSA-MW-10	10/2/19 12:26	pH	4.59	pH
BY-GSA-MW-10	10/2/19 12:26	Temperature	22.31	C
BY-GSA-MW-10	10/2/19 12:26	Turbidity	1.26	NTU
BY-GSA-MW-10	10/2/19 12:31	Conductivity	63.5	uS/cm
BY-GSA-MW-10	10/2/19 12:31	DO	4.02	mg/L
BY-GSA-MW-10	10/2/19 12:31	Depth to Water Detail	13.3	ft
BY-GSA-MW-10	10/2/19 12:31	Oxidation Reduction Potention	411	mv
BY-GSA-MW-10	10/2/19 12:31	pH	4.6	pH
BY-GSA-MW-10	10/2/19 12:31	Temperature	22.23	C
BY-GSA-MW-10	10/2/19 12:31	Turbidity	1.37	NTU

Appendix C

1st
Semi-Annual
Monitoring Event

Interwell Prediction Limits - Significant Results

Plant Barry Client: Southern Company Data: Barry GSA Printed 6/26/2019, 10:18 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Obsrv.	Sig.	Bg.N	%NDs	Transform	Alpha	Method
Boron (mg/L)	BY-GSA-MW-6	0.188	n/a	5/28/2019	0.556	Yes	48	83.33	n/a	0.000818	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BY-GSA-MW-6	1.898	n/a	5/28/2019	10	Yes	48	0	No	0.001254	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-6	5.014	4.575	5/28/2019	5.21	Yes	56	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-9	5.014	4.575	5/29/2019	4.45	Yes	56	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-10	5.014	4.575	5/29/2019	4.54	Yes	56	0	No	0.000...	Param Inter 1 of 2
TDS (mg/L)	BY-GSA-MW-6	58	n/a	5/28/2019	77.3	Yes	48	14.58	n/a	0.000818	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-9	58	n/a	5/29/2019	60	Yes	48	14.58	n/a	0.000818	NP Inter (normality) ...

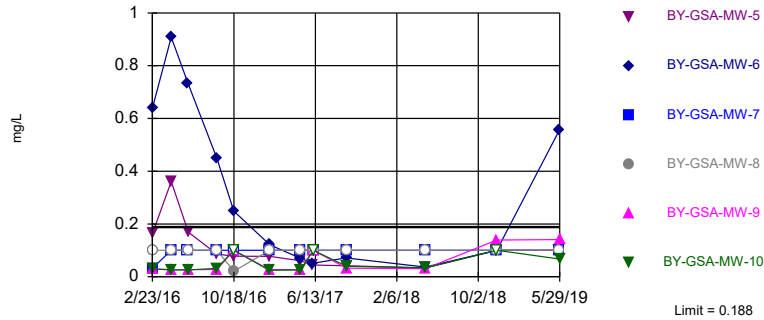
Interwell Prediction Limits - All Results

Plant Barry Client: Southern Company Data: Barry GSA Printed 6/26/2019, 10:18 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	%NDs	Transform	Alpha	Method
Boron (mg/L)	BY-GSA-MW-5	0.188	n/a	5/28/2019	0.1ND	No	48	83.33	n/a	0.000818	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-6	0.188	n/a	5/28/2019	0.556	Yes	48	83.33	n/a	0.000818	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-7	0.188	n/a	5/28/2019	0.1ND	No	48	83.33	n/a	0.000818	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-8	0.188	n/a	5/28/2019	0.1ND	No	48	83.33	n/a	0.000818	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-9	0.188	n/a	5/29/2019	0.141	No	48	83.33	n/a	0.000818	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-10	0.188	n/a	5/29/2019	0.0669	No	48	83.33	n/a	0.000818	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BY-GSA-MW-5	1.898	n/a	5/28/2019	1.25	No	48	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-6	1.898	n/a	5/28/2019	10	Yes	48	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-7	1.898	n/a	5/28/2019	0.972	No	48	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-8	1.898	n/a	5/28/2019	0.789	No	48	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-9	1.898	n/a	5/29/2019	1.8	No	48	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-10	1.898	n/a	5/29/2019	1.07	No	48	0	No	0.001254	Param Inter 1 of 2
Fluoride (mg/L)	BY-GSA-MW-5	0.1	n/a	5/28/2019	0.1ND	No	52	44.23	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-6	0.1	n/a	5/28/2019	0.0591	No	52	44.23	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-7	0.1	n/a	5/28/2019	0.1ND	No	52	44.23	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-8	0.1	n/a	5/28/2019	0.1ND	No	52	44.23	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-9	0.1	n/a	5/29/2019	0.1ND	No	52	44.23	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-10	0.1	n/a	5/29/2019	0.1ND	No	52	44.23	n/a	0.000...	NP Inter (normality) ...
pH (pH)	BY-GSA-MW-5	5.014	4.575	5/28/2019	4.8	No	56	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-6	5.014	4.575	5/28/2019	5.21	Yes	56	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-7	5.014	4.575	5/28/2019	4.83	No	56	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-8	5.014	4.575	5/28/2019	4.92	No	56	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-9	5.014	4.575	5/29/2019	4.45	Yes	56	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-10	5.014	4.575	5/29/2019	4.54	Yes	56	0	No	0.000...	Param Inter 1 of 2
TDS (mg/L)	BY-GSA-MW-5	58	n/a	5/28/2019	26	No	48	14.58	n/a	0.000818	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-6	58	n/a	5/28/2019	77.3	Yes	48	14.58	n/a	0.000818	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-7	58	n/a	5/28/2019	32.7	No	48	14.58	n/a	0.000818	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-8	58	n/a	5/28/2019	28.7	No	48	14.58	n/a	0.000818	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-9	58	n/a	5/29/2019	60	Yes	48	14.58	n/a	0.000818	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-10	58	n/a	5/29/2019	43.3	No	48	14.58	n/a	0.000818	NP Inter (normality) ...

Exceeds Limit: BY-GSA-MW-6

Prediction Limit
Interwell Non-parametric

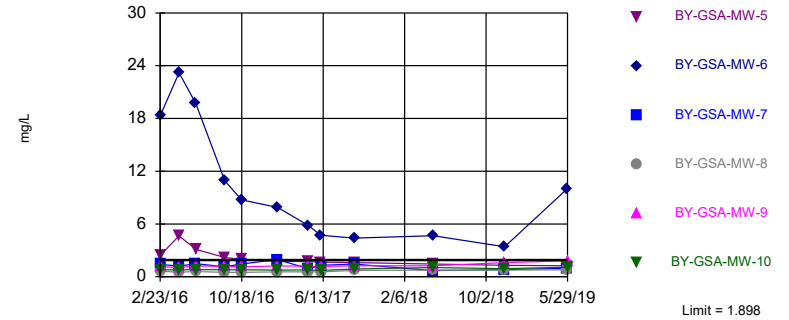


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 48 background values. 83.33% NDs. Annual per-constituent alpha = 0.009772. Individual comparison alpha = 0.000818 (1 of 2). Comparing 6 points to limit.

Constituent: Boron Analysis Run 6/26/2019 10:17 AM View: PLs - Interwell
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit: BY-GSA-MW-6

Prediction Limit
Interwell Parametric

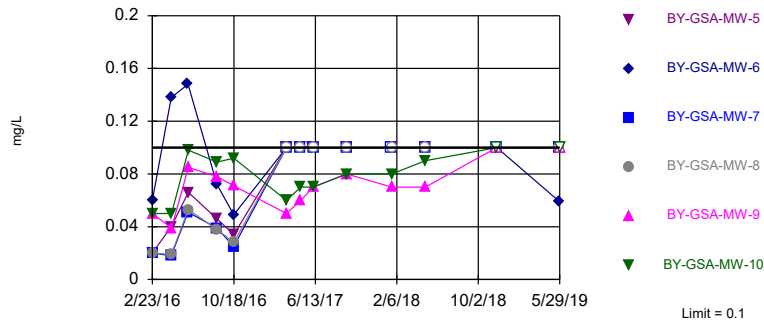


Background Data Summary: Mean=1.41, Std. Dev.=0.2558, n=48. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9533, critical = 0.929. Kappa = 1.908 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001254. Comparing 6 points to limit.

Constituent: Calcium Analysis Run 6/26/2019 10:17 AM View: PLs - Interwell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Interwell Non-parametric

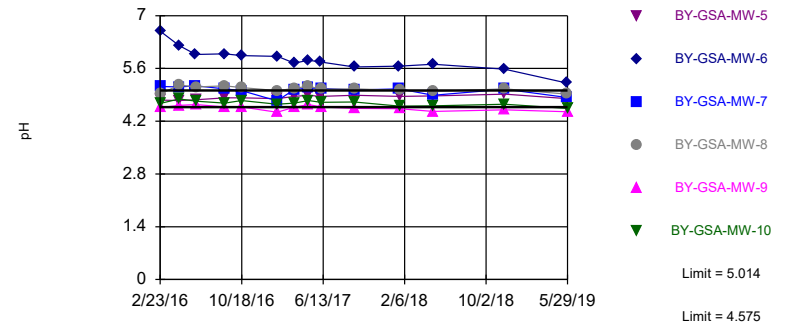


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 52 background values. 44.23% NDs. Annual per-constituent alpha = 0.008327. Individual comparison alpha = 0.0006966 (1 of 2). Comparing 6 points to limit.

Constituent: Fluoride Analysis Run 6/26/2019 10:17 AM View: PLs - Interwell
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limits: BY-GSA-MW-6, BY-GSA-MW-9, BY-GSA-MW-10

Prediction Limit
Interwell Parametric

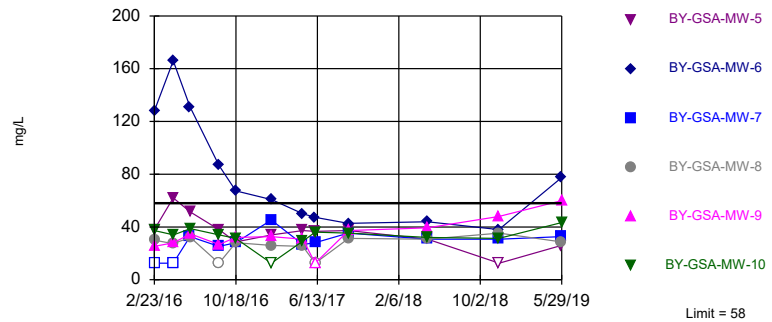


Background Data Summary: Mean=4.794, Std. Dev.=0.1162, n=56. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9783, critical = 0.942. Kappa = 1.889 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0006268. Comparing 6 points to limit.

Constituent: pH Analysis Run 6/26/2019 10:17 AM View: PLs - Interwell
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit: BY-GSA-MW-6, BY-GSA-MW-9

Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 48 background values. 14.58% NDs. Annual per-constituent alpha = 0.009772. Individual comparison alpha = 0.000818 (1 of 2). Comparing 6 points to limit.

Constituent: TDS Analysis Run 6/26/2019 10:17 AM View: PLs - Interwell
Plant Barry Client: Southern Company Data: Barry GSA

Intrawell Prediction Limits - Significant Results

Plant Barry Client: Southern Company Data: Barry GSA Printed 6/26/2019, 10:20 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Obsrv.</u>	<u>Sig.</u>	<u>Bg.N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Chloride (mg/L)	BY-GSA-MW-1	4.5	n/a	5/29/2019	5.48	Yes	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-9	7.734	n/a	5/29/2019	8.56	Yes	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-1	11.7	n/a	5/29/2019	23.3	Yes	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-7	4.709	n/a	5/28/2019	4.74	Yes	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-9	10.51	n/a	5/29/2019	12.3	Yes	8	0	No	0.001254	Param Intra 1 of 2

Intrawell Prediction Limits - All Results

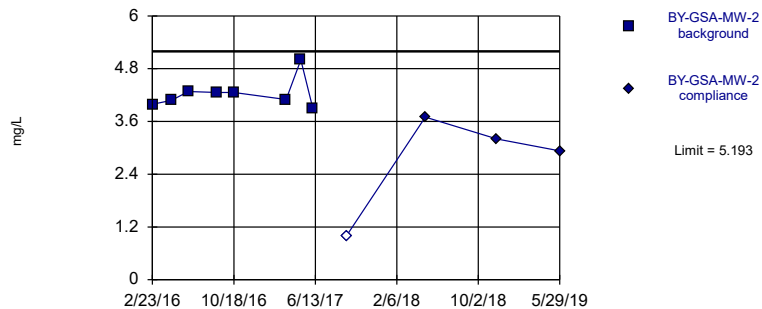
Plant Barry Client: Southern Company Data: Barry GSA Printed 6/26/2019, 10:20 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg.N	%NDs	Transform	Alpha	Method
Chloride (mg/L)	BY-GSA-MW-2	5.193	n/a	5/29/2019	2.93	No	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-3	4.6	n/a	5/29/2019	3.58	No	8	0	n/a	0.02144	NP Intra (normality) ...
Chloride (mg/L)	BY-GSA-MW-4	4.808	n/a	5/28/2019	3.6	No	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-1	4.5	n/a	5/29/2019	5.48	Yes	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-5	4.999	n/a	5/28/2019	3.69	No	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-6	7.813	n/a	5/28/2019	6.26	No	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-7	9.416	n/a	5/28/2019	4.59	No	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-8	6.035	n/a	5/28/2019	4.43	No	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-9	7.734	n/a	5/29/2019	8.56	Yes	8	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-10	4.781	n/a	5/29/2019	4.34	No	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-2	10.38	n/a	5/29/2019	5.94	No	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-3	9.697	n/a	5/29/2019	7.81	No	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-4	8.385	n/a	5/28/2019	7.1	No	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-1	11.7	n/a	5/29/2019	23.3	Yes	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-5	33.46	n/a	5/28/2019	6.5	No	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-6	95.72	n/a	5/28/2019	32.7	No	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-7	4.709	n/a	5/28/2019	4.74	Yes	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-8	5.432	n/a	5/28/2019	4.46	No	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-9	10.51	n/a	5/29/2019	12.3	Yes	8	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-10	13.32	n/a	5/29/2019	11.1	No	8	0	No	0.001254	Param Intra 1 of 2

Within Limit

Prediction Limit

Intrawell Parametric



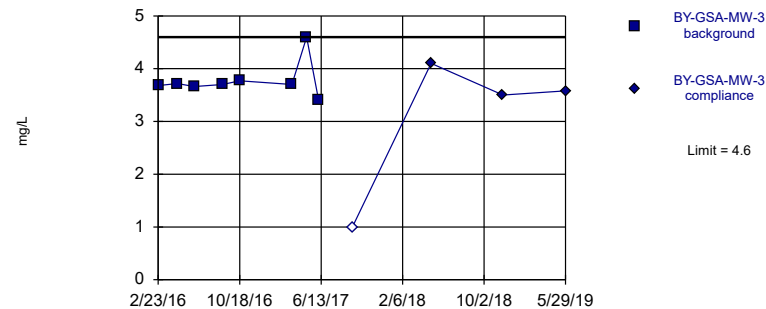
Background Data Summary: Mean=4.234, Std. Dev.=0.3387, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7927, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit

Intrawell Non-parametric



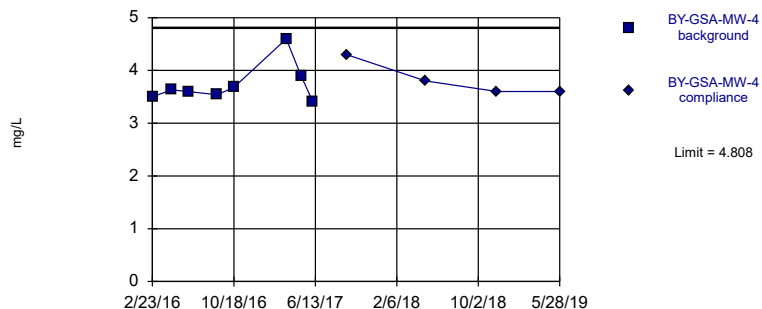
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit

Intrawell Parametric



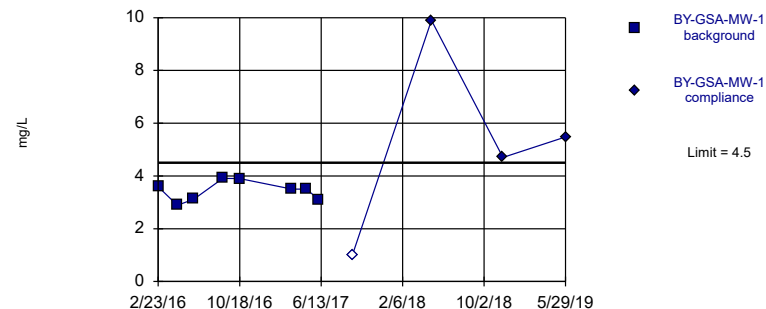
Background Data Summary: Mean=3.731, Std. Dev.=0.3804, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7625, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit

Prediction Limit

Intrawell Parametric

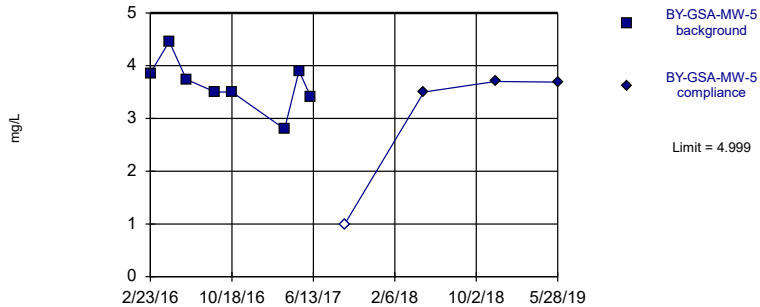


Background Data Summary: Mean=3.439, Std. Dev.=0.3747, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9229, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
 Intrawell Parametric

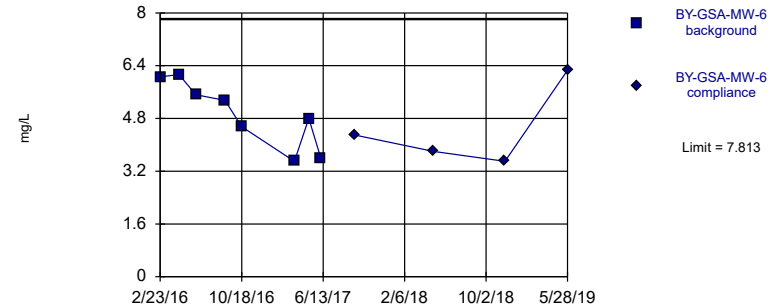


Background Data Summary: Mean=3.645, Std. Dev.=0.4782, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9592, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
 Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
 Intrawell Parametric

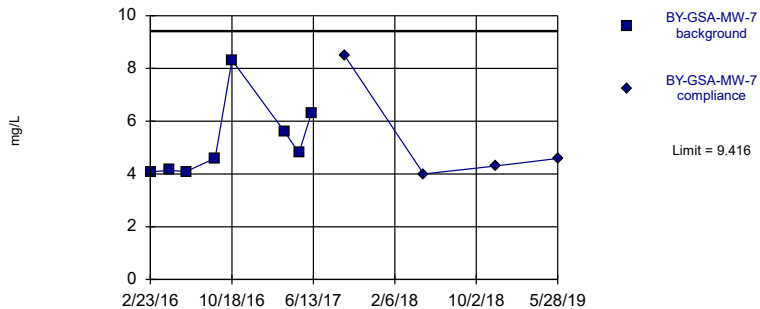


Background Data Summary: Mean=4.939, Std. Dev.=1.015, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9153, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
 Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
 Intrawell Parametric

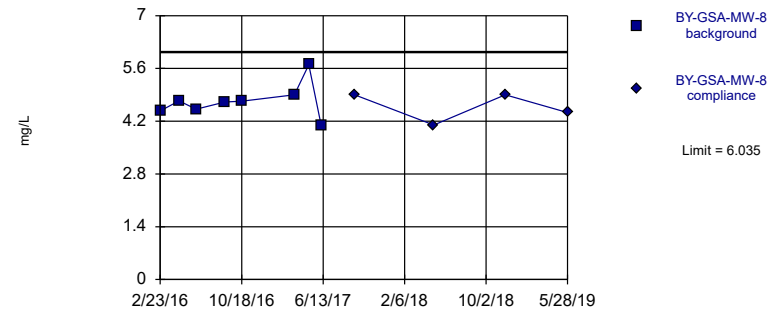


Background Data Summary: Mean=5.241, Std. Dev.=1.475, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8191, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
 Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
 Intrawell Parametric

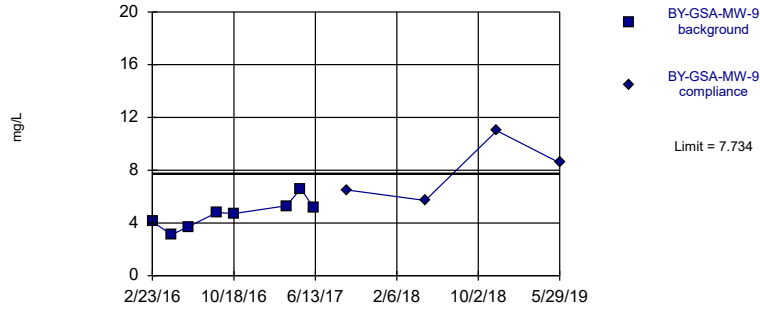


Background Data Summary: Mean=4.734, Std. Dev.=0.4596, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8848, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
 Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric

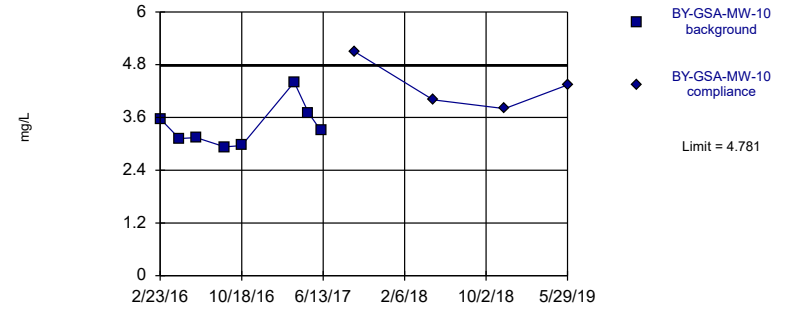


Background Data Summary: Mean=4.693, Std. Dev.=1.074, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9767, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

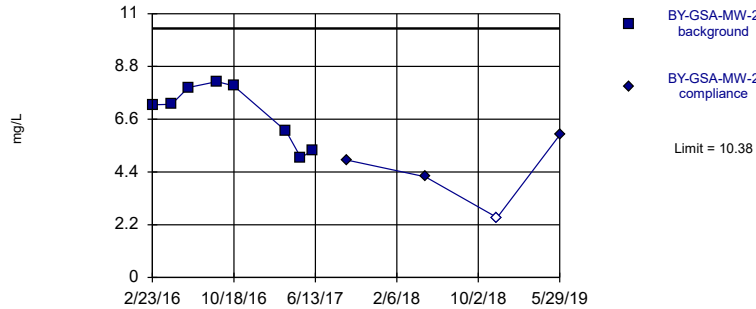


Background Data Summary: Mean=3.39, Std. Dev.=0.4912, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8688, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

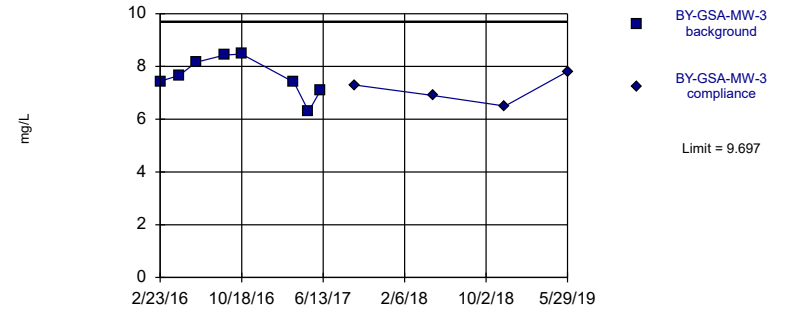


Background Data Summary: Mean=6.863, Std. Dev.=1.244, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8803, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

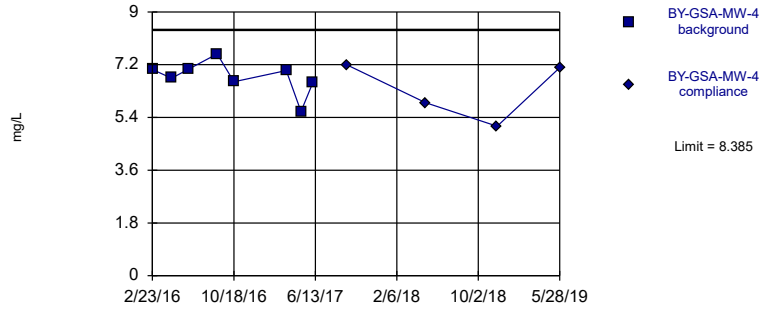


Background Data Summary: Mean=7.62, Std. Dev.=0.7334, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9376, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

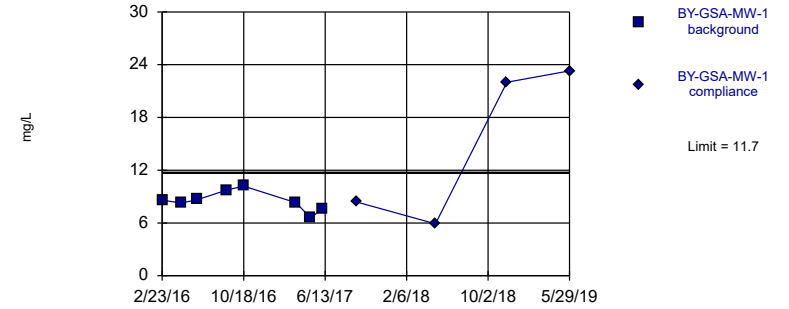


Background Data Summary: Mean=6.776, Std. Dev.=0.5682, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8914, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:19 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric

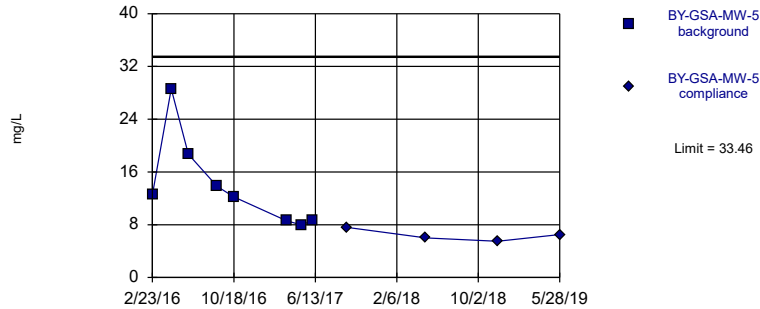


Background Data Summary: Mean=8.495, Std. Dev.=1.132, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9632, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:20 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

