

**2023 SEMI-ANNUAL GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT**

**ALABAMA POWER COMPANY
PLANT GADSDEN
ASH POND**

January 31, 2024

Prepared for

Alabama Power Company
Birmingham, Alabama

By

Southern Company Services
Earth Science and Environmental Engineering



CERTIFICATION STATEMENT

This 2023 *Semi-Annual Groundwater Monitoring and Corrective Action Report, Alabama Power Company - Plant Gadsden Ash Pond* has been prepared in accordance with the United States Environmental Protection Agency's coal combustion residual rule (40 CFR Part 257, Subpart D), ADEM Admin. Code r. 335-13-15, and Part E of ADEM Administrative Order No. 18-095-GW, under the supervision of a licensed professional engineer in the State of Alabama. As such, I certify that the information contained herein is true and accurate to the best of my knowledge.



01/31/2024

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EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart 257), the Alabama Department of Environmental Management (ADEM) Admin. Code Ch. 335-13-15, and ADEM Administrative Order (AO) No. 19-104-GW, this 2023 Semi-Annual Groundwater Monitoring and Corrective Action Report has been prepared to document groundwater monitoring activities and results from the October/November 2023 semi-annual monitoring event at the Alabama Power Company (APC) Gadsden Electric Generating Plant (Site) Ash Pond and satisfies the requirements of § 257.90(e), ADEM Admin. Code r. 335-13-15-.06(1)(f), ADEM Admin. Code r. 335-13-15-.06(5)(g), and Part F of AO No. 19-104-GW. Semi-annual monitoring and associated reporting for the Ash Pond is performed in accordance with the monitoring requirements found in 40 CFR § 257.90 through § 257.98 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(9).

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

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

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

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

Statistical evaluation of assessment monitoring data identified SSLs of the Appendix IV parameter arsenic at wells GSD-AP-MW-2 and GSD-AP-MW-4 during the first semi-annual monitoring event. The following summarizes the semi-annual groundwater monitoring activities at Plant Gadsden Ash Pond:

- Submitted the 2023 Annual Groundwater Monitoring and Corrective Action Report to ADEM on August 1, 2023.
- Completed the first semi-annual groundwater sampling event between October 31, 2023, and November 8, 2023.
- Completed the Laboratory Treatability Studies Results report (**Appendix F**) for the geochemical manipulation by injection that was selected as one of the corrective measures as described in the Groundwater Remedy Selection Report in December 2023.
- Performed preliminary design investigation (PDI) field work for potential geochemical injection treatment to remediate groundwater at two potential remediation areas (PRA) of the Site, to provide data for predictive groundwater modeling and to inform the design of pilot tests performed between January 2, 2024 and January 6, 2024. The scope of work developed and executed for the PDI included:
 - Update the hydrogeologic conceptual site model (HCSM). The HCSM will synthesize existing data into a comprehensive understanding of Site conditions and will be used to evaluate data needs and answer remedial design questions.
 - Water level monitoring using pressure transducers installed at select monitoring wells to monitor changes in water levels related to PDI activities (drilling, well development, and groundwater sampling).
 - Advance hydraulic profiling tool (HPT) borings at each PRA to collect data to identify relatively permeable zones that could represent primary constituents of interest (COI) flow paths and less-permeable layers that could store and gradually release COIs by diffusion into the more permeable zones during remediation.
 - Advance direct-push drilling technology (DPT) borings for the visual characterization and logging of soils in conjunction with the HPT data, to identify the presence and continuity of coarser, permeable zones and finer-grained, less-permeable zones.

- Collect groundwater screening samples from the higher-permeability zones based on the HPT results and zones with lower permeability to evaluate if COI mass is present that could hinder remediation if sequestered within these zones.
- Advance three DPT soil borings for installing water-level-only temporary piezometers within the vicinity and periphery of the observed groundwater divide to augment the current interpretation of shallow groundwater flow near well GSD-AP-MW-2.

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

- Evaluate PDI data to update the HCSM, which will provide input parameters for predictive numeric modeling and identify continuous zones of higher transmissivity to support the design of the pilot test well network targeting the zones of impacted Site groundwater.
- Install monitoring wells at each PRA for collection of groundwater samples to establish baseline (pre-pilot test) concentrations of COIs, provide monitor locations for potential tracer testing, and monitor pilot testing performance.
- Draft and submit a Class V Underground Injection Control (UIC) permit application for geochemical manipulation by injection, which was selected as one of the corrective measures described in the Groundwater Remedy Selection Report.
- Continue the geogenic evaluation of Site bedrock (Conasauga shale/mudstone) as a geogenic source of lithium and review of possible mechanisms to mobilize lithium into deeper Site wells recently installed for vertical delineation.
- Conduct the second semi-annual assessment monitoring event in Spring 2024 and submit the Annual Groundwater Monitoring and Corrective Action Report summarizing the findings to ADEM by August 1, 2024.

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

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

Assessment Monitoring Initiated: July 16, 2019
Monitoring Period: August 1, 2023 - December 31, 2023
Beginning Status: Corrective Action
Ending Status: Corrective Action

Statistical Analysis Results *

Appendix III SSIs

Parameter	Wells
Boron	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-11, GSD-AP-MW-12.
Calcium	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12.
Chloride	GSD-AP-MW-1, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-PZ-2.
Fluoride	None.
pH	GSD-AP-MW-5, GSD-AP-MW-10.
Sulfate	GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-12.
TDS	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-11, GSD-AP-MW-12.

Appendix IV SSLs

Parameter	Wells
Arsenic	GSD-AP-MW-2, GSD-AP-MW-4.
Lithium	None.

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

Assessment of Corrective Measures & Groundwater Remedy

Assessment of Corrective Measures

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

Groundwater Remedy

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

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ABBREVIATIONS

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

SM	Standard Method(s)
SSE	selective sequential extraction
SSI	statistically significant increase
SSL	statistically significant level
TAL	Test America, Inc.
TOC	top of casing
TDS	total dissolved solids
USGS	Unites States Geological Survey
UTLs	Upper Tolerance Limits
XRD	X-ray diffraction
XRF	X-ray fluorescence

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D) and the State of Alabama Department of Environmental Management (ADEM) Admin. Code Ch. 335-13-15, this 2023 Semi-Annual Groundwater Monitoring and Corrective Action Report has been prepared to document the first semi-annual groundwater monitoring activities at the Plant Gadsden Ash Pond and to satisfy the requirements of § 257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f). Semi-annual assessment monitoring and associated reporting for the Ash Pond is performed in accordance with the monitoring requirements 40 CFR § 257.90 through § 257.98 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(9).

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

2.0 MONITORING PROGRAM STATUS

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

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

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

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

3.0 SITE LOCATION AND DESCRIPTION

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

3.1 PHYSICAL SETTING

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

3.2 SITE GEOLOGY AND HYDROGEOLOGY

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

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

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

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

Figure 4A Geologic Cross-Section A-A' and **Figure 4B, Geologic Cross-Section B-B'** illustrate the geologic layering and stratigraphy underlying the Site.

3.2.1 Uppermost Aquifer

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

3.2.2 Flow Interpretation

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

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

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

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

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

Based on groundwater elevations measured during the June 2023 and October 2023 monitoring events, the seasonal groundwater divide was observed during both wet/dry season sampling events. Potentiometric surface maps generated from the October 2022 event seem to parallel the groundwater flow patterns presented in the June and October 2023 maps. Temporary water-level piezometers were installed within the vicinity of GSD-AP-MW-2 and along the periphery of the groundwater divide as part of the PDI field efforts performed in January 2024. Once collected, the additional groundwater elevation data should provide more insight into the shallow flow dynamics within this area. The localized flow divide at the Site will continue to be monitored for potential fluctuations in flow interpretation.

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

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

3.3 GROUNDWATER MONITORING SYSTEM

Pursuant to § 257.91 and ADEM Admin. Code r. 335-13-15-.06(2), Plant Gadsden has installed a groundwater monitoring well network to evaluate groundwater quality within the uppermost aquifer. The certified groundwater monitoring system for the Plant Gadsden Ash Pond is designed to monitor groundwater flow passing the waste boundary of the CCR unit. Wells were sited to serve as upgradient and downgradient monitoring locations based on groundwater flow direction as determined by the potentiometric surface elevation contour maps. All groundwater monitoring wells were designed and constructed using “Design and Installation of Groundwater Monitoring Wells in Aquifers,” ASTM Subcommittee D18.21, as a guideline.

3.3.1 Monitoring Wells

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

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

3.3.1.1 Upgradient Wells

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

3.3.1.2 Downgradient Wells

Monitoring well locations MW-1 through MW-12, PZ-1, PZ-2, PZ-5, and PZ-6 are used as downgradient locations. These well locations are in the proximity of the waste boundary to the north, east, south, and west of the Ash Pond. Because groundwater flow conditions can change seasonally in response to rainfall at the Site (as described in **Section 3.2.2**), wells previously identified as being downgradient to the north (GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-PZ-1, GSD-AP-PZ-5, GSD-AP-PZ-6) now appear hydraulically upgradient of the Site or hydraulically separated from the Site by a localized groundwater divide. APC will continue to monitor all wells surrounding the Ash Pond as downgradient compliance wells until a revision to the network is proposed to and approved by ADEM. Changes to well designations are not recommended at this time. **Table 1a** summarizes the monitoring well construction details and design purpose.

3.3.1.3 Delineation Wells

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

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

Following a review of the March 2021 analytical data, it was determined that additional (Phase III) vertical delineation was necessary to further evaluate the spatial extent of lithium around wells GSD-AP-MW-2, GSD-AP-MW-2VA, and GSD-AP-MW-2VB and further north and northwest in the direction of groundwater flow associated with the seasonal groundwater divide. Five vertical delineation wells (GSD-AP-MW-2VC, GSD-AP-MW-21VB, GSD-AP-MW-21VC, GSD-AP-MW-22VB, and GSD-AP-MW-

23VB) were installed between August 17, 2021, and September 3, 2021. Two of the vertical delineation wells (GSD-AP-MW-21VC and GSD-AP-MW-22VB) were successfully developed and sampled during the 2022 semi-annual sampling event in October. Vertical delineation wells GSD-AP-MW-2VC, GSD-AP-MW21VB, and GSD-AP-MW-23VB did not produce sufficient water to be sampled and are designated as water level only piezometers.

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

3.3.1.4 Piezometers

Vertical delineation wells GSD-AP-MW-2V, GSD-AP-MW-2VC, GSD-AP-MW-21VB, and GSD-AP-MW-23VB did not produce sufficient water for sampling. As a result, these wells have been designated as piezometers and will be used to better define groundwater flow direction at the Site. **Table 1c** summarizes the water level only piezometer construction details and design purpose.

3.3.1.5 Monitoring Well Replacement and Abandonment

Monitoring well replacements or abandonments were not conducted during the semi-annual reporting period.

3.4 GROUNDWATER MONITORING HISTORY

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

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

The Site entered assessment monitoring pursuant to 40 CFR § 257.95(a) and ADEM Admin. Code r. 335-13-15-.06(6)(a) in July 2019. Statistical evaluations of the 2019 assessment monitoring data identified SSLs of Appendix IV constituents above the GWPS, and the Site entered Assessment of Corrective

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

3.4.1 Available Monitoring Data

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

3.4.2 Historical Groundwater Flow

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

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

A less prominent groundwater mound was observed just to the north of the Site during the August 2019, August 2020, October 2021, October 2022, June 2023, and October/November 2023 sampling events and appears to form a localized groundwater divide where groundwater flow bifurcates to the north (north of the divide) or to the south (south of the divide). The groundwater divide appears to be centered approximately 120 feet north of the Ash Pond, indicating north to south flow across the Ash Pond. Historically, this groundwater flow divide appears to be seasonal or temporary with occurrences during drier periods. However, an evaluation of the groundwater potentiometric surface maps from the last three sampling events indicate that the apparent groundwater divide is present throughout both wet and dry

seasons. Tables summarizing groundwater elevations from all groundwater monitoring events are included in **Appendix B, Historical Groundwater Elevations Summary**.

3.4.3 Monitoring Variance

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

The variance:

1. Retains boron as an Appendix III detection monitoring parameter and excludes it as an Appendix IV monitoring parameter.
2. Authorizes the use of Federally-published GWPS of 0.006 milligrams per liter (mg/L) for cobalt, 0.015 mg/L for lead, 0.040 mg/L for lithium, and 0.100 mg/L for molybdenum in lieu of background where those levels are greater than background levels.

3.5 GROUNDWATER SAMPLING AND ANALYSIS

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

During routine semi-annual monitoring events, all compliance and delineation network wells are sampled and analyzed for Appendix III and Appendix IV constituents. The following subsections summarize the sequential steps and process for the sampling, handling and transport, and analysis of compliance-related groundwater samples at the site.

3.5.1 Groundwater Sample Collection

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

Groundwater samples were collected from monitoring wells using low-flow sampling procedures in accordance with § 257.93(a) and ADEM Admin. Code r. 335-13-15-.06(4)(a). All monitoring wells at

Plant Gadsden are equipped with a dedicated pump. Monitoring wells were purged and sampled using low-flow sampling procedures. In this procedure, field water quality parameters (pH, turbidity, conductivity, and dissolved oxygen) are measured to determine stabilization and groundwater samples are collected when the following stabilization criteria are met:

- 0.2 standard units for pH.
- 5% for specific conductance.
- 0.2 mg/L or 10% for DO > 0.5 mg/l (whichever is greater).
- Turbidity measurements less than 10 NTU.
- Temperature and ORP – record only, no stabilization criteria.

During purging and sampling, an in situ Aqua Troll instrument was used to monitor and record field parameters. All downhole groundwater monitoring equipment was calibrated prior to sample collection per the manufacturer's specifications outlined in the Alabama Power Environmental Affairs (EA) Water and Field Group (WFG) Technical Standard Operating Procedure, dated December 14, 2021. Once stabilization was achieved, samples were collected and submitted to the laboratory following standard chain-of-custody (COC) protocol. Field data recorded in support of groundwater sampling activities are included in **Appendix C, Laboratory and Field Records**.

3.5.2 Sample Preservation and Handling

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

3.5.3 Chain of Custody

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

3.5.4 Laboratory Analysis

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

3.5.5 Monitoring Period Sampling Events Summary

As required by § 257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f), the following describes monitoring-related activities performed during the first semi-annual monitoring event that occurred in October/November 2023.

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

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

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

4.0 GROUNDWATER DATA EVALUATION

During the October/November 2023 sampling event, groundwater elevations ranged from 530.13 to 504.16 feet above mean seal level (ft MSL). **Figure 6, Potentiometric Surface Contour Map (October 31, 2023)** depicts groundwater elevations and inferred groundwater flow direction from higher elevation to lower.

As shown on **Figure 6** and discussed in **Section 3.2.2**, a seasonal groundwater divide is depicted north of the Ash Pond. Historical monitoring events have shown this seasonal groundwater divide occurs during fall dry season monitoring events. However, a groundwater divide appears to be present during the three most recent events. The groundwater divide during the October 2022, June 2023, and October/November 2023 sampling events appears to occur or be centered along or near a straight line between wells GSD-AP-MW-1 and GSD-AP-MW-4.

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

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

4.1 GROUNDWATER FLOW VELOCITY CALCULATIONS

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

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

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

Where:

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

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

i = Horizontal hydraulic gradient

n_e = Effective porosity

Using this equation, horizontal groundwater flow velocity is calculated for the site flow regime. **Appendix D** presents the estimated horizontal flow velocity calculated using groundwater elevation data from measurements collected during the October/November 2023 sampling event.

5.0 EVALUATION OF GROUNDWATER QUALITY DATA

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

5.1 DATA VALIDATION QUALITY ASSURANCE/QUALITY CONTROL

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

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

Where:

RPD = Relative Percent Difference (%)

Conc1 = Higher concentration of the sample or field duplicate

Conc2 = Lower concentration of the sample or field duplicate

Where the relative percent difference is below 20%, the difference is considered acceptable, and no further action is needed. Where an RPD is greater than 20%, further evaluation is required to attempt to determine the cause of the difference and potentially result in qualified data. **Table 4a, Relative Percent Difference Calculations** provides the relative percent differences for sample and sample duplicates during the October/November 2023 semi-annual sampling event. RPD calculations are only conducted on sets of valid detections; estimated concentrations and non-detects do not provide a reliable base for comparison. All RPDs were below 20% for the October 2022 sampling events with the exception of cadmium, in parent-duplicate pair GSD-AP-MW-14/GSD-AP-MW-14 DUP and arsenic, in parent-duplicate pair GSD-AP-MW-19H/GSD-AP-MW-19H DUP. A resulting qualifier of (+) J was needed because both duplicate concentrations exceeded five times the reporting limit (RL).

Analytical data reviewed did not identify any low-level or trace detections in field blank or equipment blanks during the 2023 semi-annual monitoring period sampling events. **Table 4b, Field QC: Blank Detections** provides a summary of the low-level detections observed during the first and second 2023 semi-annual monitoring periods. These detections are estimated concentrations, above the MDL but below the RL, and qualified in the laboratory analytical reports with “J flags.” However, if concentrations are detected above the MDL in field QC samples, original results on the (1) date of a blank detection and (2) with a value less than 5 times the field QC detection are flagged with a (+) U* and MDL/RL values modified based upon the blank concentration.

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

5.2 STATISTICAL METHODOLOGY AND TESTS

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

5.2.1 Appendix III Evaluation

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

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

The following adjustments were made:

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

5.2.2 Appendix IV Evaluation

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

Parametric tolerance limits (UTL) were calculated using pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent on the number of background samples. The UTLs were then used as the GWPS.

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

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

(iii) Lithium 0.040 mg/l.

(iv) Molybdenum 0.100 mg/l.

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

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

5.3 STATISTICAL EXCEEDANCES

Analytical data from the October/November 2023 semi-annual monitoring event were statistically analyzed in accordance with the Professional Engineer (PE)-certified Statistical Analysis Plan (April 2019 and revised in August 2020) by Groundwater Stats Consulting. Appendix III statistical analysis was performed to determine if constituents have returned to background levels. Appendix IV monitoring parameters were evaluated to determine if concentrations statistically exceeded the established groundwater protection standard.

5.3.1 Appendix III Constituents

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

5.3.2 Appendix IV Constituents

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

Statistical analysis of Appendix IV data identified the following SSLs over GWPS at the listed wells during the October/November 2023 semi-annual monitoring event:

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

Table 6, First Semi-Annual Monitoring Event Analytical Results Summary provides a summary of all detected constituents for the October/November 2023 semi-annual sampling event.

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

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

Fluoride was detected at concentrations exceeding the GWPS during the semi-annual sampling event in vertical delineation wells GSD-AP-MW-2VB and GSD-AP-MW-21VC. However, it is not being considered as a potential impact from the Ash Pond. **Section 6.2** discusses and outlines the rationale for fluoride not being considered an impact from the Ash Pond.

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

6.0 GROUNDWATER ASSESSMENT AND CORRECTIVE ACTION

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

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

6.1 CHRONOLOGY OF DELINEATION ACTIVITIES

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

6.1.1 Delineation Wells

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

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

Phase I was conducted from June 5, 2019 to April 16, 2020. **Table 1b** and **Figure 5** present details and locations of the onsite delineation wells.

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

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

Phase II – Groundwater Investigation – March 2021 to July 2021

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

Phase III – Groundwater Investigation – August 2021 to Present

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

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

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

6.2 DISCUSSION OF DELINEATION RESULTS

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

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

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

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

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

In the most recent phase of groundwater investigation and monitoring, fluoride exceedances were observed in vertical delineation wells GSD-AP-MW-2VB and GSD-AP-MW-21VC during semi-annual sampling events in October 2021, May 2022, October 2022, June 2023, and October/November 2023. The exceedances are not being considered as a potential impact from the Ash Pond. This determination is based on data: (1) fluoride impacts have not been observed historically in the uppermost aquifer or other site delineation wells (including paired locations GSD-AP-MW-2, GSD-AP-MW-2VA) and (2) GSD-AP-MW-2VB and GSD-AP-MW-21VC are new wells, screened in a deeper section of the Conasauga Formation, which has different geochemical characteristics and can introduce new types of variability not observed in shallow site wells. Groundwater quality data from recently installed wells could potentially provide (temporary) unrepresentative results, because the physical processes used during the boring and well installation process can disrupt equilibrium conditions for months to years.

Isoconcentration maps for arsenic and lithium from the first semi-annual event are presented in **Figure 7, Arsenic Isoconcentration Map (October/November 2023)** and **Figure 8, Lithium Isoconcentration Map (October/November 2023)** respectively. Geologic profiles depicting arsenic and lithium concentrations in cross-section are presented in **Figure 9, Arsenic Concentrations Along Geologic Cross-**

Section A-A' (October/November 2023) and **Figure 10, Lithium Concentrations Along Geologic Cross-Section A-A' (October/November 2023)** respectively. **Table 6** identifies Appendix IV constituents in delineation wells with concentrations above GWPS.

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

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

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

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

6.2.1 Arsenic Delineation

As shown on **Figure 7** and **Figure 9**, arsenic impacts to groundwater include two compliance wells, GSD-AP-MW-2 and GSD-AP-MW-4. Phase I groundwater delineation activities were performed to continue the investigation of impacts to groundwater at Plant Gadsden, and delineation wells were installed to define

the horizontal and vertical extent of Appendix IV exceedances. In addition, existing downgradient piezometers GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, and GSD-AP-PZ-6 were sampled and used in delineation of Appendix IV exceedances.

Arsenic concentrations in well GSD-AP-MW-2 have declined since October 2018 and the completion of ash pond closure. Arsenic concentrations in compliance well GSD-AP-MW-2 fluctuate but exhibit an overall decrease from 1.01 mg/L in October 2018 to 0.424 mg/L in October 2021 to 0.555 mg/L in October 2022. Analytical results from the sampling event in June 2023 exhibit a slight increase in arsenic concentrations from 0.555 mg/L to 0.652 mg/L. However, concentrations detected from the most recent sampling event in October/November 2023 were reported at 0.542 mg/L and still suggests an overall declining trend.

Compliance well GSD-AP-MW-4 has displayed a consistent or overall flat trend since sampling began in 2017. However, arsenic concentrations in well GSD-AP-MW-4 demonstrate a distinctive seasonal overprint pattern of higher concentrations in fall/winter sampling events and lower concentrations in spring sampling events. The magnitude of these seasonal trends is small, with variations typically around 0.001 to 0.002 mg/L or presented differently, concentration variations of 9-11% between events. It should be noted that the average concentration (0.015 mg/L) is just 0.005 mg/L above the GWPS (0.01 mg/L). While arsenic does not show a decreasing trend, boron in well GSD-AP-MW-4, has shown an overall decreasing trend from 0.510 to 0.4405 mg/L between December 2018 and the most recent October/November 2023 sampling event. This indicates that throughout this period, pond closure activities have had a positive impact on limiting CCR sources of COI and reducing concentrations overall. Arsenic concentrations and fluctuations in GSD-AP-MW-4 likely represent a geochemical dynamic of sorption and desorption from aquifer minerals.

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

groundwater divide. Arsenic concentrations have not been detected above GWPS in Phase II or III vertical delineation wells GSD-AP-MW-2VB, GSD-AP-MW-21VC, or GSD-AP-MW-22VB. As shown on **Figure 7** and **Figure 9**, analytical results for arsenic in horizontal and vertical delineation wells have been below GWPS and are sufficiently delineated laterally and vertically at the Site.

6.2.2 Lithium Delineation

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

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

Vertical delineation results obtained from GSD-AP-MW-2VA showed lithium concentrations above GWPS during the August 2020 sampling event with concentrations increasing with depth from MW-2 to MW-2VA. Additionally, an upward hydraulic gradient was noted at the well pair GSD-AP-MW-2 and GSD-AP-MW-2VA where groundwater appeared to be flowing from deeper intervals towards the shallow water table. To continue vertical delineation, a second deeper vertical delineation well, GSD-AP-MW-2VB, was installed to further assess groundwater conditions in the vicinity of compliance well GSD-AP-MW-2. Results from the recent May 2022 and October 2022 sampling events continue to indicate increased lithium concentrations with depth. The lithium concentration exhibited in vertical delineation well GSD-AP-MW-2VB was approximately twice the concentration exhibited in vertical delineation well GSD-AP-MW-2VA, and over four times the concentration exhibited in the shallow compliance well GSD-AP-MW-2. Additional vertical delineation wells were installed to further evaluate lithium around wells GSD-AP-MW-2, GSD-AP-MW-2VA, and GSD-AP-MW-2VB further north and northwest in the direction of groundwater flow. Two vertical delineation wells, GSD-AP-MW-21VC and GSD-AP-MW-22VB, exhibited lithium concentrations above GWPS during the October 2021, May 2022, October 2022, June 2023, and October/November 2023 semi-annual sampling events, continuing to indicate increased lithium concentrations with depth. Concentrations of lithium at these locations show no observable trends, with reported detections slightly fluctuating with time.

Lithium concentrations in compliance well GSD-AP-MW-2 remained below the GWPS for the sixth consecutive time during the October/November 2023 sampling event, and it is no longer identified as an

SSL. The decreasing lithium concentration trend in GSD-AP-MW-2 began between October 2018 and February 2019, which correlates exactly with the timing and disappearance of the radial flow pattern described in **Section 3.2.2**

6.3 STATUS OF DELINEATION

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

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

6.4 GEOGENIC EVALUATION

A geogenic investigation to evaluate the potential natural geogenic sources of lithium is currently being conducted. Because (1) lithium concentrations tend to increase with depth in vertical delineation wells, (2) a clay zone separates rock from the overlying alluvial aquifer, and (3) an initial review of water chemistry data suggests differences in water chemistry between groundwater in the alluvial aquifer and rock aquifer, a natural source of lithium (possibly Conasauga shale) is suspected. A geogenic study of lithium was initiated. The following activities have been accomplished:

- Existing reports, geologic logs, and water quality data have been reviewed.
- Groundwater quality data have been plotted on Piper diagrams to determine if there are distinct differences in water types between the unconsolidated sediments (alluvial aquifer) and bedrock. Based on information gathered, there appear to be distinct water quality differences between the unconsolidated sediments and bedrock zones.
- Groundwater data have been evaluated and correlation plots have been conducted to determine whether there were strong relationships between groundwater parameters and lithium. For example,

lithium is correlated with fluoride, which suggests fluorine-bearing minerals could be a source of lithium.