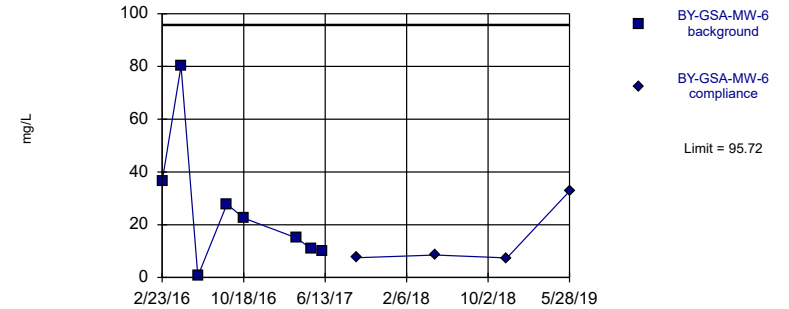


Background Data Summary: Mean=13.88, Std. Dev.=6.918, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8212, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:20 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

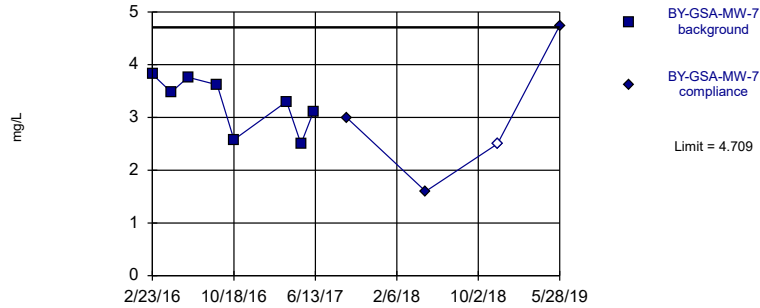


Background Data Summary: Mean=25.44, Std. Dev.=24.82, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8338, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:20 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric

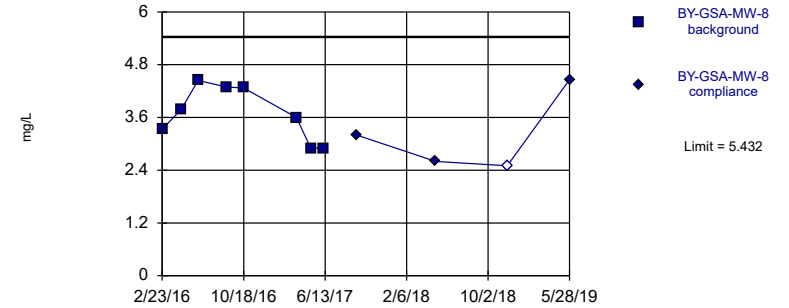


Background Data Summary: Mean=3.27, Std. Dev.=0.5082, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8962, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:20 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

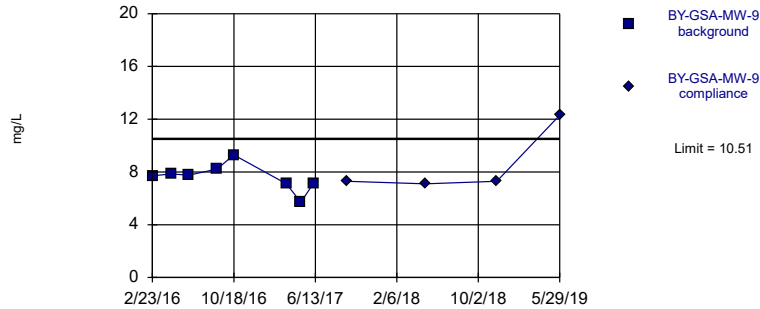


Background Data Summary: Mean=3.689, Std. Dev.=0.6156, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9007, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:20 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit

Prediction Limit
Intrawell Parametric

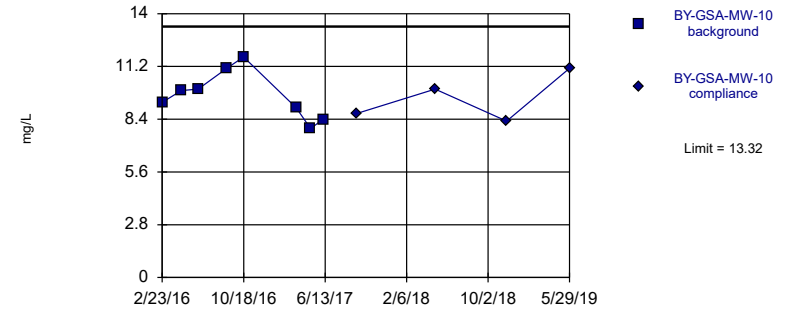


Background Data Summary: Mean=7.591, Std. Dev.=1.032, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9501, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 6/26/2019 10:20 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

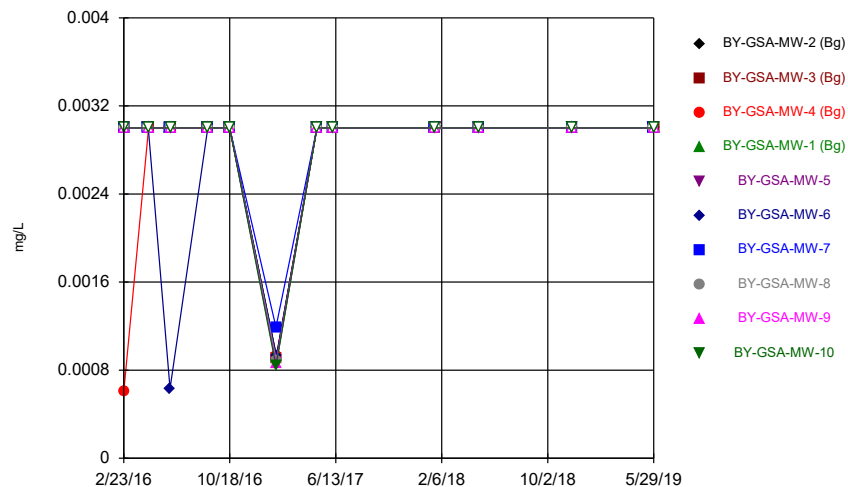
Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=9.664, Std. Dev.=1.292, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.969, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

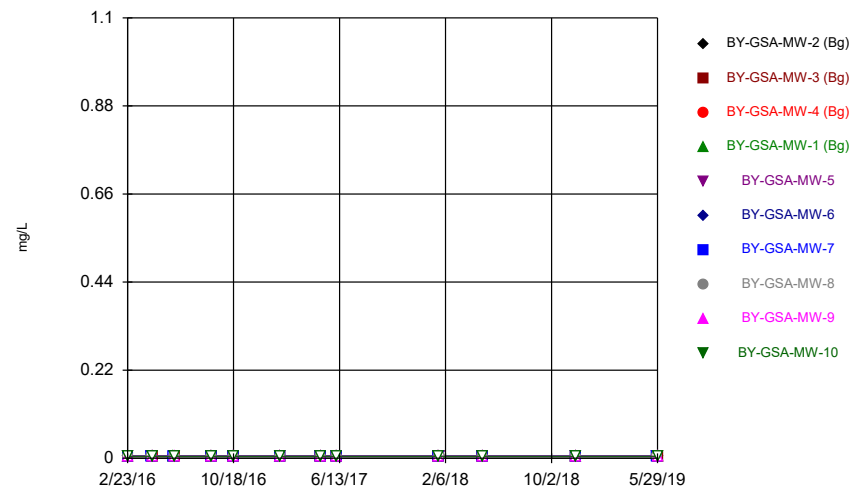
Constituent: Sulfate Analysis Run 6/26/2019 10:20 AM View: PLs - Intrawell
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



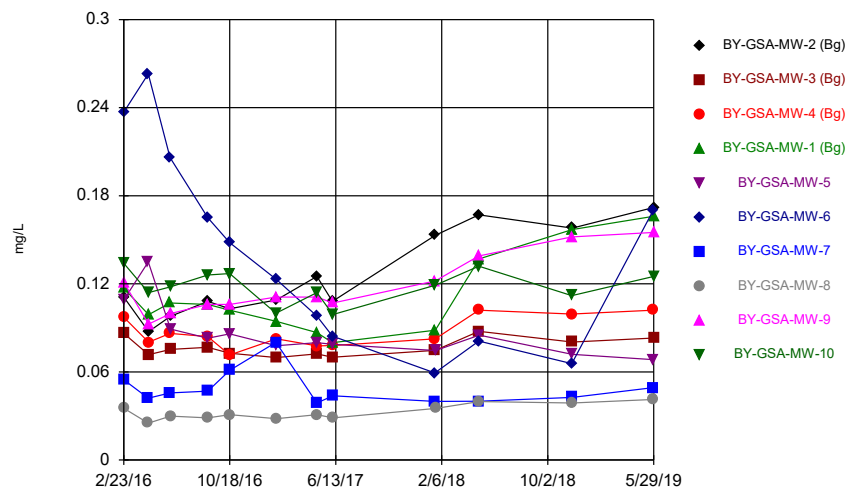
Constituent: Antimony Analysis Run 6/26/2019 10:23 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



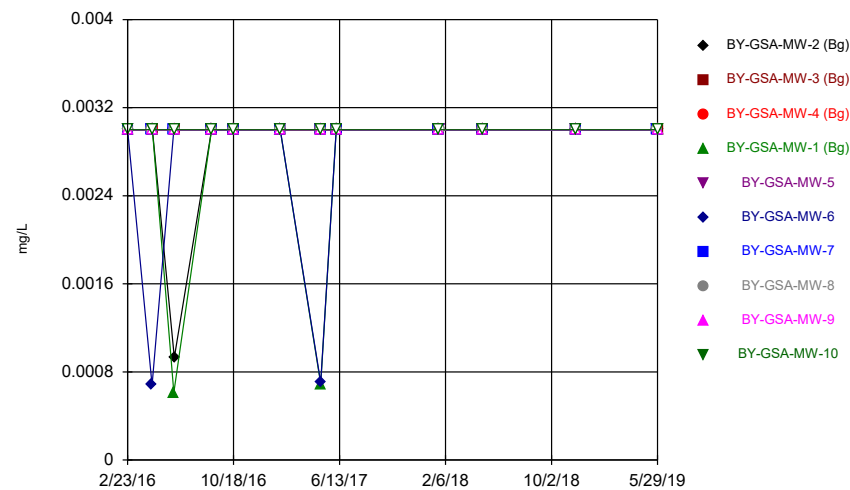
Constituent: Arsenic Analysis Run 6/26/2019 10:23 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



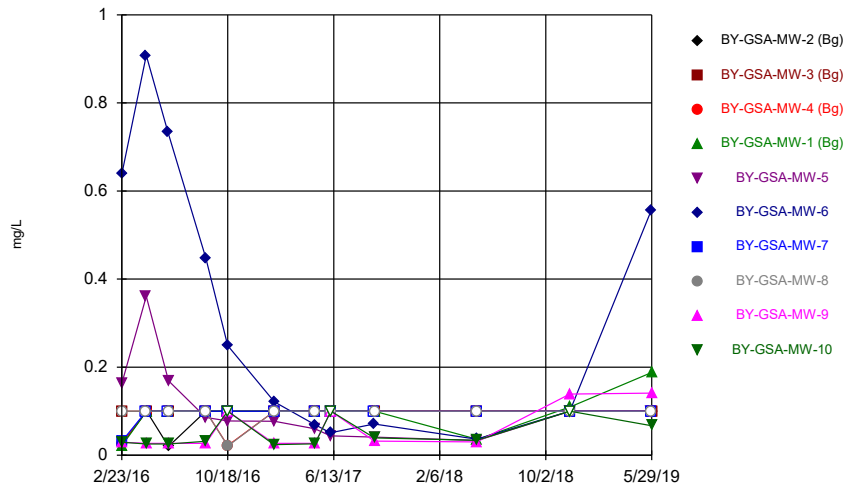
Constituent: Barium Analysis Run 6/26/2019 10:23 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



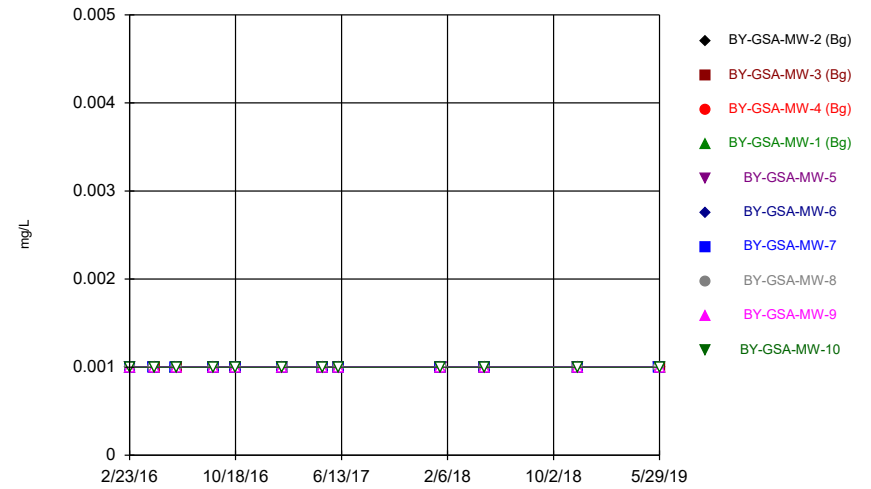
Constituent: Beryllium Analysis Run 6/26/2019 10:23 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



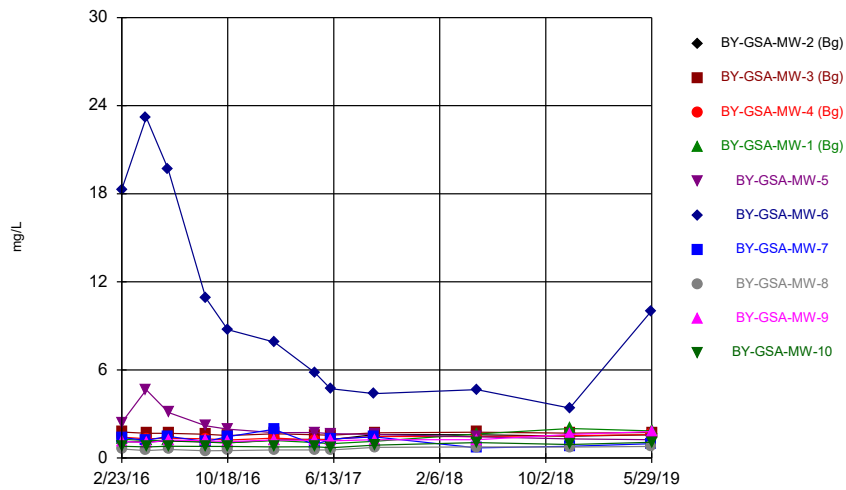
Constituent: Boron Analysis Run 6/26/2019 10:23 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



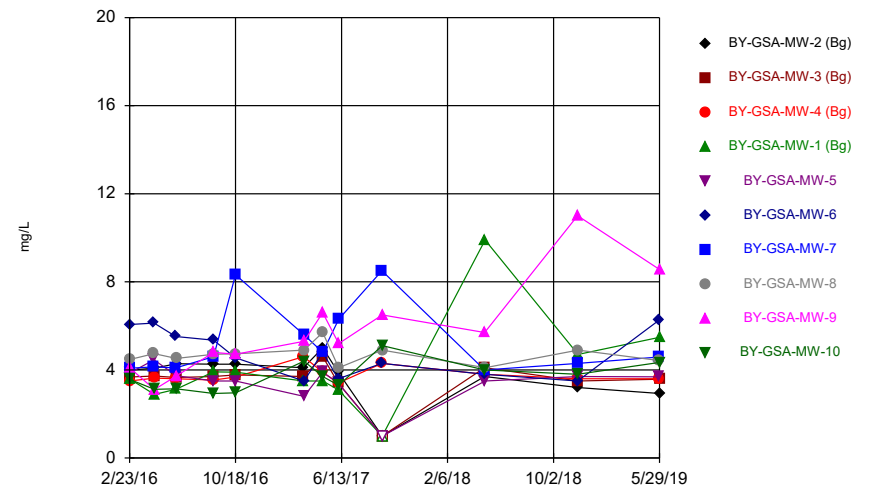
Constituent: Cadmium Analysis Run 6/26/2019 10:23 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



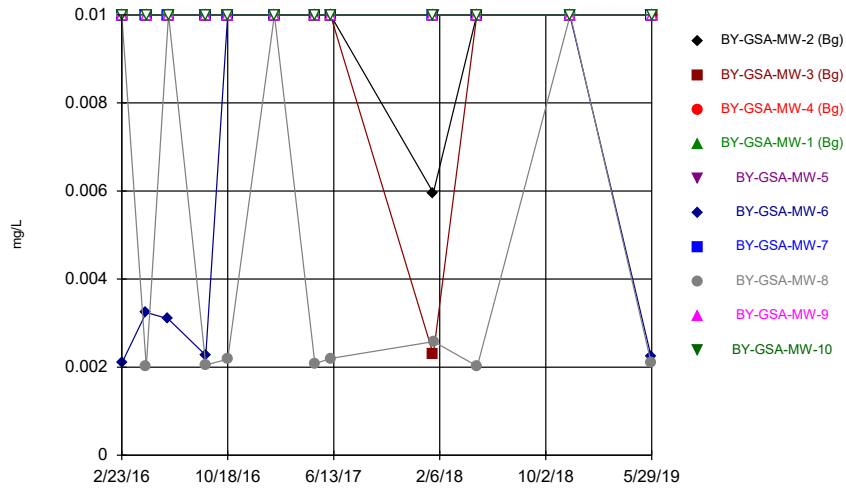
Constituent: Calcium Analysis Run 6/26/2019 10:23 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



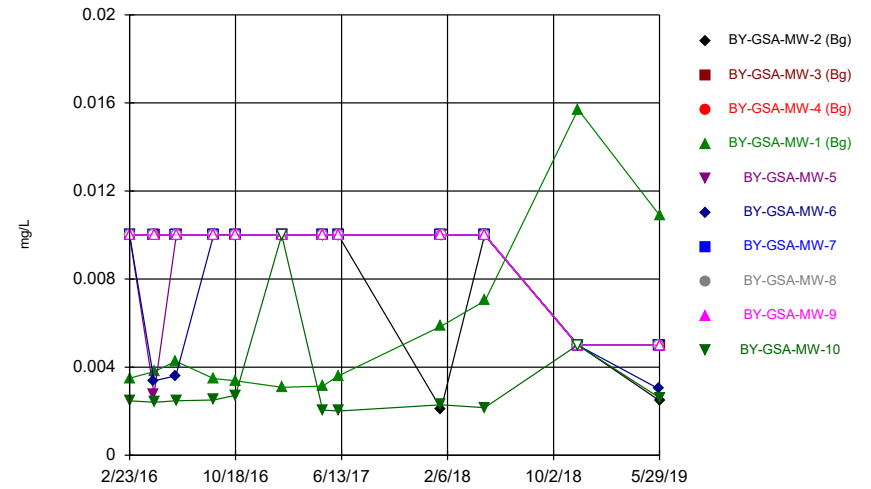
Constituent: Chloride Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



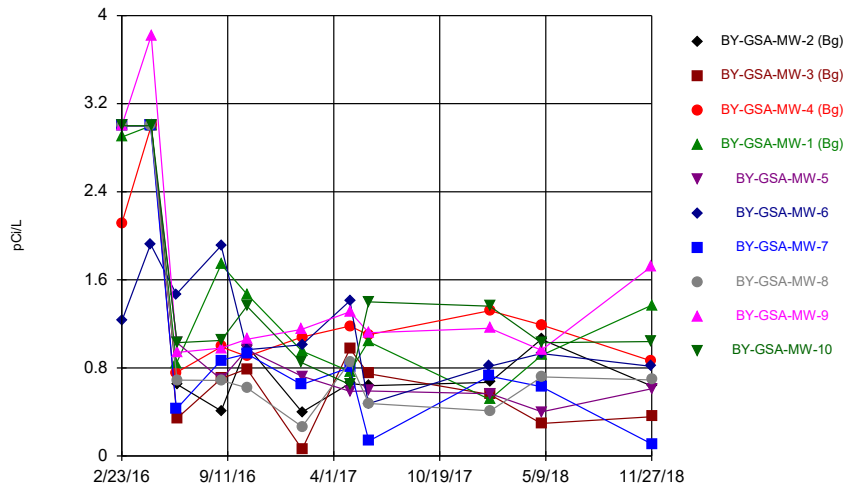
Constituent: Chromium Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



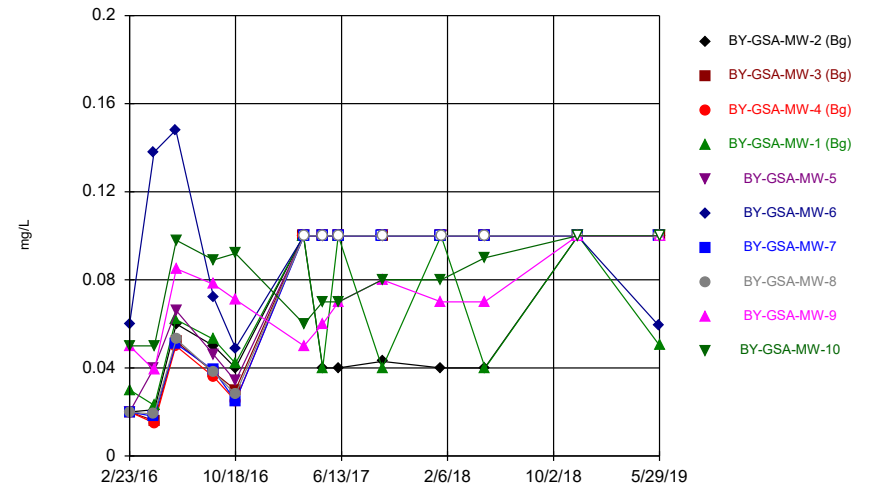
Constituent: Cobalt Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



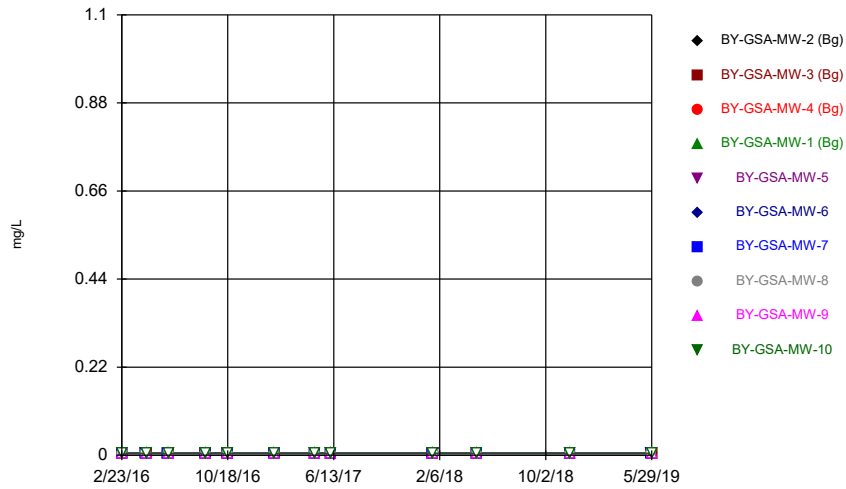
Constituent: Combined Radium 226 + 228 Analysis Run 6/26/2019 10:24 AM View: Time Series - All Well
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



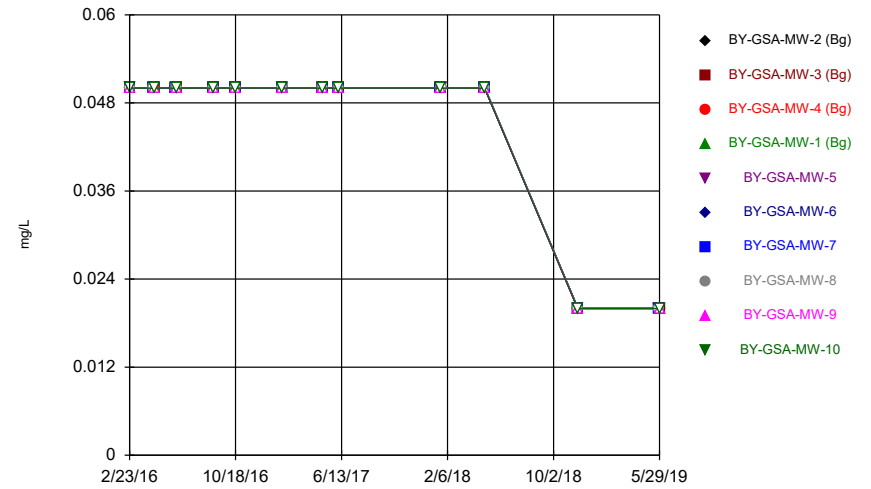
Constituent: Fluoride Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



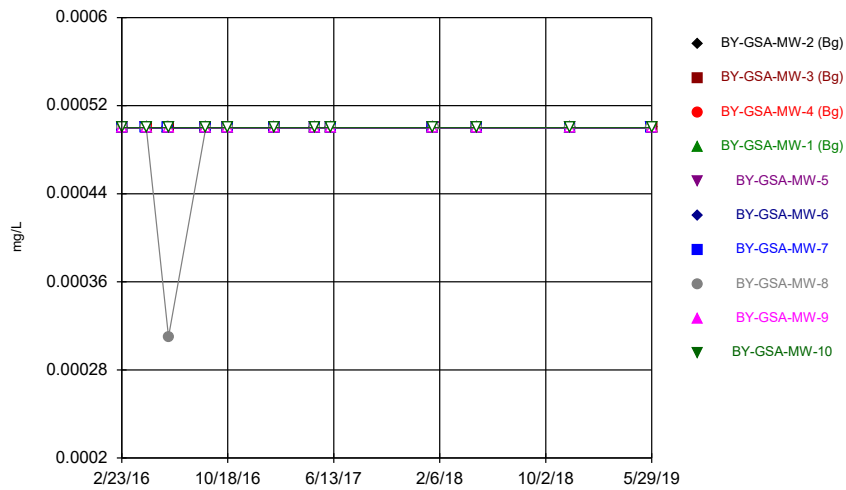
Constituent: Lead Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



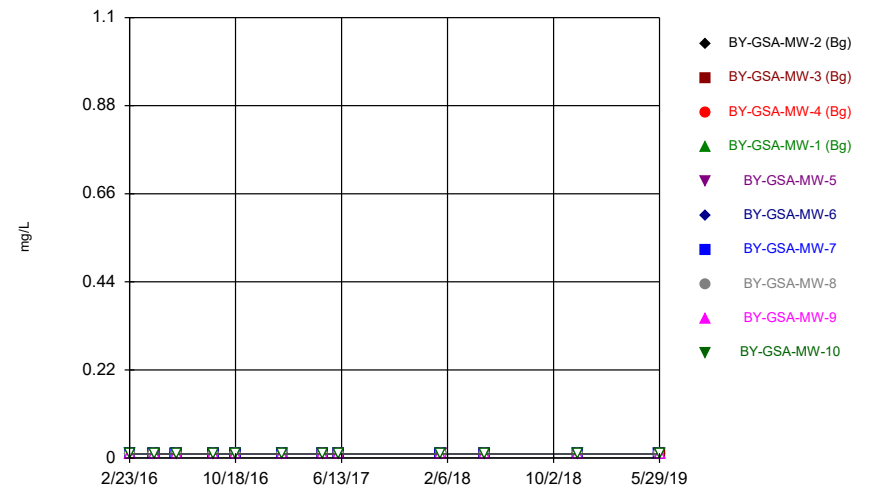
Constituent: Lithium Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



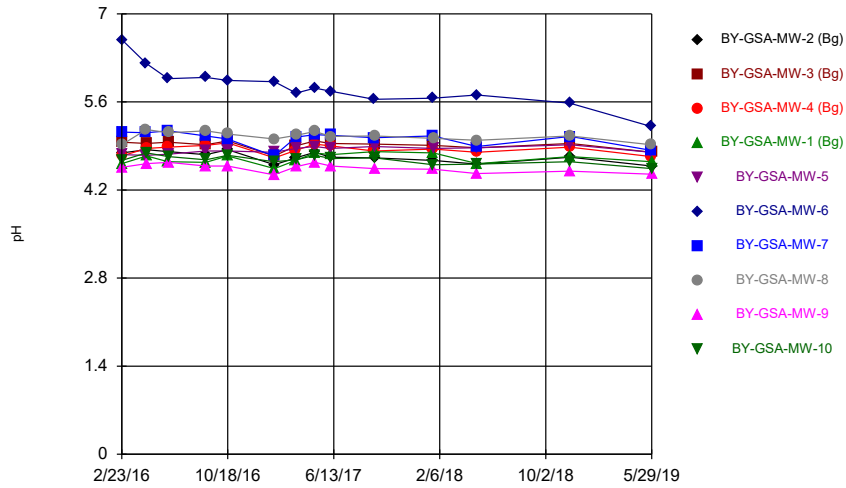
Constituent: Mercury Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



Constituent: Molybdenum Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

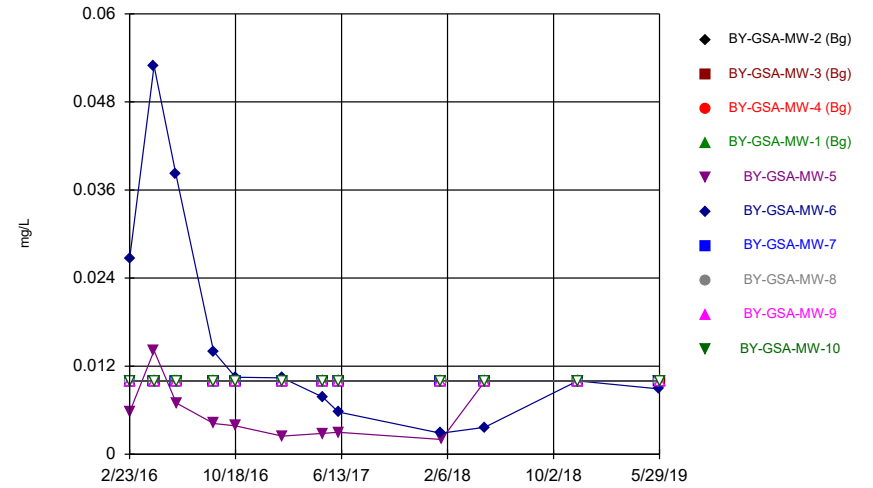
Time Series



Constituent: pH Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Hollow symbols indicate censored values.

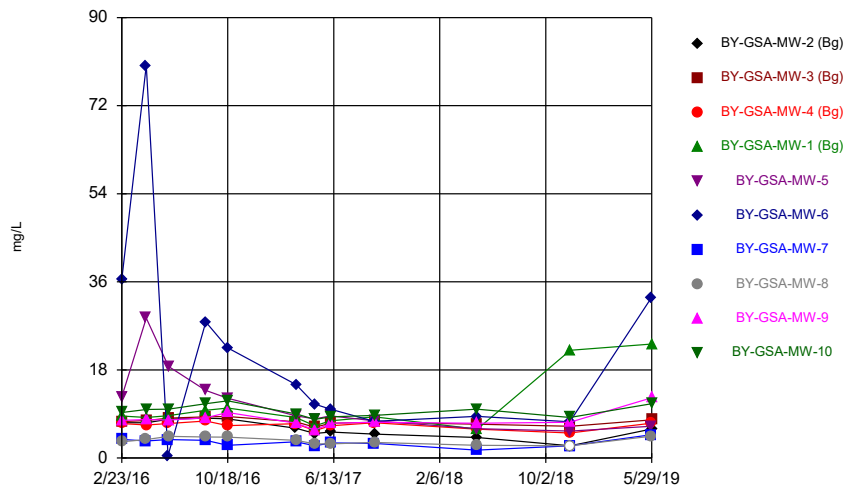
Time Series



Constituent: Selenium Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Hollow symbols indicate censored values.

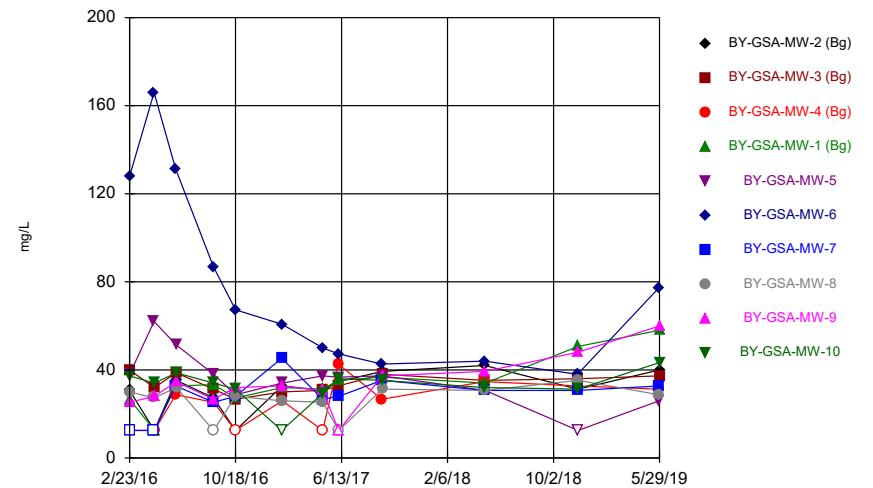
Time Series



Constituent: Sulfate Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

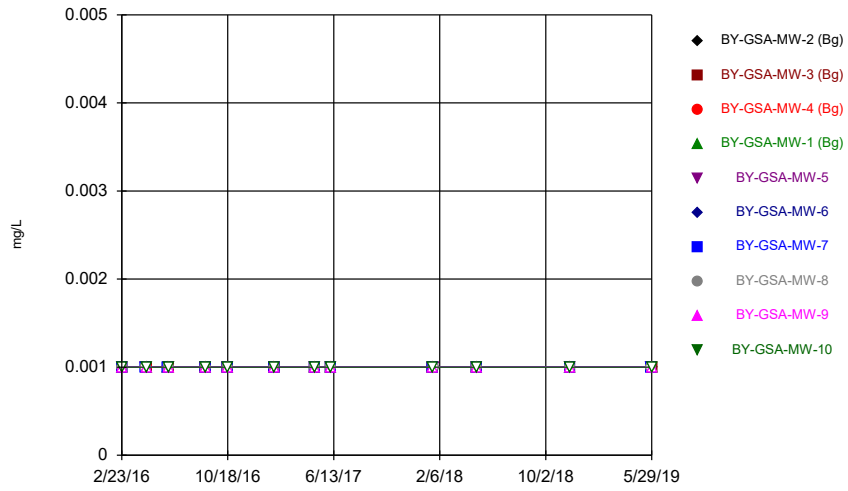
Hollow symbols indicate censored values.

Time Series



Constituent: TDS Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



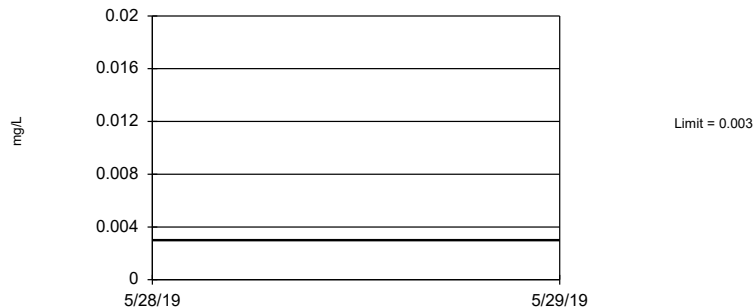
Constituent: Thallium Analysis Run 6/26/2019 10:24 AM View: Time Series - All Wells
Plant Barry Client: Southern Company Data: Barry GSA

Upper Tolerance Limits

Plant Barry Client: Southern Company Data: Barry GSA Printed 6/26/2019, 10:26 AM

<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)	0.003	48	n/a	n/a	89.58	n/a	n/a	0.08526	NP Inter(NDs)
Arsenic (mg/L)	0.005	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Barium (mg/L)	0.172	48	n/a	n/a	0	n/a	n/a	0.08526	NP Inter(normal...
Beryllium (mg/L)	0.003	48	n/a	n/a	93.75	n/a	n/a	0.08526	NP Inter(NDs)
Cadmium (mg/L)	0.001	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Chromium (mg/L)	0.01	48	n/a	n/a	95.83	n/a	n/a	0.08526	NP Inter(NDs)
Cobalt (mg/L)	0.0157	48	n/a	n/a	70.83	n/a	n/a	0.08526	NP Inter(normal...
Combined Radium 226 + 228 (pCi/L)	3	44	n/a	n/a	0	n/a	n/a	0.1047	NP Inter(normal...
Fluoride (mg/L)	0.1	52	n/a	n/a	44.23	n/a	n/a	0.06944	NP Inter(normal...
Lead (mg/L)	0.005	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Lithium (mg/L)	0.02	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Mercury (mg/L)	0.0005	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Molybdenum (mg/L)	0.01	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Selenium (mg/L)	0.01	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)
Thallium (mg/L)	0.001	48	n/a	n/a	100	n/a	n/a	0.08526	NP Inter(NDs)

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 48 background values. 89.58% NDs. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Antimony Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

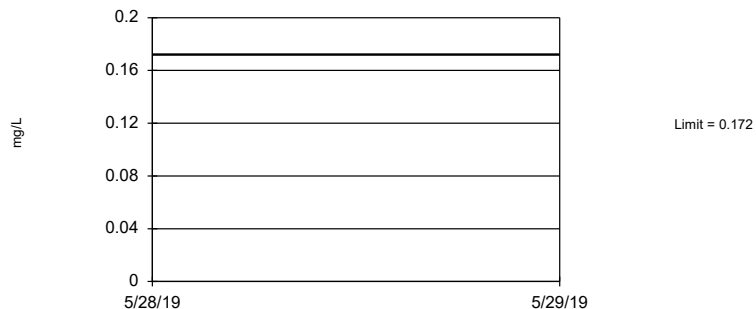
Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Arsenic Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

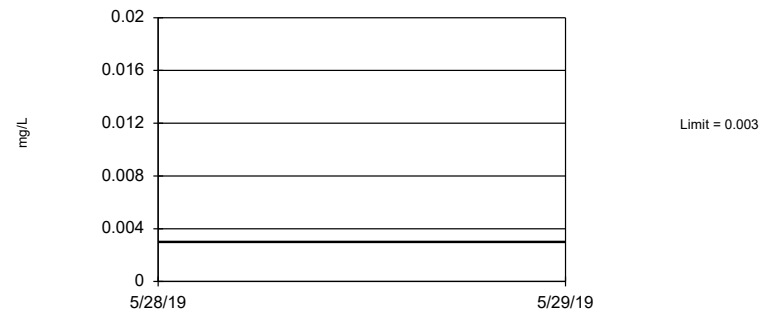
Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 48 background values. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Barium Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

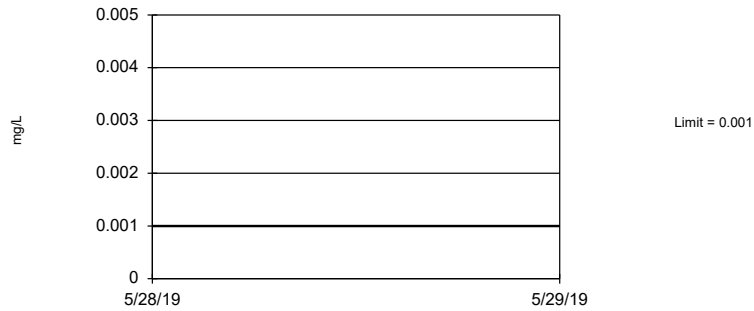
Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 48 background values. 93.75% NDs. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Beryllium Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Cadmium Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 48 background values. 95.83% NDs. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Chromium Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 48 background values. 70.83% NDs. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Cobalt Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

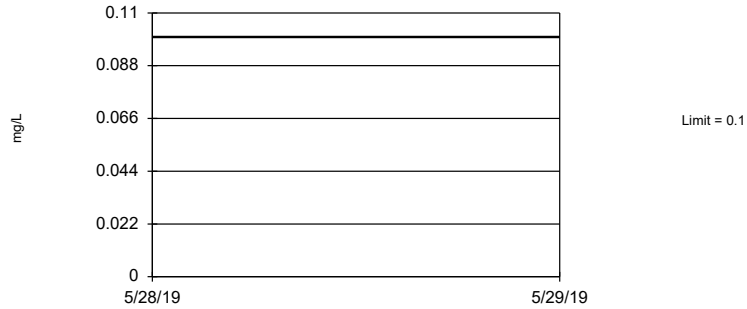
Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 44 background values. 90.04% coverage at alpha=0.01; 93.55% coverage at alpha=0.05; 98.24% coverage at alpha=0.5. Report alpha = 0.1047.

Constituent: Combined Radium 226 + 228 Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

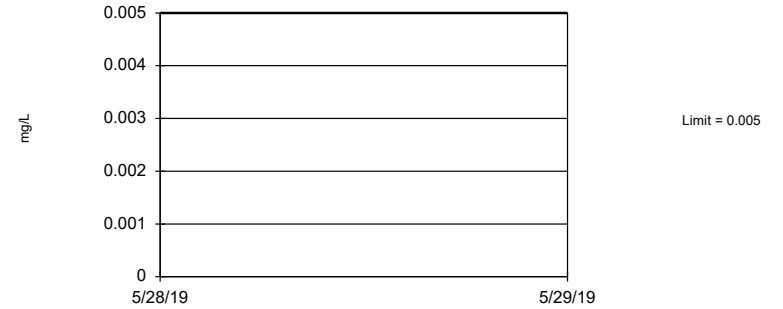
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 52 background values. 44.23% NDs. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Fluoride Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Lead Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

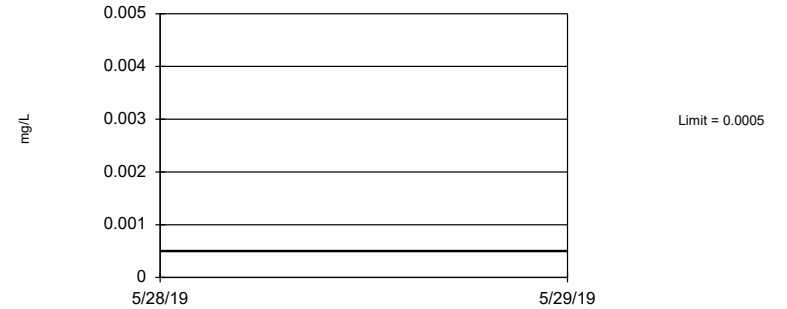
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Lithium Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Mercury Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

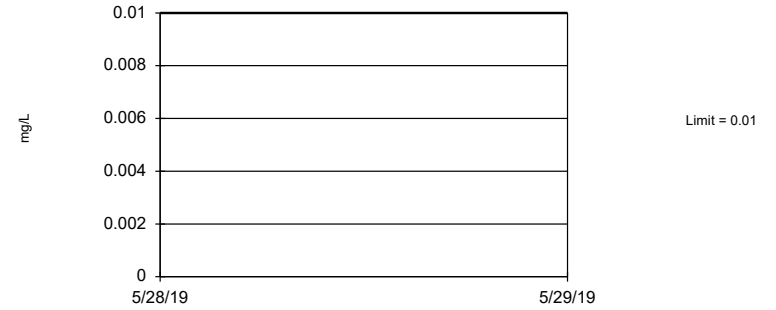
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Molybdenum Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Selenium Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 90.82% coverage at alpha=0.01; 93.95% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.08526.

Constituent: Thallium Analysis Run 6/26/2019 10:25 AM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Confidence Intervals - All Results (No Significant Results)

Plant Barry Client: Southern Company Data: Barry GSA Printed 6/26/2019, 10:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	BY-GSA-MW-5	0.003	0.000866	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-6	0.003	0.000926	0.006	No	12	83.33	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-7	0.003	0.00119	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-8	0.003	0.000885	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-9	0.003	0.000859	0.006	No	12	91.67	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-10	0.003	0.000838	0.006	No	12	91.67	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-5	0.005	0.005	0.01	No	12	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-6	0.005	0.005	0.01	No	12	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-7	0.005	0.005	0.01	No	12	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-8	0.005	0.005	0.01	No	12	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-9	0.005	0.005	0.01	No	12	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-10	0.005	0.005	0.01	No	12	100	No	0.01	NP (NDs)
Barium (mg/L)	BY-GSA-MW-5	0.109	0.072	2	No	12	0	No	0.01	NP (normality)
Barium (mg/L)	BY-GSA-MW-6	0.1952	0.08822	2	No	12	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-7	0.0611	0.0399	2	No	12	0	No	0.01	NP (normality)
Barium (mg/L)	BY-GSA-MW-8	0.03678	0.02864	2	No	12	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-9	0.1344	0.1027	2	No	12	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-10	0.1272	0.1095	2	No	12	0	No	0.01	Param.
Beryllium (mg/L)	BY-GSA-MW-5	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-6	0.003	0.000704	0.004	No	12	83.33	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-7	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-8	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-9	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-10	0.003	0.003	0.004	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-5	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-6	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-7	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-8	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-9	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-10	0.001	0.001	0.005	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-5	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-6	0.01	0.00223	0.1	No	12	58.33	No	0.01	NP (normality)
Chromium (mg/L)	BY-GSA-MW-7	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-8	0.01	0.00202	0.1	No	12	33.33	No	0.01	NP (normality)
Chromium (mg/L)	BY-GSA-MW-9	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-10	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-5	0.01	0.005	0.0157	No	12	91.67	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-6	0.01	0.00338	0.0157	No	12	75	No	0.01	NP (normality)
Cobalt (mg/L)	BY-GSA-MW-7	0.01	0.005	0.0157	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-8	0.01	0.005	0.0157	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-9	0.01	0.005	0.0157	No	12	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-10	0.005	0.00205	0.0157	No	12	16.67	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-5	3	0.401	5	No	11	0	No	0.006	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-6	1.561	0.7934	5	No	11	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-7	1.675	0.2859	5	No	11	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-8	3	0.266	5	No	11	0	No	0.006	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-9	3	0.941	5	No	11	0	No	0.006	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-10	1.902	0.8588	5	No	11	0	ln(x)	0.01	Param.
Fluoride (mg/L)	BY-GSA-MW-5	0.1	0.034	4	No	13	61.54	No	0.01	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-6	0.1158	0.07287	4	No	13	53.85	No	0.01	Param.
Fluoride (mg/L)	BY-GSA-MW-7	0.1	0.02	4	No	13	61.54	No	0.01	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-8	0.1	0.02	4	No	13	61.54	No	0.01	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-9	0.08806	0.05696	4	No	13	15.38	No	0.01	Param.
Fluoride (mg/L)	BY-GSA-MW-10	0.09602	0.06567	4	No	13	15.38	No	0.01	Param.
Lead (mg/L)	BY-GSA-MW-5	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-6	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-7	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-8	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-9	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-10	0.005	0.005	0.015	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-5	0.05	0.02	0.04	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-6	0.05	0.02	0.04	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-7	0.05	0.02	0.04	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-8	0.05	0.02	0.04	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-9	0.05	0.02	0.04	No	12	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-10	0.05	0.02	0.04	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-5	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-6	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)

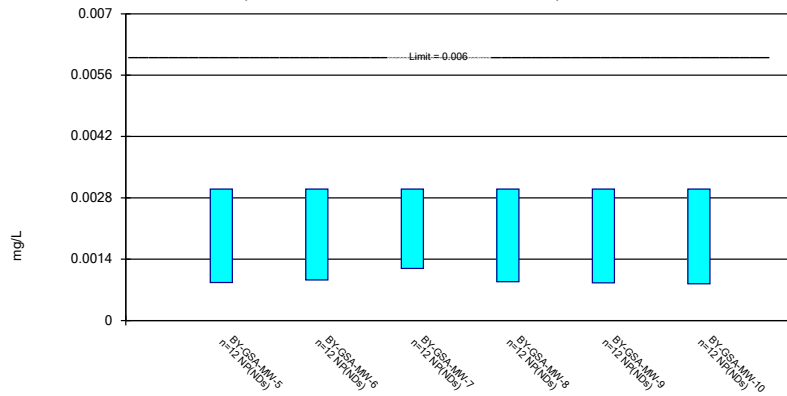
Confidence Intervals - All Results (No Significant Results)

Plant Barry Client: Southern Company Data: Barry GSA Printed 6/26/2019, 10:29 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Mercury (mg/L)	BY-GSA-MW-7	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-8	0.0005	0.00031	0.002	No	12	91.67	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-9	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-10	0.0005	0.0005	0.002	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-5	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-6	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-7	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-8	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-9	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-10	0.01	0.01	0.1	No	12	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-5	0.01087	0.003166	0.05	No	12	25	No	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-6	0.02485	0.005332	0.05	No	12	8.333	sqrt(x)	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-7	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-8	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-9	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-10	0.01	0.01	0.05	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-5	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-6	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-7	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-8	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-9	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-10	0.001	0.001	0.002	No	12	100	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

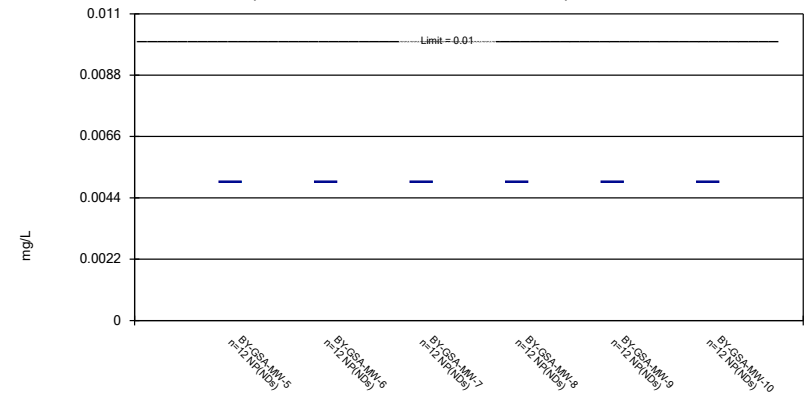
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

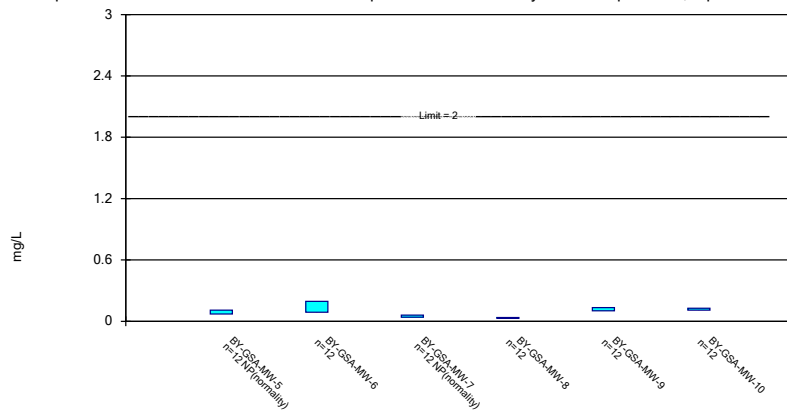
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Parametric and Non-Parametric (NP) Confidence Interval

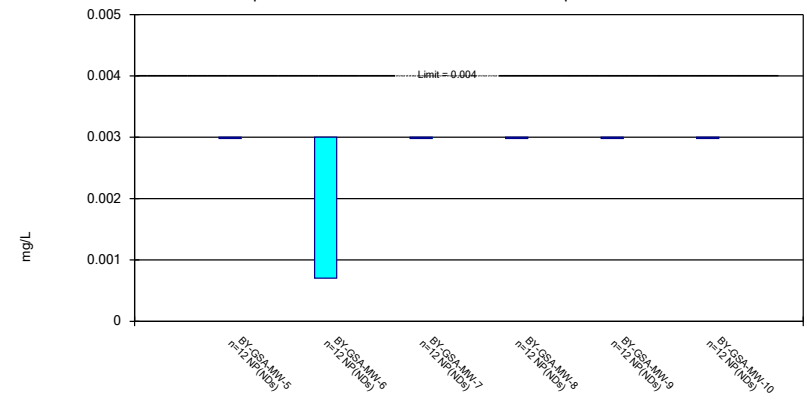
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



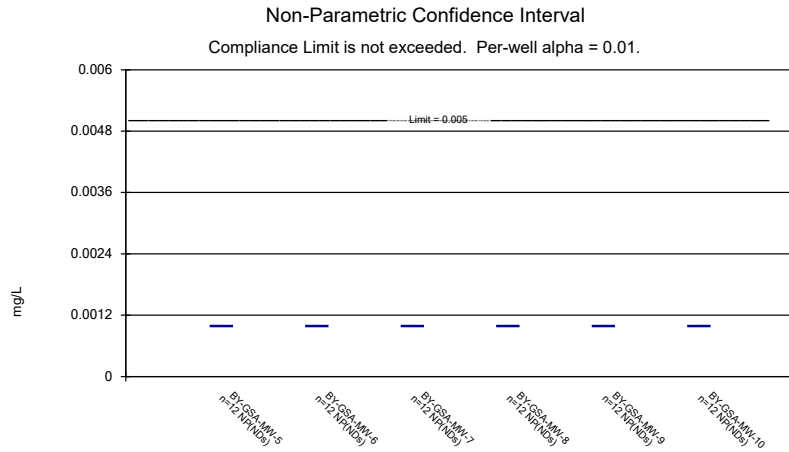
Constituent: Barium Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

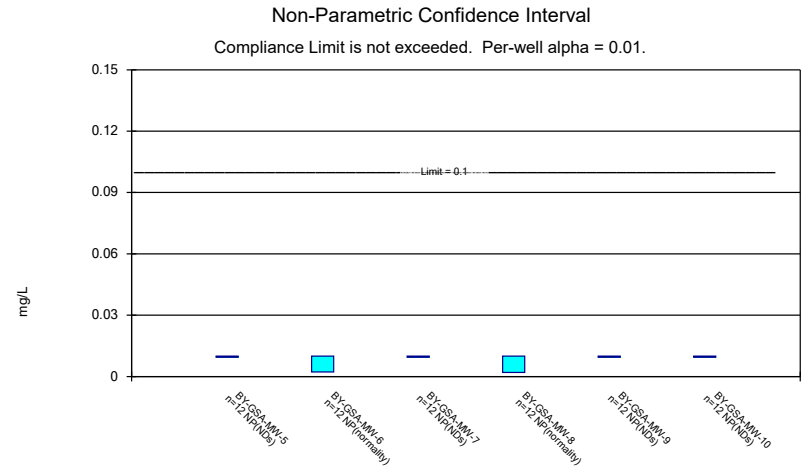
Compliance Limit is not exceeded. Per-well alpha = 0.01.