- An initial evaluation has been conducted of the geological units and their potential for permeability and groundwater flow isolation or retardation.
- In March 2023, eight borings were advanced to bedrock at select locations around the ash pond for soil sample collection and subsequent analysis. Surficial aquifer soils were collected for additional permeability testing.
- Mineralogy of the bedrock samples was analyzed for lithium presence, mineral associations, and environmental availability, including bulk chemical analysis, X-ray fluorescence, X-ray diffraction, selective sequential extraction (SSE), and cation exchange capacity (CEC).

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

- Further evaluation of analytical results and of the vertical distribution of arsenic and lithium in the unconsolidated material overlying the bedrock and in the upper portion of the mudstone. This information would help further evaluate the distribution of these constituents in the subsurface and determine which of the intervals could be the source in several monitoring wells.
- Initial results of the study suggest a natural geogenic source for site COIs. Once all data have been received and reviewed, a report summarizing the findings will be submitted to ADEM.

6.5 GROUNDWATER QUALITY CHANGES AND TRENDS

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

- Arsenic concentrations exceeding GWPS are limited to two compliance wells: GSD-AP-MW-2 and GSD-AP-MW-4. Arsenic has been delineated laterally and vertically.
- Arsenic concentrations in compliance well GSD-AP-MW-2 fluctuate seasonally but exhibit an overall decrease from 1.01 mg/L in October 2018 to 0.424 mg/L in October 2021 to 0.555 mg/L in October 2022. Concentrations from June 2023 sampling event showed a slight increase (0.652 mg/L), but decreased to 0.542 mg/L in the most recent October/November 2023 event. A downward trend with time is still being demonstrated.
- Arsenic concentrations in compliance well GSD-AP-MW-4 historically have exhibited a trend of fluctuating concentrations just slightly above GWPS, with an average concentration of 0.015 mg/L.

- Lithium concentrations in compliance well GSD-AP-MW-2 have decreased to below GWPS during the last six consecutive sampling events, and it is no longer identified as an SSL.
- Recent analytical results have identified only lithium constituent concentrations above GWPS in deeper vertical delineation wells GSD-AP-MW-2VA, GSD-AP-MW-2VB, GSD-AP-MW-21VC, and GSD-AP-MW-22VB. A geogenic investigation is currently being performed to evaluate groundwater quality and bedrock geochemistry in deep rock intervals where constituents and concentrations may vary from the more-shallow monitoring network naturally.

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

Annualized Averages – Boundary Compliance Wells				
Year	Boron (mg/L)	Conductivity (Us/cm)	ORP (mv)	Field_pH (SU)
2017	0.39	576	-25.9	6.56
2018	0.37	525	-13.4	6.41
2019	0.35	498	17.9	6.21
2020	0.34	438	21.3	6.27
2021	0.31	457	41.4	6.25
2022	0.29	443	38.7	6.16
2023	0.29	414	40.4	6.30

Statistically decreasing trends for Appendix III parameters are noticeably clustered in northern boundary wells. This clustering could be related to the dissipation of radial groundwater flow since closure.

Statistically Decreasing:

- Boron: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-4, and GSD-AP-MW-5.
- Calcium: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3.
- Chloride: GSD-AP-MW-17, GSD-AP-MW-3, GSD-AP-MW-5, and GSD-AP-MW-7.
- pH: GSD-AP-MW-16.
- TDS: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3.

7.0 GROUNDWATER REMEDY AND CORRECTIVE ACTION

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

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

7.1 GROUNDWATER REMEDY SELECTION

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

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

Closure of the Site, which included dewatering, consolidation, and capping, has reduced source contributions to groundwater. Geochemical manipulation by injection was selected because of its effectiveness, ease of implementation, versatility (ability to treat more than one COI with the same treatment solution), ability to implement in areas with limited working space, and lack of byproducts that would require further treatment or disposal. MNA was selected because substantial evidence indicates that it is currently occurring at the Site.

7.2 CORRECTIVE ACTION – GROUNDWATER MONITORING PROGRAM

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

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

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

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

Selected Remedy	Implementation Tasks
Monitored Natural Attenuation	<ol style="list-style-type: none"> 1. Implementation of expanded MNA sampling parameters. 2. Further assessment of MNA monitoring network.
Geochemical Injection	<ol style="list-style-type: none"> 1. Complete laboratory treatability studies to evaluate reagent composition, dosing, effectiveness, and sequencing for in situ groundwater treatment of constituents of interest (COI) via injection. Results from the treatability studies would be incorporated into an Underground Injection Control (UIC) permit application for the Site. 2. Implementation of geochemical injection pilot tests using data collected from the laboratory treatability studies and issuance of an UIC permit.

Implementation of Monitored Natural Attenuation

MNA sampling parameters were added to the sampling plans and analyzed in the laboratory beginning with the May 2022 sampling event (**Table 6**). These parameters, in addition to field parameters, Appendix III, and Appendix IV parameters, are used to study the processes that govern or facilitate MNA as well as changes in geochemical conditions. Parameters will be included in the site geochemical model.

Geochemical Injection Pilot Testing Program

Laboratory treatability studies have been conducted (**Appendix F**) using Site aquifer media and impacted groundwater to evaluate reagent composition, dosing, effectiveness, and sequencing (if applicable) for in situ groundwater treatment of COIs with injection. Treatability tests include the following tasks and procedures prior to field implementation of an injection treatment pilot study.

- Selection and formulation of reagent solutions based on previous similar studies.

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

The tentative schedule for this initial foundation phase is:

- Aquifer solids (soils) and groundwater sample collection from the selected pilot test areas – first and second quarters of 2022 (completed).
- Laboratory batch and column testing, and selective sequential extraction of treated soil (completed December 2023, see **Appendix F**).
- In situ groundwater treatment and hydraulic containment evaluation (in progress).
- Preliminary Design Investigation for potential injection treatment for remediation efforts in select areas (in progress).
- Underground Injection Permit application – TBD.
- Geochemical Injection Pilot Program – TBD, pending requisite documents and approvals supporting the injection program.

7.3 PRE-DESIGN INVESTIGATION

The PDI field activities for the Plant Gadsden Ash Pond commenced on January 2, 2024. The proposed work plan focused on well locations GSD-AP-MW-2 and GSD-AP-MW-4 as the PRA of interest for the PDI. The two locations were chosen based on accessibility considerations and concentrations of the applicable COIs arsenic and lithium. The objective of the PDI is to provide data specific to each PRA to enable predictive groundwater modeling and to inform the design of a pilot test for in situ groundwater remediation. Additionally, the investigation will identify data gaps in subsurface lithologic/hydrogeologic data including:

- Hydrostratigraphic data
 - Depths and thicknesses, and hydrostratigraphic heterogeneities within the overburden.
- Hydraulic data within the overburden

- Hydraulic conductivity
- Hydraulic responses between wells
- Groundwater transport continuity between wells
 - Proof of flow path continuity between and among wells
 - Transport-relevant soil physical parameters (porosity and bulk density)
- Aquifer matrix characteristics
 - Mineralogy
 - Soil geochemical properties
- Groundwater characteristics
 - COI concentrations
 - Groundwater geochemical properties

The scope of work developed and executed for the PDI included:

- Update the hydrogeologic conceptual site model (HCSM). The HCSM will synthesize existing data into a comprehensive understanding of Site conditions and be used to evaluate data needs and answer remedial design questions.
- Water level monitoring using pressure transducers installed at select monitoring wells to monitor changes in water levels related to PDI activities (drilling, well development, and groundwater sampling).
- Advance hydraulic profiling tool (HPT) borings at each PRA to collect data to identify relatively permeable zones that may represent primary constituents of interest (COI) flow paths and less-permeable layers that may store and gradually release COIs via diffusion into the more permeable zones during remediation.
- Advance direct-push drilling technology (DPT) borings for the visual characterization and logging of soils in conjunction with the HPT data to identify the presence and continuity of coarser, permeable zones and finer-grained, less-permeable zones.
- Collect groundwater screening samples from the higher-permeability zones based on the HPT results and zones with lower permeability to evaluate if COI mass is present that could hinder remediation if sequestered within these zones.
- Advance three DPT soil borings for installing water-level-only temporary piezometers within the vicinity and periphery of the observed groundwater divide to augment the current interpretation of shallow groundwater flow near well GSD-AP-MW-2.

8.0 SUMMARY AND CONCLUSIONS

The first semi-annual monitoring event was conducted in October/November 2023. Statistical evaluations of the monitoring data identified SSLs of the Appendix IV constituent arsenic at wells GSD-AP-MW-2 and GSD-AP-MW-4 during the first semi-annual monitoring event.

To address previously identified SSLs, a Groundwater Remedy Selection Report was prepared and submitted to ADEM on October 29, 2021. Subsequently, within 90 days of remedy selection, a Corrective Action Groundwater Monitoring Program was developed and submitted to ADEM on January 27, 2022, for review.

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

- Evaluate PDI data to update the HCSM, which will provide input parameters for predictive numeric modeling and identify continuous zones of higher transmissivity to support the design of the pilot test well network targeting the zones of impacted Site groundwater.
- Install monitoring wells at each PRA for collection of groundwater samples to establish baseline (pre-pilot test) concentrations of COIs, provide monitor locations for potential tracer testing, and monitor pilot testing performance.
- Draft and submit a Class V Underground Injection Control (UIC) permit application for geochemical manipulation by injection, which was selected as one of the corrective measures described in the Groundwater Remedy Selection Report.
- Continue the geogenic evaluation of Site bedrock (Conasauga shale/mudstone) as a geogenic source of lithium and review of possible mechanisms to mobilize lithium into deeper Site wells recently installed for vertical delineation.
- Conduct the second semi-annual assessment monitoring event in Spring 2024 and submit the Annual Groundwater Monitoring and Corrective Action Report summarizing the findings to ADEM by August 1, 2024.

9.0 REFERENCES

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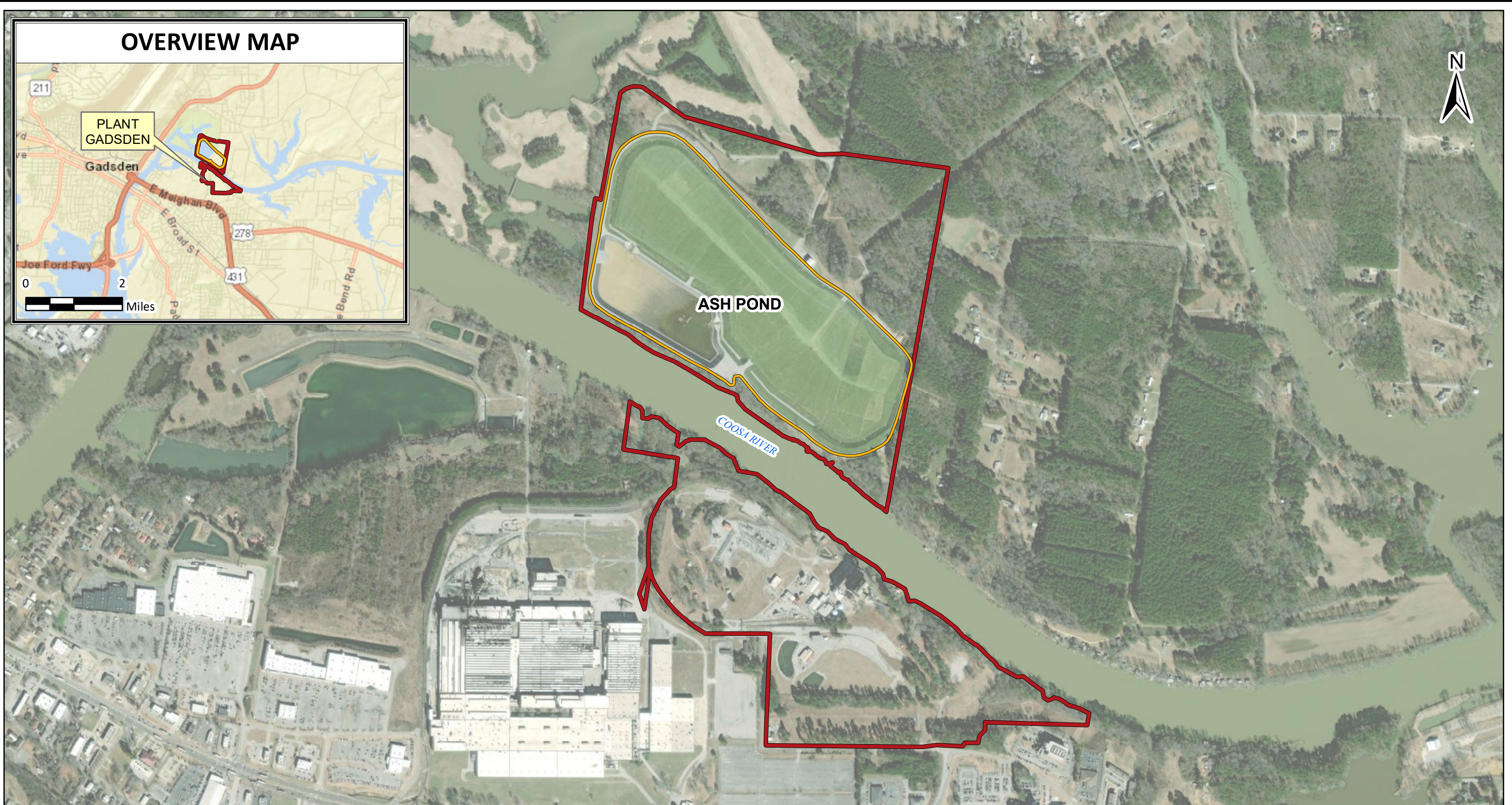
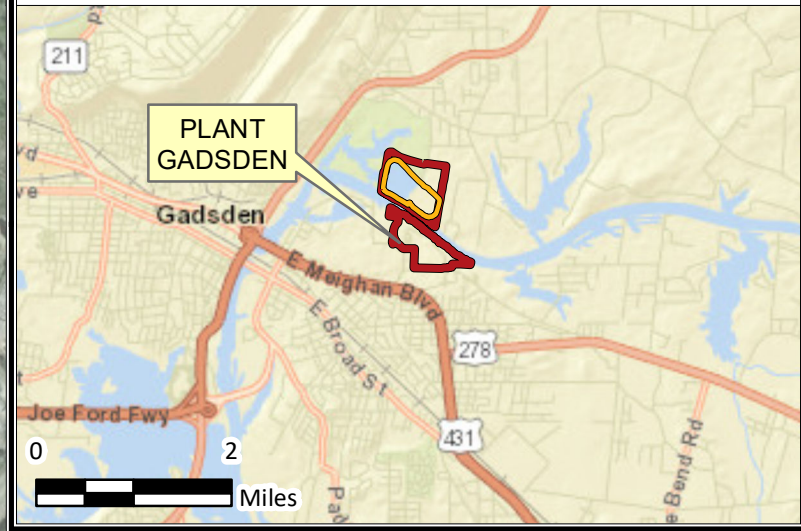
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Figures

OVERVIEW MAP



- LEGEND**
- Ash Pond Boundary
 - GadsdenLands_2023



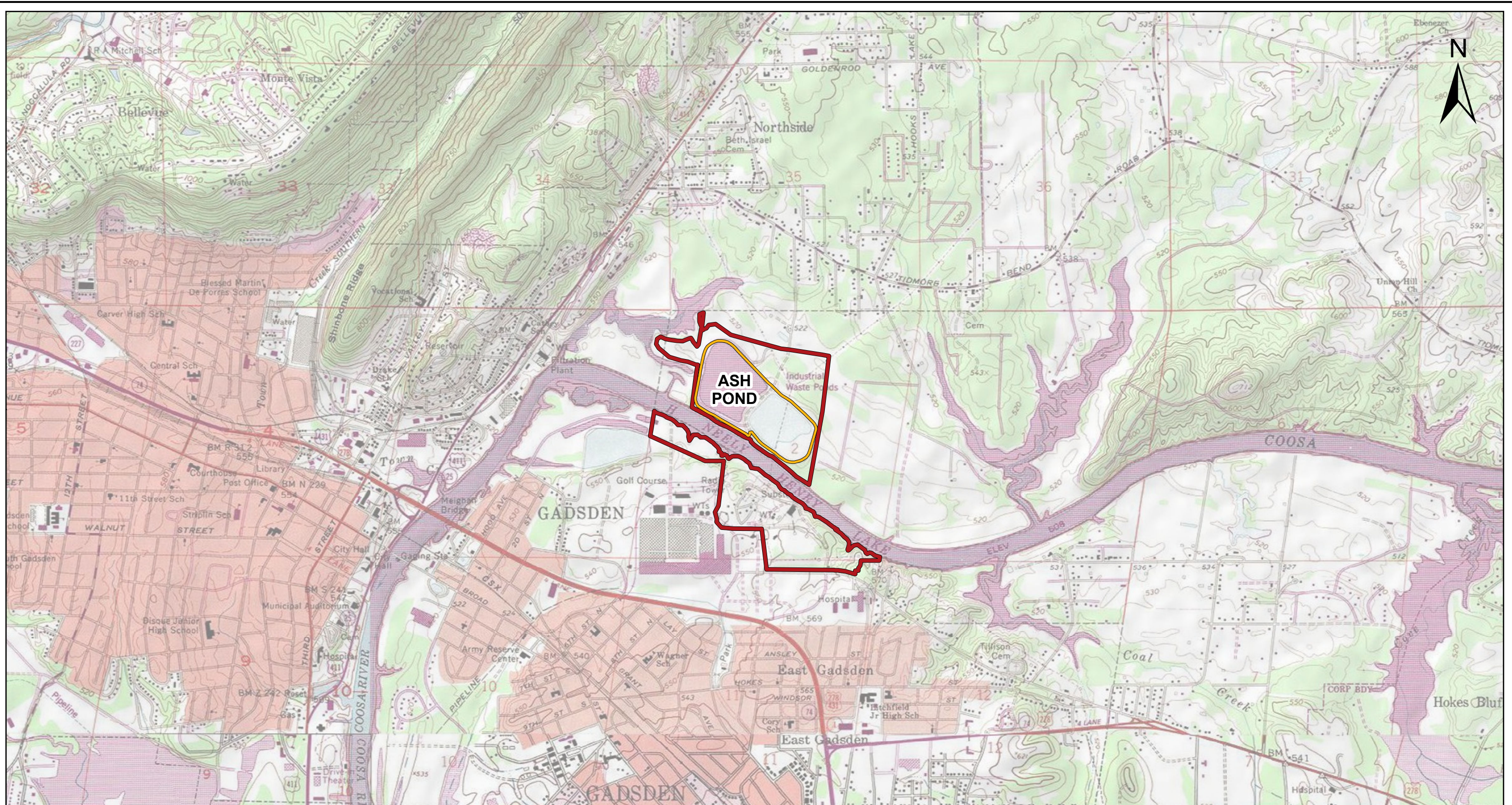
Projection: NAD 1983 State Plane Alabama East FIPS 0102 Feet
 Base Map: Maxar Vivid Standard, 2/6/2023

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DATE	11/21/2023
DRAWN BY	KAR
CHECKED BY	AWH

DRAWING TITLE:
**SITE LOCATION MAP
 PLANT GADSDEN ASH POND**

FIGURE NO.
FIGURE 1






LEGEND

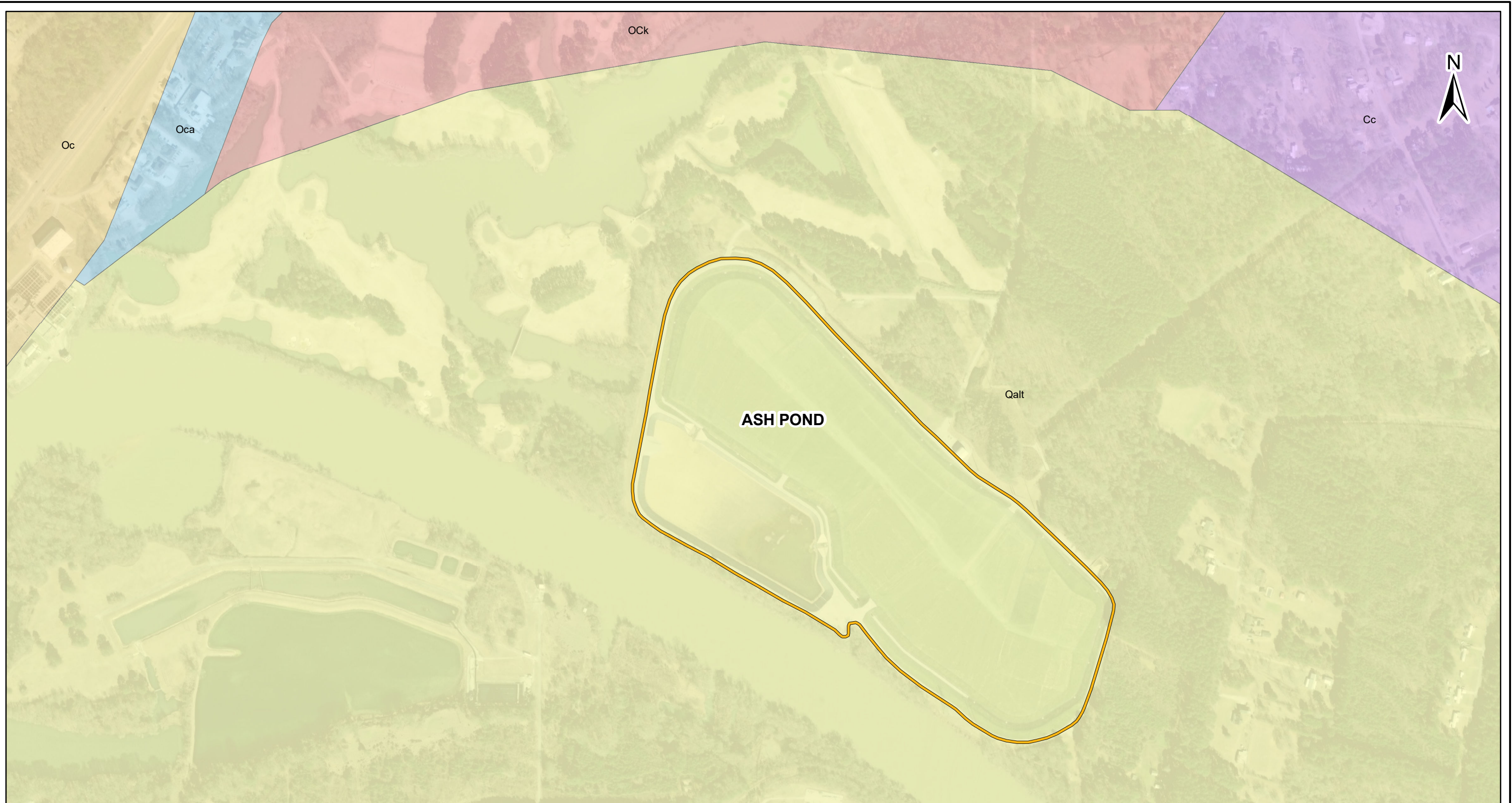
- Ash Pond Boundary
- Property Boundary (Approximate)




Projection: NAD 1983 State Plane Alabama East FIPS 0102 Feet
 Base Map: U.S. Geological Survey 7.5' Topographic Quadrangles:
 Gadsden West, Alabama, 1959 (Photorevised 1984); Gadsden East, Alabama, 1965 (Photorevised 1986);
 Dunaway Mountain, Alabama, 1947 (Photorevised 1973; Glencoe, Alabama, 1965 (Photorevised 1973).