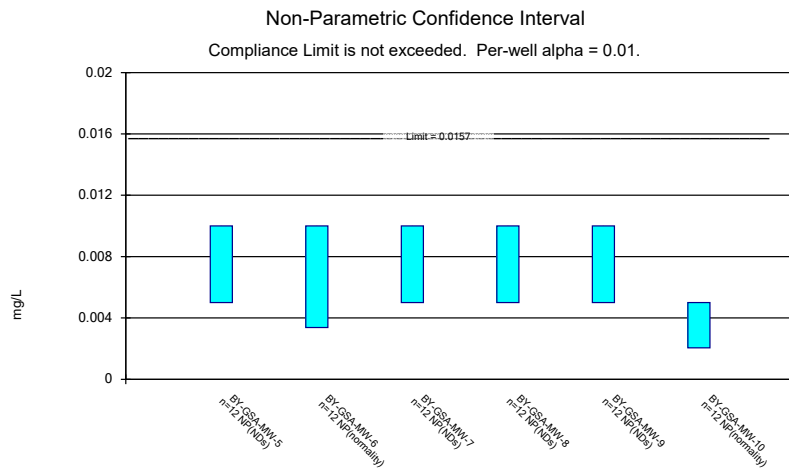
Constituent: Beryllium Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA



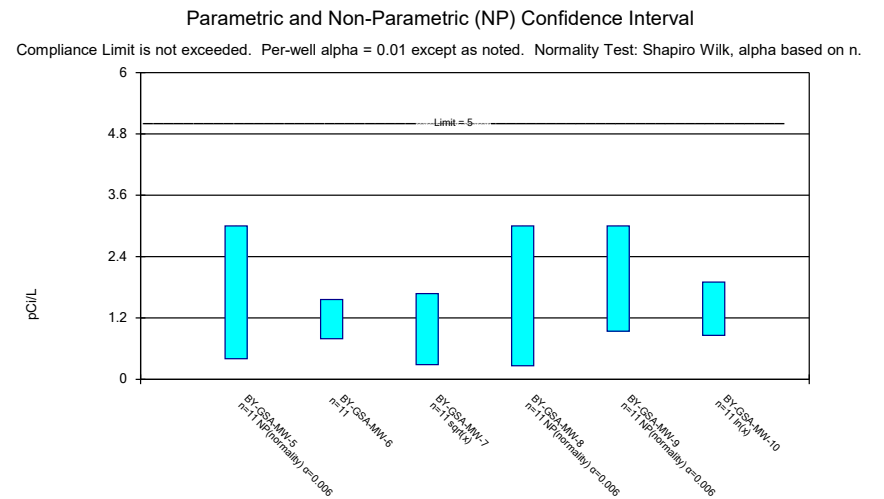
Constituent: Cadmium Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA



Constituent: Chromium Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA



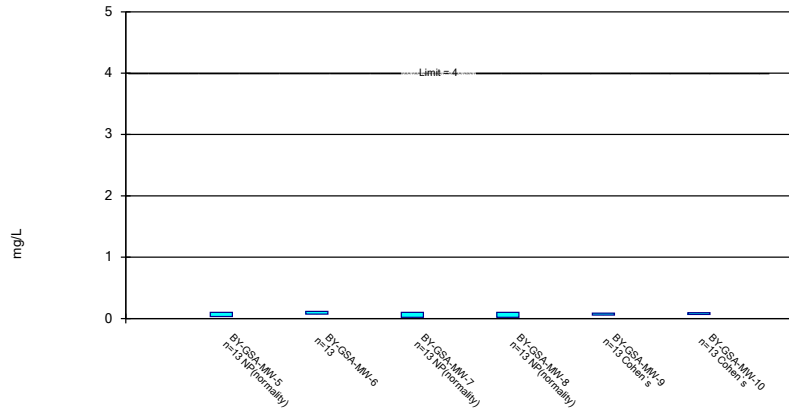
Constituent: Cobalt Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA



Constituent: Combined Radium 226 + 228 Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Parametric and Non-Parametric (NP) Confidence Interval

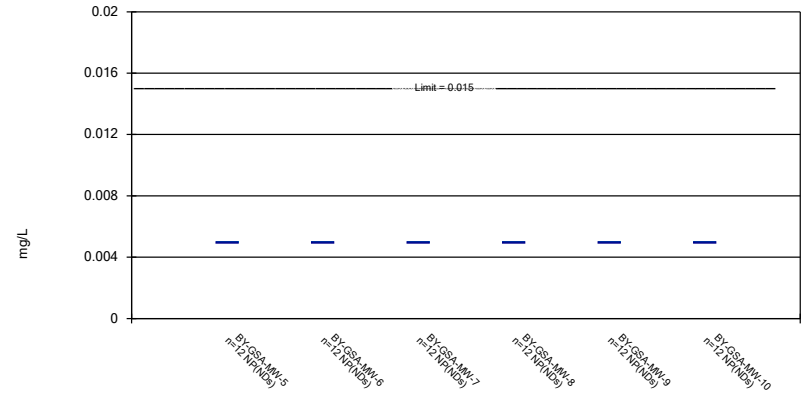
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

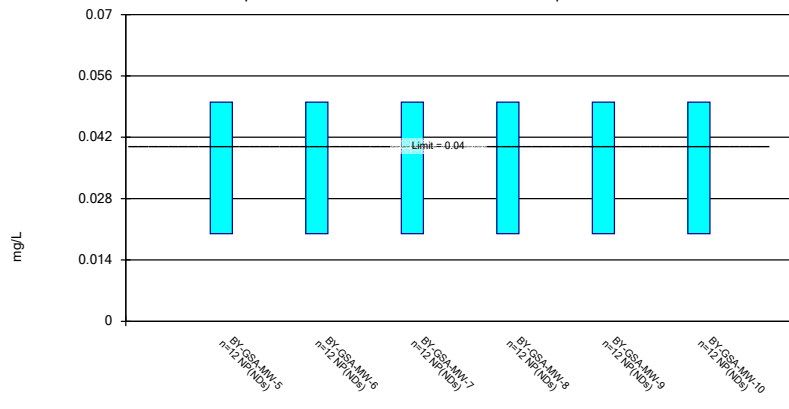
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 6/26/2019 10:27 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

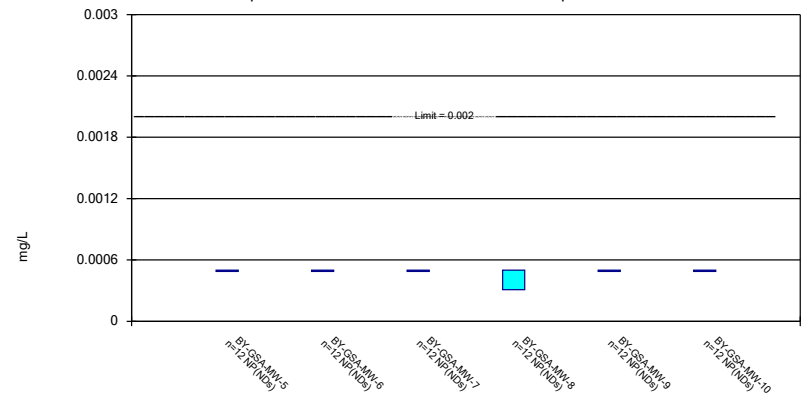
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lithium Analysis Run 6/26/2019 10:28 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

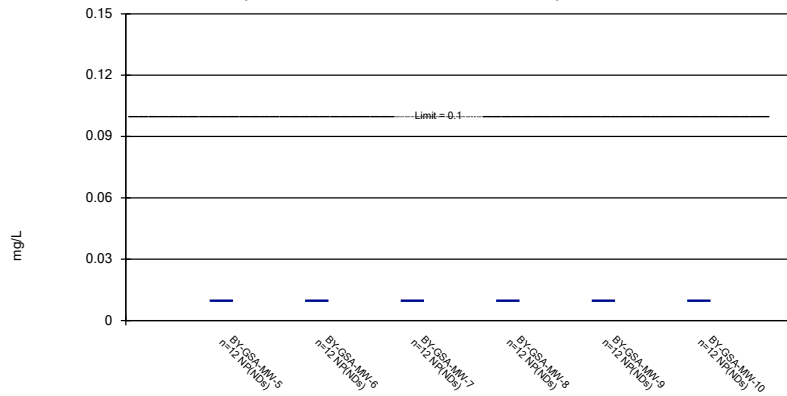
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 6/26/2019 10:28 AM View: Confidence Intervals
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

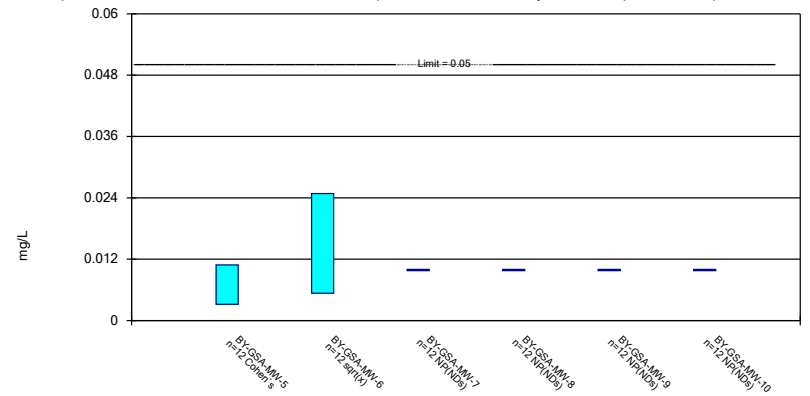
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Molybdenum Analysis Run 6/26/2019 10:28 AM View: Confidence Intervals
 Plant Barry Client: Southern Company Data: Barry GSA

Parametric and Non-Parametric (NP) Confidence Interval

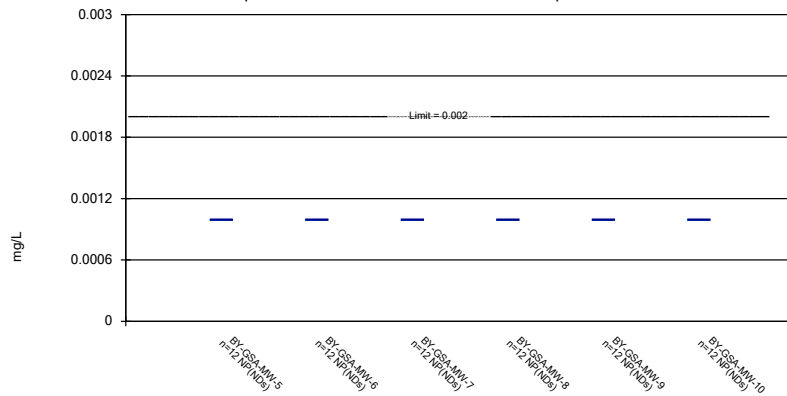
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 6/26/2019 10:28 AM View: Confidence Intervals
 Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 6/26/2019 10:28 AM View: Confidence Intervals
 Plant Barry Client: Southern Company Data: Barry GSA

2nd
Semi-Annual
Monitoring Event

Interwell Prediction Limit - Significant Results

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:06 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Calcium (mg/L)	BY-GSA-MW-6	1.925	n/a	10/2/2019	4.94	Yes	52	0	No	0.001254	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-5	5.022	4.533	10/2/2019	4.44	Yes	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-6	5.022	4.533	10/2/2019	5.4	Yes	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-7	5.022	4.533	10/2/2019	5.04	Yes	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-9	5.022	4.533	10/2/2019	4.49	Yes	60	0	No	0.000...	Param Inter 1 of 2

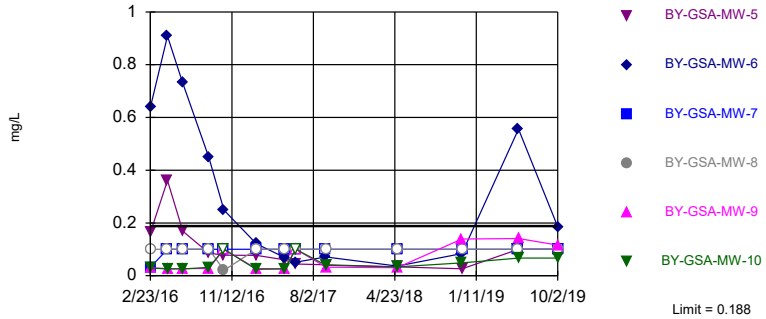
Interwell Prediction Limit - All Results

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Boron (mg/L)	BY-GSA-MW-5	0.188	n/a	10/2/2019	0.1ND	No	52	80.77	n/a	0.000...	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-6	0.188	n/a	10/2/2019	0.186	No	52	80.77	n/a	0.000...	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-7	0.188	n/a	10/2/2019	0.1ND	No	52	80.77	n/a	0.000...	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-8	0.188	n/a	10/2/2019	0.1ND	No	52	80.77	n/a	0.000...	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-9	0.188	n/a	10/2/2019	0.116	No	52	80.77	n/a	0.000...	NP Inter (NDs) 1 of 2
Boron (mg/L)	BY-GSA-MW-10	0.188	n/a	10/2/2019	0.0671	No	52	80.77	n/a	0.000...	NP Inter (NDs) 1 of 2
Calcium (mg/L)	BY-GSA-MW-5	1.925	n/a	10/2/2019	1.33	No	52	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-6	1.925	n/a	10/2/2019	4.94	Yes	52	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-7	1.925	n/a	10/2/2019	0.929	No	52	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-8	1.925	n/a	10/2/2019	0.882	No	52	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-9	1.925	n/a	10/2/2019	1.85	No	52	0	No	0.001254	Param Inter 1 of 2
Calcium (mg/L)	BY-GSA-MW-10	1.925	n/a	10/2/2019	1.32	No	52	0	No	0.001254	Param Inter 1 of 2
Fluoride (mg/L)	BY-GSA-MW-5	0.1	n/a	10/2/2019	0.1ND	No	56	48.21	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-6	0.1	n/a	10/2/2019	0.1ND	No	56	48.21	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-7	0.1	n/a	10/2/2019	0.1ND	No	56	48.21	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-8	0.1	n/a	10/2/2019	0.1ND	No	56	48.21	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-9	0.1	n/a	10/2/2019	0.1ND	No	56	48.21	n/a	0.000...	NP Inter (normality) ...
Fluoride (mg/L)	BY-GSA-MW-10	0.1	n/a	10/2/2019	0.1ND	No	56	48.21	n/a	0.000...	NP Inter (normality) ...
pH (pH)	BY-GSA-MW-5	5.022	4.533	10/2/2019	4.44	Yes	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-6	5.022	4.533	10/2/2019	5.4	Yes	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-7	5.022	4.533	10/2/2019	5.04	Yes	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-8	5.022	4.533	10/2/2019	4.86	No	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-9	5.022	4.533	10/2/2019	4.49	Yes	60	0	No	0.000...	Param Inter 1 of 2
pH (pH)	BY-GSA-MW-10	5.022	4.533	10/2/2019	4.6	No	60	0	No	0.000...	Param Inter 1 of 2
TDS (mg/L)	BY-GSA-MW-5	58	n/a	10/2/2019	34.7	No	52	13.46	n/a	0.000...	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-6	58	n/a	10/2/2019	50.7	No	52	13.46	n/a	0.000...	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-7	58	n/a	10/2/2019	30.7	No	52	13.46	n/a	0.000...	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-8	58	n/a	10/2/2019	37.3	No	52	13.46	n/a	0.000...	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-9	58	n/a	10/2/2019	46.7	No	52	13.46	n/a	0.000...	NP Inter (normality) ...
TDS (mg/L)	BY-GSA-MW-10	58	n/a	10/2/2019	36	No	52	13.46	n/a	0.000...	NP Inter (normality) ...

Within Limit

Prediction Limit
Interwell Non-parametric

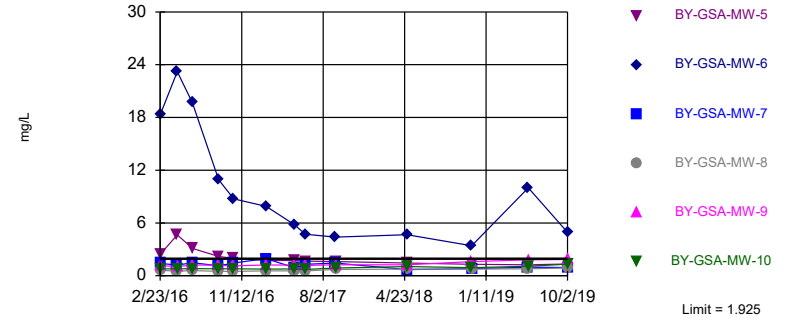


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 52 background values. 80.77% NDs. Annual per-constituent alpha = 0.008327. Individual comparison alpha = 0.0006966 (1 of 2). Comparing 6 points to limit.

Constituent: Boron Analysis Run 1/17/2020 12:02 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limit: BY-GSA-MW-6

Prediction Limit
Interwell Parametric

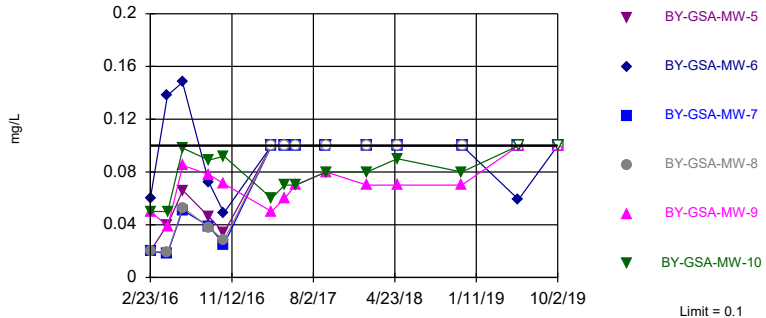


Background Data Summary: Mean=1.432, Std. Dev.=0.2597, n=52. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.971, critical = 0.937. Kappa = 1.898 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001254. Comparing 6 points to limit.

Constituent: Calcium Analysis Run 1/17/2020 12:02 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Interwell Non-parametric

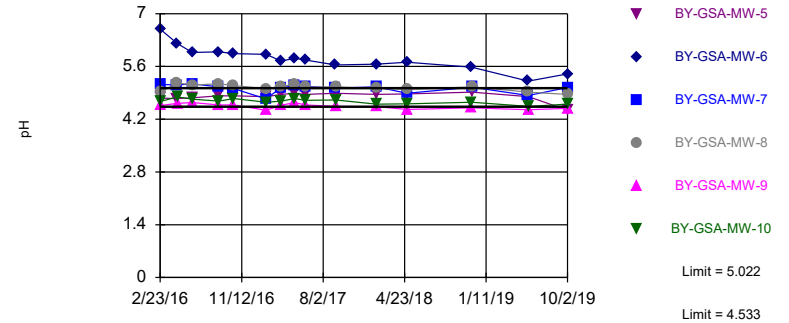


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 56 background values. 48.21% NDs. Annual per-constituent alpha = 0.007286. Individual comparison alpha = 0.0006092 (1 of 2). Comparing 6 points to limit.

Constituent: Fluoride Analysis Run 1/17/2020 12:02 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

Exceeds Limits: BY-GSA-MW-5, BY-GSA-MW-6, BY-GSA-MW-7, BY-GSA-MW-9

Prediction Limit
Interwell Parametric



Background Data Summary: Mean=4.778, Std. Dev.=0.1302, n=60. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9758, critical = 0.945. Kappa = 1.881 (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 Analysis Run 1/17/2020 12:02 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/17/2020 12:06 PM View: Interwell PI

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-1 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-3 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-2 (bg)	BY-GSA-MW-10
2/23/2016	0.0212 (J)	0.0257 (J)	0.163	0.638	<0.1	0.0314 (J)	<0.1	0.0252 (J)	0.0294 (J)
4/18/2016			0.361	0.908		<0.1	<0.1		
4/19/2016	<0.1	<0.1			<0.1			<0.1	0.0257 (J)
6/6/2016	<0.1	<0.1		0.733		<0.1			
6/7/2016			0.169		<0.1		<0.1	0.0202 (J)	0.0257 (J)
8/30/2016	<0.1	<0.1	0.0858 (J)	0.448	<0.1	<0.1	<0.1	<0.1	0.0317 (J)
10/18/2016	<0.1	0.022 (J)	0.0778 (J)	0.249	<0.1	<0.1	0.0207 (J)	<0.1	<0.1
1/30/2017						<0.1			0.0243 (J)
1/31/2017	<0.1	<0.1	0.077 (J)	0.121	<0.1		<0.1	<0.1	
5/2/2017	<0.1	<0.1	0.0602 (J)	0.0695 (J)	<0.1	<0.1	<0.1	<0.1	0.0259 (J)
6/6/2017	<0.1	<0.1	0.0442 (J)	0.0509 (J)	<0.1			<0.1	
6/7/2017						<0.1	<0.1		<0.1
9/12/2017		<0.1		0.0709 (J)		<0.1			
9/13/2017	<0.1		0.0411 (J)		<0.1		<0.1	<0.1	0.0394 (J)
5/1/2018		<0.1		0.0365 (J)	<0.1	<0.1		<0.1	0.0338 (J)
5/2/2018	0.0362 (J)		0.0334 (J)				<0.1		
11/26/2018		<0.1		0.0836 (J)					0.0484 (J)
11/27/2018	0.11		0.0265 (J)		<0.1	<0.1	<0.1	0.0207 (J)	
5/28/2019		<0.1	<0.1	0.556		<0.1	<0.1		
5/29/2019	0.188				<0.1			<0.1	0.0669 (J)
10/2/2019	0.097 (J)	<0.1	<0.1	0.186	<0.1	<0.1	<0.1	<0.1	0.0671 (J)

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/17/2020 12:06 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-9
2/23/2016	0.0297 (J)
4/18/2016	
4/19/2016	0.0269 (J)
6/6/2016	
6/7/2016	0.0271 (J)
8/30/2016	0.0272 (J)
10/18/2016	<0.1
1/30/2017	0.0269 (J)
1/31/2017	
5/2/2017	0.027 (J)
6/6/2017	
6/7/2017	<0.1
9/12/2017	
9/13/2017	0.032 (J)
5/1/2018	0.0302 (J)
5/2/2018	
11/26/2018	0.139
11/27/2018	
5/28/2019	
5/29/2019	0.141
10/2/2019	0.116

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/17/2020 12:06 PM View: Interwell PI

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-1 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-3 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-2 (bg)	BY-GSA-MW-10
2/23/2016	1.28	1.42	2.42	18.3	1.77	1.4	0.618	1.11	0.795
4/18/2016			4.65	23.2		1.2	0.505		
4/19/2016	1.19	1.31			1.68			1.09	0.761
6/6/2016	1.19	1.35		19.7		1.48			
6/7/2016			3.1		1.68		0.587	1.16	0.799
8/30/2016	1.11	1.31	2.19	10.9	1.62	1.13	0.495 (J)	1.08	0.788
10/18/2016	1.04	1.22	1.97	8.74	1.53	1.45	0.503	1.03	0.788
1/30/2017						1.95			0.755
1/31/2017	1.19	1.36	1.73	7.89	1.65		0.554	1.23	
5/2/2017	1.05	1.24	1.74	5.81	1.58	0.908	0.548	1.28	0.763
6/6/2017	0.978	1.28	1.66	4.72	1.55			1.25	
6/7/2017						1.29	0.545		0.706
9/12/2017		1.47		4.39		1.44			
9/13/2017	1.14		1.61		1.71		0.723	1.6	0.873
5/1/2018		1.47		4.66	1.76	0.695		1.58	1.05
5/2/2018	1.64		1.44				0.751		
11/26/2018		1.52		3.41					0.922
11/27/2018	2.01		1.3		1.69	0.798	0.743	1.49	
5/28/2019		1.6	1.25	10		0.973	0.789		
5/29/2019	1.85				1.74			1.59	1.07
10/2/2019	1.55	1.7	1.33	4.94	1.86	0.929	0.882	1.7	1.32

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/17/2020 12:06 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-9
2/23/2016	1.15
4/18/2016	
4/19/2016	1.04
6/6/2016	
6/7/2016	1.22
8/30/2016	1.18
10/18/2016	1.12
1/30/2017	1.23
1/31/2017	
5/2/2017	1.2
6/6/2017	
6/7/2017	1.17
9/12/2017	
9/13/2017	1.25
5/1/2018	1.25
5/2/2018	
11/26/2018	1.61
11/27/2018	
5/28/2019	
5/29/2019	1.8
10/2/2019	1.85

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/17/2020 12:06 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-10
2/23/2016	0.05 (J)
4/18/2016	
4/19/2016	0.05 (J)
6/6/2016	
6/7/2016	0.098 (J)
8/30/2016	0.089 (J)
10/18/2016	0.092 (J)
3/20/2017	
3/21/2017	0.06 (J)
5/2/2017	0.07 (J)
6/6/2017	
6/7/2017	0.07 (J)
9/12/2017	
9/13/2017	0.08 (J)
1/22/2018	
1/23/2018	0.08 (J)
1/24/2018	
5/1/2018	0.09 (J)
5/2/2018	
11/26/2018	0.08 (J)
11/27/2018	
5/28/2019	
5/29/2019	<0.1
10/2/2019	<0.1

Prediction Limit

Constituent: pH (pH) Analysis Run 1/17/2020 12:06 PM View: Interwell PI

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-1 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-3 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-2 (bg)	BY-GSA-MW-9	BY-GSA-MW-4 (bg)
2/23/2016	4.62	4.76	6.59	4.96	5.12	4.92	4.79	4.56	4.74
4/18/2016		4.75	6.21		5.11	5.16			
4/19/2016	4.74			4.94			4.84	4.62	4.86
6/6/2016	4.65		5.97		5.14				4.88
6/7/2016		4.77		4.96		5.11	4.81	4.64	
8/30/2016	4.64	4.82	5.99	4.92	5.06	5.14	4.76	4.58	4.91
10/18/2016	4.74	4.82	5.94	4.98	5.01	5.09	4.84	4.58	4.95
1/30/2017					4.74			4.44	
1/31/2017	4.54	4.8	5.92	4.74		5.01	4.6		4.71
3/20/2017	4.67			4.9			4.71		4.83
3/21/2017		4.86	5.74		5.04	5.07		4.57	
5/2/2017	4.79	4.89	5.82	4.98	5.08	5.13	4.8	4.64	4.93
6/6/2017	4.76	4.86	5.77	4.94			4.72		4.9
6/7/2017					5.07	5.05		4.58	
9/12/2017			5.64		5.03				4.82
9/13/2017	4.81	4.89		4.93		5.06	4.71	4.54	
1/22/2018			5.66		5.06				
1/23/2018	4.79			4.91			4.67	4.53	4.85
1/24/2018		4.86				5.02			
5/1/2018			5.71	4.87	4.89		4.61	4.46	4.8
5/2/2018	4.62	4.87				4.99			
11/26/2018			5.58					4.5	4.88
11/27/2018	4.73	4.92		4.94	5.05	5.06	4.72		
5/28/2019		4.8	5.21		4.83	4.92			4.73
5/29/2019	4.65			4.8			4.58	4.45	
10/2/2019	4.57	4.44	5.4	4.52	5.04	4.86	4.43	4.49	4.67

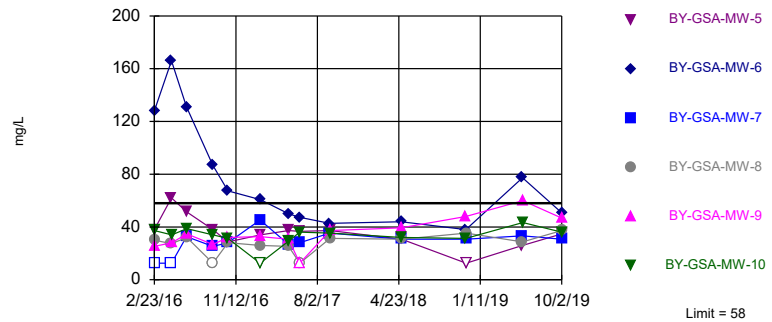
Prediction Limit

Constituent: pH (pH) Analysis Run 1/17/2020 12:06 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-10
2/23/2016	4.67
4/18/2016	
4/19/2016	4.79
6/6/2016	
6/7/2016	4.73
8/30/2016	4.68
10/18/2016	4.75
1/30/2017	4.65
1/31/2017	
3/20/2017	
3/21/2017	4.68
5/2/2017	4.75
6/6/2017	
6/7/2017	4.7
9/12/2017	
9/13/2017	4.71
1/22/2018	
1/23/2018	4.6
1/24/2018	
5/1/2018	4.61
5/2/2018	
11/26/2018	4.65
11/27/2018	
5/28/2019	
5/29/2019	4.54
10/2/2019	4.6

Within Limit

Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 52 background values. 13.46% NDs. Annual per-constituent alpha = 0.008327. Individual comparison alpha = 0.0006966 (1 of 2). Comparing 6 points to limit.

Constituent: TDS Analysis Run 1/17/2020 12:02 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

Prediction Limit

Constituent: TDS (mg/L) Analysis Run 1/17/2020 12:06 PM View: Interwell PI

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-1 (bg)	BY-GSA-MW-4 (bg)	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-3 (bg)	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-2 (bg)	BY-GSA-MW-10
2/23/2016	26.7	<25	38	128	40	<25	30	30.7	37.3
4/18/2016			62	166		<25	27.3		
4/19/2016	<25	<25			32			<25	34
6/6/2016	32.7	28.7		131		32.7			
6/7/2016			51.3		38.7		32	35.3	38.7
8/30/2016	33.3	25.3	38	86.7	31.3	25.3	<25	27.3	34
10/18/2016	27.3	<25	28.7	67.3	26.7	28	28	<25	31.3
1/30/2017						45.3			<25
1/31/2017	32	26	34	60.7	30		26	32.7	
5/2/2017	31.3	<25	37.3	50	30.7	26.7	25.3	30.7	29.3
6/6/2017	35.3	42.7	36.7	47.3	32.7			34.7	
6/7/2017						28	<25		36
9/12/2017		26.7		42.7		35.3			
9/13/2017	36.7		37.3		38		31.3	39.3	35.3
5/1/2018		34.7		44	35.3	30.7		42	32
5/2/2018	34		30.7				30.7		
11/26/2018		32.7		38					31.3
11/27/2018	50.7		<25		36	30.7	35.3	31.3	
5/28/2019		31.3	26	77.3		33.3	28.7		
5/29/2019	58				37.3			40	43.3
10/2/2019	46	36	34.7	50.7	36.7	30.7	37.3	41.3	36

Prediction Limit

Constituent: TDS (mg/L) Analysis Run 1/17/2020 12:06 PM View: Interwell PI
Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-9
2/23/2016	25.3
4/18/2016	
4/19/2016	28
6/6/2016	
6/7/2016	34.7
8/30/2016	26.7
10/18/2016	32
1/30/2017	32.7
1/31/2017	
5/2/2017	30.7
6/6/2017	
6/7/2017	<25
9/12/2017	
9/13/2017	37.3
5/1/2018	39.3
5/2/2018	
11/26/2018	48
11/27/2018	
5/28/2019	
5/29/2019	60
10/2/2019	46.7

Intrawell Prediction Limit - Significant Results

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:09 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Sulfate (mg/L)	BY-GSA-MW-10	12.55	n/a	10/2/2019	13.2	Yes	12	0	No	0.001254	Param Intra 1 of 2

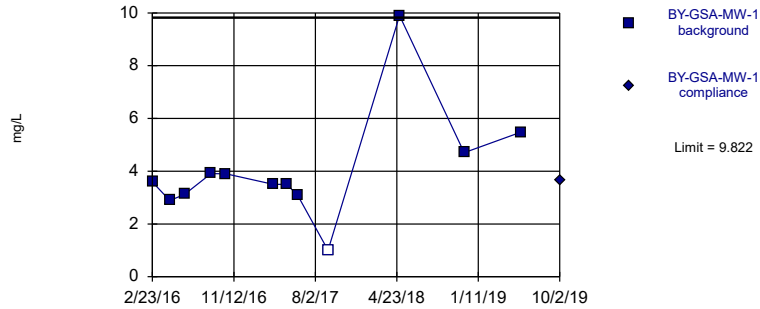
Intrawell Prediction Limit - All Results

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Chloride (mg/L)	BY-GSA-MW-1	9.822	n/a	10/2/2019	3.65	No	12	8.333	sqrt(x)	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-2	5.401	n/a	10/2/2019	2.75	No	12	8.333	x^2	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-3	4.671	n/a	10/2/2019	3.64	No	12	8.333	x^3	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-4	4.615	n/a	10/2/2019	3.5	No	12	0	sqrt(x)	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-5	4.818	n/a	10/2/2019	3.49	No	12	8.333	x^2	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-6	7.317	n/a	10/2/2019	4.13	No	12	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-7	9.716	n/a	10/2/2019	5.02	No	12	0	ln(x)	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-8	5.7	n/a	10/2/2019	4.32	No	12	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-9	11.01	n/a	10/2/2019	8.48	No	12	0	No	0.001254	Param Intra 1 of 2
Chloride (mg/L)	BY-GSA-MW-10	5.293	n/a	10/2/2019	4.34	No	12	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-1	23.3	n/a	10/2/2019	17.5	No	12	0	n/a	0.01077	NP Intra (normality) ...
Sulfate (mg/L)	BY-GSA-MW-2	9.825	n/a	10/2/2019	6.04	No	12	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-3	9.12	n/a	10/2/2019	7.62	No	12	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-4	8.365	n/a	10/2/2019	6.88	No	12	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-5	28.75	n/a	10/2/2019	6.55	No	12	0	sqrt(x)	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-6	45.34	n/a	10/2/2019	15.9	No	11	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-7	5.264	n/a	10/2/2019	4.6	No	12	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-8	5.191	n/a	10/2/2019	4.96	No	12	0	No	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-9	11.87	n/a	10/2/2019	11.6	No	12	0	sqrt(x)	0.001254	Param Intra 1 of 2
Sulfate (mg/L)	BY-GSA-MW-10	12.55	n/a	10/2/2019	13.2	Yes	12	0	No	0.001254	Param Intra 1 of 2

Within Limit

Prediction Limit
Intrawell Parametric

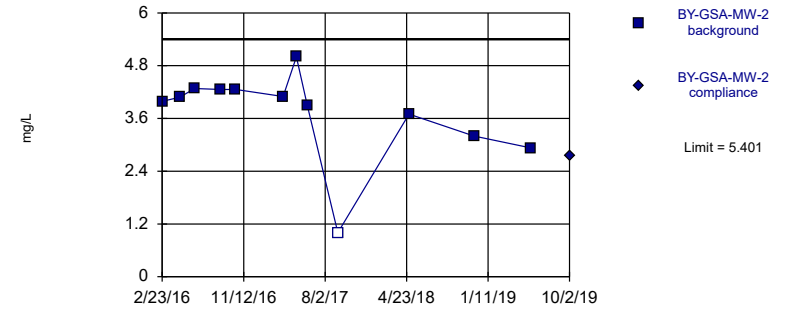


Background Data Summary (based on square root transformation): Mean=1.956, Std. Dev.=0.4939, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8699, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

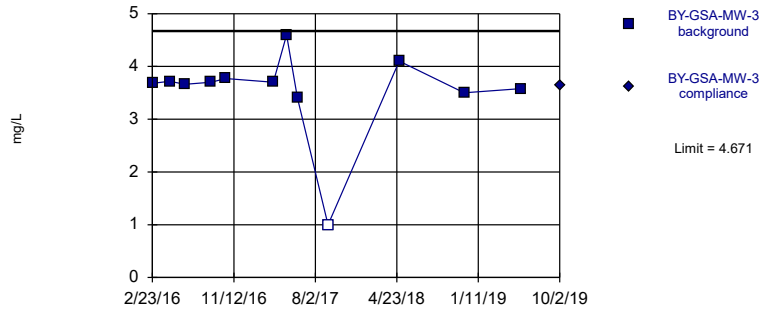


Background Data Summary (based on square transformation): Mean=14.81, Std. Dev.=6.021, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

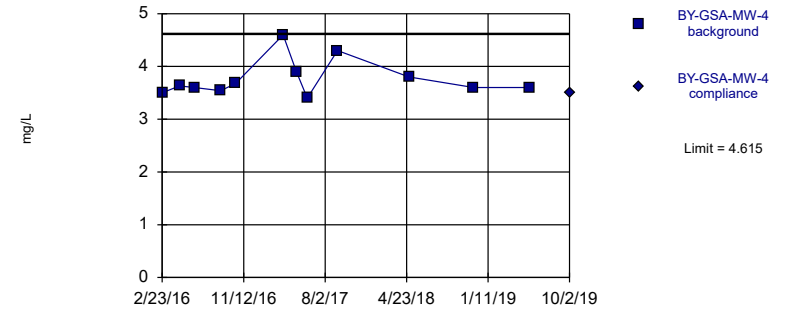


Background Data Summary (based on cube transformation): Mean=50.05, Std. Dev.=21.74, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8422, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

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 Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

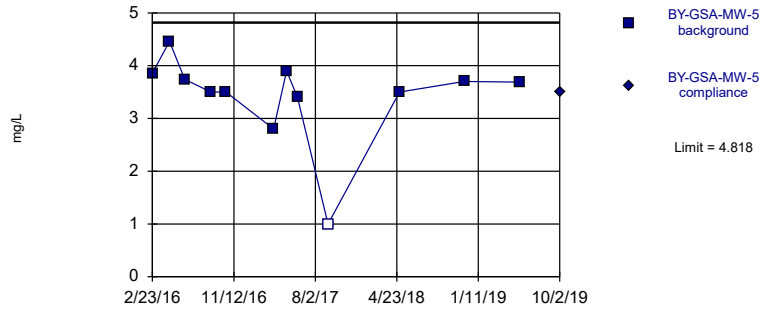
Prediction Limit

Constituent: Chloride Analysis Run 1/17/2020 12:09 PM View: IntraWell PL
Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-1	BY-GSA-MW-1	BY-GSA-MW-2	BY-GSA-MW-2	BY-GSA-MW-3	BY-GSA-MW-3	BY-GSA-MW-4	BY-GSA-MW-4
2/23/2016	3.59		3.99		3.68		3.5	
4/19/2016	2.89		4.08		3.72		3.63	
6/6/2016	3.12						3.6	
6/7/2016			4.28		3.66			
8/30/2016	3.91		4.26		3.7		3.54	
10/18/2016	3.9		4.26		3.77		3.68	
3/20/2017	3.5		4.1		3.7		4.6	
5/2/2017	3.5		5		4.6		3.9	
6/6/2017	3.1		3.9		3.4		3.4	
9/12/2017							4.3	
9/13/2017	<2 (U*)		<2 (U*)		<2 (U*)			
5/1/2018			3.7		4.1		3.8	
5/2/2018	9.9							
11/26/2018							3.6	
11/27/2018	4.7		3.2		3.5			
5/28/2019							3.6	
5/29/2019	5.48		2.93		3.58			
10/2/2019		3.65		2.75		3.64		3.5

Within Limit

Prediction Limit
Intrawell Parametric

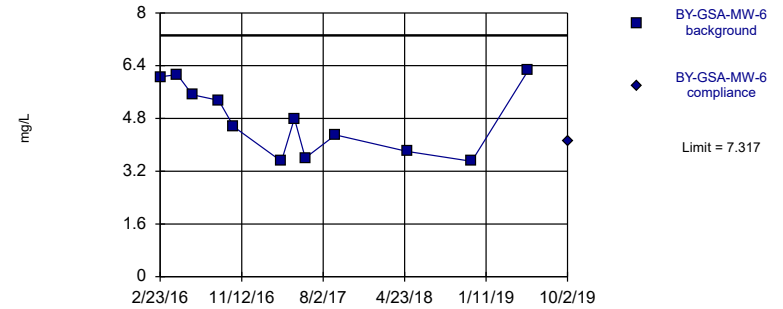


Background Data Summary (based on square transformation): Mean=12.37, Std. Dev.=4.547, n=12, 8.333% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8651, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

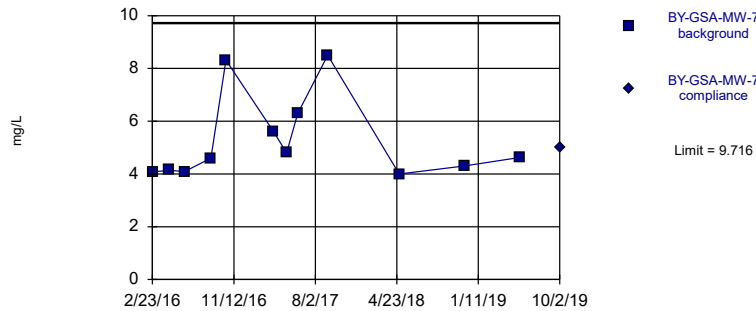


Background Data Summary: Mean=4.781, Std. Dev.=1.063, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.897, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

Within Limit

Prediction Limit
Intrawell Parametric

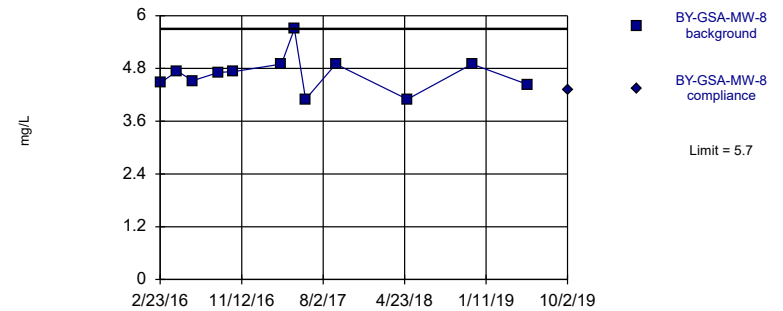


Background Data Summary (based on natural log transformation): Mean=1.627, Std. Dev.=0.271, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8109, critical = 0.805. Kappa = 2.385 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

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 Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

Prediction Limit

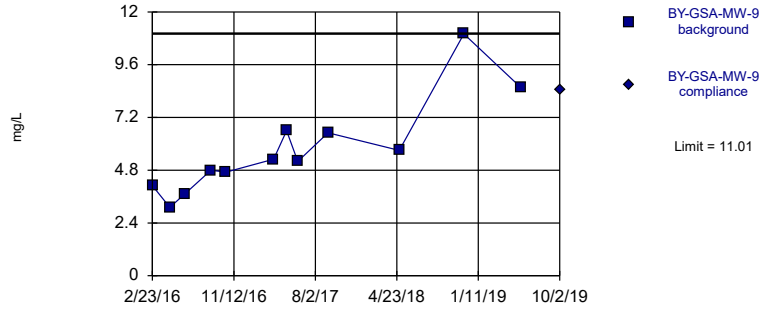
Constituent: Chloride Analysis Run 1/17/2020 12:09 PM View: IntraWell PL

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-5	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-6	BY-GSA-MW-7	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-8
2/23/2016	3.86		6.06		4.08		4.47	
4/18/2016	4.46		6.13		4.14		4.74	
6/6/2016			5.52		4.09			
6/7/2016	3.74						4.52	
8/30/2016	3.5		5.35		4.6		4.71	
10/18/2016	3.5		4.55		8.32		4.73	
3/21/2017	2.8		3.5		5.6		4.9	
5/2/2017	3.9		4.8		4.8		5.7	
6/6/2017	3.4		3.6					
6/7/2017					6.3		4.1	
9/12/2017			4.3		8.5			
9/13/2017	<2 (U*)						4.9	
5/1/2018			3.8		4			
5/2/2018	3.5						4.1	
11/26/2018			3.5					
11/27/2018	3.7				4.3		4.9	
5/28/2019	3.69		6.26		4.63		4.43	
10/2/2019		3.49		4.13		5.02		4.32

Within Limit

Prediction Limit
Intrawell Parametric



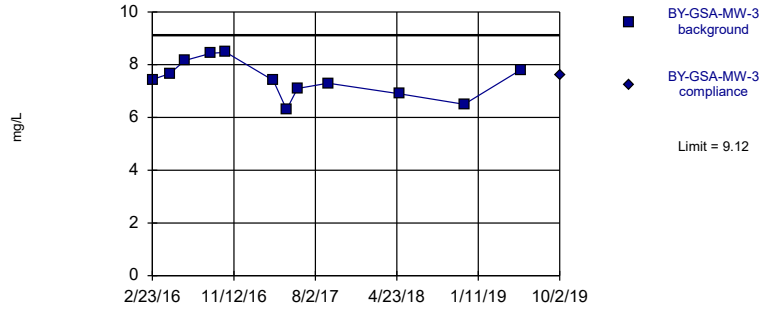
Prediction Limit

Constituent: Chloride, Sulfate Analysis Run 1/17/2020 12:09 PM View: IntraWell PL

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-9	BY-GSA-MW-9	BY-GSA-MW-10	BY-GSA-MW-10	BY-GSA-MW-1	BY-GSA-MW-1	BY-GSA-MW-2	BY-GSA-MW-2
2/23/2016	4.1		3.57		8.59		7.2	
4/19/2016	3.11		3.12		8.27		7.22	
6/6/2016					8.66			
6/7/2016	3.72		3.14				7.92	
8/30/2016	4.8		2.93		9.74		8.17	
10/18/2016	4.71		2.96		10.2		7.99	
3/20/2017					8.3		6.1	
3/21/2017	5.3		4.4					
5/2/2017	6.6		3.7		6.6		5	
6/6/2017					7.6		5.3	
6/7/2017	5.2		3.3					
9/13/2017	6.5		5.1		8.4		4.9 (J)	
5/1/2018	5.7		4				4.2 (J)	
5/2/2018					5.9			
11/26/2018	11		3.8					
11/27/2018					22		3.7 (J)	
5/29/2019	8.56		4.34		23.3		5.94	
10/2/2019		8.48		4.34		17.5		6.04

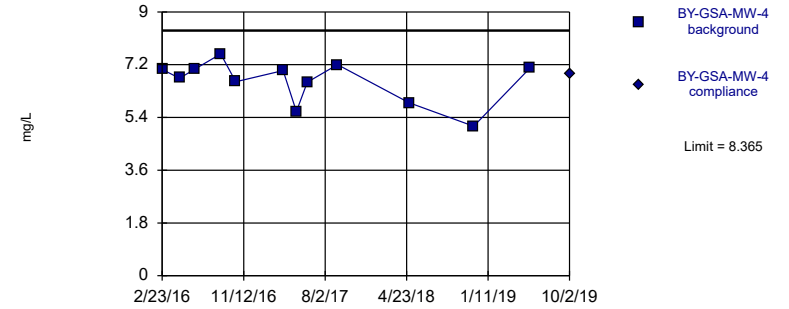
Within Limit Prediction Limit
Intrawell Parametric



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 Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

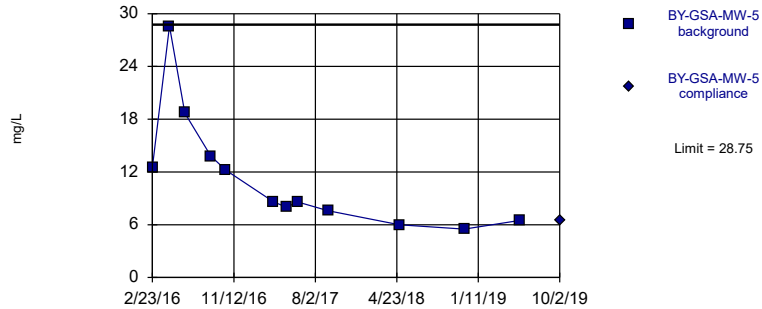
Within Limit Prediction Limit
Intrawell Parametric



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 Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

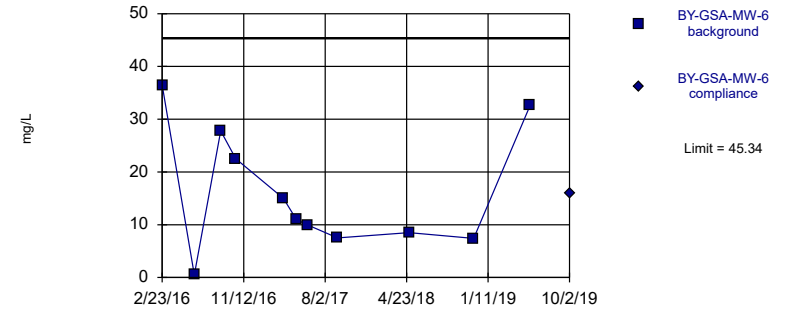
Within Limit Prediction Limit
Intrawell Parametric



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 Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

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 Analysis Run 1/17/2020 12:07 PM View: Intrawell PL
Plant Barry Client: Southern Company Data: Barry GSA

Prediction Limit

Constituent: Sulfate Analysis Run 1/17/2020 12:09 PM View: IntraWell PL

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-3	BY-GSA-MW-3	BY-GSA-MW-4	BY-GSA-MW-4	BY-GSA-MW-5	BY-GSA-MW-5	BY-GSA-MW-6	BY-GSA-MW-6
2/23/2016	7.44		7.04		12.5		36.5	
4/18/2016					28.6			
4/19/2016	7.66		6.74					
6/6/2016			7.04				0.498 (J)	
6/7/2016	8.16				18.7			
8/30/2016	8.43		7.57		13.8		27.8	
10/18/2016	8.47		6.62		12.2		22.5	
3/20/2017	7.4		7					
3/21/2017					8.6		15	
5/2/2017	6.3		5.6		8		11	
6/6/2017	7.1		6.6		8.6		10	
9/12/2017			7.2				7.5	
9/13/2017	7.3				7.6			
5/1/2018	6.9		5.9				8.5	
5/2/2018					6			
11/26/2018			5.1				7.4	
11/27/2018	6.5				5.5			
5/28/2019			7.1		6.5		32.7	
5/29/2019	7.81							
10/2/2019		7.62		6.88		6.55		15.9

Prediction Limit

Constituent: Sulfate Analysis Run 1/17/2020 12:09 PM View: Intrawell PL

Plant Barry Client: Southern Company Data: Barry GSA

	BY-GSA-MW-7	BY-GSA-MW-7	BY-GSA-MW-8	BY-GSA-MW-8	BY-GSA-MW-9	BY-GSA-MW-9	BY-GSA-MW-10	BY-GSA-MW-10
2/23/2016	3.82		3.33		7.71		9.29	
4/18/2016	3.48		3.78					
4/19/2016					7.85		9.92	
6/6/2016	3.76							
6/7/2016			4.44		7.76		10	
8/30/2016	3.62		4.29		8.22		11.1	
10/18/2016	2.58		4.27		9.29		11.7	
3/21/2017	3.3 (J)		3.6 (J)		7.1		9	
5/2/2017	2.5 (J)		2.9 (J)		5.7		7.9	
6/7/2017	3.1 (J)		2.9 (J)		7.1		8.4	
9/12/2017	3 (J)							
9/13/2017			3.2 (J)		7.3		8.7	
5/1/2018	1.6 (J)				7.1		10	
5/2/2018			2.6 (J)					
11/26/2018					7.3		8.3	
11/27/2018	1.9 (J)		2.8 (J)					
5/28/2019	4.86		4.46					
5/29/2019					12.3		11.1	
10/2/2019		4.6		4.96		11.6		13.2

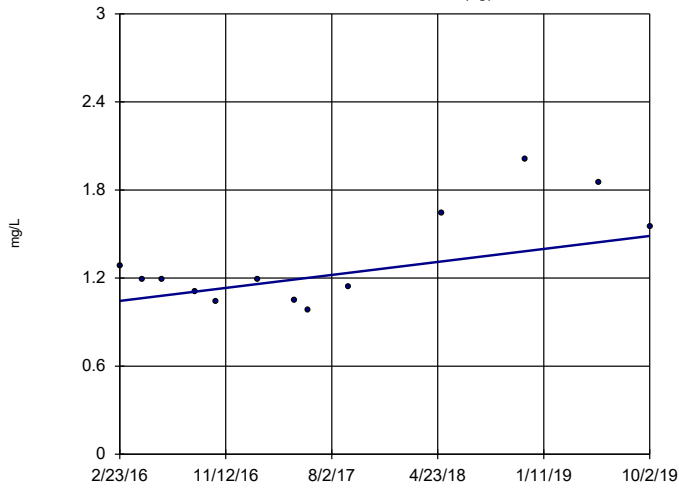
Trend Test Summary Table

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:11 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium (mg/L)	BY-GSA-MW-1 (bg)	0.1228	15	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-2 (bg)	0.1737	52	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-3 (bg)	0.0243	17	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-4 (bg)	0.09079	38	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	BY-GSA-MW-6	-4.634	-50	-43	Yes	13	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-1 (bg)	0.003643	5	53	No	15	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-2 (bg)	-0.07883	-62	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-3 (bg)	-0.04358	-44	-53	No	15	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-4 (bg)	-0.0316	-26	-53	No	15	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-5	0.04257	37	53	No	15	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-6	-0.2456	-91	-53	Yes	15	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-7	-0.03133	-43	-53	No	15	0	n/a	n/a	0.01	NP
pH (pH)	BY-GSA-MW-9	-0.03878	-51	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BY-GSA-MW-1 (bg)	2.469	14	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BY-GSA-MW-2 (bg)	-1.055	-36	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BY-GSA-MW-3 (bg)	-0.2499	-18	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BY-GSA-MW-4 (bg)	-0.1397	-17	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	BY-GSA-MW-10	0.2898	6	43	No	13	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