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
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FIGURE NO. FIGURE 2	





LEGEND


 Ash Pond Boundary


Geologic Units

 Alluvial, coastal, and low terrace deposits (Qalt)

 Attalla Chert Conglomerate Member of the Chickamauga Limestone (Oca)

 Chickamauga Limestone (Oc)

 Conasauga Formation (Cc)

 Knox Group undifferentiated (OCK)



Projection: NAD 1983 State Plane Alabama East FIPS 0102 Feet
Base Map: Maxar Vivid Standard, 2/6/2023

SCALE 1:6,000

DATE 11/22/2023

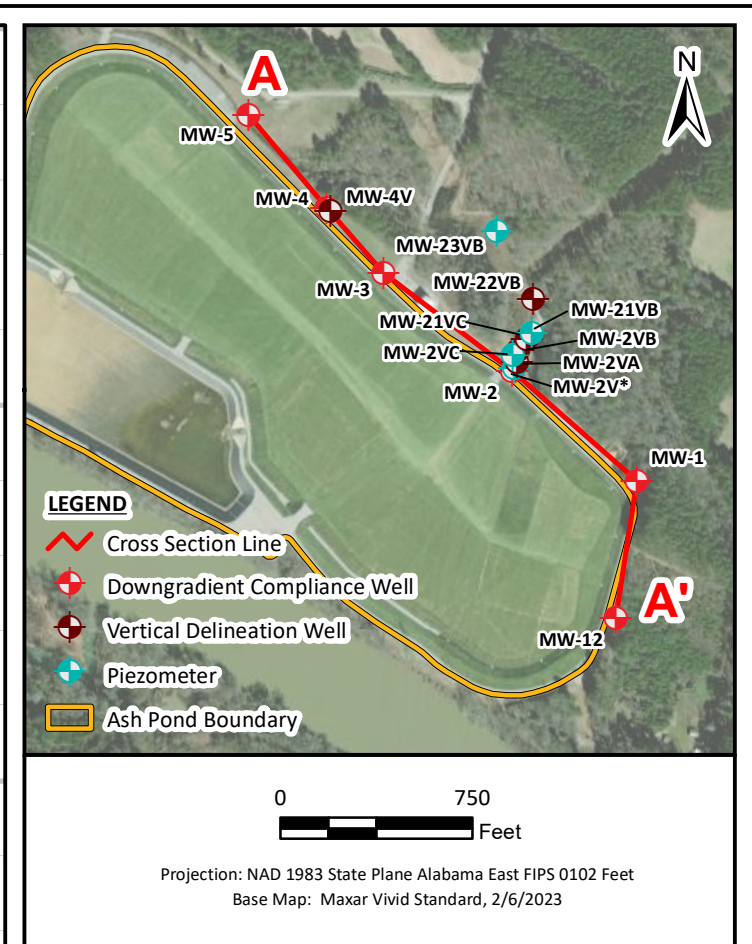
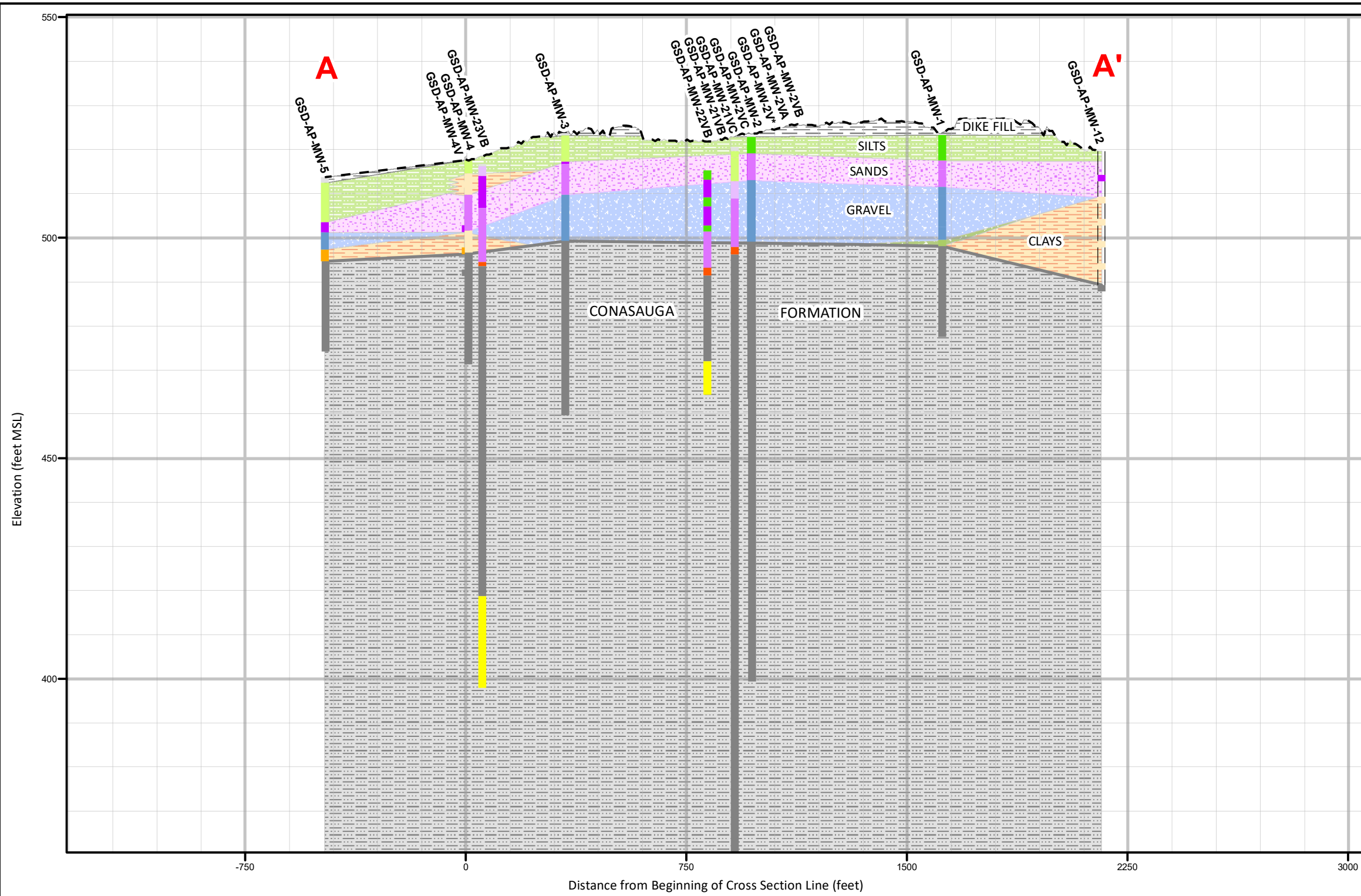
DRAWN BY KAR

CHECKED BY ACP

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**SITE GEOLOGIC MAP
PLANT GADSDEN ASH POND**

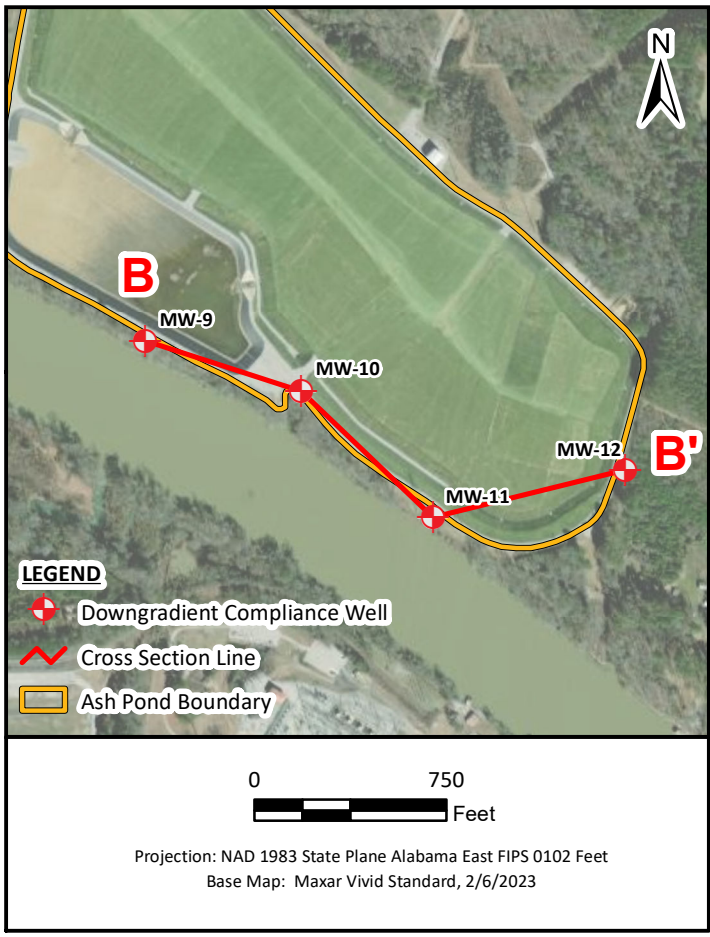
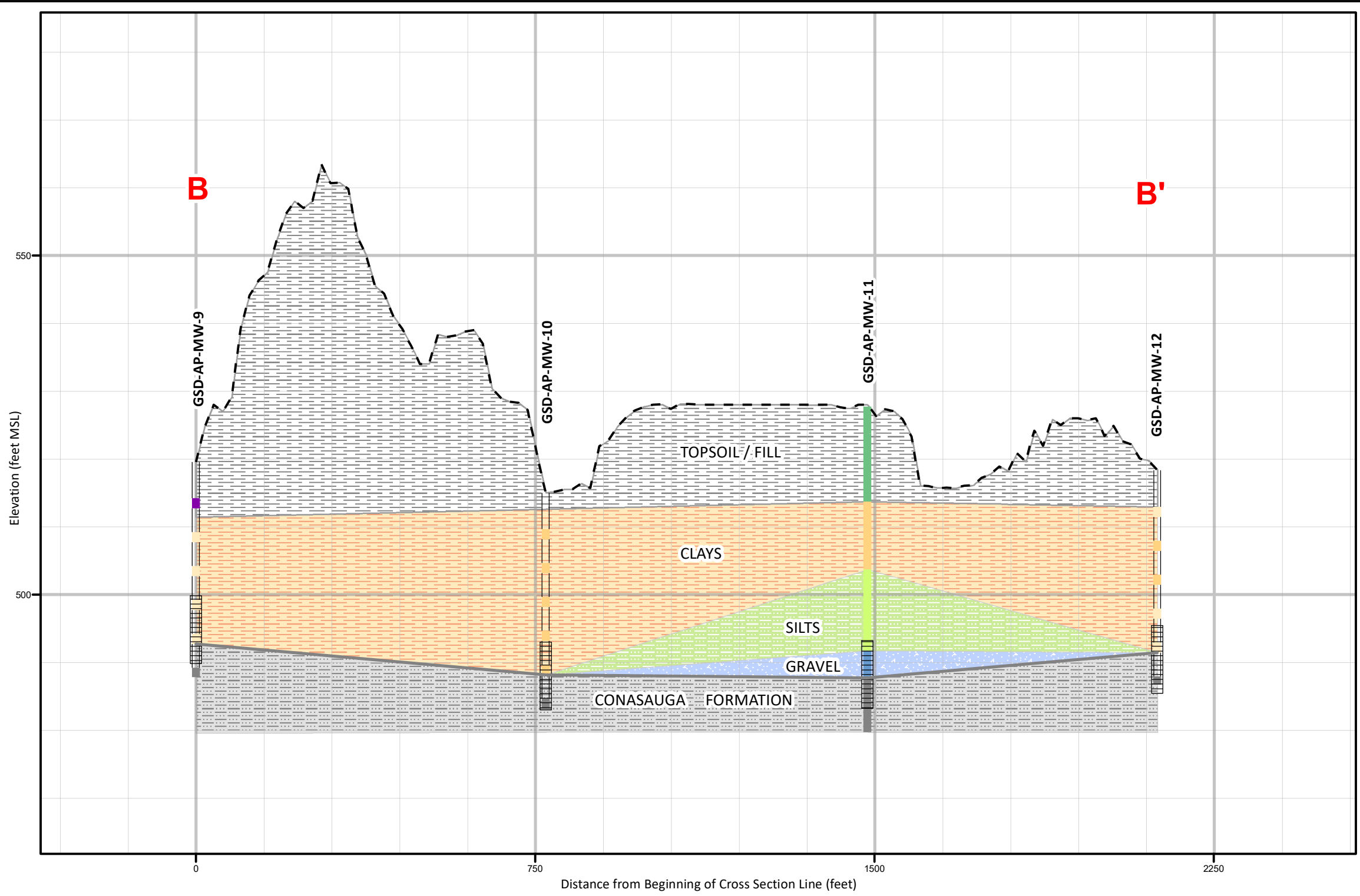
FIGURE NO.
FIGURE 3





- NOTES:**
1. Stratigraphic layers were correlated using boring data.
 2. Elevation data are reported using feet above the North American Vertical Datum of 1988 (NAVD88).
 3. Vertical exaggeration is 15x.
 4. *GSD-AP-MW-2V is utilized for water levels only and was not sampled.
 5. The ground surface shown on the cross section was derived from a digital elevation model raster along the cross section line drawn as shown on the inset map. In addition to boring data from wells located directly on the cross section line, boring data from wells located near but not directly on the cross section line were also utilized for lithologic correlation. These wells' boring data are projected onto the cross section line, and, as such, the ground surface shown on the cross section is higher in elevation than what the ground surface actually is at those locations.

LEGEND			Borehole Descriptions		Geologic Units		SCALE	DRAWING TITLE	
	Ground Surface Elevation		Topsoil/Fill		Well-graded Sand		Dike Fill	AS SHOWN	GEOLOGIC CROSS-SECTION A - A' PLANT GADSDEN ASH POND
	Unit Boundary		Lean and Sandy Lean Clay		Poorly-graded Sands		Clays	DATE 11/28/2023	
			Fat Clay		Clay, Sand, and Gravel Mix		Silt	DRAWN BY KAR	FIGURE NO
			Silty Clay		Well-graded Gravel		Sands	CHECKED BY AWH	FIGURE 4A
			Silt		Mudstone/Shale		Gravel		
			Sandy Silt		Undifferentiated Clay, Sand, and Gravel		Mudstone/Shale		
			Silty Sand		No Data				



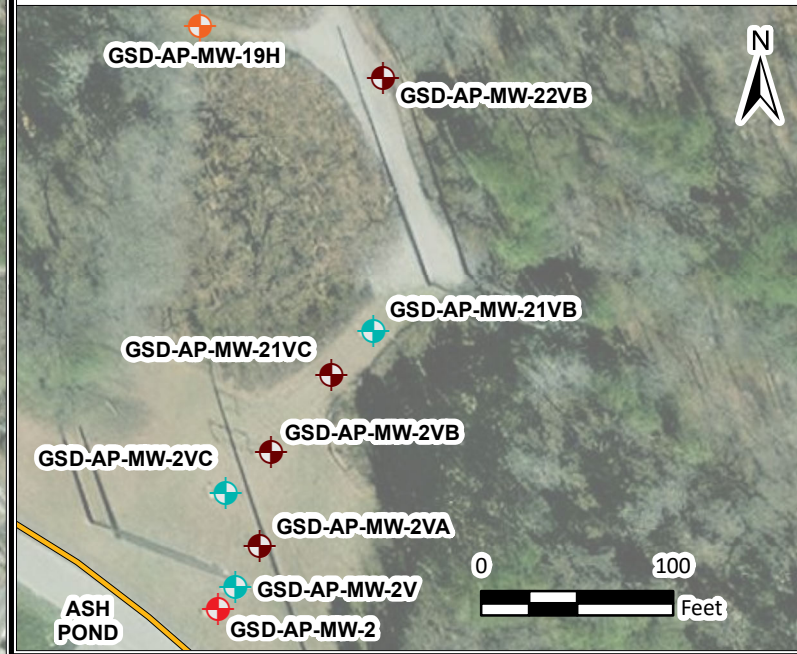
NOTES:
 1. Stratigraphic layers were correlated using boring data.
 2. Elevation data are reported using feet above the North American Vertical Datum of 1988 (NAVD88).
 3. Vertical exaggeration is 15x.

LEGEND		Borehole Descriptions		Geologic Units	
	Unit Boundary		Clay, Silt, and Gravel Fill		Topsoil/Fill
	Screen Interval		Lean Clays		Clays
	Ground Surface Elevation		Fat and Silty Clays		Silts
			Poorly-graded Gravelly Sand		Gravel
			Well-graded Gravel		Siltstone/Shale
			Shale/Siltstone		
			No Data		

SCALE	AS SHOWN
DATE	11/29/2023
DRAWN BY	KAR
CHECKED BY	AWH

DRAWING TITLE		
GEOLOGIC CROSS-SECTION B - B' PLANT GADSDEN ASH POND		
FIGURE NO	FIGURE 4B	

**WELL NETWORK
DETAIL MAP**



LEGEND

-  Downgradient Compliance Well
-  Upgradient Compliance Well
-  Horizontal Delineation Well
-  Vertical Delineation Well
-  Piezometer
-  Ash Pond Boundary



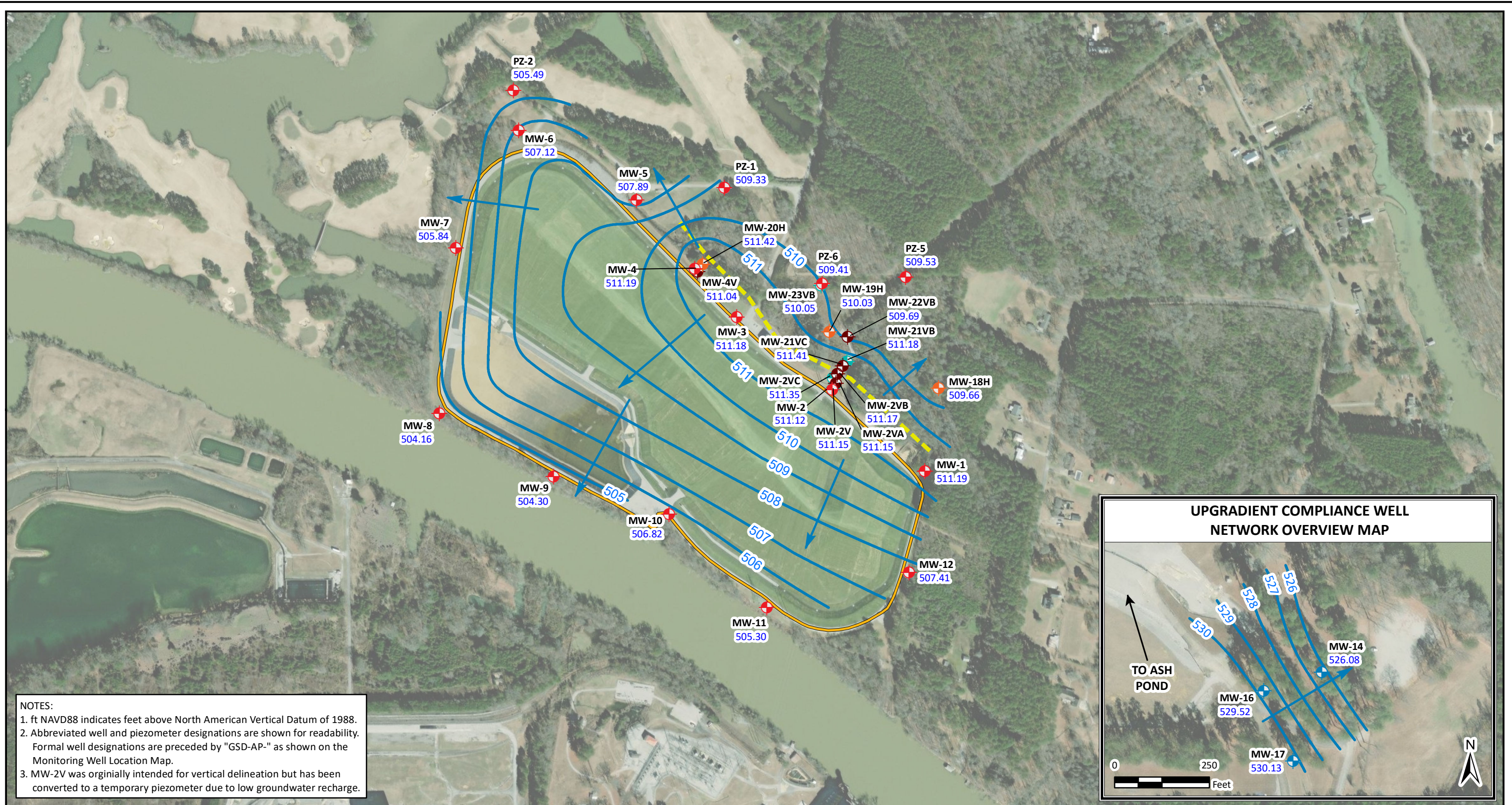
Projection: NAD 1983 State Plane Alabama East FIPS 0102 Feet
Base Map: Maxar Vivid Standard, 2/6/2023

SCALE	1:1,200
DATE	12/8/2023
DRAWN BY	KAR
CHECKED BY	ACP

DRAWING TITLE:
**MONITORING WELL LOCATION MAP
PLANT GADSDEN ASH POND**

FIGURE NO.
FIGURE 5





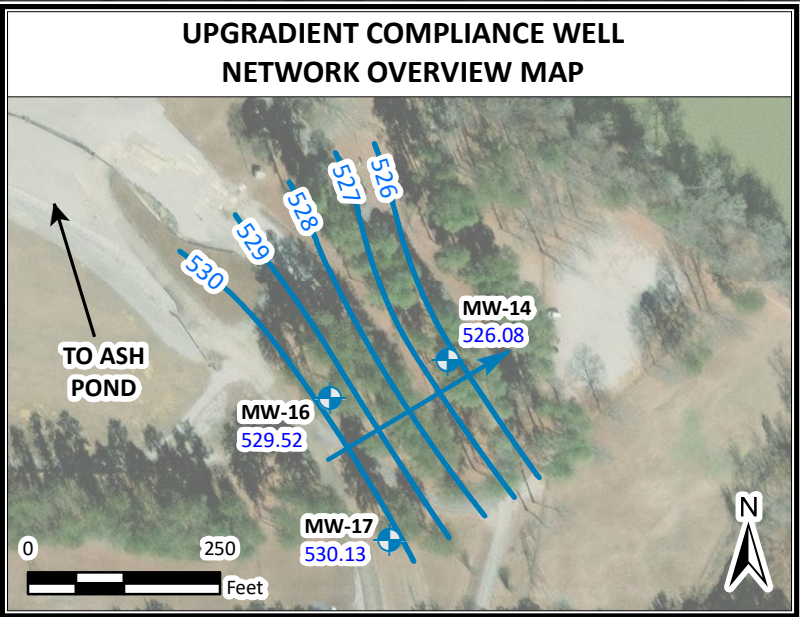
NOTES:
 1. ft NAVD88 indicates feet above North American Vertical Datum of 1988.
 2. Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.
 3. MW-2V was originally intended for vertical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

LEGEND	
	Downgradient Compliance Well
	Horizontal Delineation Well
	Vertical Delineation Well
	Piezometer
	Potentiometric Surface Contour (ft NAVD88)
	Approximate Groundwater Flow Direction
	Groundwater Divide
	Ash Pond Boundary
MW-1	Well ID
511.19	Groundwater Elevation

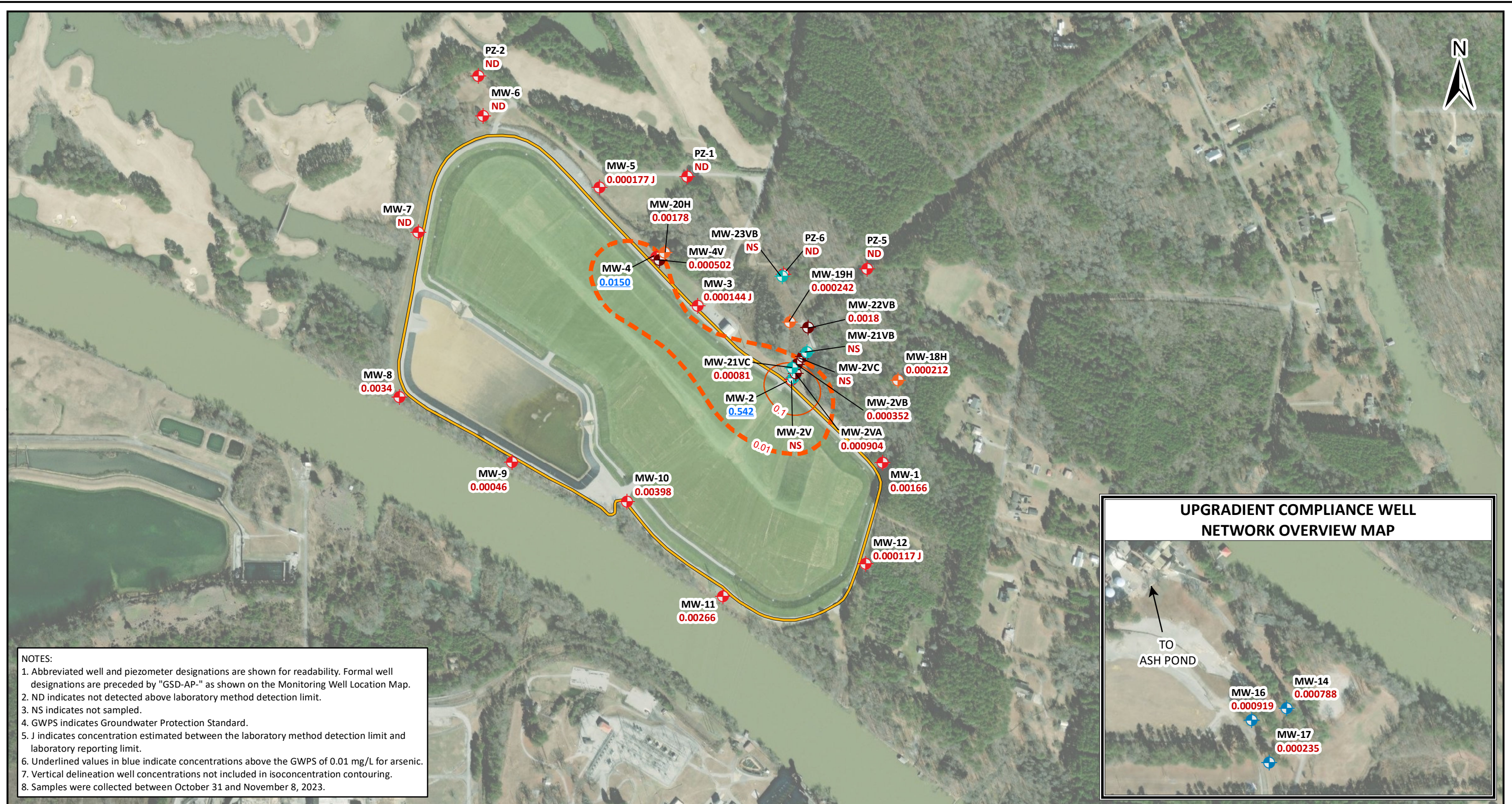


Base Map: Maxar Vivid Standard, 2/6/2023.
 Projection: NAD 1983 State Plane Alabama West FIPS 0102

SCALE	1:6,000
DATE	12/8/2023
DRAWN BY	KAR
CHECKED BY	ACP

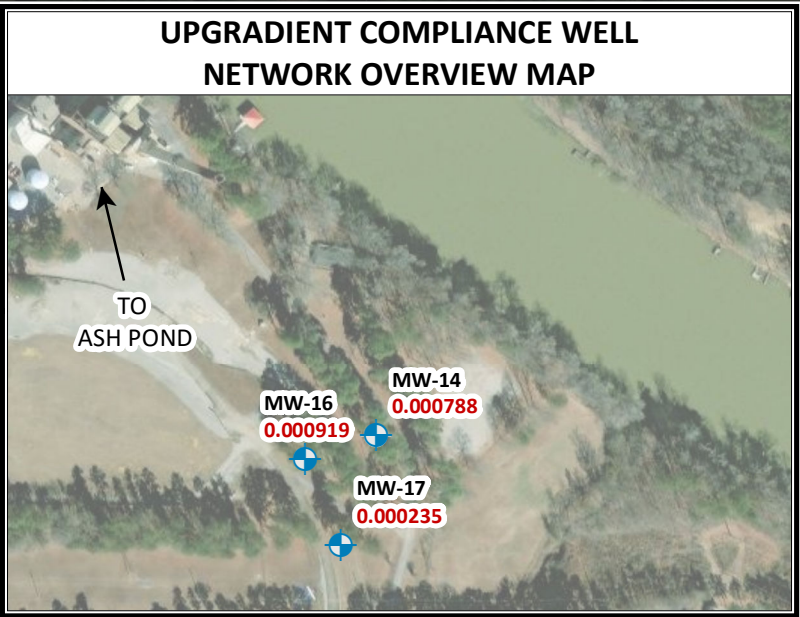


DRAWING TITLE: POTENTIOMETRIC SURFACE CONTOUR MAP OCTOBER 31, 2023 PLANT GADSDEN ASH POND	
FIGURE NO. FIGURE 6	



NOTES:

- Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.
- ND indicates not detected above laboratory method detection limit.
- NS indicates not sampled.
- GWPS indicates Groundwater Protection Standard.
- J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.
- Underlined values in blue indicate concentrations above the GWPS of 0.01 mg/L for arsenic.
- Vertical delineation well concentrations not included in isoconcentration contouring.
- Samples were collected between October 31 and November 8, 2023.