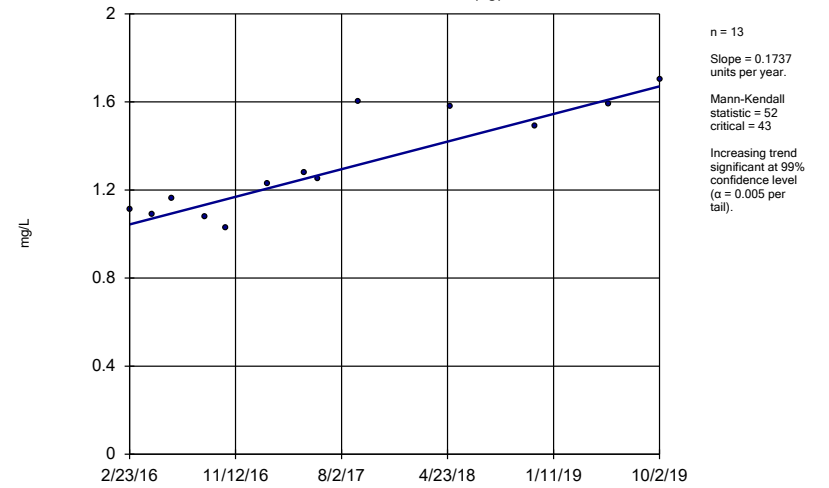
BY-GSA-MW-1 (bg)



Constituent: Calcium Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator

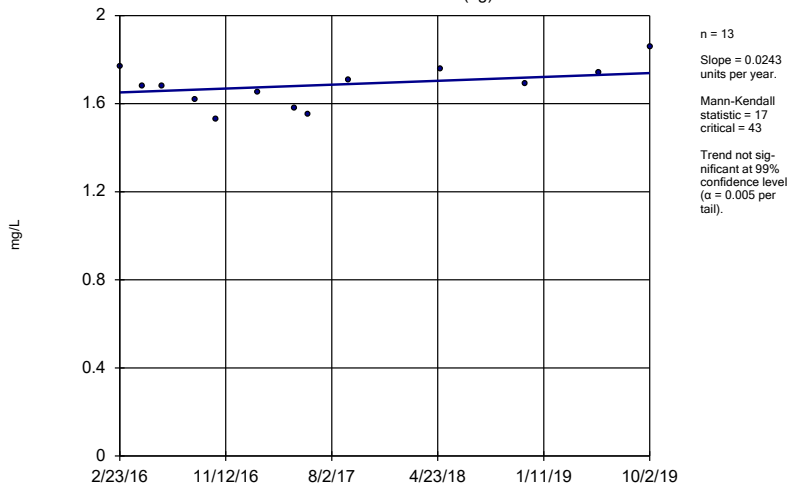
BY-GSA-MW-2 (bg)



Constituent: Calcium Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator

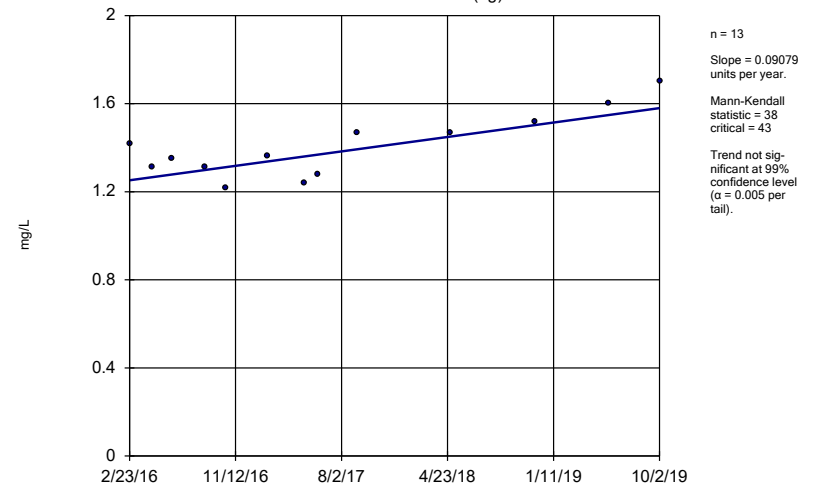
BY-GSA-MW-3 (bg)



Constituent: Calcium Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

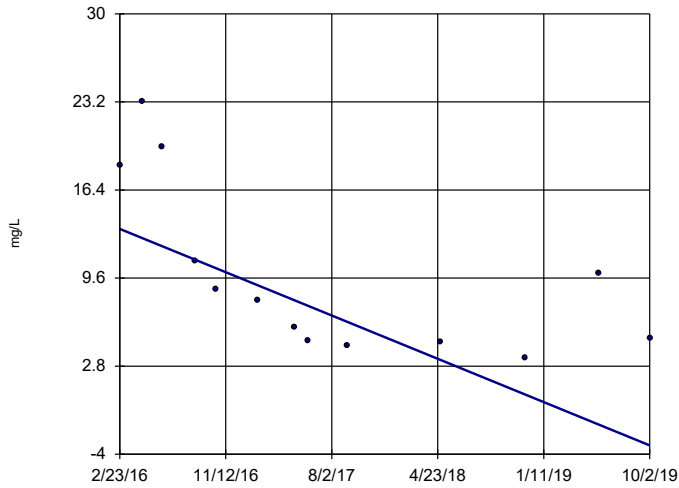
Sen's Slope Estimator

BY-GSA-MW-4 (bg)



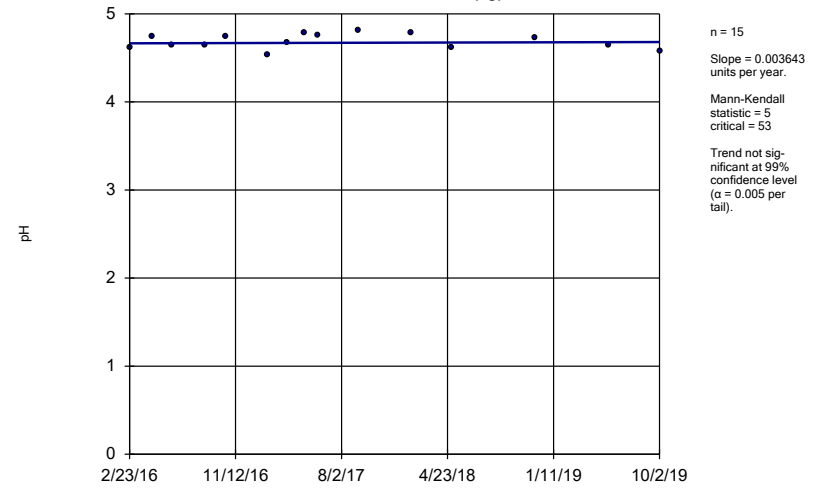
Constituent: Calcium Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator BY-GSA-MW-6



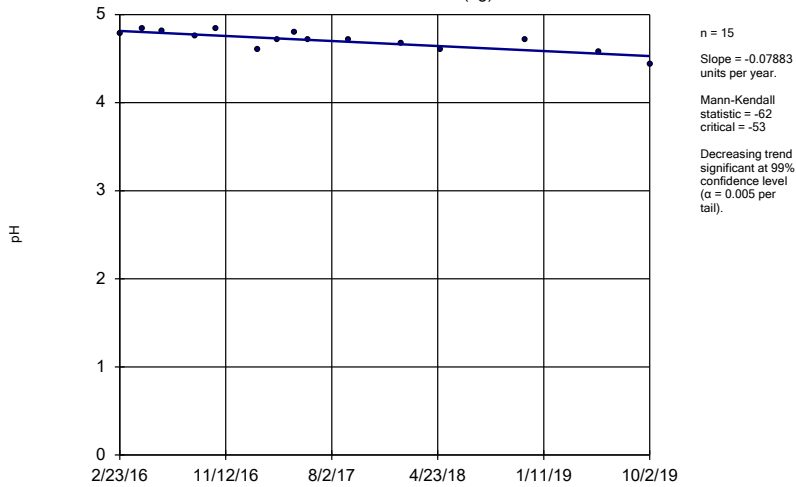
Constituent: Calcium Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator BY-GSA-MW-1 (bg)



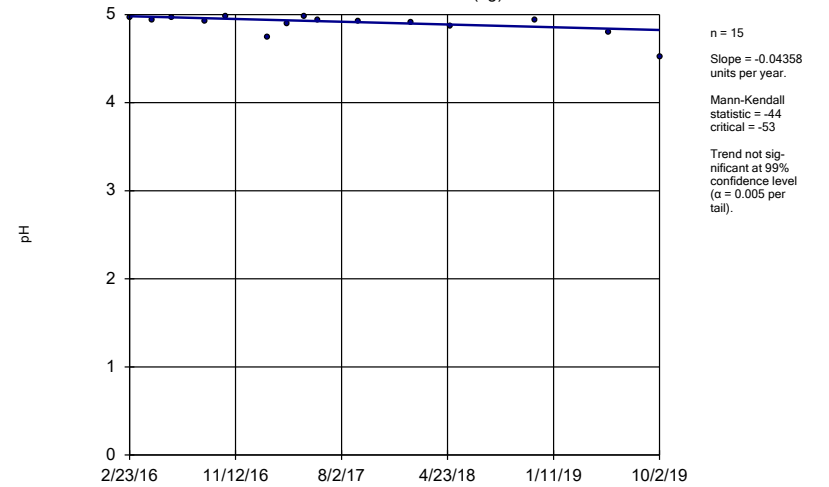
Constituent: pH Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator BY-GSA-MW-2 (bg)



Constituent: pH Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

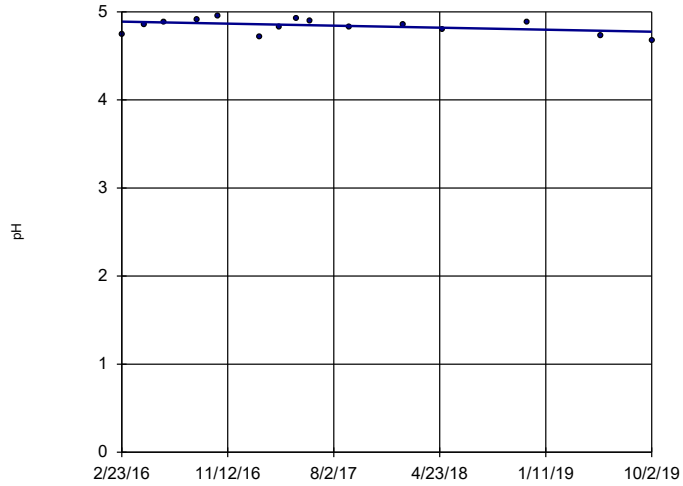
Sen's Slope Estimator BY-GSA-MW-3 (bg)



Constituent: pH Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator

BY-GSA-MW-4 (bg)

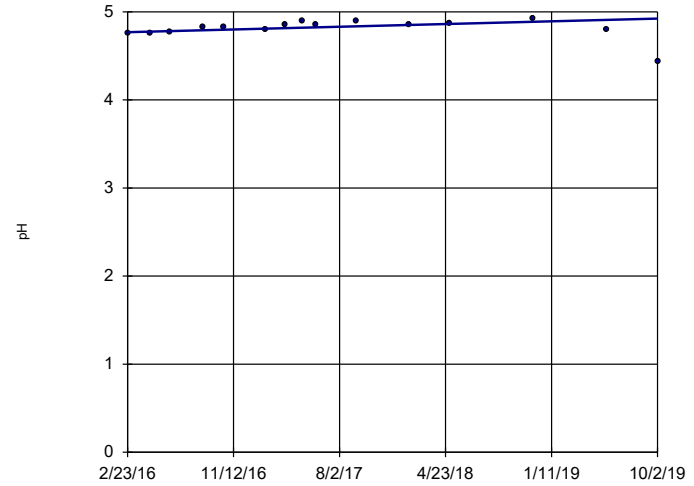


n = 15
 Slope = -0.0316
 units per year.
 Mann-Kendall
 statistic = -26
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 1/17/2020 12:10 PM View: Trend Test
 Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator

BY-GSA-MW-5

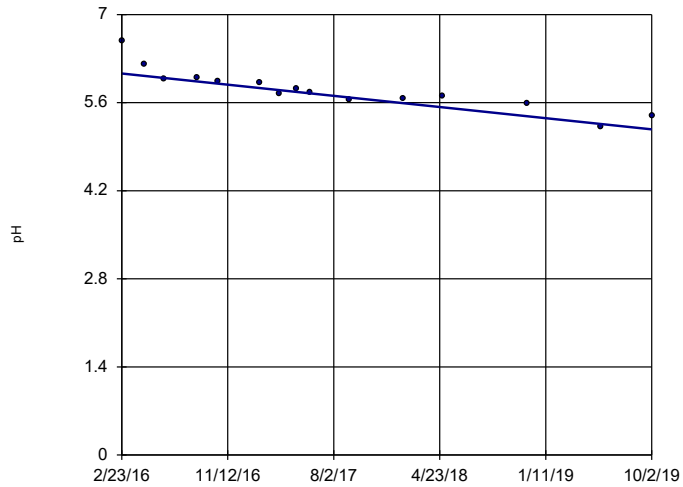


n = 15
 Slope = 0.04257
 units per year.
 Mann-Kendall
 statistic = 37
 critical = 53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 1/17/2020 12:10 PM View: Trend Test
 Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator

BY-GSA-MW-6

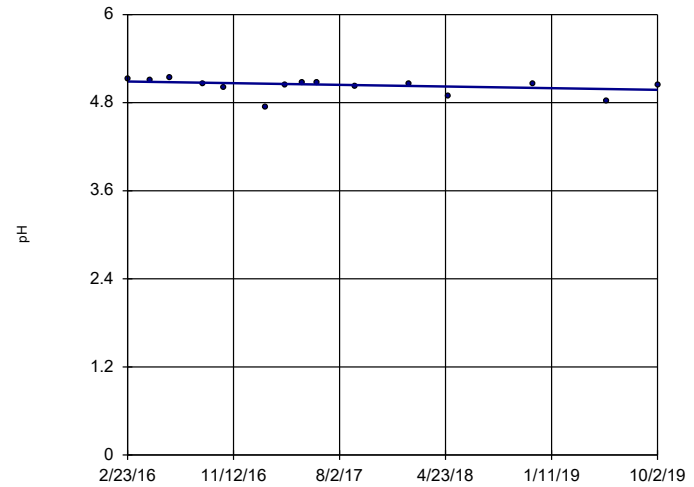


n = 15
 Slope = -0.2456
 units per year.
 Mann-Kendall
 statistic = -91
 critical = -53
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 1/17/2020 12:10 PM View: Trend Test
 Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator

BY-GSA-MW-7

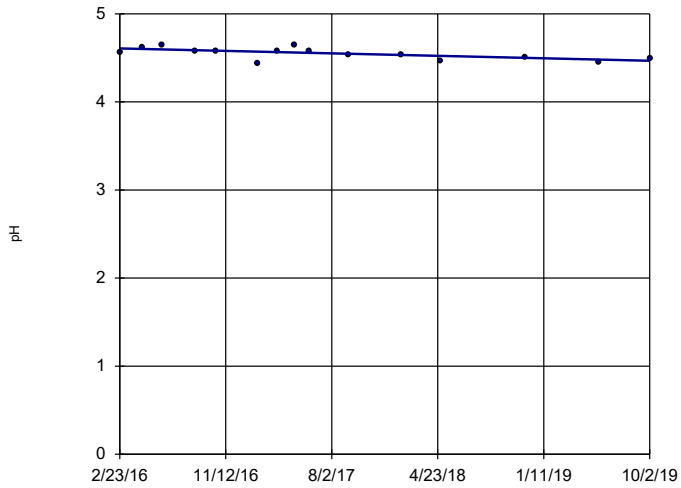


n = 15
 Slope = -0.03133
 units per year.
 Mann-Kendall
 statistic = -43
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: pH Analysis Run 1/17/2020 12:10 PM View: Trend Test
 Plant Barry Client: Southern Company Data: Barry GSA

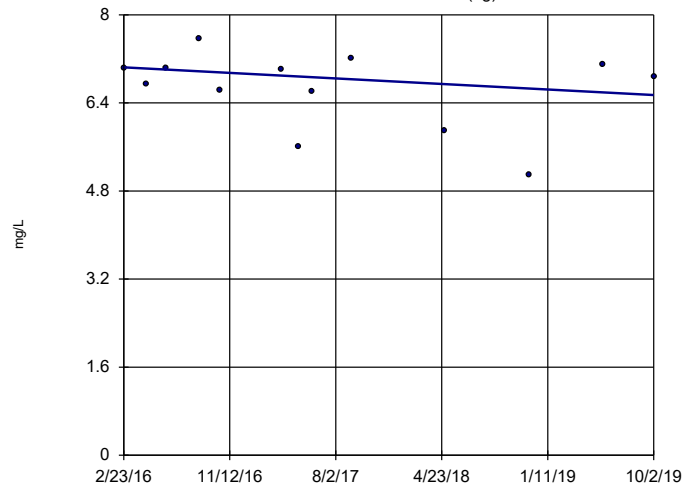
Sen's Slope Estimator

BY-GSA-MW-9



Sen's Slope Estimator

BY-GSA-MW-4 (bg)

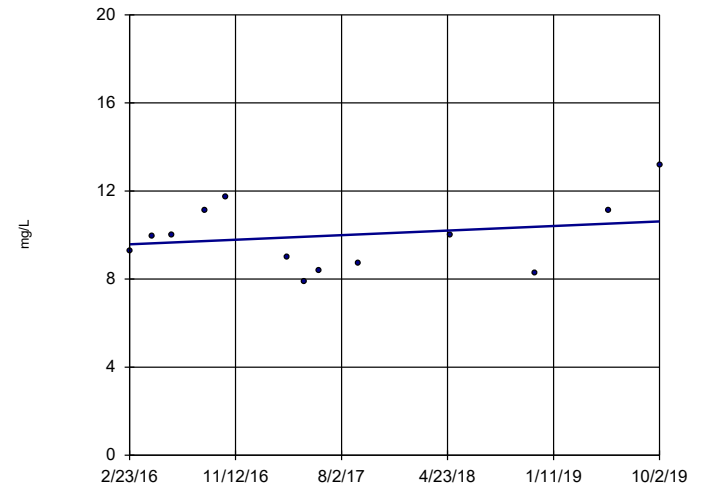


n = 13
Slope = -0.1397
units per year.
Mann-Kendall
statistic = -17
critical = -43
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Sulfate Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Sen's Slope Estimator

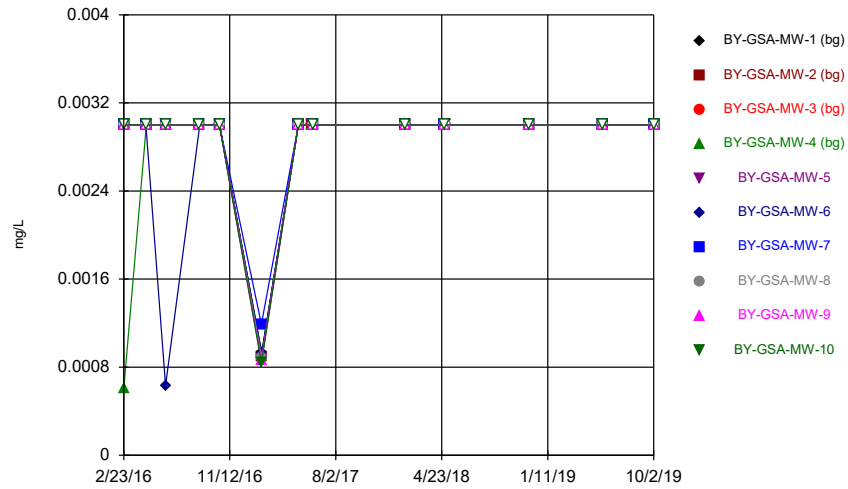
BY-GSA-MW-10



n = 13
Slope = 0.2898
units per year.
Mann-Kendall
statistic = 6
critical = 43
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

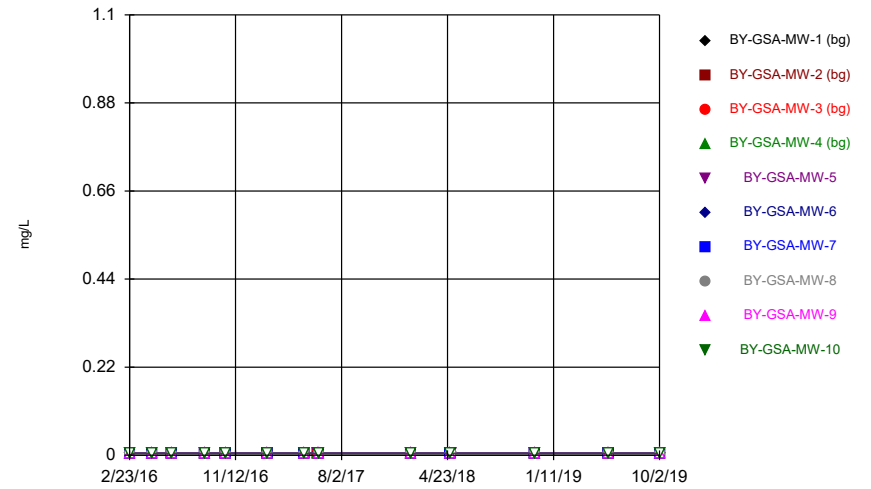
Constituent: Sulfate Analysis Run 1/17/2020 12:10 PM View: Trend Test
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



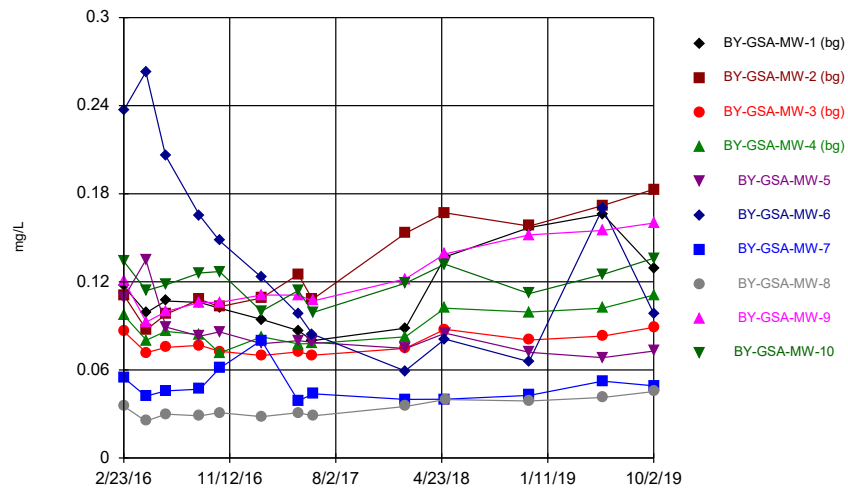
Constituent: Antimony Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



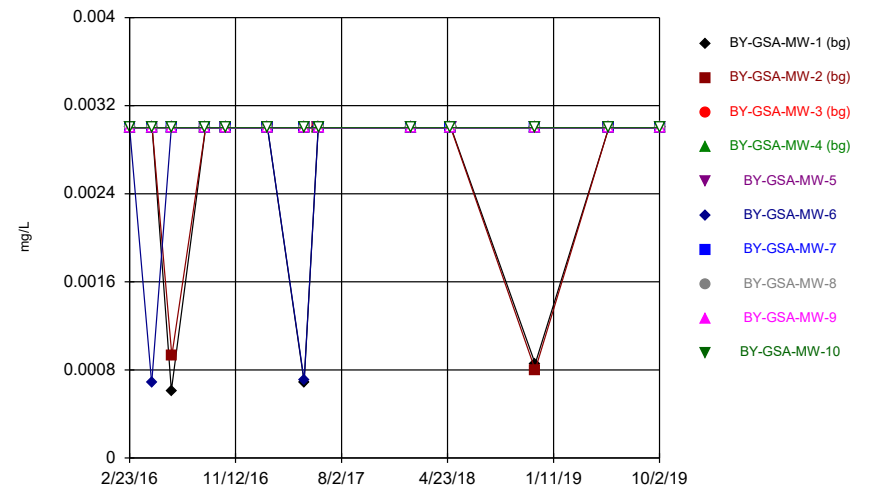
Constituent: Arsenic Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



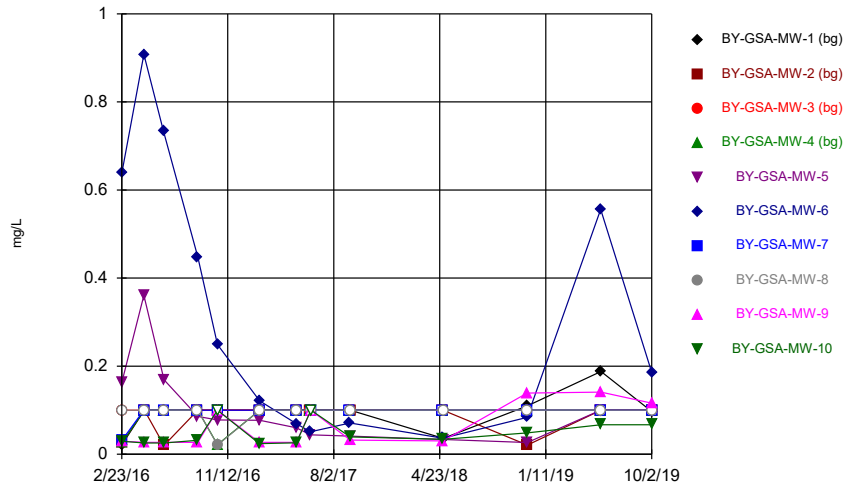
Constituent: Barium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



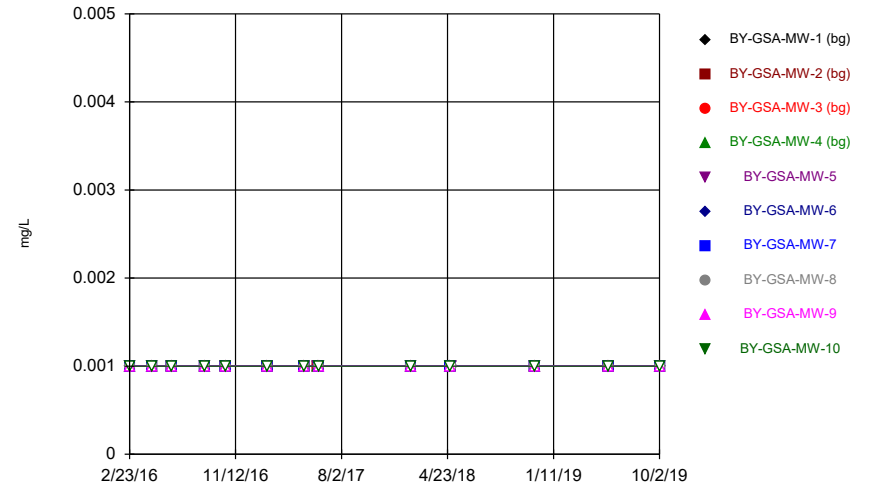
Constituent: Beryllium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



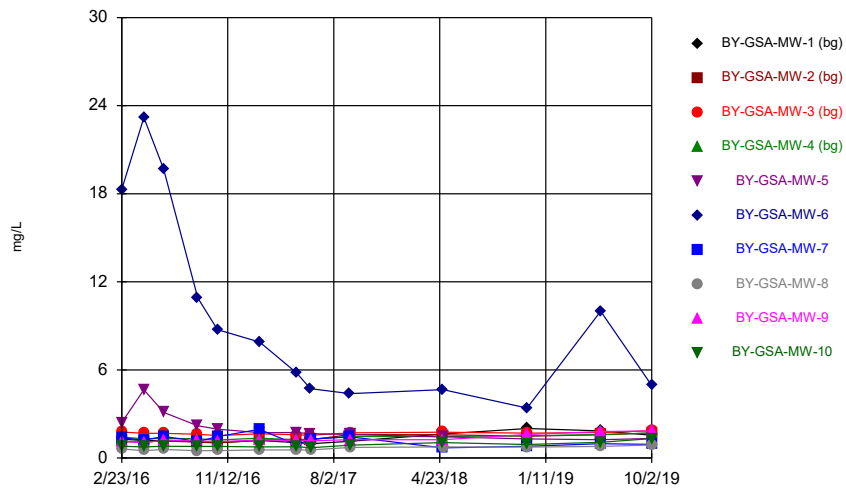
Constituent: Boron Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



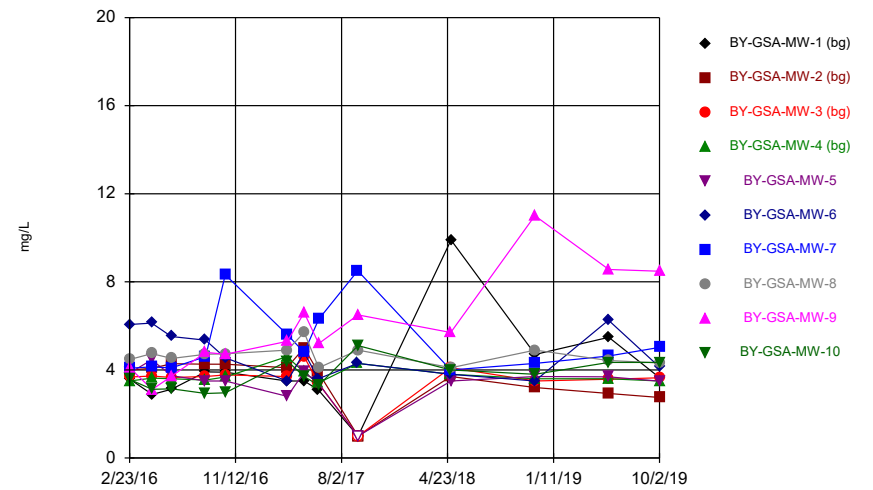
Constituent: Cadmium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



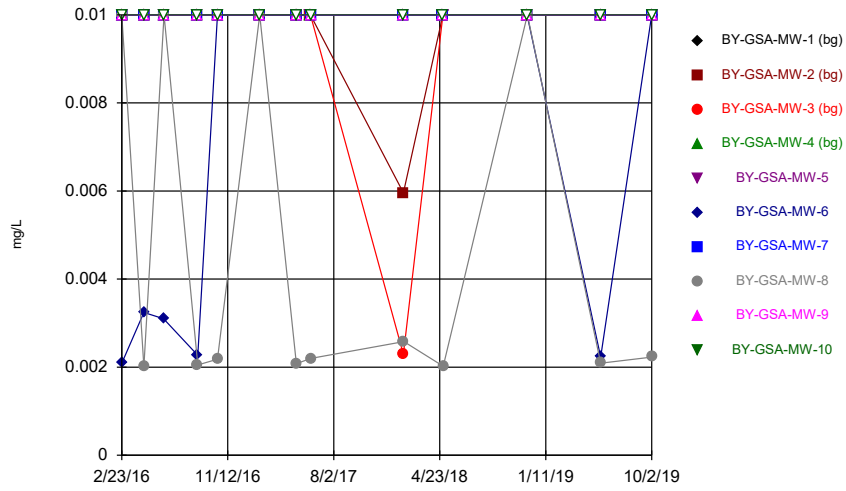
Constituent: Calcium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



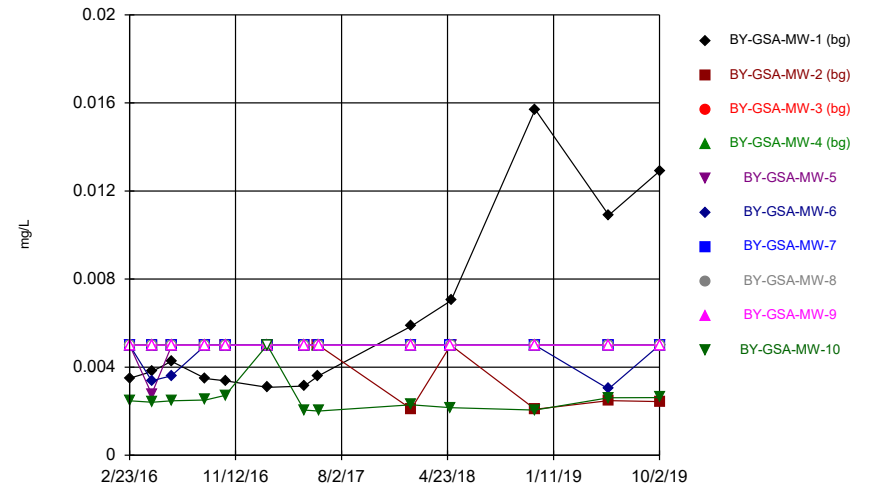
Constituent: Chloride Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



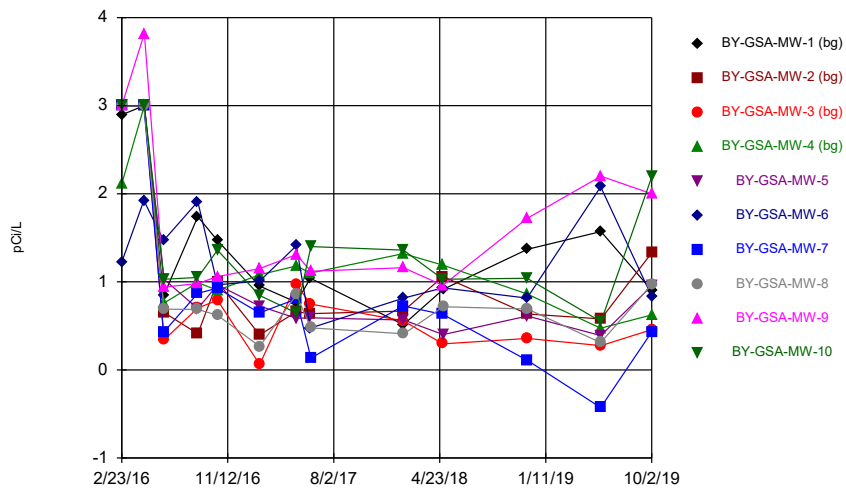
Constituent: Chromium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



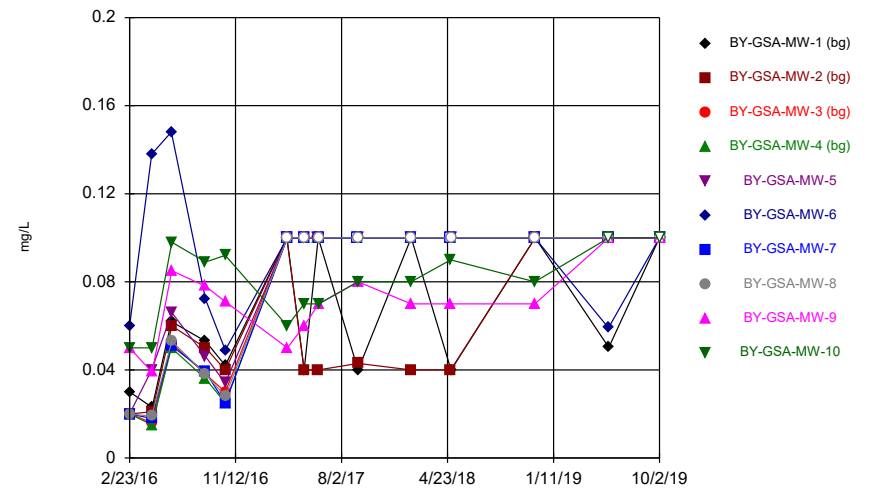
Constituent: Cobalt Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



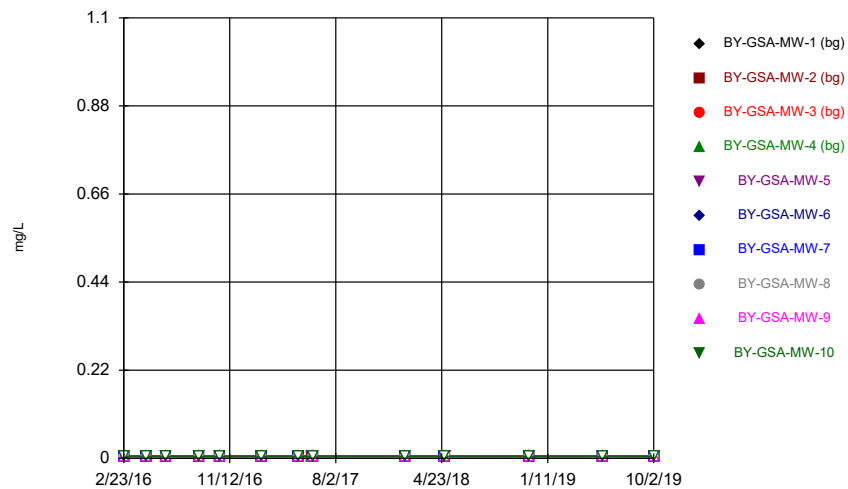
Constituent: Combined Radium 226 + 228 Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



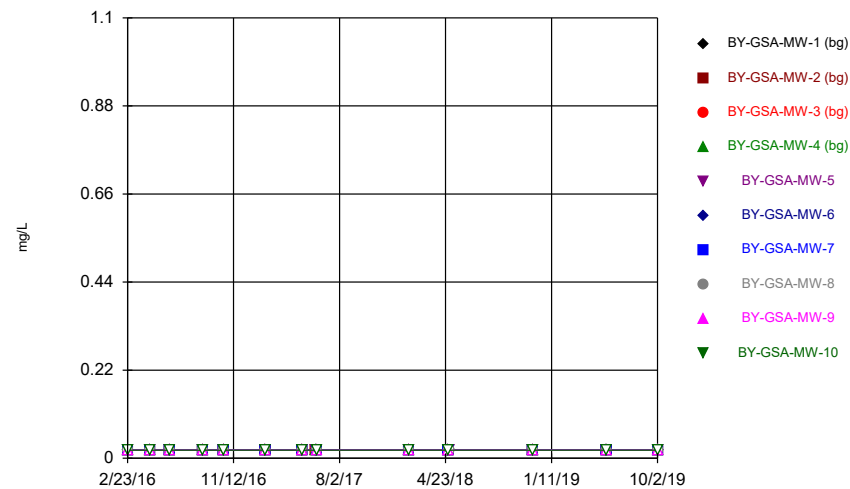
Constituent: Fluoride Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



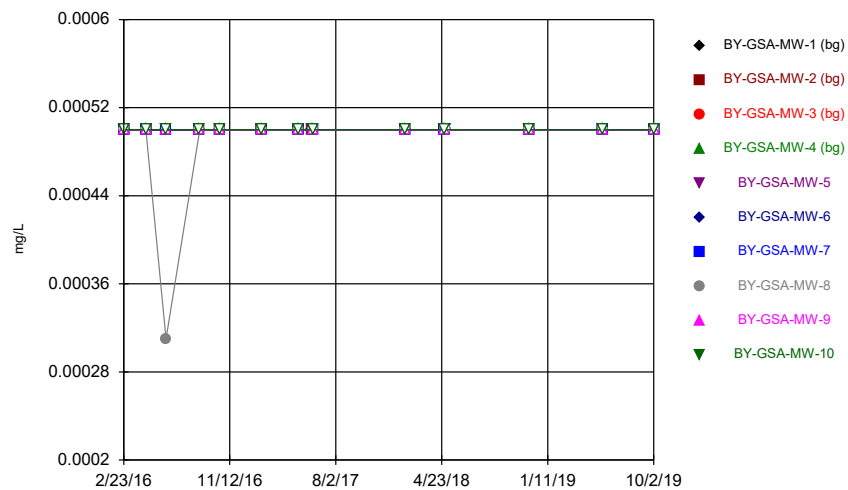
Constituent: Lead Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



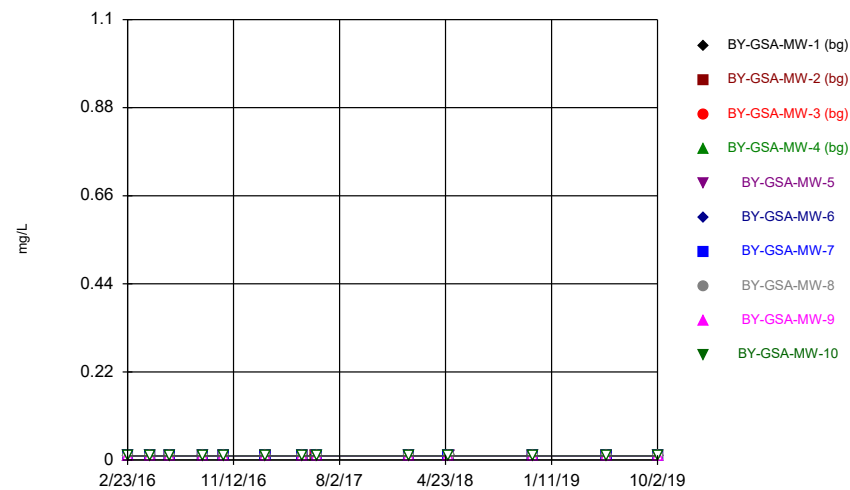
Constituent: Lithium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



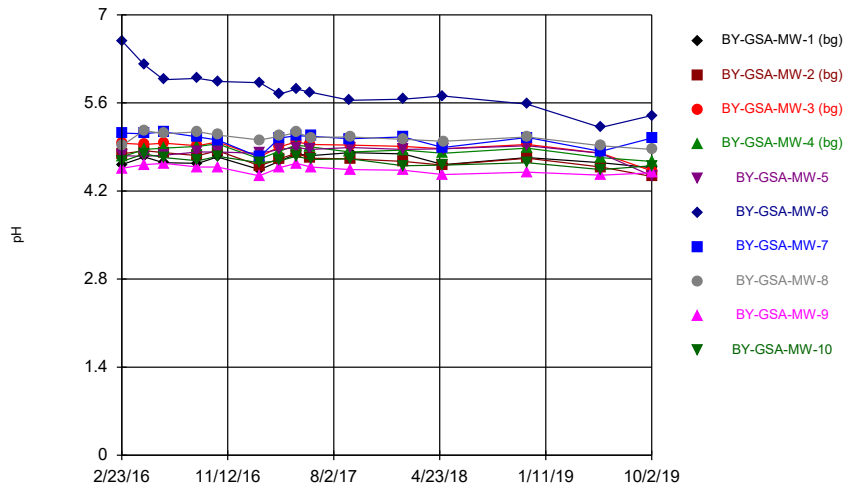
Constituent: Mercury Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



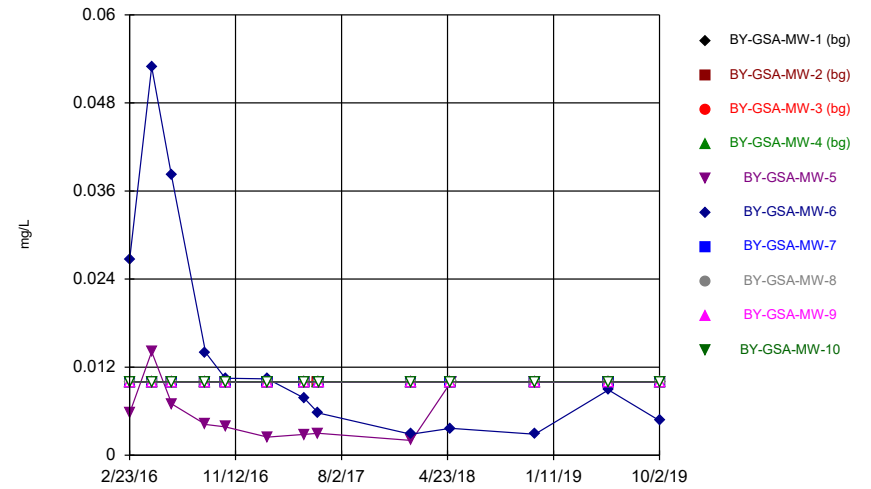
Constituent: Molybdenum Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



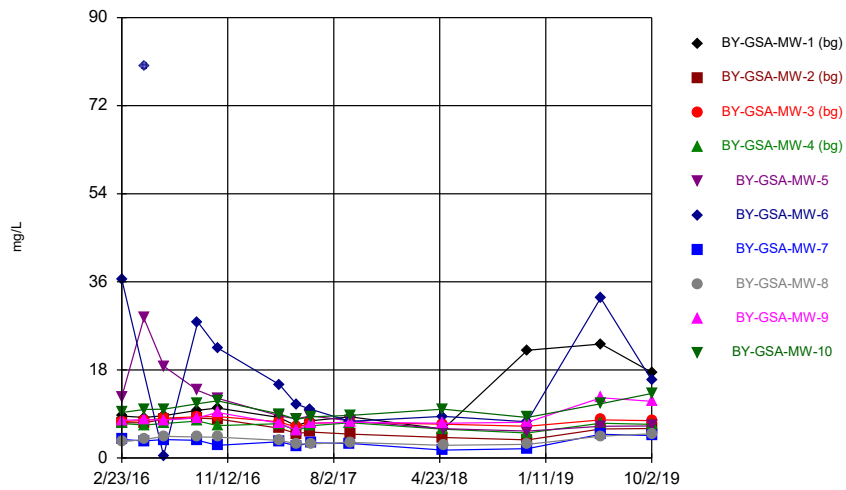
Constituent: pH Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



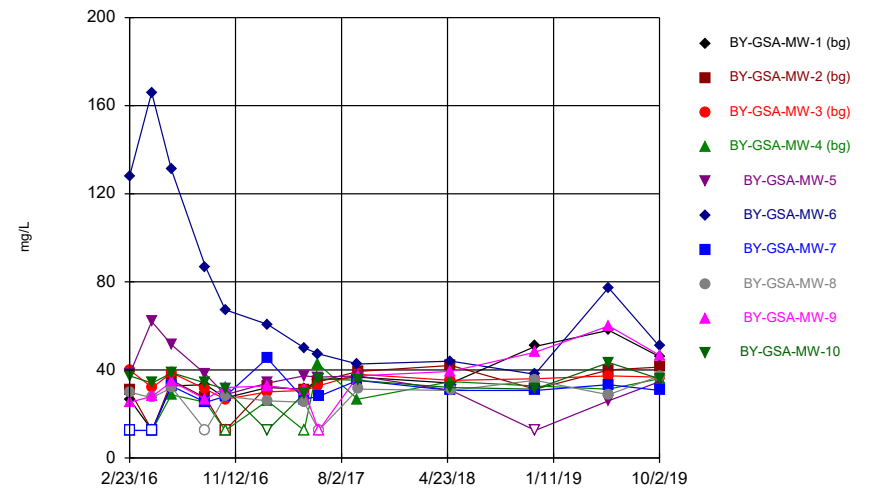
Constituent: Selenium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



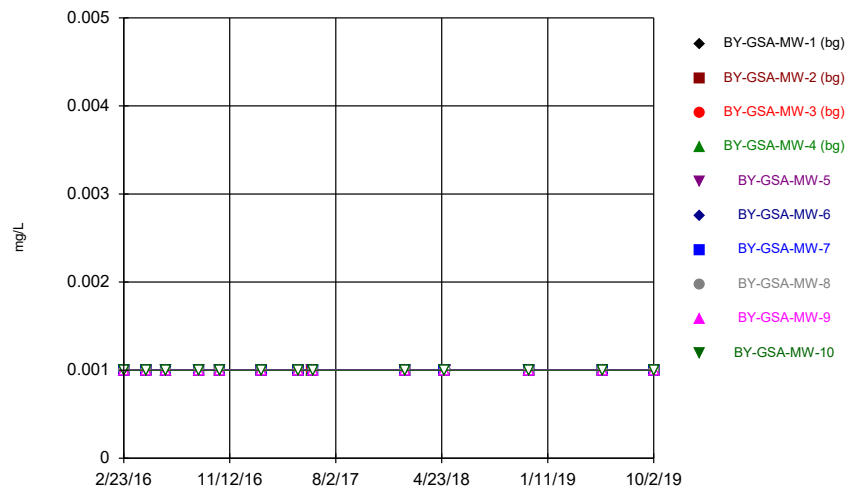
Constituent: Sulfate Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



Constituent: TDS Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Time Series



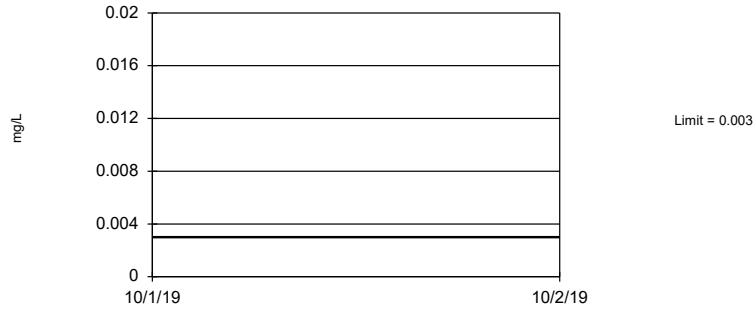
Constituent: Thallium Analysis Run 1/17/2020 12:12 PM View: Time Series
Plant Barry Client: Southern Company Data: Barry GSA

Upper Tolerance Limits - Appendix IV

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:16 PM

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(normal...
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)

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 52 background values. 90.38% NDs. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Antimony Analysis Run 1/17/2020 12:14 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

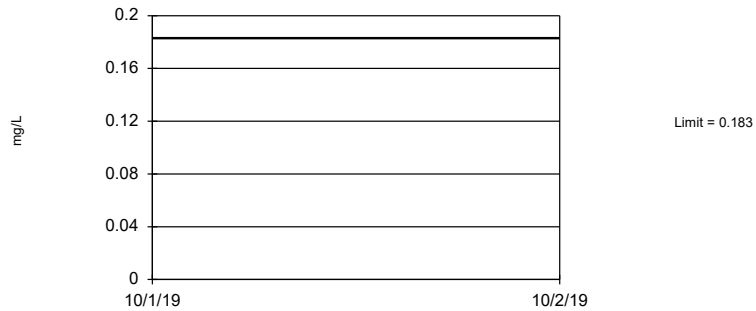
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Arsenic Analysis Run 1/17/2020 12:14 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

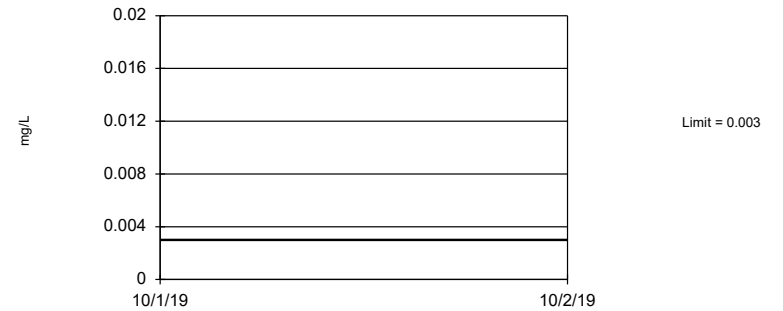
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 52 background values. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Barium Analysis Run 1/17/2020 12:14 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

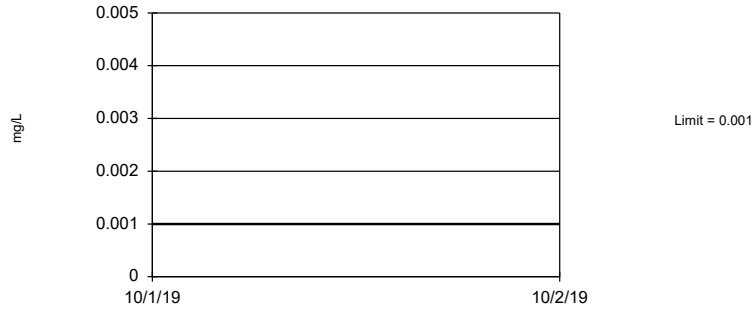
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 52 background values. 90.38% NDs. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Beryllium Analysis Run 1/17/2020 12:14 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

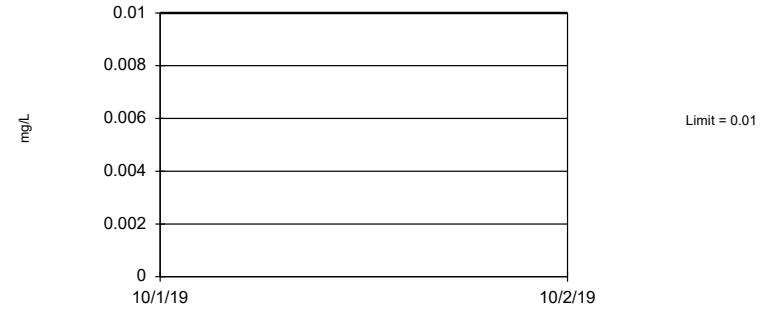
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Cadmium Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

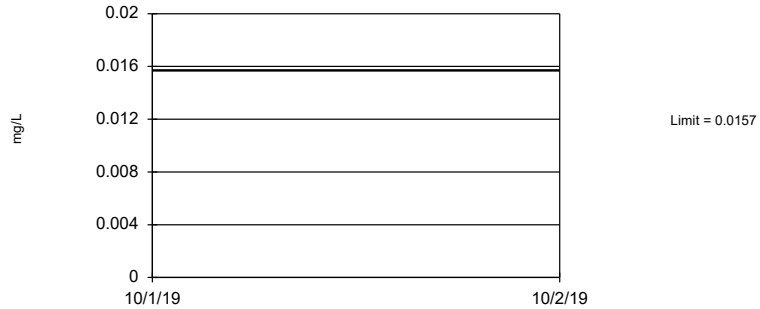
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. Limit is highest of 52 background values. 96.15% NDs. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Chromium Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 52 background values. 67.31% NDs. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Cobalt Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

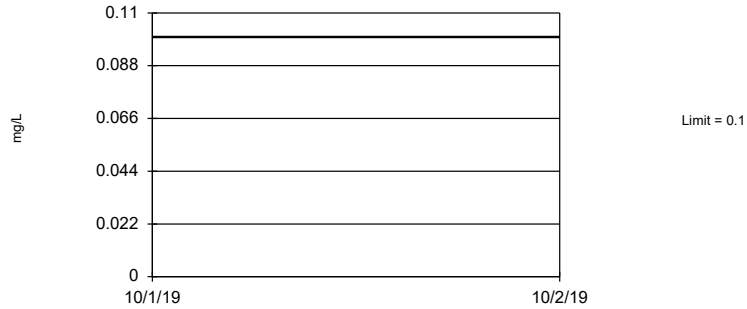
Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary (based on cube root transformation): Mean=0.9903, Std. Dev.=0.2355, n=52. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9388, critical = 0.937. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 56 background values. 48.21% NDs. 91.99% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05656.