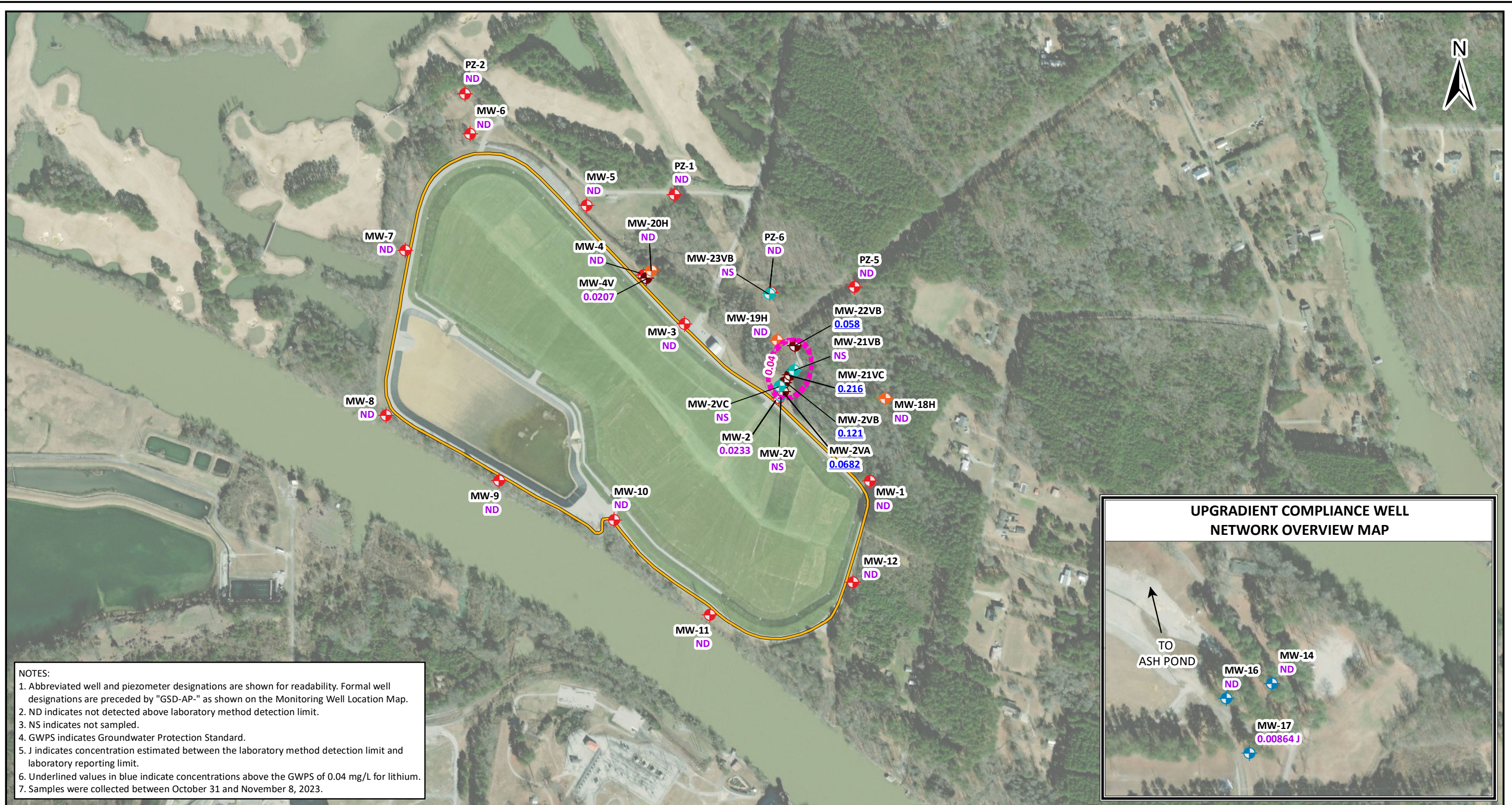
LEGEND	
	Downgradient Compliance Well
	Upgradient Compliance Well
	Horizontal Delineation Well
	Vertical Delineation Well
	Piezometer
	Approximate Arsenic Groundwater Protection Standard Contour (0.01 mg/L)
	Arsenic Concentration Contour (mg/L)
	Ash Pond Boundary
MW-11	Well ID
0.00266	Arsenic Concentration (mg/L)



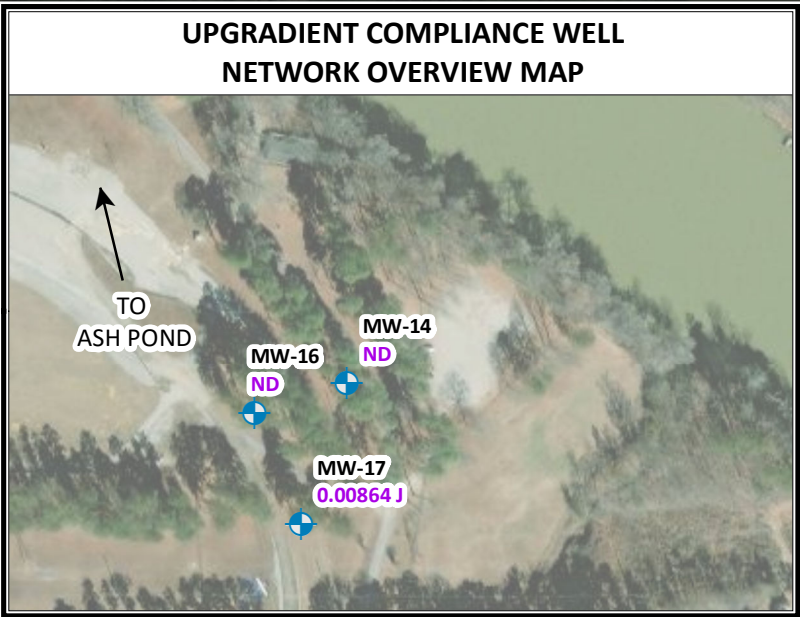
Projection: NAD 1983 State Plane Alabama East FIPS 0102 Feet
 Base Map: Maxar Vivid Standard, 2/6/2023

SCALE	1:6,000
DATE	1/3/2024
DRAWN BY	KAR
CHECKED BY	ACP

DRAWING TITLE: ARSENIC ISOCONCENTRATION MAP OCTOBER AND NOVEMBER 2023 PLANT GADSDEN ASH POND	
FIGURE NO. FIGURE 7	



NOTES:
 1. Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.
 2. ND indicates not detected above laboratory method detection limit.
 3. NS indicates not sampled.
 4. GWPS indicates Groundwater Protection Standard.
 5. J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.
 6. Underlined values in blue indicate concentrations above the GWPS of 0.04 mg/L for lithium.
 7. Samples were collected between October 31 and November 8, 2023.



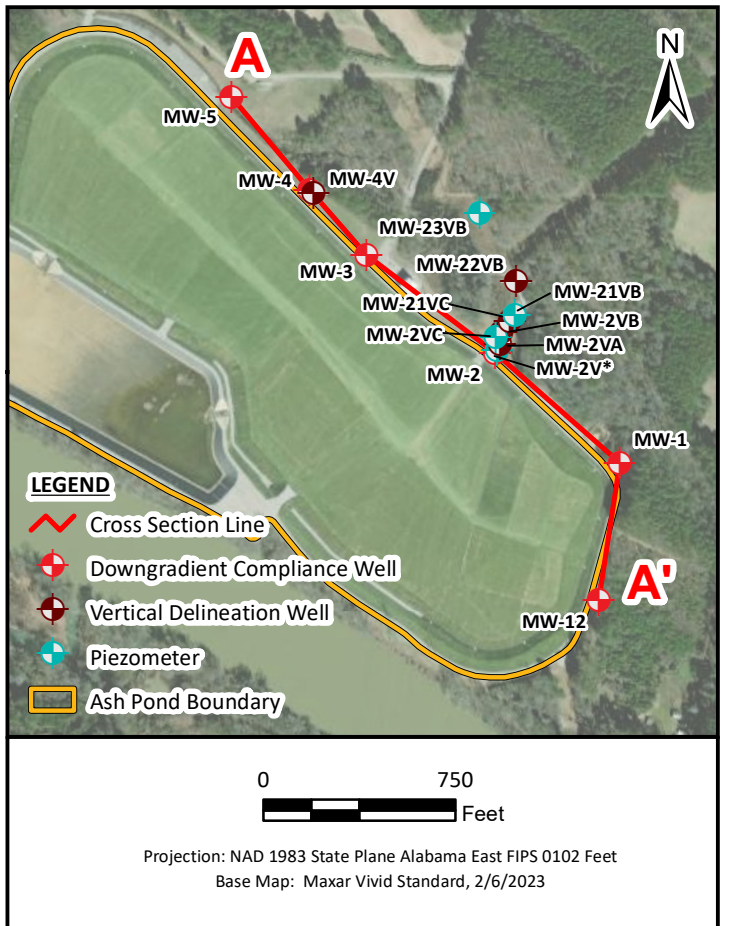
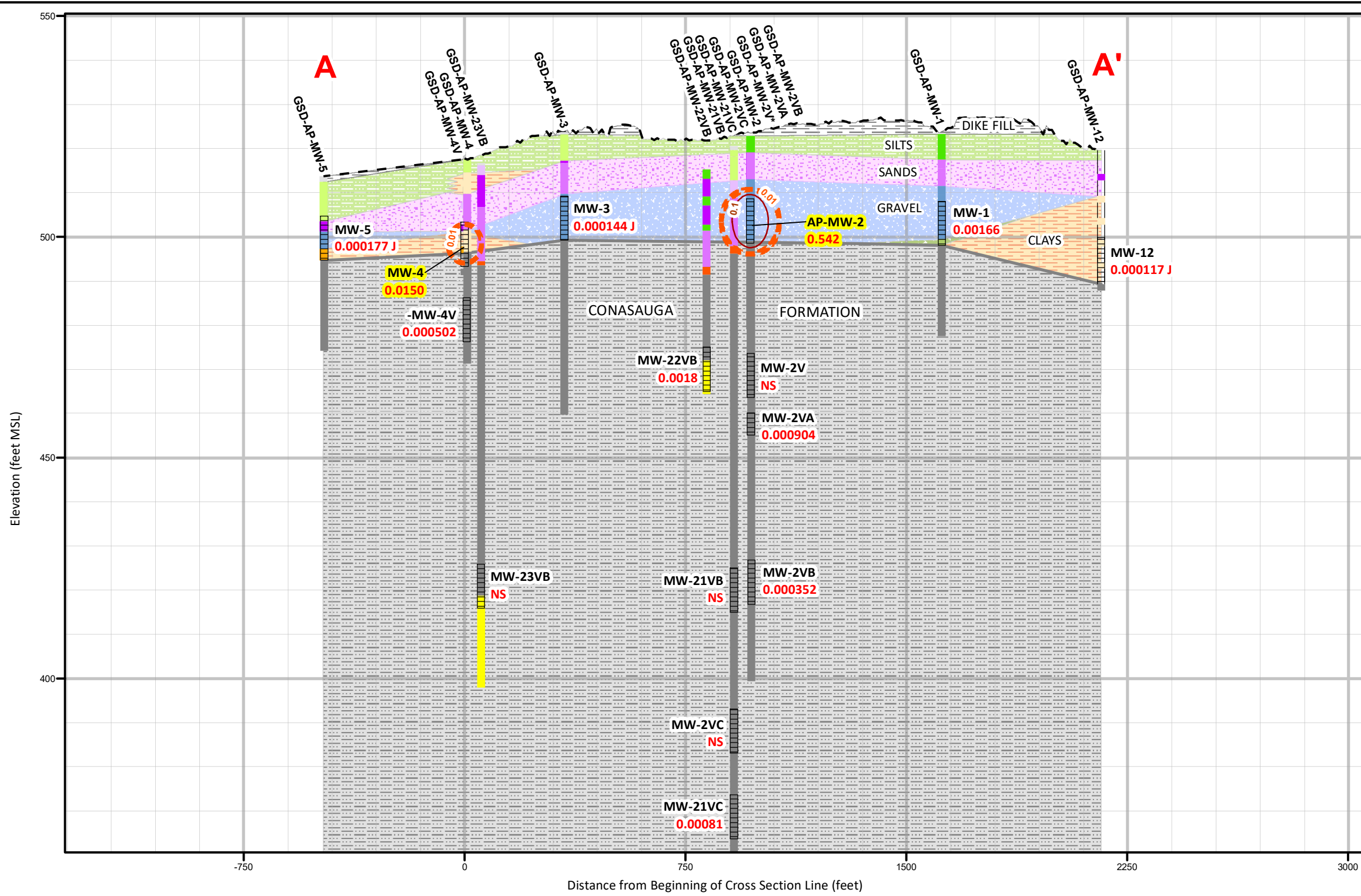
LEGEND	
	Downgradient Compliance Well
	Upgradient Compliance Well
	Horizontal Delineation Well
	Vertical Delineation Well
	Piezometer
	Approximate Lithium Groundwater Protection Standard Contour (0.04 mg/L)
	Ash Pond Boundary
MW-2	Well ID
<u>0.0233</u>	Lithium Concentration (mg/L)



Projection: NAD 1983 State Plane Alabama East FIPS 0102 Feet
 Base Map: Maxar Vivid Standard, 2/6/2023

SCALE	1:6,000
DATE	1/3/2024
DRAWN BY	KAR
CHECKED BY	ACP

DRAWING TITLE: LITHIUM ISOCONCENTRATION MAP OCTOBER AND NOVEMBER 2023 PLANT GADSDEN ASH POND	
FIGURE NO.	FIGURE 8

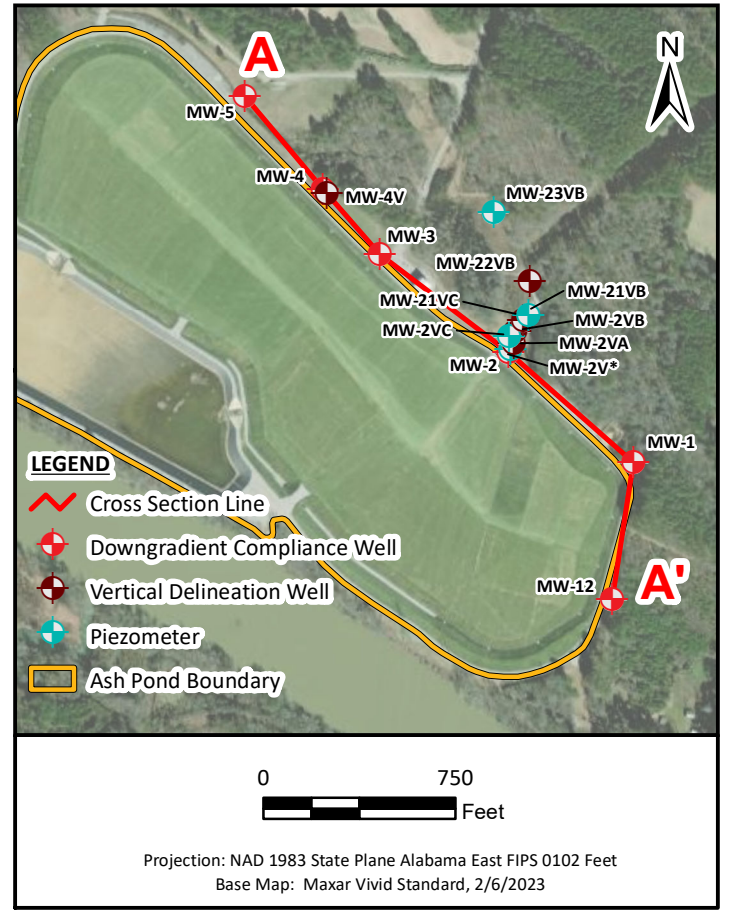
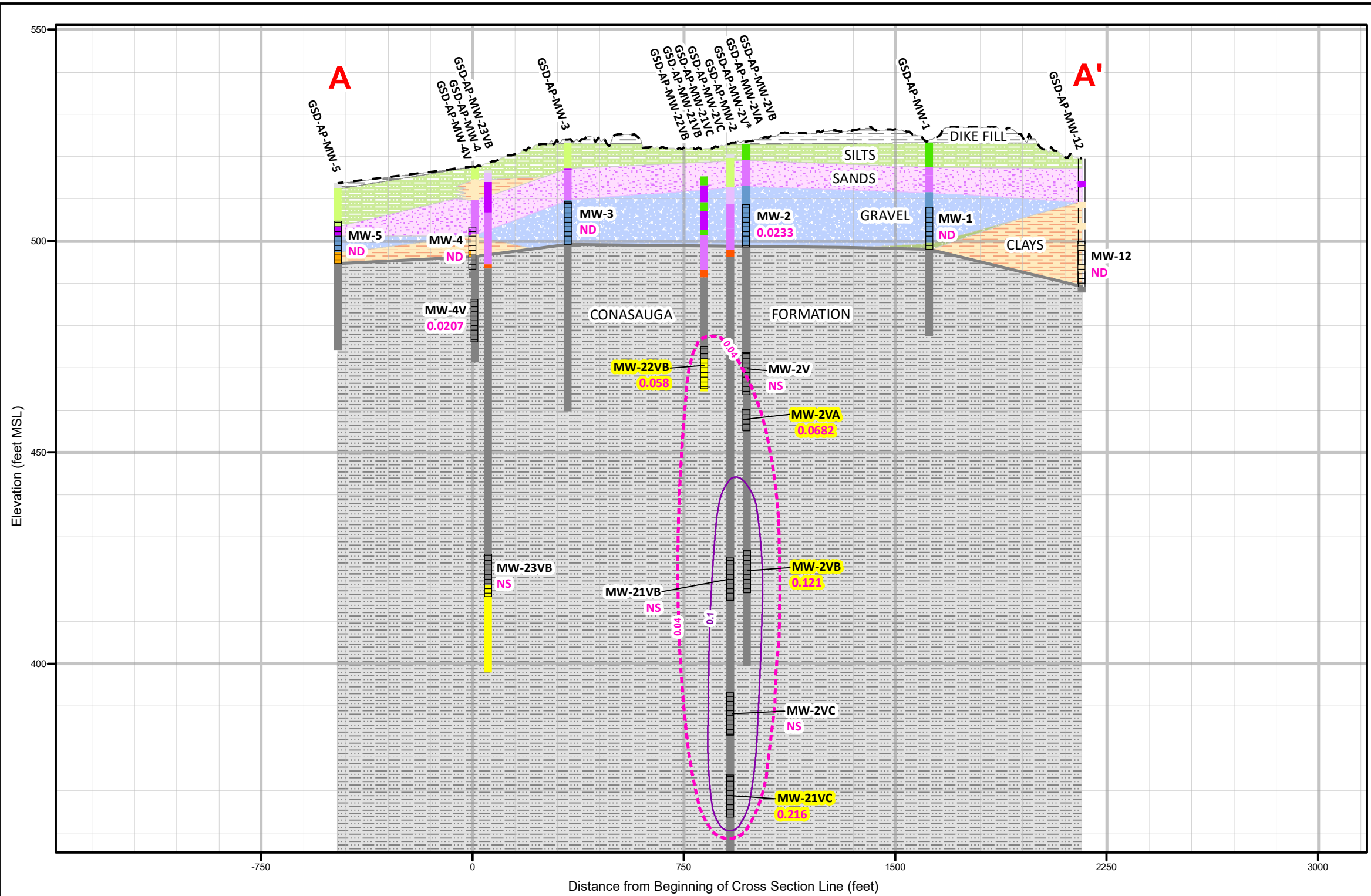


- NOTES:
1. Stratigraphic layers were correlated using boring data.
 2. Elevation data are reported using feet above the North American Vertical Datum of 1988 (NAVD88).
 3. Vertical exaggeration is 15x.
 4. *GSD-AP-MW-2V is utilized for water levels only and was not sampled.
 5. Groundwater samples were collected between October 31 and November 8, 2023.
 6. ND indicates not detected above laboratory method detection limit.
 7. NS indicates not sampled.
 8. J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.
 9. GWPS indicates Groundwater Protection Standard.
 10. Highlighted values indicate concentrations above the GWPS of 0.01 mg/L for arsenic.

LEGEND		Borehole Descriptions		Geologic Units	
	Screen Interval		Topsoil/Fill		Dike Fill
	Approximate Arsenic Groundwater Protection Standard Contour (0.01 mg/L)		Lean and Sandy Lean Clay		Clays
	Arsenic Isoconcentration Contour (mg/L)		Fat Clay		Silts
	Ground Surface Elevation		Silty Clay		Well-graded Gravel
	Unit Boundary		Silt		Mudstone/Shale
	0.00166 As Concentration (mg/L)		Sandy Silt		Dolomite or Limestone
			Silty Sand		No Data
					Undifferentiated Clay, Sand, and Gravel
					Mudstone/Shale

SCALE	AS SHOWN
DATE	1/8/2024
DRAWN BY	KAR
CHECKED BY	ACP

DRAWING TITLE	
ARSENIC CONCENTRATIONS ALONG GEOLOGIC CROSS-SECTION A - A' PLANT GADSDEN ASH POND	
DRAWING NO	FIGURE NO
FIGURE 9	FIGURE 9



- NOTES:
1. Stratigraphic layers were correlated using boring data.
 2. Elevation data are reported using feet above the North American Vertical Datum of 1988 (NAVD88).
 3. Vertical exaggeration is 15x.
 4. *GSD-AP-MW-2V is utilized for water levels only and was not sampled.
 5. Groundwater samples were collected between October 31 and November 8, 2023.
 6. ND indicates not detected above laboratory method detection limit.
 7. NS indicates not sampled.
 8. J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.
 9. GWPS indicates Groundwater Protection Standard.
 10. Highlighted values indicate concentrations above the GWPS of 0.04 mg/L for lithium.

LEGEND		Borehole Descriptions		Geologic Units	
	Approximate Lithium Groundwater Protection Standard Contour (0.04 mg/L)		Topsoil/Fill		Dike Fill
	Lithium Isoconcentration Contour (mg/L)		Lean and Sandy Lean Clay		Clays
	Screen Interval		Fat Clay		Silts
	Unit Boundary		Silty Clay		Well-graded Gravel
	Ground Surface Elevation		Silt		Mudstone/Shale
	Lithium Concentration (mg/L)		Sandy Silt		Dolomite or Limestone
			Silty Sand		No Data
			Well-graded Sand		Undifferentiated Clay, Sand, and Gravel
			Poorly-graded Sands		Mudstone/Shale
			Clay, Sand, and Gravel Mix		
			Well-graded Gravel		
			Mudstone/Shale		
			Dolomite or Limestone		
			Silty Sand		
			No Data		

SCALE	AS SHOWN	DRAWING TITLE	LITHIUM CONCENTRATIONS ALONG GEOLOGIC CROSS-SECTION A - A' PLANT GADSDEN ASH POND
DATE	1/8/2024		
DRAWN BY	KAR	FIGURE NO	FIGURE 10
CHECKED BY	ACP		

Tables



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

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

Notes:
 ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing
 (1) Coordinates have been transformed into WGS 84 from NAD 27/83, State Plane, Alabama, feet.
 (2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD) 1988.
 (3) Total well depth accounts for sump if data provided on well construction logs.



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

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

Notes:

ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing

(1) Coordinates have been transformed into WGS 84 from NAD 27/83, State Plane, Alabama, feet.

(2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD) 1988.

(3) Total well depth accounts for sump if data provided on well construction logs.