Constituent: Fluoride Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Lead Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

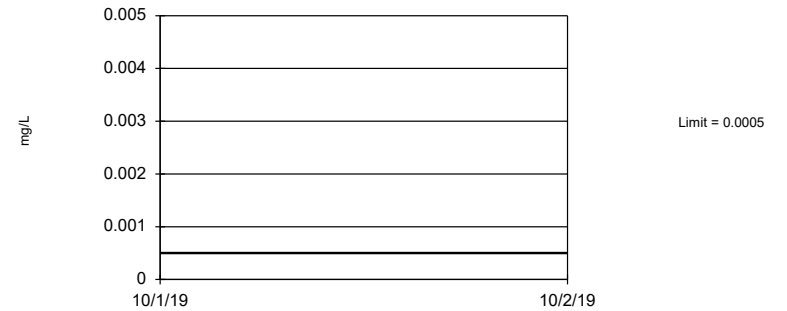
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Lithium Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Mercury Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Molybdenum Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Selenium Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 75%. All background values were censored; limit is most recent reporting limit. 91.6% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.06944.

Constituent: Thallium Analysis Run 1/17/2020 12:15 PM View: UTL's - Appendix IV
Plant Barry Client: Southern Company Data: Barry GSA

Confidence Intervals - All Results (No Significant Results)

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	BY-GSA-MW-5	0.003	0.000866	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-6	0.003	0.000926	0.006	No	13	84.62	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-7	0.003	0.00119	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-8	0.003	0.000885	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-9	0.003	0.000859	0.006	No	13	92.31	No	0.01	NP (NDs)
Antimony (mg/L)	BY-GSA-MW-10	0.003	0.000838	0.006	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-5	0.005	0.005	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-6	0.005	0.005	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-7	0.005	0.005	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-8	0.005	0.005	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-9	0.005	0.005	0.01	No	13	100	No	0.01	NP (NDs)
Arsenic (mg/L)	BY-GSA-MW-10	0.005	0.005	0.01	No	13	100	No	0.01	NP (NDs)
Barium (mg/L)	BY-GSA-MW-5	0.109	0.072	2	No	13	0	No	0.01	NP (normality)
Barium (mg/L)	BY-GSA-MW-6	0.1877	0.08904	2	No	13	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-7	0.05587	0.04124	2	No	13	0	ln(x)	0.01	Param.
Barium (mg/L)	BY-GSA-MW-8	0.03819	0.02916	2	No	13	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-9	0.1384	0.105	2	No	13	0	No	0.01	Param.
Barium (mg/L)	BY-GSA-MW-10	0.1285	0.1109	2	No	13	0	No	0.01	Param.
Beryllium (mg/L)	BY-GSA-MW-5	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-6	0.003	0.000704	0.004	No	13	84.62	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-7	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-8	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-9	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Beryllium (mg/L)	BY-GSA-MW-10	0.003	0.003	0.004	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-5	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-6	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-7	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-8	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-9	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Cadmium (mg/L)	BY-GSA-MW-10	0.001	0.001	0.005	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-5	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-6	0.01	0.00223	0.1	No	13	61.54	No	0.01	NP (normality)
Chromium (mg/L)	BY-GSA-MW-7	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-8	0.01	0.00202	0.1	No	13	30.77	No	0.01	NP (normality)
Chromium (mg/L)	BY-GSA-MW-9	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Chromium (mg/L)	BY-GSA-MW-10	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-5	0.005	0.00278	0.0157	No	13	92.31	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-6	0.005	0.00338	0.0157	No	13	76.92	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-7	0.005	0.005	0.0157	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-8	0.005	0.005	0.0157	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-9	0.005	0.005	0.0157	No	13	100	No	0.01	NP (NDs)
Cobalt (mg/L)	BY-GSA-MW-10	0.00272	0.00205	0.0157	No	13	7.692	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-5	1.03	0.401	5	No	13	0	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-6	1.594	0.8469	5	No	13	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-7	0.927	0.109	5	No	13	0	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-8	1.261	0.4259	5	No	13	0	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-9	3	0.961	5	No	13	0	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	BY-GSA-MW-10	1.928	0.8447	5	No	13	0	sqrt(x)	0.01	Param.
Fluoride (mg/L)	BY-GSA-MW-5	0.1	0.04	4	No	14	64.29	No	0.01	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-6	0.138	0.06	4	No	14	57.14	No	0.01	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-7	0.1	0.025	4	No	14	64.29	No	0.01	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-8	0.1	0.028	4	No	14	64.29	No	0.01	NP (normality)
Fluoride (mg/L)	BY-GSA-MW-9	0.08341	0.05844	4	No	14	14.29	No	0.01	Param.
Fluoride (mg/L)	BY-GSA-MW-10	0.09139	0.06704	4	No	14	14.29	No	0.01	Param.
Lead (mg/L)	BY-GSA-MW-5	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-6	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-7	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-8	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-9	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lead (mg/L)	BY-GSA-MW-10	0.005	0.005	0.015	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-5	0.02	0.02	0.04	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-6	0.02	0.02	0.04	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-7	0.02	0.02	0.04	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-8	0.02	0.02	0.04	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-9	0.02	0.02	0.04	No	13	100	No	0.01	NP (NDs)
Lithium (mg/L)	BY-GSA-MW-10	0.02	0.02	0.04	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-5	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-6	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)

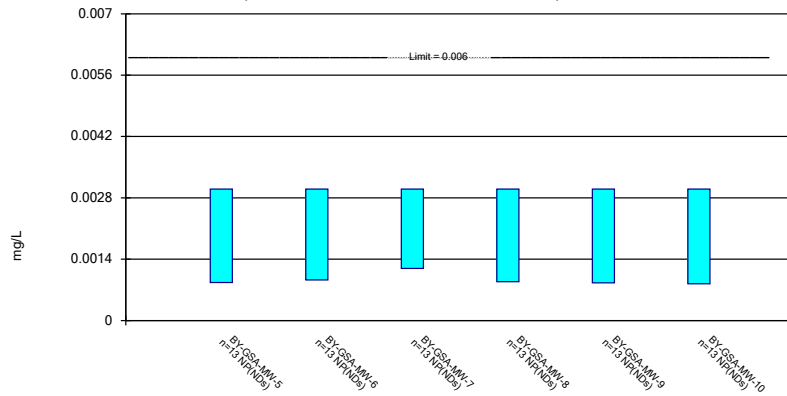
Confidence Intervals - All Results (No Significant Results)

Plant Barry Client: Southern Company Data: Barry GSA Printed 1/17/2020, 12:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Mercury (mg/L)	BY-GSA-MW-7	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-8	0.0005	0.00031	0.002	No	13	92.31	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-9	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Mercury (mg/L)	BY-GSA-MW-10	0.0005	0.0005	0.002	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-5	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-6	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-7	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-8	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-9	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Molybdenum (mg/L)	BY-GSA-MW-10	0.01	0.01	0.1	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-5	0.01146	0.003733	0.05	No	13	30.77	No	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-6	0.02116	0.004609	0.05	No	13	0	x^(1/3)	0.01	Param.
Selenium (mg/L)	BY-GSA-MW-7	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-8	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-9	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Selenium (mg/L)	BY-GSA-MW-10	0.01	0.01	0.05	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-5	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-6	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-7	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-8	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-9	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)
Thallium (mg/L)	BY-GSA-MW-10	0.001	0.001	0.002	No	13	100	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

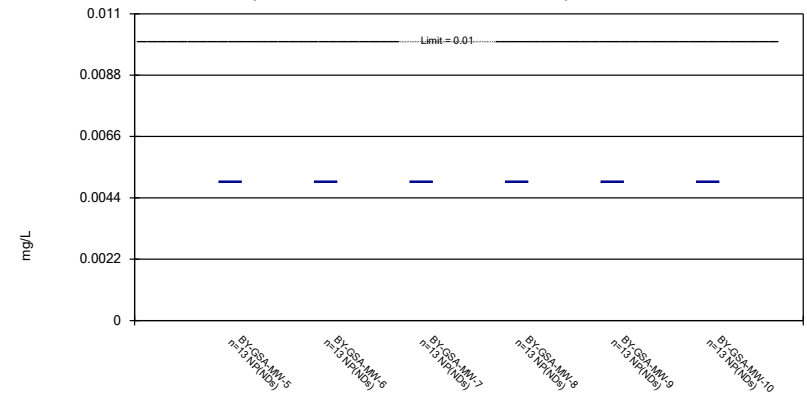
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

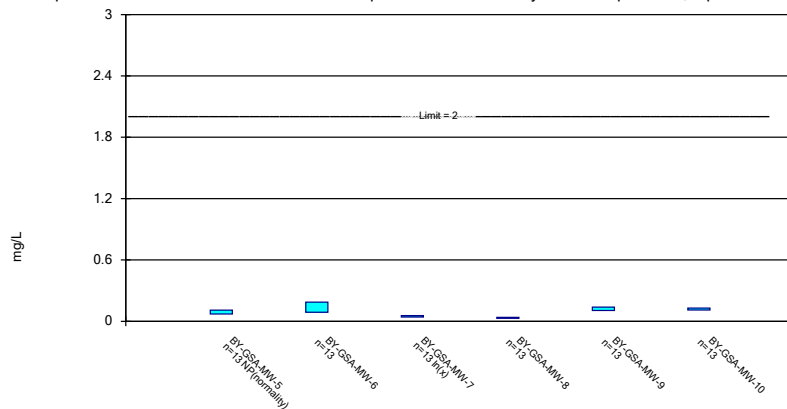
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA

Parametric and Non-Parametric (NP) Confidence Interval

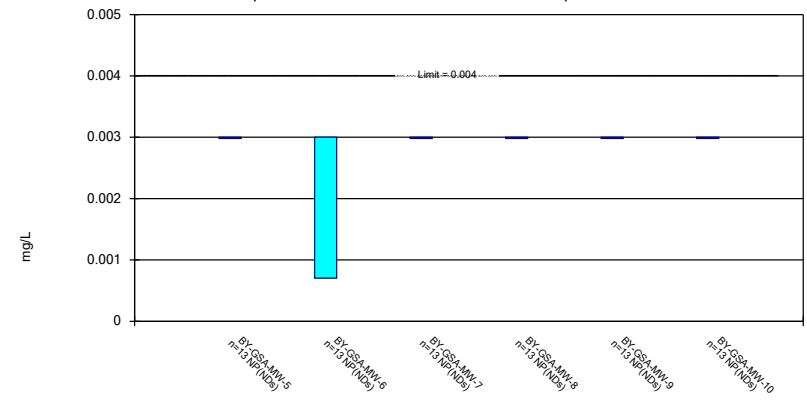
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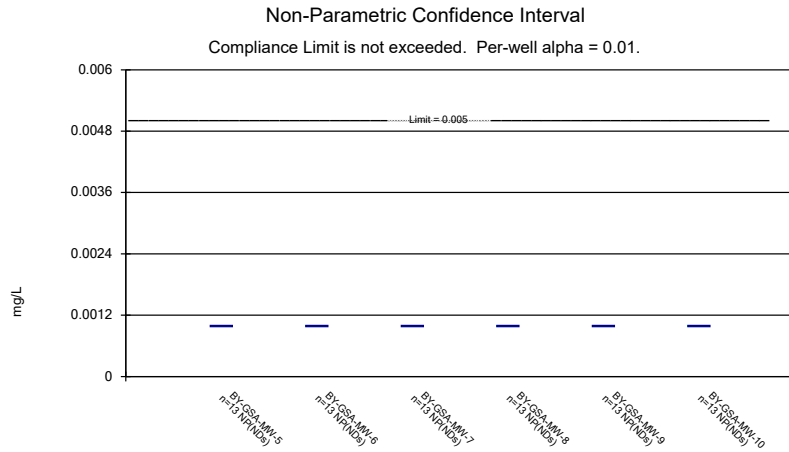
Constituent: Barium Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

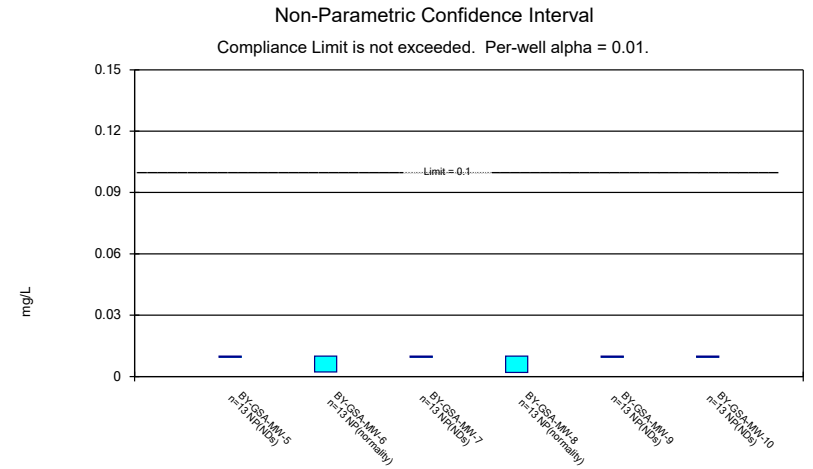
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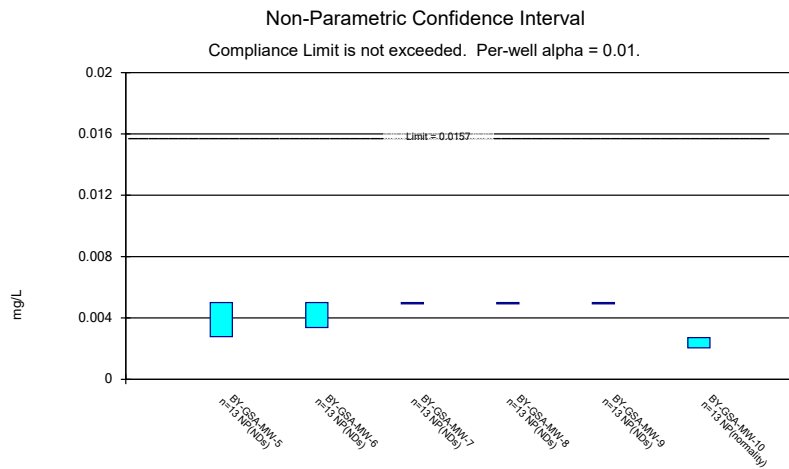
Constituent: Beryllium Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA



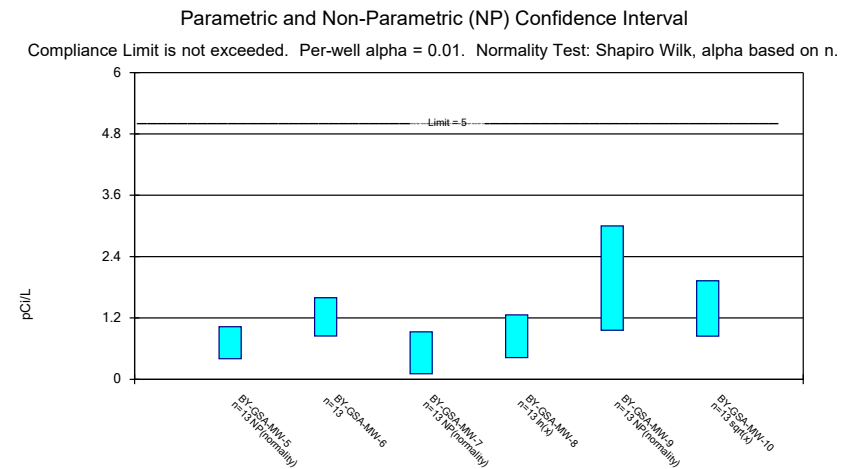
Constituent: Cadmium Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA



Constituent: Chromium Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA



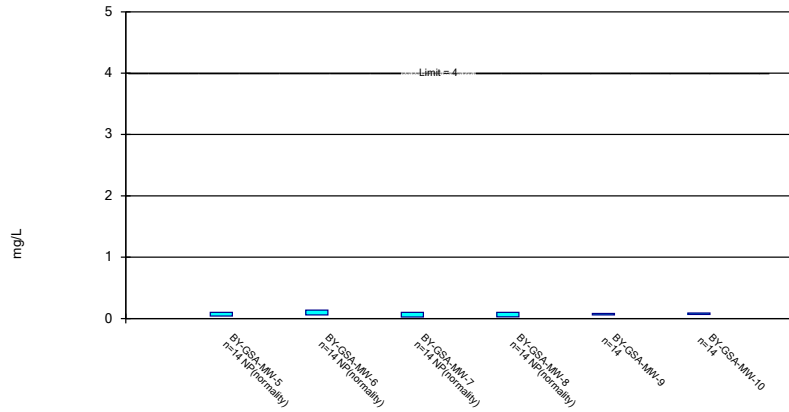
Constituent: Cobalt Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA



Constituent: Combined Radium 226 + 228 Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals -
Plant Barry Client: Southern Company Data: Barry GSA

Parametric and Non-Parametric (NP) Confidence Interval

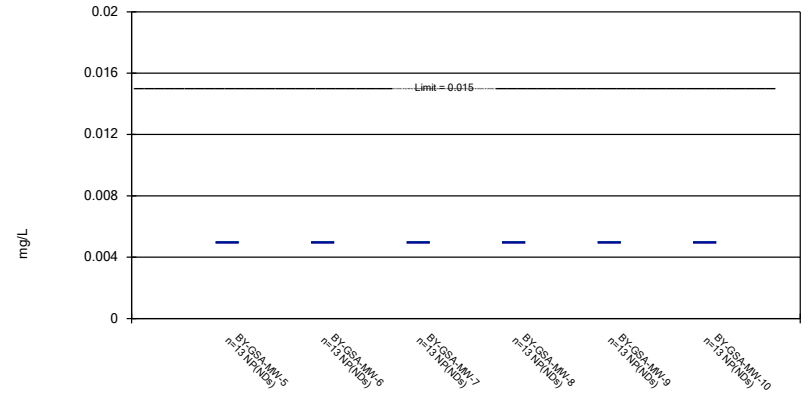
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

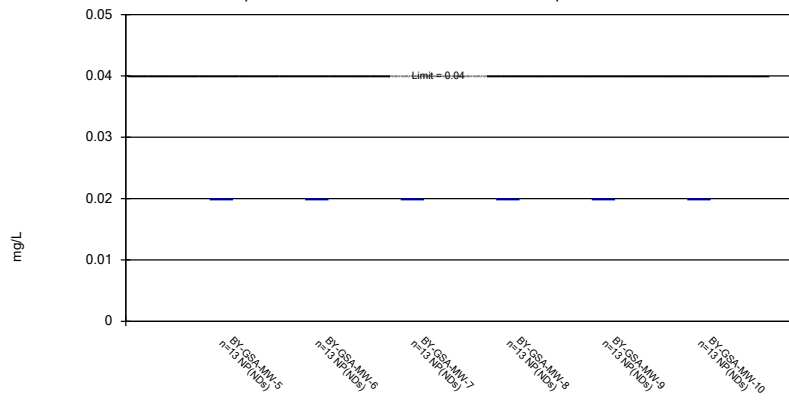
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

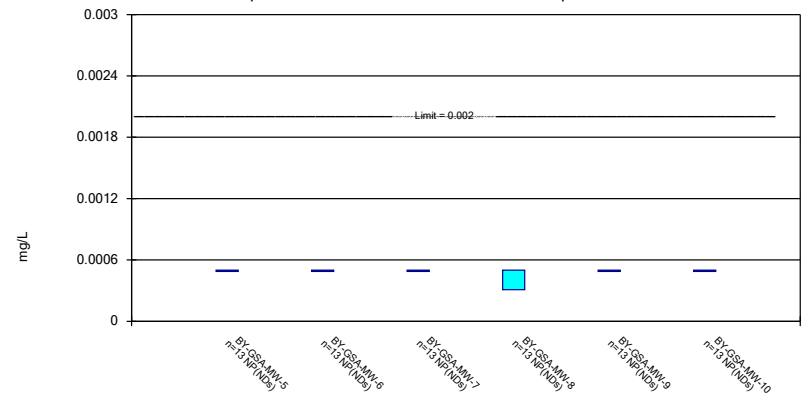
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Constituent: Lithium Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

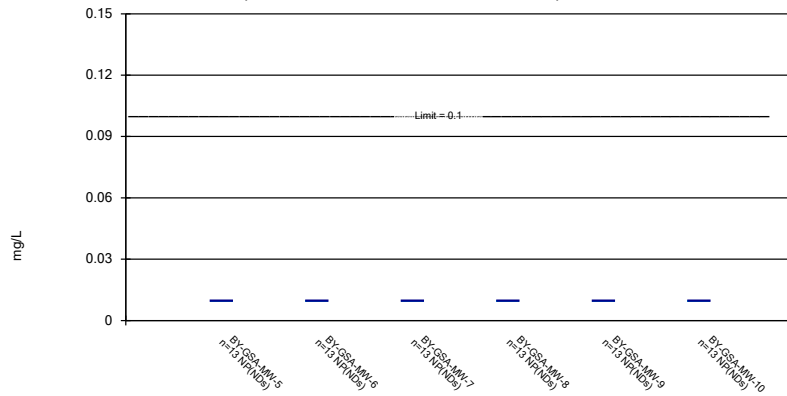
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
Plant Barry Client: Southern Company Data: Barry GSA

Non-Parametric Confidence Interval

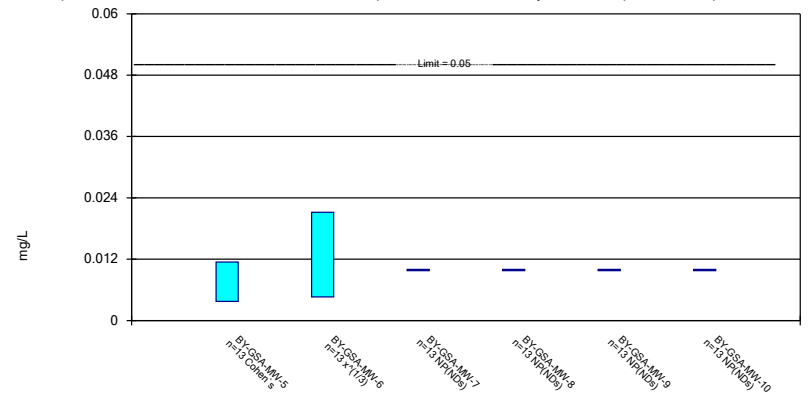
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Molybdenum Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
 Plant Barry Client: Southern Company Data: Barry GSA

Parametric and Non-Parametric (NP) Confidence Interval

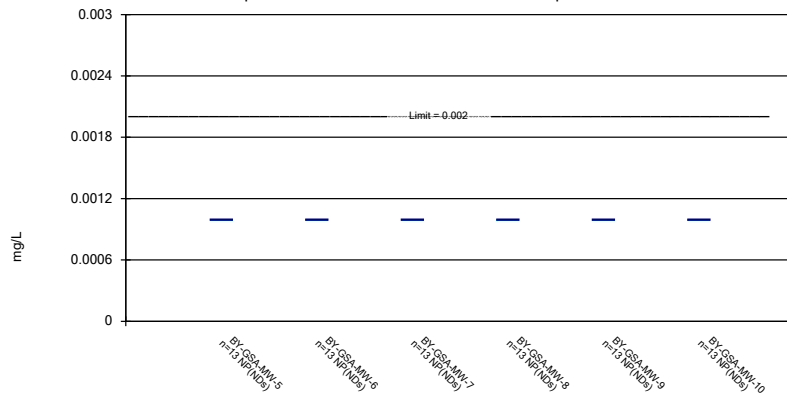
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
 Plant Barry Client: Southern Company Data: Barry GSA

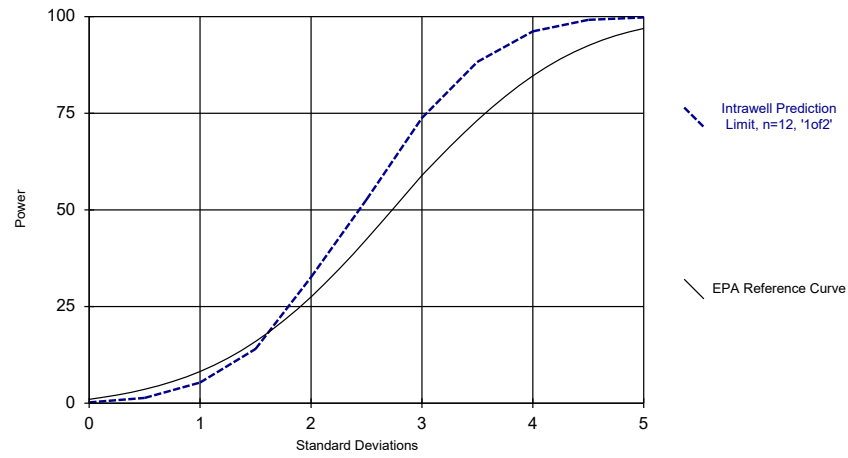
Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 1/17/2020 12:17 PM View: Confidence Intervals - App IV
 Plant Barry Client: Southern Company Data: Barry GSA

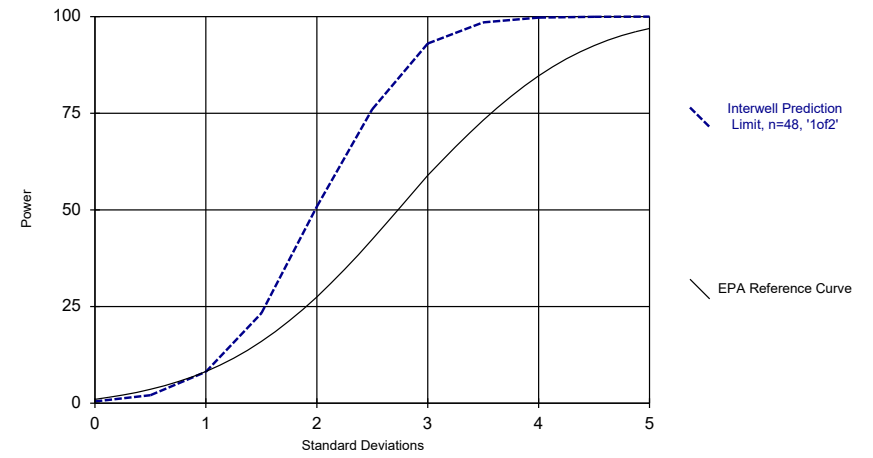
Power Curve



Kappa = 2.385, based on 6 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/30/2020 10:25 AM View: Power Curves
Plant Barry Client: Southern Company Data: Barry GSA

Power Curve



Kappa = 1.908, based on 6 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/30/2020 10:25 AM View: Power Curves
Plant Barry Client: Southern Company Data: Barry GSA