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

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

Notes:
 ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing
 (1) Coordinates have been transformed into WGS 84 from NAD 27/83, State Plane, Alabama, feet.
 (2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD) 1988.
 (3) Total well depth accounts for sump if data provided on well construction logs.



Table 2. Parameters And Reporting Limits

Plant Gadsden Ash Pond
10/31/2023 - 11/08/2023

Appendix III Parameters			
Parameters	Analytical Methods	Reporting Limits	Units of Measure
Boron	EPA 200.7	0.1015	mg/L
Calcium	EPA 200.7	0.406-4.06	mg/L
Chloride	SM4500Cl E	1-16	mg/L
Fluoride	SM4500F G 2017	0.125-0.25	mg/L
pH Field	Field Sampling	NA	SU
Sulfate	SM4500SO4 E 2011	2-50	mg/L
TDS	NA	NA	mg/L
Appendix IV Parameters			
Parameters	Analytical Methods	Reporting Limits	Units of Measure
Antimony	EPA 200.8	0.001015	mg/L
Arsenic	EPA 200.8	0.000203	mg/L
Barium	EPA 200.8	0.001015	mg/L
Beryllium	EPA 200.8	0.001015	mg/L
Cadmium	EPA 200.8	0.000203	mg/L
Chromium	EPA 200.8	0.001015	mg/L
Cobalt	EPA 200.8	0.000203	mg/L
Fluoride	SM4500F G 2017	0.125-0.25	mg/L
Lead	EPA 200.8	0.000203	mg/L
Lithium	EPA 200.7	0.02	mg/L
Mercury	EPA 245.1	0.0005	mg/L
Molybdenum	EPA 200.7	0.01015	mg/L
Selenium	EPA 200.8	0.001015	mg/L
Thallium	EPA 200.8	0.000203	mg/L
Combined Radium 226 + 228	Total Radium Calculation	0.886-1.48	pCi/L

Notes:

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



Table 3. Groundwater Elevations Summary

Plant Gadsden Ash Pond
10/31/2023 - 10/31/2023

Measurement Date		10/31/2023	
Well	TOC Elevation (ft. NAVD)	Depth To Water (ft. BTOC)	Groundwater Elevation (ft. NAVD)
GSD-AP-MW-1	526.37	15.18	511.19
GSD-AP-MW-10	530.91	24.09	506.82
GSD-AP-MW-11	517.01	11.71	505.30
GSD-AP-MW-12	521.82	14.41	507.41
GSD-AP-MW-14	548.34	22.26	526.08
GSD-AP-MW-16	555.83	26.31	529.52
GSD-AP-MW-17	550.11	19.98	530.13
GSD-AP-MW-18H	524.45	14.79	509.66
GSD-AP-MW-19H	517.32	7.29	510.03
GSD-AP-MW-2	526.16	15.04	511.12
GSD-AP-MW-20H	516.68	5.26	511.42
GSD-AP-MW-21VB	520.24	9.06	511.18
GSD-AP-MW-21VC	521.13	9.72	511.41
GSD-AP-MW-22VB	518.01	8.32	509.69
GSD-AP-MW-23VB	519.03	8.98	510.05
GSD-AP-MW-2VA	524.94	13.79	511.15
GSD-AP-MW-2VB	522.56	11.39	511.17
GSD-AP-MW-2VC	522.87	11.52	511.35
GSD-AP-MW-3	526.80	15.62	511.18
GSD-AP-MW-4	520.60	9.41	511.19
GSD-AP-MW-4V	520.33	9.29	511.04
GSD-AP-MW-5	516.27	8.38	507.89
GSD-AP-MW-6	515.23	8.11	507.12
GSD-AP-MW-7	519.86	14.02	505.84
GSD-AP-MW-8	519.22	15.06	504.16
GSD-AP-MW-9	520.36	16.06	504.30
GSD-AP-PZ-1	521.64	12.31	509.33
GSD-AP-PZ-2	516.49	11.00	505.49
GSD-AP-PZ-5	524.26	14.73	509.53
GSD-AP-PZ-6	519.60	10.19	509.41

Notes:

ft. = feet; ft. NAVD = elevation in feet, referenced to North American Vertical Datum (1988); TOC = top of casing; BTOC = below top of casing;
N/A = Not Acquired



Table 4. Relative Percent Difference (RPD) Calculations

Plant Gadsden Ash Pond
11/01/2023 - 11/08/2023

GSD-AP-MW-14				
Sample Date = 11/8/2023				
Analyte	Units	Original Result	Duplicate Result	RPD (%)
Calcium	mg/L	9.1	9	1.11%
Chloride	mg/L	2.44	2.44	0.00%
Sulfate	mg/L	52.9	55.6	4.98%
Arsenic	mg/L	0.00079	0.00079	0.13%
Barium	mg/L	0.0265	0.0261	1.52%
Cadmium	mg/L	0.0004	0.00028	36.02%
Cobalt	mg/L	0.0208	0.0199	4.42%
Lead	mg/L	0.00125	0.00132	5.45%
Selenium	mg/L	0.00175	0.00127	31.79%
GSD-AP-MW-19H				
Sample Date = 11/7/2023				
Analyte	Units	Original Result	Duplicate Result	RPD (%)
Boron	mg/L	0.35	0.349	0.29%
Calcium	mg/L	39.7	39.1	1.52%
Chloride	mg/L	7.16	7.19	0.42%
Sulfate	mg/L	51.6	51.9	0.58%
Arsenic	mg/L	0.00024	0.00031	25.59%
Barium	mg/L	0.144	0.144	0.00%
Cobalt	mg/L	0.00224	0.00221	1.35%
GSD-AP-MW-2				
Sample Date = 11/1/2023				
Analyte	Units	Original Result	Duplicate Result	RPD (%)
Boron	mg/L	0.453	0.455	0.44%
Calcium	mg/L	91	93.4	2.60%
Chloride	mg/L	2.21	2.28	3.12%
Fluoride	mg/L	0.217	0.213	1.86%
Sulfate	mg/L	89.5	93.6	4.48%
Arsenic	mg/L	0.542	0.536	1.11%
Barium	mg/L	0.136	0.14	2.90%
Cobalt	mg/L	0.03	0.0295	1.68%
Lithium	mg/L	0.0233	0.0233	0.00%
Molybdenum	mg/L	0.0222	0.022	0.91%
Thallium	mg/L	0.00034	0.00036	7.15%



Table 5. Summary of Background Levels and Groundwater Protection Standards

Plant Gadsden Ash Pond

Appendix IV Analytes			
Analyte	Units	Background	GWPS
Antimony	mg/L	0.001015	0.006
Arsenic	mg/L	0.00614	0.01
Barium	mg/L	0.312	2
Beryllium	mg/L	0.00157	0.004
Cadmium	mg/L	0.00108	0.005
Chromium	mg/L	0.00325	0.1
Cobalt	mg/L	0.0563	0.0563
Fluoride	mg/L	0.23	4
Lead	mg/L	0.00258	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.000775	0.002
Molybdenum	mg/L	0.01015	0.1
Selenium	mg/L	0.0134	0.05
Thallium	mg/L	0.000203	0.002
Combined Radium 226 + 228	pCi/L	1.533	5

Notes:

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

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

Field Parameters								
Hydraulic Location	Well	Sample Date	DO mg/L	ORP mv	Turbidity NTU	Field Temperature C	pH_Field SU	Conductivity uS/cm
Upgradient	GSD-AP-MW-14	11/08/2023	4.19	316.68	1.72	19.23	4.03	173.96
Upgradient	GSD-AP-MW-16	10/31/2023	4.35	224.4	7.56	19.52	4.5	128.06
Upgradient	GSD-AP-MW-17	10/31/2023	0.88	26.52	0.62	19.97	7.98	247.39
Downgradient	GSD-AP-MW-1	11/07/2023	0.11	88.52	1.67	17.9	5.94	859.33
Downgradient	GSD-AP-MW-10	11/07/2023	0.09	-107.88	3.67	20.06	6.94	311.93
Downgradient	GSD-AP-MW-11	11/07/2023	0.25	-25.99	3.9	20.53	6.36	672.19
Downgradient	GSD-AP-MW-12	11/07/2023	0.1	146.15	0.12	22.13	5.54	642.72
Downgradient	GSD-AP-MW-2	11/01/2023	0.07	-51.96	1.78	20.5	6.49	434.97
Downgradient	GSD-AP-MW-3	11/01/2023	0.08	88.04	0.01	21.27	5.98	418.32
Downgradient	GSD-AP-MW-4	11/07/2023	0.05	-90.97	6.28	20.24	6.72	534.02
Downgradient	GSD-AP-MW-5	11/07/2023	0.07	77.95	6.82	21.53	6.6	328.58
Downgradient	GSD-AP-MW-6	11/07/2023	0.06	144.22	3.22	20.22	6.22	147.82
Downgradient	GSD-AP-MW-7	11/07/2023	0.15	138.72	0.27	18.18	6.47	176.3
Downgradient	GSD-AP-MW-8	11/07/2023	0.09	-47.36	3.5	18.54	6.75	326.68
Downgradient	GSD-AP-MW-9	11/07/2023	0.1	-7.51	1.24	18.92	6.98	265.65
Downgradient	GSD-AP-PZ-1	11/07/2023	1.38	113.28	3.1	19.54	6.83	212.97
Downgradient	GSD-AP-PZ-2	11/07/2023	0.07	88.07	4	21.36	6.32	196.11
Downgradient	GSD-AP-PZ-5	11/07/2023	4.19	301.32	2.58	17.44	5.32	43.23
Downgradient	GSD-AP-PZ-6	11/07/2023	5.31	294.94	2.21	19.36	5.27	43.74
Vert. Delineation	GSD-AP-MW-21VC	11/07/2023	0.02	-194.99	1.11	19.44	8.35	1589.84

Notes:

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2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

Field Parameters								
Hydraulic Location	Well	Sample Date	DO mg/L	ORP mv	Turbidity NTU	Field Temperature C	pH_Field SU	Conductivity uS/cm
Vert. Delineation	GSD-AP-MW-22VB	11/07/2023	0.23	-161.8	1.75	18.82	8.1	335.17
Vert. Delineation	GSD-AP-MW-2VA	11/01/2023	0.21	-177.59	0.13	17.53	8.47	481.08
Vert. Delineation	GSD-AP-MW-2VB	11/01/2023	0.16	-211.25	0.13	19.27	8.45	950.47
Vert. Delineation	GSD-AP-MW-4V	11/07/2023	0.05	-168.07	6.17	19.49	8.26	383.81
Horiz. Delineation	GSD-AP-MW-18H	11/07/2023	7.71	343.79	2.01	17.41	5.07	103.65
Horiz. Delineation	GSD-AP-MW-19H	11/07/2023	0.06	53.02	1.56	19.8	6.31	298.45
Horiz. Delineation	GSD-AP-MW-20H	11/07/2023	0.04	17.08	7.86	19.17	6.81	584.15

Notes:

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2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

EPA Appendix III Set								
Hydraulic Location	Well	Sample Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH_Field SU	Sulfate mg/L
Upgradient	GSD-AP-MW-14	11/08/2023	<0.03	9.1	2.44	<0.06	4.03	52.9
Upgradient	GSD-AP-MW-16	10/31/2023	<0.03	8.31	3.17	<0.06	4.5	40.2
Upgradient	GSD-AP-MW-17	10/31/2023	0.0316 J	28.2	2.82	0.148	7.98	11.5
Downgradient	GSD-AP-MW-1	11/07/2023	0.934	192	5.89	0.0626 J	5.94	428
Downgradient	GSD-AP-MW-10	11/07/2023	0.089 J	38.2	5.68	0.0804 J	6.94	1.75 J
Downgradient	GSD-AP-MW-11	11/07/2023	0.238	113	5.08	0.0709 J	6.36	230
Downgradient	GSD-AP-MW-12	11/07/2023	0.183	85.2	4.92	<0.06	5.54	297
Downgradient	GSD-AP-MW-2	11/01/2023	0.453	91	2.21	0.217	6.49	89.5
Downgradient	GSD-AP-MW-3	11/01/2023	0.792	63.1	4.21	<0.06	5.98	158
Downgradient	GSD-AP-MW-4	11/07/2023	0.466	48.6	7.87	0.168	6.72	91.6
Downgradient	GSD-AP-MW-5	11/07/2023	0.227	44.7	6.07	0.0639 J	6.6	29.3
Downgradient	GSD-AP-MW-6	11/07/2023	0.0957 J	11.8	9.61	<0.06	6.22	12.5
Downgradient	GSD-AP-MW-7	11/07/2023	0.078 J	17	6.52	0.0652 J	6.47	10.5
Downgradient	GSD-AP-MW-8	11/07/2023	0.048 J	58	5.39	<0.06	6.75	8.1
Downgradient	GSD-AP-MW-9	11/07/2023	0.0693 J	35.4	7.13	0.105 J	6.98	17.4
Downgradient	GSD-AP-PZ-1	11/07/2023	<0.03	30.7	3.34	<0.06	6.83	3.69
Downgradient	GSD-AP-PZ-2	11/07/2023	<0.03	24.9	5.27	<0.06	6.32	8.98
Downgradient	GSD-AP-PZ-5	11/07/2023	<0.03	3.02	3.99	<0.06	5.32	<0.6
Downgradient	GSD-AP-PZ-6	11/07/2023	<0.03	3.32	3.54	<0.06	5.27	1.34 J
Vert. Delineation	GSD-AP-MW-21VC	11/07/2023	0.58	3.31	179	7.7	8.35	19.4
Vert. Delineation	GSD-AP-MW-22VB	11/07/2023	0.432	9.48	1.48	1.3	8.1	2.63

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

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary
Plant Gadsden Ash Pond
10/31/2023 - 11/08/2023

EPA Appendix III Set								
Hydraulic Location	Well	Sample Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH_Field SU	Sulfate mg/L
Vert. Delineation	GSD-AP-MW-2VA	11/01/2023	0.603	4.52	6.43	2.39	8.47	2.1
Vert. Delineation	GSD-AP-MW-2VB	11/01/2023	0.65	5.32	57.2	5.71	8.45	25
Vert. Delineation	GSD-AP-MW-4V	11/07/2023	0.0642 J	23.6	5.69	0.218	8.26	1 J
Horiz. Delineation	GSD-AP-MW-18H	11/07/2023	0.0703 J	8.62	5.01	<0.06	5.07	31.7
Horiz. Delineation	GSD-AP-MW-19H	11/07/2023	0.35	39.7	7.16	<0.06	6.31	51.6
Horiz. Delineation	GSD-AP-MW-20H	11/07/2023	0.74	64.7	4.93	0.0912 J	6.81	149

Notes:

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

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary
Plant Gadsden Ash Pond
10/31/2023 - 11/08/2023

EPA Appendix IV Set										
Hydraulic Location	Well	Sample Date	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Fluoride mg/L
Upgradient	GSD-AP-MW-14	11/08/2023	<0.00071	0.000788	0.0265	0.000778 J	0.000403	0.000422 J	0.0208	<0.06
Upgradient	GSD-AP-MW-16	10/31/2023	<0.00071	0.000919	0.0273	<0.000406	0.000203	0.000505 J	0.0167	<0.06
Upgradient	GSD-AP-MW-17	10/31/2023	<0.00071	0.000235	0.294	<0.000406	<6.8e-005	<0.000203	<6.8e-005	0.148
Downgradient	GSD-AP-MW-1	11/07/2023	<0.00071	0.00166	0.0259	<0.000406	0.000155 J	<0.000203	0.0127	0.0626 J
Downgradient	GSD-AP-MW-10	11/07/2023	<0.00071	0.00398	0.28	<0.000406	<6.8e-005	<0.000203	0.000909	0.0804 J
Downgradient	GSD-AP-MW-11	11/07/2023	<0.00071	0.00266	0.118	<0.000406	<6.8e-005	<0.000203	0.00381	0.0709 J
Downgradient	GSD-AP-MW-12	11/07/2023	<0.00071	0.000117 J	0.0415	<0.000406	0.000372	<0.000203	0.0085	<0.06
Downgradient	GSD-AP-MW-2	11/01/2023	<0.00071	0.542	0.136	<0.000406	<6.8e-005	0.00027 J	0.03	0.217
Downgradient	GSD-AP-MW-3	11/01/2023	<0.00071	0.000144 J	0.0314	<0.000406	0.000212	0.000486 J	0.0116	<0.06
Downgradient	GSD-AP-MW-4	11/07/2023	<0.00071	0.015	0.257	<0.000406	<6.8e-005	<0.000203	0.0306	0.168
Downgradient	GSD-AP-MW-5	11/07/2023	<0.00071	0.000177 J	0.248	<0.000406	<6.8e-005	0.000266 J	0.000837	0.0639 J
Downgradient	GSD-AP-MW-6	11/07/2023	<0.00071	<0.000112	0.0759	<0.000406	<6.8e-005	<0.000203	0.00123	<0.06
Downgradient	GSD-AP-MW-7	11/07/2023	<0.00071	<0.000112	0.0713	<0.000406	<6.8e-005	0.000203 J	0.000168 J	0.0652 J
Downgradient	GSD-AP-MW-8	11/07/2023	<0.00071	0.0034	0.323	<0.000406	<6.8e-005	<0.000203	0.00262	<0.06
Downgradient	GSD-AP-MW-9	11/07/2023	<0.00071	0.00046	0.133	<0.000406	<6.8e-005	0.000252 J	0.00115	0.105 J
Downgradient	GSD-AP-PZ-1	11/07/2023	<0.00071	<0.000112	0.0787	<0.000406	<6.8e-005	<0.000203	<6.8e-005	<0.06
Downgradient	GSD-AP-PZ-2	11/07/2023	<0.00071	<0.000112	0.13	<0.000406	<6.8e-005	<0.000203	0.00184	<0.06
Downgradient	GSD-AP-PZ-5	11/07/2023	<0.00071	<0.000112	0.0473	<0.000406	<6.8e-005	0.000284 J	7.78e-005 J	<0.06
Downgradient	GSD-AP-PZ-6	11/07/2023	<0.00071	<0.000112	0.0303	<0.000406	<6.8e-005	<0.000203	7.02e-005 J	<0.06

Notes:

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- mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
- NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

EPA Appendix IV Set									
Hydraulic Location	Well	Sample Date	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	Selenium mg/L	Thallium mg/L	Combined Radium 226 + 228 pCi/L
Upgradient	GSD-AP-MW-14	11/08/2023	0.00125	<0.007105	<0.0003	<0.005075	0.00175	<6.8e-005	1.12 U
Upgradient	GSD-AP-MW-16	10/31/2023	0.000767	<0.007105	<0.0003	<0.005075	0.00145	<6.8e-005	0.72 U
Upgradient	GSD-AP-MW-17	10/31/2023	<6.8e-005	0.00864 J	<0.0003	<0.005075	<0.000508	<6.8e-005	0.285 U
Downgradient	GSD-AP-MW-1	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	1.01 U
Downgradient	GSD-AP-MW-10	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	1.24
Downgradient	GSD-AP-MW-11	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.93 U
Downgradient	GSD-AP-MW-12	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.932 U
Downgradient	GSD-AP-MW-2	11/01/2023	<6.8e-005	0.0233	<0.0003	0.0222	<0.000508	0.000337	1.05 U
Downgradient	GSD-AP-MW-3	11/01/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	0.000109 J	0.843 U
Downgradient	GSD-AP-MW-4	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	1.68
Downgradient	GSD-AP-MW-5	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.607 U
Downgradient	GSD-AP-MW-6	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.571 U
Downgradient	GSD-AP-MW-7	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.507 U
Downgradient	GSD-AP-MW-8	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.765 U
Downgradient	GSD-AP-MW-9	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.649 U
Downgradient	GSD-AP-PZ-1	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.23 U
Downgradient	GSD-AP-PZ-2	11/07/2023	0.000136 J	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.614 U
Downgradient	GSD-AP-PZ-5	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	1.15 U
Downgradient	GSD-AP-PZ-6	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.43 U

Notes:

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6. NC = value not detected with alkalinity calculation

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

EPA Appendix IV Set										
Hydraulic Location	Well	Sample Date	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Fluoride mg/L
Vert. Delineation	GSD-AP-MW-21VC	11/07/2023	<0.00071	0.00081	0.441	<0.000406	<6.8e-005	<0.000203	<6.8e-005	7.7
Vert. Delineation	GSD-AP-MW-22VB	11/07/2023	<0.00071	0.0018	0.268	<0.000406	<6.8e-005	<0.000203	<6.8e-005	1.3
Vert. Delineation	GSD-AP-MW-2VA	11/01/2023	<0.00071	0.000904	0.169	<0.000406	<6.8e-005	<0.000203	<6.8e-005	2.39
Vert. Delineation	GSD-AP-MW-2VB	11/01/2023	<0.00071	0.000352	0.333	<0.000406	<6.8e-005	<0.000203	<6.8e-005	5.71
Vert. Delineation	GSD-AP-MW-4V	11/07/2023	<0.00071	0.000502	0.484	<0.000406	<6.8e-005	0.000243 J	9.61e-005 J	0.218
Horiz. Delineation	GSD-AP-MW-18H	11/07/2023	<0.00071	0.000212	0.0355	<0.000406	<6.8e-005	<0.000203	0.000469	<0.06
Horiz. Delineation	GSD-AP-MW-19H	11/07/2023	<0.00071	0.000242	0.144	<0.000406	<6.8e-005	<0.000203	0.00224	<0.06
Horiz. Delineation	GSD-AP-MW-20H	11/07/2023	<0.00071	0.00178	0.0819	<0.000406	<6.8e-005	<0.000203	0.00823	0.0912 J

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

EPA Appendix IV Set									
Hydraulic Location	Well	Sample Date	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	Selenium mg/L	Thallium mg/L	Combined Radium 226 + 228 pCi/L
Vert. Delineation	GSD-AP-MW-21VC	11/07/2023	<6.8e-005	0.216	<0.0003	<0.005075	<0.000508	<6.8e-005	0.638 U
Vert. Delineation	GSD-AP-MW-22VB	11/07/2023	<6.8e-005	0.058	<0.0003	<0.005075	<0.000508	<6.8e-005	1.17 U
Vert. Delineation	GSD-AP-MW-2VA	11/01/2023	<6.8e-005	0.0682	<0.0003	<0.005075	<0.000508	<6.8e-005	0.538 U
Vert. Delineation	GSD-AP-MW-2VB	11/01/2023	<6.8e-005	0.121	<0.0003	<0.005075	<0.000508	<6.8e-005	0.508 U
Vert. Delineation	GSD-AP-MW-4V	11/07/2023	<6.8e-005	0.0207	<0.0003	<0.005075	<0.000508	<6.8e-005	0.932 U
Horiz. Delineation	GSD-AP-MW-18H	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	0.00113	<6.8e-005	0.793 U
Horiz. Delineation	GSD-AP-MW-19H	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	<6.8e-005	0.778 U
Horiz. Delineation	GSD-AP-MW-20H	11/07/2023	<6.8e-005	<0.007105	<0.0003	<0.005075	<0.000508	0.000133 J	1.18

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary
Plant Gadsden Ash Pond
10/31/2023 - 11/08/2023

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Sulfide mg/L	Iron Total mg/L	Magnesium Total mg/L	Silicon mg/L	Sodium mg/L	Calcium mg/L	Silica mg/L	Aluminum mg/L
Upgradient	GSD-AP-MW-14	11/08/2023	0	0.0521	3.28	4.07	1.96	9.1	8.71	4.75
Upgradient	GSD-AP-MW-16	10/31/2023	0	0.0916	2.87	4.13	2.83	8.31	8.84	2.89
Upgradient	GSD-AP-MW-17	10/31/2023	0	0.0348 J	5.27	8.19	25.8	28.2	17.5	0.0449 J
Downgradient	GSD-AP-MW-1	11/07/2023	0	1.07	32.5	5.17	15.8	192	11.1	<0.009135
Downgradient	GSD-AP-MW-10	11/07/2023	0	23.1	6.44	16.8	13	38.2	36	<0.009135
Downgradient	GSD-AP-MW-11	11/07/2023	0	15	17.7	11.6	15.2	113	24.8	<0.009135
Downgradient	GSD-AP-MW-12	11/07/2023	0	0.13	37.9	8.88	18.1	85.2	19	<0.009135
Downgradient	GSD-AP-MW-2	11/01/2023	0	12.9	8.93	5.34	5.15	91	11.4	0.0324 J
Downgradient	GSD-AP-MW-3	11/01/2023	0	0.183	15.4	4.78	9.86	63.1	10.2	<0.009135
Downgradient	GSD-AP-MW-4	11/07/2023	0	57	14.5	4.87	16.1	48.6	10.4	<0.009135
Downgradient	GSD-AP-MW-5	11/07/2023	0	0.29	9.51	7.72	15.9	44.7	16.5	0.093
Downgradient	GSD-AP-MW-6	11/07/2023	0	0.0595	3.58	6.19	12.6	11.8	13.2	<0.009135
Downgradient	GSD-AP-MW-7	11/07/2023	0	0.0167 J	3.6	7.95	17.6	17	17	0.0141 J
Downgradient	GSD-AP-MW-8	11/07/2023	0	7.86	6.37	11.5	11.9	58	24.6	<0.009135
Downgradient	GSD-AP-MW-9	11/07/2023	0	1.02	8.16	9.8	14	35.4	21	<0.009135
Downgradient	GSD-AP-PZ-1	11/07/2023	--	<0.00812	4.46	7.58	4.36	30.7	16.2	<0.009135
Downgradient	GSD-AP-PZ-2	11/07/2023	0	0.181	5.1	8.22	8.62	24.9	17.6	0.019 J
Downgradient	GSD-AP-PZ-5	11/07/2023	0	0.012 J	1.17	7.28	4.03	3.02	15.6	<0.009135
Downgradient	GSD-AP-PZ-6	11/07/2023	0	0.0147 J	1.07	6.42	4.08	3.32	13.7	<0.009135
Vert. Delineation	GSD-AP-MW-21VC	11/07/2023	0	0.0514	1.14	4.02	467	3.31	8.6	0.0143 J

Notes:

- "J" indicates the result was detected above the MDL but below the PQL
- "<" indicates the result was not detected above the MDL and is considered a non-detect.
- U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
- DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
- mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
- NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary
Plant Gadsden Ash Pond
10/31/2023 - 11/08/2023

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Manganese Total mg/L	Potassium mg/L	Nitrate Nitrite mg/L as N	Carbon, Total Organic mg/L	Chloride mg/L	Sulfate mg/L	Alkalinity Total as CaCO3 mg CaCO3/L	Carbonate Alkalinity as CaCO3 mg CaCO3/L
Upgradient	GSD-AP-MW-14	11/08/2023	0.297	0.32 J	0.309	<1	2.44	52.9	--	--
Upgradient	GSD-AP-MW-16	10/31/2023	0.18	0.445 J	0.95	<1	3.17	40.2	--	--
Upgradient	GSD-AP-MW-17	10/31/2023	0.0128	0.611	<0.2	<1	2.82	11.5	134	1.6
Downgradient	GSD-AP-MW-1	11/07/2023	2.27	7.59	<0.2	1.42 J	5.89	428	69.2	NC
Downgradient	GSD-AP-MW-10	11/07/2023	0.712	0.609	<0.2	1.09 J	5.68	1.75 J	142	NC
Downgradient	GSD-AP-MW-11	11/07/2023	5.89	2.08	<0.2	1.06 J	5.08	230	136	NC
Downgradient	GSD-AP-MW-12	11/07/2023	2.83	0.966	<0.2	1.1 J	4.92	297	36.5	NC
Downgradient	GSD-AP-MW-2	11/01/2023	6.64	8.38	<0.2	1.36 J	2.21	89.5	115	NC
Downgradient	GSD-AP-MW-3	11/01/2023	18	3.07	<0.2	1.25 J	4.21	158	73.3	NC
Downgradient	GSD-AP-MW-4	11/07/2023	3	2.9	<0.2	1.98 J	7.87	91.6	103	NC
Downgradient	GSD-AP-MW-5	11/07/2023	0.15	0.8	<0.2	1.21 J	6.07	29.3	135	NC
Downgradient	GSD-AP-MW-6	11/07/2023	0.318	0.992	<0.2	<1	9.61	12.5	46.9	NC
Downgradient	GSD-AP-MW-7	11/07/2023	0.0335	0.269 J	<0.2	<1	6.52	10.5	77	NC
Downgradient	GSD-AP-MW-8	11/07/2023	1.16	0.479 J	<0.2	1.14 J	5.39	8.1	168	NC
Downgradient	GSD-AP-MW-9	11/07/2023	1.77	2.05	<0.2	<1	7.13	17.4	129	NC
Downgradient	GSD-AP-PZ-1	11/07/2023	0.0148	0.505 J	0.52	<1	3.34	3.69	89.7	NC
Downgradient	GSD-AP-PZ-2	11/07/2023	0.184	0.546	<0.2	1.08 J	5.27	8.98	80	NC
Downgradient	GSD-AP-PZ-5	11/07/2023	0.00801	0.505 J	0.889	<1	3.99	<0.6	10.5	NC
Downgradient	GSD-AP-PZ-6	11/07/2023	0.00175	0.469 J	0.944	<1	3.54	1.34 J	10.7	NC
Vert. Delineation	GSD-AP-MW-21VC	11/07/2023	0.0055	1.07	<0.2	3.73	179	19.4	581	19.2

Notes:

- "J" indicates the result was detected above the MDL but below the PQL
- "<" indicates the result was not detected above the MDL and is considered a non-detect.
- U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
- DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
- mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
- NC = value not detected with alkalinity calculation

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

General Chemistry and MNA Parameters			
Hydraulic Location	Well	Sample Date	Bicarbonate Alkalinity as CaCO ₃ mg CaCO ₃ /L
Upgradient	GSD-AP-MW-14	11/08/2023	--
Upgradient	GSD-AP-MW-16	10/31/2023	--
Upgradient	GSD-AP-MW-17	10/31/2023	132
Downgradient	GSD-AP-MW-1	11/07/2023	69.2
Downgradient	GSD-AP-MW-10	11/07/2023	142
Downgradient	GSD-AP-MW-11	11/07/2023	136
Downgradient	GSD-AP-MW-12	11/07/2023	36.5
Downgradient	GSD-AP-MW-2	11/01/2023	115
Downgradient	GSD-AP-MW-3	11/01/2023	73.3
Downgradient	GSD-AP-MW-4	11/07/2023	103
Downgradient	GSD-AP-MW-5	11/07/2023	135
Downgradient	GSD-AP-MW-6	11/07/2023	46.9
Downgradient	GSD-AP-MW-7	11/07/2023	76.9
Downgradient	GSD-AP-MW-8	11/07/2023	168
Downgradient	GSD-AP-MW-9	11/07/2023	129
Downgradient	GSD-AP-PZ-1	11/07/2023	89.5
Downgradient	GSD-AP-PZ-2	11/07/2023	80
Downgradient	GSD-AP-PZ-5	11/07/2023	10.5
Downgradient	GSD-AP-PZ-6	11/07/2023	10.7
Vert. Delineation	GSD-AP-MW-21VC	11/07/2023	562

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Sulfide mg/L	Iron Total mg/L	Magnesium Total mg/L	Silicon mg/L	Sodium mg/L	Calcium mg/L	Silica mg/L	Aluminum mg/L
Vert. Delineation	GSD-AP-MW-22VB	11/07/2023	0	0.0871	2.19	4.79	104	9.48	10.3	0.0197 J
Vert. Delineation	GSD-AP-MW-2VA	11/01/2023	0	0.111	1.3	4.73	149	4.52	10.1	0.0283 J
Vert. Delineation	GSD-AP-MW-2VB	11/01/2023	0	0.049	1.96	4.67	294	5.32	9.99	0.0359 J
Vert. Delineation	GSD-AP-MW-4V	11/07/2023	0	0.543	5.67	8.61	69	23.6	18.4	0.0512
Horiz. Delineation	GSD-AP-MW-18H	11/07/2023	0	<0.00812	3.89	3.7	5.04	8.62	7.92	0.0421 J
Horiz. Delineation	GSD-AP-MW-19H	11/07/2023	0	0.412	7.73	8.34	14.6	39.7	17.8	<0.009135
Horiz. Delineation	GSD-AP-MW-20H	11/07/2023	0	2.12	19.5	3.92	15.3	64.7	8.39	0.0282 J

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary Plant Gadsden Ash Pond 10/31/2023 - 11/08/2023

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Manganese Total mg/L	Potassium mg/L	Nitrate Nitrite mg/L as N	Carbon, Total Organic mg/L	Chloride mg/L	Sulfate mg/L	Alkalinity Total as CaCO3 mg CaCO3/L	Carbonate Alkalinity as CaCO3 mg CaCO3/L
Vert. Delineation	GSD-AP-MW-22VB	11/07/2023	0.0168	0.475 J	<0.2	1.25 J	1.48	2.63	211	6.65
Vert. Delineation	GSD-AP-MW-2VA	11/01/2023	0.0141	0.706	<0.2	1.58 J	6.43	2.1	281	5.06
Vert. Delineation	GSD-AP-MW-2VB	11/01/2023	0.0158	1.49	<0.2	5.66	57.2	25	431	7.41
Vert. Delineation	GSD-AP-MW-4V	11/07/2023	0.0474	0.85	<0.2	1.06 J	5.69	1 J	204	2.73
Horiz. Delineation	GSD-AP-MW-18H	11/07/2023	0.018	0.964	1.07	<1	5.01	31.7	3.56	NC
Horiz. Delineation	GSD-AP-MW-19H	11/07/2023	0.466	0.97	<0.2	<1	7.16	51.6	95.4	NC
Horiz. Delineation	GSD-AP-MW-20H	11/07/2023	28.8	2.78	<0.2	1.45 J	4.93	149	142	NC

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary
Plant Gadsden Ash Pond
10/31/2023 - 11/08/2023

General Chemistry and MNA Parameters			
Hydraulic Location	Well	Sample Date	Bicarbonate Alkalinity as CaCO ₃ mg CaCO ₃ /L
Vert. Delineation	GSD-AP-MW-22VB	11/07/2023	204
Vert. Delineation	GSD-AP-MW-2VA	11/01/2023	276
Vert. Delineation	GSD-AP-MW-2VB	11/01/2023	423
Vert. Delineation	GSD-AP-MW-4V	11/07/2023	201
Horiz. Delineation	GSD-AP-MW-18H	11/07/2023	3.56
Horiz. Delineation	GSD-AP-MW-19H	11/07/2023	95.3
Horiz. Delineation	GSD-AP-MW-20H	11/07/2023	142

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

Appendix A



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-14								
		08/20/2019	04/16/2020	08/25/2020	03/22/2021	10/12/2021	05/09/2022	10/26/2022	06/06/2023	11/08/2023
Appendix III										
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	14.4	20.1	13.1	12.2	11.8	14.5	8.93	14.9	9
Chloride	mg/L	3.27	3.74	3.03	3.15	2.87	3	2.56	3.2	2.44
Fluoride	mg/L	<0.05	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
pH_Field	SU	4	3.93	4.03	3.25	4.04	3.6	4.07	3.82	4.03
Sulfate	mg/L	106	191	98.4	83.8	88.9	125	50.7	116	55.6
TDS	mg/L	265	280	160	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.00216 J	0.00483 J	0.002 J	0.00188	0.00137	0.00274	0.00107	0.0016	0.000789
Barium	mg/L	0.0274	0.0327	0.0291	0.0254	0.0268	0.0365	0.0246	0.0423	0.0265
Beryllium	mg/L	0.00129 J	0.00157 J	0.00117 J	0.000918 J	0.00117	0.00126	0.000798 J	0.00139	0.00153
Cadmium	mg/L	0.000622 J	0.00101	0.000584 J	0.000407	0.000587	0.000627	0.000368	0.00062	0.000403
Chromium	mg/L	<0.002	<0.002	<0.002	0.000771 J	0.00061 J	0.000868 J	0.000428 J	0.000838 J	0.000402 J
Cobalt	mg/L	0.0391	0.056	0.0365	0.0262	0.0291	0.0416	0.0202	0.0432	0.0208
Combined Radium	pCi/L	0.774	0.865	0.976	1.04	1.61	1.31	0.457 U	1.35	1.12 U
Lead	mg/L	0.00176 J	0.00258 J	0.0018 J	0.00143	0.00151	0.00194	0.00134	0.00202	0.00125
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	0.000301 J	0.000558	<0.0003	0.000363 J	<0.0003	0.00039 J	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-10								
		12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/07/2018	10/22/2018	12/04/2018	02/06/2019	02/26/2019
Appendix III										
Boron	mg/L	0.135	0.12	0.144	0.0903 J	0.106	0.107	0.103	0.105	0.146
Calcium	mg/L	42	47.6	50.1	37.1	37.4	36.3	42.1	41.3	53.3
Chloride	mg/L	6.9	6.1	--	5.6	5.1	5.5	5.6	6.24	8.28
Fluoride	mg/L	0.09 J	0.08 J	--	0.09 J	0.04 J	0.1	0.07 J	0.107	0.0813 J
pH_Field	SU	6.83	6.82	6.74	6.67	6.72	6.73	6.77	6.67	6.77
Sulfate	mg/L	11	19	--	<1.4	<1.4	<1.4	11	16.8	38.4
TDS	mg/L	215	237	242	194	195	184	215	208	252
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	0.00247 J	0.00192 J	0.00218 J	0.00419 J	0.00365 J	0.00404 J	0.00332 J	0.00333 J	--
Barium	mg/L	0.308	0.289	0.359	0.307	0.25	0.29	0.305	0.265	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Combined Radium	pCi/L	0.585 U	0.474	0.463 U	0.678	0.495 U	0.36 U	0.407 U	0.537	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	0.000302 J	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-10								
		08/22/2019	04/15/2020	08/26/2020	03/23/2021	10/11/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023
Appendix III										
Boron	mg/L	0.0951 J	0.164	0.108	0.188	0.09 J	0.097 J	0.0868 J	0.0864 J	0.089 J
Calcium	mg/L	38.5	54.1	37.8	57	38.2	42.2	39.5	36.4	38.2
Chloride	mg/L	5.66	6.49	5.39	7.14	5.72	5.72	5.87	5.45	5.68
Fluoride	mg/L	0.084 J	0.112	0.0997 J	0.101	0.201	0.0918 J	0.0929 J	0.0805 J	0.0804 J
pH_Field	SU	6.37	6.85	6.73	6.87	6.72	6.39	6.84	6.55	6.94
Sulfate	mg/L	6.74	50.7	10.5	60.1	7.75	11.6	4.42	21.9	1.75 J
TDS	mg/L	194	262	186	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.00394 J	0.00236 J	0.00422 J	0.00163	0.0037	0.00361	0.00414	0.00397	0.00398
Barium	mg/L	0.302	0.35	0.322	0.395	0.292	0.318	0.278	0.294	0.28
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.00035 J	0.000285 J	0.000305 J	0.000207 J	0.000348 J	<0.000203
Cobalt	mg/L	<0.002	<0.002	<0.002	0.00037	0.000886	0.000907	0.000907	0.000866	0.000909
Combined Radium	pCi/L	-0.021 U	0.64 U	0.221 U	0.83 U	6.52	0.421 U	0.42 U	1.38	1.24
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	0.000204	0.000451	0.000466	0.000438	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-16								
		10/24/2018	11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	02/28/2019
Appendix III										
Boron	mg/L	0.0261 J	0.0209 J	0.0239 J	<0.02	<0.02	--	0.0271 J	0.0245 J	<0.02
Calcium	mg/L	18	14.9	14.8	14.8	16.4	--	19.6	20.8	21.5
Chloride	mg/L	3.3	3.6	3.5	3.3	3.6	3.4	3.91	3.94	4.15
Fluoride	mg/L	0.11	0.1	0.1	0.11	0.14	0.16	<0.05	<0.05	<0.05
pH_Field	SU	5.27	4.99	4.74	4.76	4.57	--	4.45	4.3	4.35
Sulfate	mg/L	44	44	46	51	76	94	135	183	192
TDS	mg/L	107	96.7	102	103	126	--	212	269	261
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	--	0.000922 J	<0.0008	--
Arsenic	mg/L	<0.001	<0.001	0.00124 J	0.00113 J	0.00113 J	--	0.00257 J	0.00355 J	--
Barium	mg/L	0.0499	0.0458	0.0476	0.0475	0.0461	--	0.0485	0.0354	--
Beryllium	mg/L	<0.0006	<0.0006	0.00133 J	<0.0006	0.000761 J	--	0.000703 J	0.000711 J	--
Cadmium	mg/L	0.000307 J	0.000417 J	0.000387 J	0.000317 J	0.000438 J	--	0.000736 J	0.00101	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--
Cobalt	mg/L	0.0129	0.0114	0.0168	0.0161	0.0234	--	0.04	0.0538	--
Combined Radium	pCi/L	0.564	-0.0027 U	0.222 U	0.288 U	0.822	0.844	0.162 U	0.431 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	--	0.00114 J	0.00135 J	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	0.000411 J	0.000473 J	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-16								
		08/19/2019	04/15/2020	08/25/2020	03/22/2021	10/06/2021	05/17/2022	10/25/2022	06/06/2023	10/31/2023
Appendix III										
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	12.8	13.1	12.2	18.4	13.4	19.7	8.46	17.2	8.31
Chloride	mg/L	3.42	3.39	2.94	3.61	3.17	3.58	3.24	3.31	3.17
Fluoride	mg/L	<0.05	<0.06	0.0863 J	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
pH_Field	SU	4.57	4.49	4.2	3.45	4.16	4.34	4.64	3.65	4.5
Sulfate	mg/L	66.6	92.8	74.1	128	93.5	139	37.1	121	40.2
TDS	mg/L	121	155	131	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.00228 J	0.0034 J	0.00237 J	0.00614	0.00207	0.00457	0.00117	0.00327	0.000919
Barium	mg/L	0.0314	0.028	0.0261	0.0278	0.0215	0.0288	0.029	0.0315	0.0273
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	0.000537 J	0.000487 J	0.000606 J	<0.000406	0.000707 J	<0.000406
Cadmium	mg/L	0.000499 J	0.000697 J	0.000507 J	0.000852	0.00068	0.00108	0.000203 J	0.000937	0.000203
Chromium	mg/L	<0.002	<0.002	<0.002	0.000546 J	0.000455 J	0.000589 J	0.000275 J	0.00053 J	0.000505 J
Cobalt	mg/L	0.0247	0.0373	0.0294	0.0469	0.0321	0.0563	0.013	0.0511	0.0167
Combined Radium	pCi/L	0.377 U	0.449 U	0.851	0.942 U	1.16 U	1.01	0.406 U	0.85 U	0.72 U
Lead	mg/L	<0.001	<0.001	0.0011 J	0.0016	0.00116	0.00178	0.000634	0.00152	0.000767
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	0.000775	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-11								
		12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019
Appendix III										
Boron	mg/L	0.12	0.109	0.124	0.111	0.135	0.114	0.124	0.112	0.14
Calcium	mg/L	70	72.4	72.3	73.1	76	70.2	74	73.1	82.2
Chloride	mg/L	6.3	5.4	--	5.4	5.2	5.4	5.3	5.89	6.2
Fluoride	mg/L	0.06 J	0.05 J	--	0.06 J	0.06 J	0.06 J	<0.032	0.0678 J	0.0985 J
pH_Field	SU	6.81	6.74	6.62	6.69	6.67	6.73	6.67	6.58	6.56
Sulfate	mg/L	83	84	--	95	110	78	97	113	135
TDS	mg/L	312	323	324	333	346	311	343	317	360
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	0.00279 J	0.00252 J	0.00283 J	0.00289 J	0.00265 J	0.00287 J	0.00271 J	0.00272 J	--
Barium	mg/L	0.349	0.297	0.338	0.338	0.307	0.311	0.331	0.286	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Combined Radium	pCi/L	0.891 U	0.786	0.935	0.537	1.28	1.3	1.05	0.779	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-11								
		08/22/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/17/2022	10/26/2022	06/13/2023	11/07/2023
Appendix III										
Boron	mg/L	0.272	0.154	0.257	0.142	0.125	0.139	0.306	0.143	0.238
Calcium	mg/L	133	82.4	111	75.9	78.6	80.6	129	94.5	113
Chloride	mg/L	4.64	5.46	4.74	5.54	5.8	5.92	4.98	5.51	5.08
Fluoride	mg/L	<0.05	0.0878 J	<0.06	0.0819 J	0.134	<0.06	0.069 J	0.105 J	0.0709 J
pH_Field	SU	6.26	6.63	6.38	6.58	6.66	6.44	6.2	6.4	6.36
Sulfate	mg/L	305	146	280	135	142	145	278	150	230
TDS	mg/L	555	372	517	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.00229 J	0.00286 J	0.00246 J	0.00275	0.00272	0.00281	0.00215	0.00283	0.00266
Barium	mg/L	0.214	0.168	0.165	0.169	0.17	0.195	0.117	0.126	0.118
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.000513 J	0.000267 J	0.000385 J	0.000318 J	0.000426 J	<0.000203
Cobalt	mg/L	0.00756	<0.002	0.00599	0.000388	0.000275	0.00044	0.009	0.000517	0.00381
Combined Radium	pCi/L	1.34 U	0.922 U	1.28	0.592 U	1.02 U	1.01 U	0.505 U	1.1 U	0.93 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	0.000124 J	0.000152 J	0.000121 J	<0.000102	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-12								
		12/06/2017	02/08/2018	04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/05/2018	02/06/2019	02/27/2019
Appendix III										
Boron	mg/L	0.0605 J	0.0527 J	0.0476 J	0.0539 J	0.0637 J	0.0696 J	0.0652 J	0.051 J	0.0494 J
Calcium	mg/L	49	50	50.5	56.3	65.7	68.3	64.3	52.3	60.2
Chloride	mg/L	6.2	6.1	--	5.5	5.3	5.8	6	5.92	5.88
Fluoride	mg/L	<0.032	<0.032	--	<0.032	<0.032	0.04 J	<0.032	<0.05	<0.05
pH_Field	SU	5.6	5.44	5.41	5.45	5.46	5.47	5.45	5.31	5.4
Sulfate	mg/L	200	200	--	240	260	280	280	249	257
TDS	mg/L	371	367	365	421	479	507	479	385	422
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Barium	mg/L	0.0501	0.0375	0.0405	0.0466	0.0448	0.054	0.0493	0.0357	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	0.000596 J	0.00064 J	0.000702 J	0.000732 J	0.000587 J	0.000552 J	0.000661 J	0.000601 J	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	0.00221 J	0.00221 J	0.00257 J	0.00266 J	0.00251 J	0.00399 J	0.00466 J	0.00475 J	--
Combined Radium	pCi/L	0.435 U	0.477	0.695	0.183 U	0.817	0.796	0.498 U	-0.0241 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-12								
		08/22/2019	04/14/2020	08/26/2020	03/23/2021	10/05/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023
Appendix III										
Boron	mg/L	0.0625 J	0.0377 J	0.0698 J	0.0452 J	0.0661 J	0.066 J	0.0995 J	0.0902 J	0.183
Calcium	mg/L	89.4	40	68.4	42	55.8	48.2	60.2	53.2	85.2
Chloride	mg/L	6.31	5.74	5.91	6.3	6.26	5.64	5.76	5.18	4.92
Fluoride	mg/L	<0.05	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.0795 J	<0.06
pH_Field	SU	5.35	5.39	5.63	5.5	5.19	4.78	5.52	5.48	5.54
Sulfate	mg/L	339	155	282	160	195	193	230	212	297
TDS	mg/L	501	278	472	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<8.1e-005	0.000102 J	<0.000112	0.000117 J
Barium	mg/L	0.0455	0.0279	0.0503	0.0315	0.0417	0.0377	0.0376	0.0356	0.0415
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	0.000755 J	0.000425 J	0.000618 J	0.000405	0.000367	0.000332	0.000299	0.000334	0.000372
Chromium	mg/L	<0.002	<0.002	<0.002	0.000431 J	0.000339 J	0.000414 J	0.000276 J	0.000484 J	<0.000203
Cobalt	mg/L	0.00658	0.0035 J	0.00547	0.00378	0.00448	0.0049	0.00603	0.0058	0.0085
Combined Radium	pCi/L	0.145 U	0.643 U	1.31	0.565 U	1.48	0.531 U	0.446 U	0.515 U	0.932 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-17								
		10/24/2018	11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	02/28/2019
Appendix III										
Boron	mg/L	0.0357 J	0.0348 J	0.0313 J	0.0363 J	0.033 J	--	0.0307 J	0.0306 J	0.0206 J
Calcium	mg/L	28.3	27.5	20.7	25.3	20.9	--	17	17.1	18.6
Chloride	mg/L	4	3.6	3.5	3.2	3.4	3.2	3.15	2.98	3.05
Fluoride	mg/L	0.23	0.2	0.19	0.19	0.15	0.19	0.168	0.192	0.182
pH_Field	SU	7.92	8.23	8.95	8.77	8.99	--	9.42	9.23	9.48
Sulfate	mg/L	16	13	11	12	11	10	10.2	10.4	9.86
TDS	mg/L	184	170	167	185	164	--	137	138	140
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	--
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	--
Barium	mg/L	0.218	0.203	0.191	0.209	0.199	--	0.206	0.168	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--
Combined Radium	pCi/L	0.694	0.398 U	0.428 U	0.302 U	0.535 U	0.64	0.331 U	0.307 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	0.0111 J	0.0124 J	0.0121 J	--	0.0134 J	0.0126 J	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.0003	<0.0003	--
Molybdenum	mg/L	0.00507 J	0.00358 J	0.00322 J	0.00256 J	0.00215 J	--	0.00211 J	0.00205 J	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-17								
		08/19/2019	04/16/2020	08/24/2020	03/22/2021	10/06/2021	05/09/2022	10/25/2022	06/06/2023	10/31/2023
Appendix III										
Boron	mg/L	0.0341 J	0.0331 J	0.0303 J	0.0333 J	0.0305 J	0.0347 J	0.0308 J	<0.03	0.0316 J
Calcium	mg/L	25.3	30.7	30.8	31	31	28.4	30.7	23	28.2
Chloride	mg/L	2.8	2.93	2.82	2.94	2.98	3.01	2.88	2.93	2.82
Fluoride	mg/L	0.187	0.166	0.163	0.18	0.175	0.191	0.15	0.113 J	0.148
pH_Field	SU	7.93	8.1	8.17	7.85	7.92	7.29	7.97	7.8	7.98
Sulfate	mg/L	8.74	11.5	10	10.6	10.2	10	9.25	12.4	11.5
TDS	mg/L	240	166	162	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	<0.001	<0.001	0.00031	0.000263	0.000233	0.000572	0.000296	0.000235
Barium	mg/L	0.259	0.257	0.312	0.29	0.307	0.309	0.292	0.278	0.294
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	0.000473 J	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	0.000132 J	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	0.00267 J	<0.002	0.000509 J	0.000273 J	0.000257 J	0.000357 J	0.000529 J	<0.000203
Cobalt	mg/L	<0.002	<0.002	<0.002	0.000133 J	0.000126 J	0.000113 J	0.000311	<6.8e-005	<6.8e-005
Combined Radium	pCi/L	0.683	0.603	0.404 U	0.497 U	2.01	0.56 U	0.776 U	0.524 U	0.285 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	0.000196 J	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	0.0127 J	<0.01	0.0083 J	0.00881 J	0.00859 J	0.00897 J	0.0101 J	0.00864 J
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	0.000723	0.000453	0.000465	0.000466	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-1								
		12/06/2017	02/06/2018	04/23/2018	06/26/2018	08/07/2018	10/22/2018	12/04/2018	02/05/2019	02/26/2019
Appendix III										
Boron	mg/L	1.28	1.29	1.21	1.25	1.21	1.22	1.08	1.2	1.15
Calcium	mg/L	271	275	269	268	259	240	254	292	254
Chloride	mg/L	6.2	5.9	--	5.7	5.3	5.6	5.8	5.8	5.92
Fluoride	mg/L	0.1	0.08 J	--	0.08 J	0.07 J	0.07 J	0.04 J	0.0525 J	<0.05
pH_Field	SU	6.5	6.48	6.36	6.32	6.32	6.2	6.31	6.1	6.11
Sulfate	mg/L	650	560	--	670	660	580	580	702	748
TDS	mg/L	1300	1310	1210	1250	1220	1150	1090	1200	1210
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	0.00179 J	0.00191 J	0.0023 J	0.00306 J	0.00336 J	0.00451 J	0.00471 J	0.00365 J	--
Barium	mg/L	0.0807	0.0546	0.0488	0.0479	0.0402	0.0427	0.0434	0.0439	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	0.00818 J	0.0123	0.0204	0.0224	0.0193	0.0243	0.0166	0.0264	--
Combined Radium	pCi/L	0.694 U	0.641	-0.0527 U	0.162 U	0.87	0.691	0.213 U	0.637	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-1								
		08/21/2019	04/15/2020	08/25/2020	03/16/2021	10/05/2021	05/10/2022	10/26/2022	06/05/2023	11/07/2023
Appendix III										
Boron	mg/L	1.24	1.13	1.11	1.08	1.02	0.943	0.977	0.88	0.934
Calcium	mg/L	272	231	218	218	198	166	200	166	192
Chloride	mg/L	5.26	5.5	5.59	6.2	6.1	5.97	6.02	6.12	5.89
Fluoride	mg/L	<0.05	<0.06	<0.06	<0.06	0.0601 J	<0.06	<0.06	<0.06	0.0626 J
pH_Field	SU	6.01	5.65	6	5.87	5.79	5.77	5.86	5.68	5.94
Sulfate	mg/L	708	647	642	593	567	508	512	406	428
TDS	mg/L	1200	1060	1060	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.00444 J	0.00309 J	0.00435 J	0.0029	0.00356	0.00221	0.00223	0.00181	0.00166
Barium	mg/L	0.037	0.0329	0.0358	0.0331	0.0304	0.0284	0.028	0.0272	0.0259
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	0.000102 J	0.000102 J	0.000216	0.00013 J	0.000275	0.000155 J
Chromium	mg/L	<0.002	<0.002	<0.002	0.000376 J	0.000228 J	0.000249 J	0.000321 J	0.000271 J	<0.000203
Cobalt	mg/L	0.0242	0.0178	0.0193	0.0184	0.0169	0.0137	0.0152	0.0118	0.0127
Combined Radium	pCi/L	0.643 U	0.538 U	0.502 U	0.722 U	1.21	0.761 U	0.38 U	1.09 U	1.01 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	0.000198 J	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-2								
		08/20/2019	04/15/2020	08/25/2020	03/24/2021	10/11/2021	05/16/2022	10/25/2022	06/06/2023	11/01/2023
Appendix III										
Boron	mg/L	0.566	0.461	0.528	0.437	0.459	0.381	0.5	0.367	0.453
Calcium	mg/L	92.3	69.2	80.5	61.5	87.1	58.2	86.9	60.7	93.4
Chloride	mg/L	2.24	2.16	2	2.29	2.43	2.14	2.45	2.02	2.28
Fluoride	mg/L	0.252	0.21	0.273	0.194	0.283	0.151	0.271	0.204	0.217
pH_Field	SU	6.3	6.45	6.65	6.49	6.59	6.16	6.64	6.63	6.49
Sulfate	mg/L	110	116	114	101	112	93.1	111	73.9	89.5
TDS	mg/L	369	300	339	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000538 J	<0.00071	<0.00071
Arsenic	mg/L	0.825	0.709	0.727	0.489	0.424	0.569	0.555	0.652	0.536
Barium	mg/L	0.0685	0.0607	0.0812	0.0676	0.0807	0.0974	0.0888	0.115	0.14
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	6.88e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.00047 J	0.000479 J	0.000342 J	0.00022 J	0.000313 J	<0.000203
Cobalt	mg/L	0.0366	0.0324	0.0298	0.0316	0.0165	0.0366	0.0302	0.04	0.03
Combined Radium	pCi/L	0.553 U	0.182 U	0.43 U	0.769 U	2.38	1.06	0.683 U	0.907 U	1.05 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	9.28e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	0.0583	0.0406	0.041	0.0318	0.0225	0.0271	0.0304	0.0258	0.0233
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.027	0.0202	0.0269	0.0164	0.0204	0.0201	0.0202	0.0203	0.0222

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-3								
		12/06/2017	02/06/2018	04/24/2018	06/27/2018	08/07/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019
Appendix III										
Boron	mg/L	0.959	1.04	0.979	0.982	1	1.08	1.05	1.01	1.08
Calcium	mg/L	125	110	88.8	80.8	88.5	92.7	105	68.6	70.6
Chloride	mg/L	7.6	7.6	--	7.3	7.6	6.9	6.8	6.95	6.55
Fluoride	mg/L	0.13	0.08 J	--	0.07 J	0.09 J	0.11	0.08 J	0.064 J	<0.05
pH_Field	SU	6.54	6.39	6.02	6.07	6.28	6.3	6.38	5.83	5.93
Sulfate	mg/L	250	230	--	230	200	190	200	263	246
TDS	mg/L	628	556	510	486	487	450	492	428	441
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	0.00101 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Barium	mg/L	0.126	0.0721	0.0492	0.0453	0.0431	0.0541	0.0545	0.0363	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	0.0302	0.0371	0.0251	0.0234	0.0223	0.03	0.0238	0.0232	--
Combined Radium	pCi/L	0.643 U	0.209 U	0.596	0.363 U	0.788	0.749	0.749	0.299 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-3								
		08/20/2019	04/13/2020	08/26/2020	03/22/2021	10/05/2021	05/10/2022	10/26/2022	06/05/2023	11/01/2023
Appendix III										
Boron	mg/L	1.06	1.19	1.16	1.13	1.01	0.998	0.85	0.858	0.792
Calcium	mg/L	74.1	69.5	75.7	64.9	65.9	58.5	55.3	55.4	63.1
Chloride	mg/L	6.07	5.95	5.89	5.26	5.09	4.59	4.38	4.57	4.21
Fluoride	mg/L	0.0592 J	<0.06	<0.06	<0.06	<0.06	0.0714 J	<0.06	0.0635 J	<0.06
pH_Field	SU	5.73	5.83	5.87	5.51	5.76	5.95	5.97	5.66	5.98
Sulfate	mg/L	222	256	246	254	228	215	206	170	158
TDS	mg/L	416	433	455	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	<0.001	<0.001	0.0002 J	0.000207	0.000162 J	0.000311	0.000119 J	0.000144 J
Barium	mg/L	0.0405	0.0349	0.0363	0.0354	0.0344	0.0287	0.0306	0.0288	0.0314
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	0.000438 J	<0.0003	0.00039	0.000213	0.00035	0.000147 J	0.00035	0.000212
Chromium	mg/L	<0.002	<0.002	<0.002	0.000293 J	0.000234 J	0.000286 J	0.000276 J	0.000326 J	0.000486 J
Cobalt	mg/L	0.0257	0.0209	0.0191	0.0183	0.016	0.0147	0.0132	0.0118	0.0116
Combined Radium	pCi/L	0.709 U	0.942 U	0.177 U	0.263 U	3.21	0.189 U	0.551 U	0.422 U	0.843 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-4								
		08/20/2019	04/15/2020	08/26/2020	03/24/2021	10/05/2021	05/16/2022	10/26/2022	06/06/2023	11/07/2023
Appendix III										
Boron	mg/L	0.399	0.344	0.398	0.326	0.347	0.342	0.371	0.419	0.466
Calcium	mg/L	23.5	22	22.8	23.1	27.4	30.7	33.6	39.8	48.6
Chloride	mg/L	9.62	9.27	8.96	8.61	9.3	8.07	7.88	6.76	7.87
Fluoride	mg/L	0.197	0.238	0.251	0.227	0.205	0.17	0.283	0.225	0.168
pH_Field	SU	6.33	6.77	6.68	6.86	6.58	6.61	6.67	6.74	6.72
Sulfate	mg/L	7.34	17.2	15.5	19.9	37.8	49.4	61.8	88.7	91.6
TDS	mg/L	164	170	168	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.0141	0.0121	0.0133	0.011	0.0147	0.0132	0.0145	0.0128	0.015
Barium	mg/L	0.188	0.159	0.181	0.171	0.208	0.23	0.239	0.255	0.257
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.000323 J	<0.000203	0.000227 J	<0.000203	0.000206 J	<0.000203
Cobalt	mg/L	0.0293	0.0252	0.0231	0.0268	0.0236	0.0289	0.0289	0.0299	0.0306
Combined Radium	pCi/L	0.814	-0.0841 U	0.26 U	0.664 U	1.75	0.978	0.609 U	1.17 U	1.68
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	0.00118	0.00111	0.00122	0.00106	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-5								
		12/07/2017	02/06/2018	04/25/2018	06/27/2018	08/07/2018	10/23/2018	12/05/2018	02/05/2019	02/27/2019
Appendix III										
Boron	mg/L	0.566	0.614	0.498	0.446	0.442	0.436	0.456	0.453	0.457
Calcium	mg/L	48.2	47.8	41.8	36.9	37.6	35.3	36.3	36.6	39.6
Chloride	mg/L	8.7	8.5	--	7.1	6.9	6.7	6.7	7.24	7.38
Fluoride	mg/L	0.06 J	0.05 J	--	0.06 J	0.06 J	0.07 J	0.04 J	0.0651 J	0.0578 J
pH_Field	SU	6.32	6.27	6.14	6.15	6.18	6.15	6.15	6.08	6.11
Sulfate	mg/L	19	20	--	18	20	18	20	24.3	24.7
TDS	mg/L	215	204	192	180	183	169	177	198	185
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Barium	mg/L	0.279	0.195	0.26	0.249	0.216	0.26	0.245	0.215	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	0.00331 J	0.00323 J	0.00258 J	0.00218 J	<0.002	0.0023 J	0.00233 J	0.0021 J	--
Combined Radium	pCi/L	0.885 U	0.524	0.341 U	0.546	1.09	1.01	0.876	0.551 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-5								
		08/20/2019	04/13/2020	08/24/2020	03/16/2021	10/05/2021	05/09/2022	10/26/2022	06/07/2023	11/07/2023
Appendix III										
Boron	mg/L	0.378	0.359	0.329	0.328	0.26	0.261	0.23	0.234	0.227
Calcium	mg/L	33.7	43	35.5	38.1	35.9	38.4	39.5	46.5	44.7
Chloride	mg/L	6.53	6.48	6.64	7.14	6.78	6.81	6.4	6.81	6.07
Fluoride	mg/L	0.0567 J	0.0688 J	0.0607 J	0.065 J	0.104	0.0682 J	0.0708 J	<0.06	0.0639 J
pH_Field	SU	6.11	6.18	6.11	6.22	6.24	5.43	6.44	6.25	6.6
Sulfate	mg/L	21.3	21.9	21.2	18.8	14.5	15.5	16.6	27.5	29.3
TDS	mg/L	174	192	175	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	<0.001	<0.001	8.17e-005 J	0.000162 J	8.3e-005 J	0.000222	<0.000112	0.000177 J
Barium	mg/L	0.238	0.241	0.238	0.217	0.221	0.236	0.231	0.226	0.248
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.000397 J	0.000275 J	0.000529 J	<0.000203	0.000272 J	0.000266 J
Cobalt	mg/L	0.00223 J	<0.002	0.00222 J	0.00136	0.00116	0.00101	0.000936	0.000715	0.000837
Combined Radium	pCi/L	0.206 U	1.19	0.482 U	0.709 U	1.44	1.16	0.643 U	1.06 U	0.607 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	0.000142 J	0.000114 J	0.000371	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-6								
		08/20/2019	04/13/2020	08/26/2020	03/17/2021	10/05/2021	05/10/2022	10/26/2022	06/05/2023	11/07/2023
Appendix III										
Boron	mg/L	0.0608 J	0.0561 J	0.0633 J	0.0563 J	0.0649 J	0.068 J	0.0788 J	0.0776 J	0.0957 J
Calcium	mg/L	15.1	12.5	12.9	11.3	11.4	10.8	12.2	10.6	11.8
Chloride	mg/L	9.55	8.6	9.21	8.59	9.09	8.84	9.4	10.9	9.61
Fluoride	mg/L	<0.05	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
pH_Field	SU	5.4	5.82	5.96	5.92	5.74	5.51	5.98	5.68	6.22
Sulfate	mg/L	12.3	13.9	13.1	13.7	14.2	14.8	12.2	15.1	12.5
TDS	mg/L	98.7	90.7	91.3	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<8.1e-005	0.000151 J	<0.000112	<0.000112
Barium	mg/L	0.0731	0.0635	0.0771	0.0656	0.0741	0.0762	0.0702	0.0809	0.0759
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.000338 J	0.000246 J	<0.000203	0.000222 J	0.000252 J	<0.000203
Cobalt	mg/L	<0.002	<0.002	<0.002	0.00102	0.00104	0.00114	0.0012	0.00113	0.00123
Combined Radium	pCi/L	-0.086 U	0.0901 U	0.416 U	0.539 U	1.36	0.0979 U	0.432 U	0.704 U	0.571 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-7								
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019
Appendix III										
Boron	mg/L	0.102	0.0787 J	0.0734 J	0.094 J	0.103	0.106	0.085 J	0.0733 J	0.0548 J
Calcium	mg/L	23.4	20.1	17.4	21.8	25.4	25.6	19	16.4	15.6
Chloride	mg/L	7.9	6.7	--	7.4	7.7	8	6.7	6.84	6.21
Fluoride	mg/L	0.09 J	0.07 J	--	0.09 J	0.1	0.1	0.06 J	<0.05	0.0824 J
pH_Field	SU	6.62	6.39	6.17	6.38	6.56	6.54	6.33	6.13	6.12
Sulfate	mg/L	14	10	--	11	13	13	9.8	10.8	8.98
TDS	mg/L	137	124	106	129	142	142	121	108	103
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Barium	mg/L	0.083	0.0756	0.0764	0.0799	0.0791	0.0898	0.0789	0.0685	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Combined Radium	pCi/L	0.895 U	0.322 U	0.0097 U	0.587	0.364 U	0.703	0.325 U	0.0774 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	0.00034 J	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-7								
		08/21/2019	04/15/2020	08/26/2020	03/23/2021	10/05/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023
Appendix III										
Boron	mg/L	0.091 J	0.0534 J	0.0665 J	0.0587 J	0.0673 J	0.0465 J	0.0839 J	0.0428 J	0.078 J
Calcium	mg/L	23.5	14	16.7	12.5	15.9	9.95	21.4	8.71	17
Chloride	mg/L	7.35	4.99	6.19	4.87	6.43	3.96	7.09	3.43	6.52
Fluoride	mg/L	0.068 J	0.0775 J	<0.06	<0.06	0.0933 J	0.0627 J	0.128	<0.06	0.0652 J
pH_Field	SU	5.97	6.16	6.11	6.04	6.06	5.08	6.44	5.98	6.47
Sulfate	mg/L	11.8	7.95	9.19	8.08	9.19	7.13	11.4	6.16	10.5
TDS	mg/L	133	102	109	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	<0.001	<0.001	<6.8e-005	6.94e-005 J	<8.1e-005	0.000105 J	<0.000112	<0.000112
Barium	mg/L	0.0946	0.0653	0.0845	0.0602	0.0716	0.0527	0.0852	0.0544	0.0713
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	9.7e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	0.000189 J	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.000406 J	0.000248 J	0.000245 J	<0.000203	0.000328 J	0.000203 J
Cobalt	mg/L	<0.002	<0.002	<0.002	0.00102	0.000182 J	0.0004	0.00016 J	0.00463	0.000168 J
Combined Radium	pCi/L	-0.0134 U	0.526 U	0.691 U	0.45 U	1.27	0.599 U	0.559 U	1.08	0.507 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<6.8e-005	9.55e-005 J	<0.000102	0.000169 J	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-8								
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019
Appendix III										
Boron	mg/L	0.0828 J	0.0691 J	0.0571 J	0.0634 J	0.0659 J	0.0666 J	0.0617 J	0.0586 J	0.0428 J
Calcium	mg/L	66.1	58	56.3	57.7	51.2	50.9	51.9	55	53.4
Chloride	mg/L	5.2	4.1	--	5	4.8	4.4	4.2	5.84	6.52
Fluoride	mg/L	0.14	0.11	--	0.1	0.1	0.11	0.08 J	<0.05	0.108
pH_Field	SU	6.81	6.73	6.61	6.59	6.6	6.64	6.68	6.62	6.56
Sulfate	mg/L	6.5	8.9	--	7.5	7.3	7.8	8.2	9.53	8.25
TDS	mg/L	253	229	223	232	208	209	213	212	211
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	0.00313 J	0.00247 J	0.00291 J	0.00265 J	0.00203 J	0.00246 J	0.00328 J	0.00325 J	--
Barium	mg/L	0.244	0.135	0.224	0.181	0.134	0.17	0.189	0.226	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	0.00212 J	<0.002	0.00204 J	<0.002	<0.002	<0.002	<0.002	0.00232 J	--
Combined Radium	pCi/L	7.45 U	0.549	0.65	0.436 U	0.486 U	0.319 U	0.875	0.378 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	0.000284 J	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-8								
		08/21/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/11/2022	10/26/2022	06/07/2023	11/07/2023
Appendix III										
Boron	mg/L	0.0569 J	0.0474 J	0.0501 J	0.0476 J	0.0462 J	0.037 J	0.0526 J	0.0355 J	0.048 J
Calcium	mg/L	71.5	56.2	55.5	48.9	66.3	61.9	63.7	56.3	58
Chloride	mg/L	5.89	5.21	5.16	5.3	5.6	5.13	5.72	5.02	5.39
Fluoride	mg/L	0.0648 J	0.0845 J	0.0732 J	0.0802 J	0.123	0.0695 J	0.0911 J	0.128	<0.06
pH_Field	SU	6.16	6.49	6.29	6.47	6.61	6.25	6.68	6.37	6.75
Sulfate	mg/L	10.8	12.5	16.1	9.21	16	11.8	10.1	12.5	8.1
TDS	mg/L	226	222	215	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.00302 J	0.00295 J	0.00304 J	0.00282	0.00287	0.00323	0.0033	0.00301	0.0034
Barium	mg/L	0.194	0.262	0.235	0.249	0.203	0.32	0.224	0.303	0.323
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	8.32e-005 J	<6.8e-005	7.28e-005 J	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.0003 J	<0.000203	0.000217 J	<0.000203	0.000245 J	<0.000203
Cobalt	mg/L	0.00303 J	0.00385 J	0.00388 J	0.003	0.00298	0.00461	0.00266	0.00299	0.00262
Combined Radium	pCi/L	0.552 U	0.641 U	0.339 U	0.662 U	0.291 U	0.475 U	0.528 U	0.682 U	0.765 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	0.000357	0.000319	0.000403	0.000422	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-9								
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/05/2018	02/06/2019	02/27/2019
Appendix III										
Boron	mg/L	0.0614 J	0.0531 J	0.0551 J	0.0568 J	0.0524 J	0.0576 J	0.0561 J	0.0627 J	0.0474 J
Calcium	mg/L	38.7	38.8	40.3	39.9	42.3	39.8	43.8	34.9	42.5
Chloride	mg/L	7	--	--	6.4	5.5	6.7	5.9	7.26	6.77
Fluoride	mg/L	0.12	--	--	0.13	0.12	0.13	0.04 J	<0.05	0.147
pH_Field	SU	6.93	6.96	6.89	6.85	6.94	6.93	6.94	6.73	6.85
Sulfate	mg/L	9	--	--	8.5	6.7	9.4	7.8	17	12.4
TDS	mg/L	183	--	180	191	192	185	200	151	186
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	0.00112 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.00111 J	<0.001	--
Barium	mg/L	0.187	0.148	0.158	0.16	0.161	0.183	0.186	0.128	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Combined Radium	pCi/L	0.226 U	0.071 U	0.569	0.43 U	0.656	0.395 U	0.52 U	0.244 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-9								
		08/21/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/11/2022	10/26/2022	06/12/2023	11/07/2023
Appendix III										
Boron	mg/L	0.0524 J	0.0562 J	0.0565 J	0.0609 J	0.0632 J	0.0636 J	0.0595 J	0.062 J	0.0693 J
Calcium	mg/L	50.9	43.6	43.2	38.1	35.4	36.9	47.7	37.8	35.4
Chloride	mg/L	6.16	7.27	6.57	7.42	7.78	7.2	6.99	7.07	7.13
Fluoride	mg/L	0.0984 J	0.133	0.13	0.132	0.147	0.108 J	0.119 J	0.13	0.105 J
pH_Field	SU	6.61	7.02	6.75	6.85	6.9	6.7	7.07	6.81	6.98
Sulfate	mg/L	11.3	15.9	12.9	15.7	18	17.7	13.8	18.9	17.4
TDS	mg/L	200	187	192	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	0.00118 J	<0.001	0.00063	0.000635	0.000555	0.000618	0.000545	0.00046
Barium	mg/L	0.183	0.186	0.202	0.157	0.147	0.16	0.154	0.146	0.133
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.000422 J	0.00031 J	0.00021 J	<0.000203	0.000345 J	0.000252 J
Cobalt	mg/L	<0.002	<0.002	<0.002	0.00103	0.00113	0.000908	0.000812	0.000874	0.00115
Combined Radium	pCi/L	1.53 U	0.119 U	1.18	0.694 U	0.311 U	0.605 U	0.572 U	0.395 U	0.649 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	0.00027	0.000177 J	0.000236	0.000276	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-1								
		06/27/2018	07/18/2018	08/07/2018	09/05/2018	09/24/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019
Appendix III										
Boron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Calcium	mg/L	39.4	38.4	36.7	43.6	44.5	45	33.7	30.1	25.3
Chloride	mg/L	3.6	3.8	3.3	3.4	3.8	3.3	3.2	3.78	3.75
Fluoride	mg/L	0.13	0.11	0.11	0.13	0.13	0.13	0.08 J	0.0934 J	<0.05
pH_Field	SU	6.79	6.8	6.73	6.75	6.83	6.76	6.6	6.66	6.6
Sulfate	mg/L	2.2 J	2.5 J	<1.4	1.4 J	<1.4	1.7 J	2.1 J	3.99	3.86
TDS	mg/L	144	156	140	154	165	148	127	113	107
Appendix IV										
Antimony	mg/L	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Barium	mg/L	0.115	0.116	0.0906	0.116	0.125	0.102	0.0784	0.0578	--
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Combined Radium	pCi/L	0.188 U	0.314 U	0.279 U	0.589	0.772	0.621	0.188 U	0.274 U	--
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-1								
		08/20/2019	04/13/2020	08/24/2020	03/24/2021	10/05/2021	05/09/2022	10/26/2022	06/07/2023	11/07/2023
Appendix III										
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	38.3	25.9	29	22.2	25.4	18.9	23.1	20.9	30.7
Chloride	mg/L	3.52	3.36	3.35	3.45	3.23	3.46	3.39	3.37	3.34
Fluoride	mg/L	0.0889 J	0.103	0.114	0.0725 J	<0.06	0.0824 J	<0.06	<0.06	<0.06
pH_Field	SU	6.3	6.66	6.64	5.85	6.46	6.03	6.66	5.9	6.83
Sulfate	mg/L	3.73	3.83	4.16	2.88	2.17	2.51	3.43	2.38	3.69
TDS	mg/L	141	104	114	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<8.1e-005	0.000164 J	<0.000112	<0.000112
Barium	mg/L	0.097	0.0529	0.0733	0.0525	0.0811	0.057	0.0682	0.0635	0.0787
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	0.000442 J	0.000352 J	0.000274 J	<0.000203	0.00033 J	<0.000203
Cobalt	mg/L	<0.002	<0.002	<0.002	<6.8e-005	0.000436	0.000139 J	<6.8e-005	<6.8e-005	<6.8e-005
Combined Radium	pCi/L	0.663	-0.129 U	0.177 U	0.245 U	2.07	0.784 U	0.561 U	1.09 U	0.23 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	9.88e-005 J	7.3e-005 J	<0.000102	<0.000102	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-2								GSD-AP-PZ-5
		04/13/2020	08/24/2020	03/17/2021	10/05/2021	05/09/2022	10/26/2022	06/05/2023	11/07/2023	06/27/2018
Appendix III										
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02
Calcium	mg/L	16.1	24.8	5.21	17.6	7.02	27.5	13.4	24.9	4.56
Chloride	mg/L	5.42	5.46	5.53	5.79	5.51	5.09	5.7	5.27	4.2
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.05 J
pH_Field	SU	5.84	6	5.34	5.72	4.35	6.16	5.2	6.32	5.81
Sulfate	mg/L	1.48	3.88	1.64	5.29	1.15 J	3.32	1.31 J	8.98	<1.4
TDS	mg/L	88	115	--	--	--	--	--	--	48.7
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071	<0.0006
Arsenic	mg/L	<0.001	<0.001	8.26e-005 J	9.28e-005 J	0.000101 J	0.000188 J	<0.000112	<0.000112	<0.001
Barium	mg/L	0.0832	0.132	0.045	0.118	0.0593	0.133	0.0862	0.13	0.154
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000304 J
Chromium	mg/L	<0.002	<0.002	0.000764 J	0.000346 J	0.000617 J	<0.000203	0.00029 J	<0.000203	<0.002
Cobalt	mg/L	0.00489 J	0.00237 J	0.00616	0.00287	0.00691	0.0021	0.00444	0.00184	0.00341 J
Combined Radium	pCi/L	0.472 U	-0.00312 U	0.756 U	1.13	0.352 U	0.391 U	0.662 U	0.614 U	0.259 U
Lead	mg/L	<0.001	<0.001	0.000191 J	0.000121 J	0.000178 J	<6.8e-005	0.000394	0.000136 J	<0.001
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025
Molybdenum	mg/L	<0.002	<0.002	<6.8e-005	0.00028	<0.000102	0.00022	<0.005075	<0.005075	<0.002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-5								
		07/18/2018	08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019	02/25/2019	08/21/2019
Appendix III										
Boron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03
Calcium	mg/L	3.92	3.74	3.38	3.25	3.37	3.67	2.89	2.95	3.04
Chloride	mg/L	4.1	3.3	3.7	3.9	4	3.6	3.72	3.95	3.85
Fluoride	mg/L	0.04 J	0.04 J	0.04 J	0.04 J	0.04 J	<0.032	<0.05	<0.05	<0.05
pH_Field	SU	5.74	5.7	5.61	5.59	5.6	5.73	5.44	5.46	5.13
Sulfate	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	0.639 J	<0.5	1.21
TDS	mg/L	46	48	47.3	44.7	35.3	48.7	42.7	40.7	46
Appendix IV										
Antimony	mg/L	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.00114 J	--	<0.0008
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001
Barium	mg/L	0.15	0.119	0.123	0.112	0.125	0.126	0.0602	--	0.085
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002
Cobalt	mg/L	0.00341 J	0.00221 J	0.00202 J	<0.002	<0.002	0.00227 J	<0.002	--	0.00225 J
Combined Radium	pCi/L	0.434	0.763	0.631	0.588	0.383 U	0.736	0.0202 U	--	0.442 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-5								GSD-AP-PZ-6
		04/15/2020	08/24/2020	03/16/2021	10/12/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023	06/27/2018
Appendix III										
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02
Calcium	mg/L	2.93	2.94	2.9	2.94	2.87	3.09	2.82	3.02	3.89
Chloride	mg/L	3.83	3.96	3.98	4.07	4.12	4.03	3.88	3.99	4.1
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.04 J
pH_Field	SU	5.31	4.65	5.47	5.33	5.38	5.31	5.1	5.32	5.44
Sulfate	mg/L	0.554 J	<0.5	1.02	0.895 J	1.02 J	0.992 J	<0.6	<0.6	<1.4
TDS	mg/L	41.3	42.7	--	--	--	--	--	--	44
Appendix IV										
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071	<0.0006
Arsenic	mg/L	<0.001	<0.001	8.08e-005 J	<6.8e-005	<8.1e-005	<8.1e-005	<0.000112	<0.000112	<0.001
Barium	mg/L	0.0535	0.0565	0.0553	0.0494	0.0497	0.0474	0.0456	0.0473	0.0298
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	<6.8e-005	8.42e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003
Chromium	mg/L	<0.002	<0.002	0.000534 J	0.000337 J	0.000368 J	0.000251 J	0.000463 J	0.000284 J	<0.002
Cobalt	mg/L	<0.002	<0.002	0.000384	8.08e-005 J	0.00015 J	<6.8e-005	0.000155 J	7.78e-005 J	<0.002
Combined Radium	pCi/L	0.432 U	0.454 U	0.32 U	0.963 U	0.659 U	1.08	0.739 U	1.15 U	0.231 U
Lead	mg/L	<0.001	<0.001	0.00013 J	<6.8e-005	<6.8e-005	<6.8e-005	7.78e-005 J	<6.8e-005	<0.001
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025
Molybdenum	mg/L	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.005075	<0.005075	<0.002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-6								
		07/18/2018	08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019	02/25/2019	08/21/2019
Appendix III										
Boron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03
Calcium	mg/L	3.8	3.89	3.78	3.73	3.79	3.79	3.75	3.81	3.71
Chloride	mg/L	4.3	3.8	3.9	4.2	4.1	3.8	4.15	4.2	4
Fluoride	mg/L	0.04 J	0.04 J	0.04 J	0.04 J	0.04 J	<0.032	<0.05	<0.05	<0.05
pH_Field	SU	5.58	5.55	5.56	5.57	5.55	5.6	5.51	5.54	5.44
Sulfate	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	1.69	1.53	1.62
TDS	mg/L	42.7	46	67.3	49.3	31.3	46	32.7	31.3	42.7
Appendix IV										
Antimony	mg/L	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.00181 J	--	<0.0008
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001
Barium	mg/L	0.0312	0.0265	0.0291	0.029	0.0298	0.0307	0.028	--	0.0312
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002
Combined Radium	pCi/L	0.676	0.496	0.62	-0.12 U	0.352 U	0.238 U	0.395 U	--	-0.00256 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS									
		GSD-AP-PZ-6								GSD-AP-MW-	
		04/15/2020	08/24/2020	03/16/2021	10/12/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023	04/15/2020	
Appendix III											
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.587
Calcium	mg/L	3.56	3.45	3.44	3.29	3.24	3.42	3.14	3.32	5	
Chloride	mg/L	3.71	3.59	3.66	3.68	3.68	3.5	3.38	3.54	6.47	
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	2.51	
pH_Field	SU	5.52	5.38	5.56	5.41	5.57	5.43	5.15	5.27	8.6	
Sulfate	mg/L	1.68	1.31	1.7	1.34	1.28 J	1.7 J	1.14 J	1.34 J	4.18	
TDS	mg/L	37.3	37.3	--	--	--	--	--	--	324	
Appendix IV											
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071	<0.0008	
Arsenic	mg/L	<0.001	<0.001	<6.8e-005	<6.8e-005	<8.1e-005	0.00015 J	<0.000112	<0.000112	<0.001	
Barium	mg/L	0.0296	0.031	0.0293	0.0303	0.0309	0.0282	0.0277	0.0303	0.2	
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	
Cadmium	mg/L	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	
Chromium	mg/L	<0.002	<0.002	0.000534 J	0.000307 J	0.00037 J	0.000224 J	0.000291 J	<0.000203	<0.002	
Cobalt	mg/L	<0.002	<0.002	0.000108 J	0.000142 J	0.000121 J	7.79e-005 J	8.43e-005 J	7.02e-005 J	<0.002	
Combined Radium	pCi/L	0.000738 U	0.404 U	0.589 U	1.57	0.468 U	0.283 U	0.33 U	0.43 U	0.231 U	
Lead	mg/L	<0.001	<0.001	8.35e-005 J	0.000119 J	0.000118 J	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	<0.007105	0.0783	
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	0.00286	<0.0003	<0.0003	<0.0003	<0.0003	
Molybdenum	mg/L	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.005075	<0.005075	<0.002	

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-2VA								GSD-AP-MW-
		07/01/2020	08/25/2020	03/22/2021	10/06/2021	05/16/2022	10/25/2022	06/07/2023	11/01/2023	03/30/2021
Appendix III										
Boron	mg/L	--	0.552	0.537	0.54	0.556	0.555	0.576	0.603	0.605
Calcium	mg/L	--	4.97	5.71	5.38	5.22	5.52	5.05	4.52	3.71
Chloride	mg/L	--	6.4	6.65	6.82	6.86	6.86	6.98	6.43	32
Fluoride	mg/L	--	2.4	2.33	2.56	2.59	2.41	2.51	2.39	6.09
pH_Field	SU	8.36	8.43	8.34	8.36	8.1	8.33	7.81	8.47	8.52
Sulfate	mg/L	--	4.83	2.04	2.44	0.723 J	2.13	2.39	2.1	10.3
TDS	mg/L	--	321	--	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	--	<0.0008	<0.000507	<0.000508	<0.000508	0.000539 J	<0.00071	<0.00071	<0.000507
Arsenic	mg/L	--	0.00135 J	0.00145	0.00139	0.00135	0.00165	0.00165	0.000904	0.000278
Barium	mg/L	--	0.135	0.114	0.12	0.132	0.137	0.154	0.169	0.313
Beryllium	mg/L	--	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	--	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	--	<0.002	0.000433 J	0.00025 J	0.000288 J	<0.000203	0.000262 J	<0.000203	0.00112
Cobalt	mg/L	--	<0.002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000116 J
Combined Radium	pCi/L	--	0.807	0.58 U	0.746 U	0.285 U	0.849	0.449 U	0.538 U	0.185 U
Lead	mg/L	--	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	0.069	0.0666	0.0666	0.0685	0.0612	0.0748	0.0668	0.0682	0.13
Mercury	mg/L	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	--	0.00323 J	0.00386	0.00363	0.00357	0.00361	<0.005075	<0.005075	0.000673

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-2VB					GSD-AP-MW-4V			
		10/12/2021	05/16/2022	10/25/2022	06/07/2023	11/01/2023	04/15/2020	08/26/2020	03/24/2021	10/11/2021
Appendix III										
Boron	mg/L	0.617	0.622	0.628	0.651	0.65	0.0634 J	0.0611 J	0.0618 J	0.0596 J
Calcium	mg/L	3.96	3.81	4.99	6.41	5.32	23.9	23.5	22.9	23
Chloride	mg/L	38	43.4	49	65.3	57.2	5.16	5.37	5.55	5.65
Fluoride	mg/L	5.97	6.14	5.77	5.43	5.71	0.218	0.217	0.212	0.23
pH_Field	SU	8.62	8.48	8.33	8.25	8.45	7.93	7.83	8.01	7.82
Sulfate	mg/L	15.2	7.94	18	33.6	25	1.25	1.21	1.39	1.7
TDS	mg/L	--	--	--	--	--	218	239	--	--
Appendix IV										
Antimony	mg/L	<0.000508	<0.000508	<0.000508	<0.00071	<0.00071	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.000426	0.000393	0.000907	0.0006	0.000352	<0.001	<0.001	0.00034	0.000366
Barium	mg/L	0.242	0.322	0.346	0.385	0.333	0.457	0.534	0.477	0.483
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000353 J	0.000264 J	<0.000203	0.000284 J	<0.000203	<0.002	<0.002	0.000402 J	0.000314 J
Cobalt	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.002	<0.002	8.16e-005 J	<6.8e-005
Combined Radium	pCi/L	0.323 U	0.253 U	0.529 U	0.758 U	0.508 U	0.329 U	0.839	0.725 U	1.58
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	0.129	0.111	0.141	0.125	0.121	0.0219	0.0203	0.0203	0.0198 J
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.00156	0.000955	0.00135	<0.005075	<0.005075	<0.002	<0.002	0.00188	0.00173

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-4V				GSD-AP-MW-21VC				
		05/11/2022	10/26/2022	06/05/2023	11/07/2023	10/06/2021	05/17/2022	10/26/2022	06/06/2023	11/07/2023
Appendix III										
Boron	mg/L	0.062 J	0.0618 J	0.0624 J	0.0642 J	0.532	0.548	0.559	0.569	0.58
Calcium	mg/L	22.6	23	23	23.6	3.46	3.3	3.6	3.22	3.31
Chloride	mg/L	5.48	5.53	5.72	5.69	166	188	181	163	179
Fluoride	mg/L	0.175	0.164	0.206	0.218	8.34	8.22	7.57	7.65	7.7
pH_Field	SU	7.91	7.92	7.72	8.26	8.53	8.31	8.31	8.41	8.35
Sulfate	mg/L	1.73 J	2.36	3.68	1 J	8.35	19.1	23.9	18.7	19.4
TDS	mg/L	--	--	--	--	--	--	--	--	--
Appendix IV										
Antimony	mg/L	<0.000508	<0.000508	<0.00071	<0.00071	0.00051 J	0.000508 J	0.000695 J	<0.00071	<0.00071
Arsenic	mg/L	0.000309	0.000446	0.000411	0.000502	0.00162	0.0014	0.00122	0.000917	0.00081
Barium	mg/L	0.525	0.474	0.521	0.484	0.374	0.435	0.431	0.433	0.441
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000239 J	0.000214 J	0.000367 J	0.000243 J	0.00111	0.00104	<0.000203	0.000256 J	<0.000203
Cobalt	mg/L	<6.8e-005	<6.8e-005	6.97e-005 J	9.61e-005 J	0.000205	0.000193 J	<6.8e-005	<6.8e-005	<6.8e-005
Combined Radium	pCi/L	0.576 U	0.725 U	0.433 U	0.932 U	1.78	0.4 U	0.755 U	0.476 U	0.638 U
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000225	0.000216	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	0.0187 J	0.0226	0.0189 J	0.0207	0.227	0.196	0.262	0.205	0.216
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.00135	0.00135	<0.005075	<0.005075	0.00107	0.00194	0.00238	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-22VB					GSD-AP-MW-18H			
		10/11/2021	05/17/2022	10/26/2022	06/07/2023	11/07/2023	04/15/2020	08/25/2020	03/16/2021	10/12/2021
Appendix III										
Boron	mg/L	0.378	0.385	0.4	0.361	0.432	0.124	0.105	0.0545 J	0.0717 J
Calcium	mg/L	9.35	9.99	9.75	10	9.48	19.1	14.9	5.77	10.3
Chloride	mg/L	1.72	1.69	1.56	2.05	1.48	6	5.79	3.85	4.59
Fluoride	mg/L	1.43	1.27	1.36	1.12	1.3	<0.06	<0.06	<0.06	<0.06
pH_Field	SU	8.13	8.29	8.11	7.41	8.1	5.1	5.13	5.08	5.12
Sulfate	mg/L	13.8	6.55	3.55	6.49	2.63	67.1	52.6	18.5	36.7
TDS	mg/L	--	--	--	--	--	126	107	--	--
Appendix IV										
Antimony	mg/L	0.00167	<0.000508	<0.000508	<0.00071	<0.00071	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00408	0.00303	0.00269	0.00215	0.0018	<0.001	<0.001	0.000136 J	0.00019 J
Barium	mg/L	0.238	0.276	0.257	0.253	0.268	0.0389	0.0388	0.0243	0.0298
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	<0.0003	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000412 J	0.00032 J	<0.000203	0.000364 J	<0.000203	<0.002	<0.002	0.000363 J	0.000209 J
Cobalt	mg/L	<6.8e-005	8.2e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<0.002	<0.002	0.000577	0.000615
Combined Radium	pCi/L	1.29	0.306 U	0.426 U	0.444 U	1.17 U	0.419 U	1.45	0.405 U	0.383 U
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	0.000312	<6.8e-005	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	0.0544	0.0499	0.0616	0.0517	0.058	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.00538	0.0028	0.0019	<0.005075	<0.005075	<0.002	<0.002	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-18H				GSD-AP-MW-19H				
		05/10/2022	10/26/2022	06/12/2023	11/07/2023	04/14/2020	06/01/2020	08/26/2020	03/23/2021	10/11/2021
Appendix III										
Boron	mg/L	0.0883 J	0.0784 J	0.0772 J	0.0703 J	0.448	--	0.39	0.41	0.328
Calcium	mg/L	12.4	10	10.8	8.62	32.9	--	39.3	31.7	40
Chloride	mg/L	6.38	5.44	5.74	5.01	7.35	--	7.03	7.11	7.04
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	--	<0.06	<0.06	0.0779 J
pH_Field	SU	4.87	4.81	4.52	5.07	5.79	--	6.33	5.88	6.08
Sulfate	mg/L	42.1	37.3	36.9	31.7	75.3	--	72.9	71.8	61.7
TDS	mg/L	--	--	--	--	190	--	202	--	--
Appendix IV										
Antimony	mg/L	<0.000508	<0.000508	<0.00071	<0.00071	<0.0008	--	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.000154 J	0.000338	0.000133 J	0.000212	<0.001	--	<0.001	0.000512	0.000846
Barium	mg/L	0.0361	0.0349	0.0312	0.0355	0.153	--	0.201	0.148	0.17
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	--	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	--	<0.0003	<6.8e-005	0.000124 J
Chromium	mg/L	0.00025 J	<0.000203	0.00029 J	<0.000203	<0.002	--	<0.002	0.000404 J	0.000475 J
Cobalt	mg/L	0.000302	0.000452	0.000225	0.000469	0.00886	--	0.0101	0.00674	0.00579
Combined Radium	pCi/L	0.576 U	0.165 U	0.564 U	0.793 U	42.6	0.215 U	0.265 U	0.562 U	0.202 U
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	--	<0.001	0.000201 J	0.000155 J
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	--	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.000102	<0.000102	<0.005075	<0.005075	<0.002	--	<0.002	<6.8e-005	0.000118 J

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-19H				GSD-AP-MW-20H				
		05/16/2022	10/26/2022	06/12/2023	11/07/2023	04/14/2020	08/26/2020	03/23/2021	10/11/2021	05/17/2022
Appendix III										
Boron	mg/L	0.334	0.327	0.34	0.349	0.308	0.308	0.419	0.504	0.632
Calcium	mg/L	26.9	51.6	28	39.7	51.5	47.6	57.6	63.4	74.7
Chloride	mg/L	7.1	7.01	6.98	7.19	6.64	6.73	6.33	6.37	6.22
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	0.125	0.103	0.108	0.127	<0.06
pH_Field	SU	5.24	6.25	5.81	6.31	6.02	6.36	6.38	6.36	5.74
Sulfate	mg/L	60.2	55.1	60.4	51.9	135	112	168	174	187
TDS	mg/L	--	--	--	--	323	310	--	--	--
Appendix IV										
Antimony	mg/L	<0.000508	<0.000508	<0.00071	<0.00071	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508
Arsenic	mg/L	0.000187 J	0.000583	0.000183 J	0.000242	0.00287 J	0.00186 J	0.00226	0.00191	0.002
Barium	mg/L	0.124	0.158	0.101	0.144	0.189	0.197	0.217	0.134	0.115
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	0.000151 J	<6.8e-005	8.42e-005 J	<6.8e-005	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	0.000265 J	<0.000203	0.000381 J	<0.000203	<0.002	<0.002	0.000417 J	0.000246 J	0.000215 J
Cobalt	mg/L	0.00485	0.00292	0.00377	0.00221	0.0122	0.0104	0.0125	0.00995	0.0102
Combined Radium	pCi/L	0.471 U	0.401 U	0.973 U	0.778 U	0.0962 U	0.413 U	0.847 U	1.09 U	0.551 U
Lead	mg/L	0.000134 J	<6.8e-005	0.000234	<6.8e-005	<0.001	<0.001	<6.8e-005	8.19e-005 J	<6.8e-005
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.000102	0.000169 J	<0.005075	<0.005075	<0.002	<0.002	0.000481	0.000312	0.000405

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS		
		GSD-AP-MW-20H		
		10/26/2022	06/05/2023	11/07/2023
Appendix III				
Boron	mg/L	0.584	0.771	0.74
Calcium	mg/L	76.3	70.5	64.7
Chloride	mg/L	5.91	5.58	4.93
Fluoride	mg/L	0.121 J	0.112 J	0.0912 J
pH_Field	SU	6.36	6.13	6.81
Sulfate	mg/L	158	172	149
TDS	mg/L	--	--	--
Appendix IV				
Antimony	mg/L	<0.000508	<0.00071	<0.00071
Arsenic	mg/L	0.00151	0.00144	0.00178
Barium	mg/L	0.0993	0.0865	0.0819
Beryllium	mg/L	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.000203	0.000265 J	<0.000203
Cobalt	mg/L	0.00924	0.0089	0.00823
Combined Radium	pCi/L	0.958 U	0.624 U	1.18
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.00033	<0.005075	<0.005075

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-14								
		08/20/2019	04/16/2020	08/25/2020	03/22/2021	10/12/2021	05/09/2022	10/26/2022	06/06/2023	11/08/2023
Appendix IV										
Selenium	mg/L	0.00328 J	0.00608 J	0.00247 J	0.00488	0.00287	0.00394	0.00151	0.0022	0.00127
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-10								
		12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/07/2018	10/22/2018	12/04/2018	02/06/2019	02/26/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-10								
		08/22/2019	04/15/2020	08/26/2020	03/23/2021	10/11/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-16								
		10/24/2018	11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	02/28/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	0.00349 J	0.00395 J	--	0.00707 J	0.00938 J	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-16								
		08/19/2019	04/15/2020	08/25/2020	03/22/2021	10/06/2021	05/17/2022	10/25/2022	06/06/2023	10/31/2023
Appendix IV										
Selenium	mg/L	0.00316 J	0.00434 J	0.00262 J	0.0134	0.00262	0.00609	0.00118	0.00301	0.00145
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-11								
		12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-11								
		08/22/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/17/2022	10/26/2022	06/13/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-12								
		12/06/2017	02/08/2018	04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/05/2018	02/06/2019	02/27/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-12								
		08/22/2019	04/14/2020	08/26/2020	03/23/2021	10/05/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-17								
		10/24/2018	11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	02/28/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-17								
		08/19/2019	04/16/2020	08/24/2020	03/22/2021	10/06/2021	05/09/2022	10/25/2022	06/06/2023	10/31/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	7.03e-005 J	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-1								
		12/06/2017	02/06/2018	04/23/2018	06/26/2018	08/07/2018	10/22/2018	12/04/2018	02/05/2019	02/26/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-1								
		08/21/2019	04/15/2020	08/25/2020	03/16/2021	10/05/2021	05/10/2022	10/26/2022	06/05/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	0.000112 J	<6.8e-005	0.000129 J	<6.8e-005	0.000101 J	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-2								
		08/20/2019	04/15/2020	08/25/2020	03/24/2021	10/11/2021	05/16/2022	10/25/2022	06/06/2023	11/01/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	0.000322 J	0.000318 J	0.000347 J	0.00037	0.000294	0.000414	0.000361	0.000425	0.000362

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-3								
		12/06/2017	02/06/2018	04/24/2018	06/27/2018	08/07/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-3								
		08/20/2019	04/13/2020	08/26/2020	03/22/2021	10/05/2021	05/10/2022	10/26/2022	06/05/2023	11/01/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	0.000121 J	0.000136 J	0.000113 J	0.00011 J	0.000102 J	0.000109 J

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-4								
		08/20/2019	04/15/2020	08/26/2020	03/24/2021	10/05/2021	05/16/2022	10/26/2022	06/06/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-5								
		12/07/2017	02/06/2018	04/25/2018	06/27/2018	08/07/2018	10/23/2018	12/05/2018	02/05/2019	02/27/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-5								
		08/20/2019	04/13/2020	08/24/2020	03/16/2021	10/05/2021	05/09/2022	10/26/2022	06/07/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

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

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-6								
		08/20/2019	04/13/2020	08/26/2020	03/17/2021	10/05/2021	05/10/2022	10/26/2022	06/05/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-7								
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-7								
		08/21/2019	04/15/2020	08/26/2020	03/23/2021	10/05/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-8								
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-8								
		08/21/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/11/2022	10/26/2022	06/07/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-9								
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/05/2018	02/06/2019	02/27/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-9								
		08/21/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/11/2022	10/26/2022	06/12/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-1								
		06/27/2018	07/18/2018	08/07/2018	09/05/2018	09/24/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-1								
		08/20/2019	04/13/2020	08/24/2020	03/24/2021	10/05/2021	05/09/2022	10/26/2022	06/07/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-2								GSD-AP-PZ-5
		04/13/2020	08/24/2020	03/17/2021	10/05/2021	05/09/2022	10/26/2022	06/05/2023	11/07/2023	06/27/2018
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.002
Thallium	mg/L	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-5								
		07/18/2018	08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019	02/25/2019	08/21/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-5								GSD-AP-PZ-6
		04/15/2020	08/24/2020	03/16/2021	10/12/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023	06/27/2018
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.002
Thallium	mg/L	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-6								
		07/18/2018	08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019	02/25/2019	08/21/2019
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-PZ-6								GSD-AP-MW-
		04/15/2020	08/24/2020	03/16/2021	10/12/2021	05/10/2022	10/26/2022	06/13/2023	11/07/2023	04/15/2020
Appendix IV										
Selenium	mg/L	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.002
Thallium	mg/L	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-2VA								GSD-AP-MW-
		07/01/2020	08/25/2020	03/22/2021	10/06/2021	05/16/2022	10/25/2022	06/07/2023	11/01/2023	03/30/2021
Appendix IV										
Selenium	mg/L	--	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000507
Thallium	mg/L	--	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-2VB					GSD-AP-MW-4V			
		10/12/2021	05/16/2022	10/25/2022	06/07/2023	11/01/2023	04/15/2020	08/26/2020	03/24/2021	10/11/2021
Appendix IV										
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-4V				GSD-AP-MW-21VC				
		05/11/2022	10/26/2022	06/05/2023	11/07/2023	10/06/2021	05/17/2022	10/26/2022	06/06/2023	11/07/2023
Appendix IV										
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-22VB					GSD-AP-MW-18H			
		10/11/2021	05/17/2022	10/26/2022	06/07/2023	11/07/2023	04/15/2020	08/25/2020	03/16/2021	10/12/2021
Appendix IV										
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.002	<0.002	0.000935 J	0.000679 J
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-18H				GSD-AP-MW-19H				
		05/10/2022	10/26/2022	06/12/2023	11/07/2023	04/14/2020	06/01/2020	08/26/2020	03/23/2021	10/11/2021
Appendix IV										
Selenium	mg/L	0.00125	0.00117	0.000931 J	0.00113	<0.002	--	<0.002	<0.000507	<0.000508
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	--	<0.0002	<6.8e-005	<6.8e-005

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS								
		GSD-AP-MW-19H				GSD-AP-MW-20H				
		05/16/2022	10/26/2022	06/12/2023	11/07/2023	04/14/2020	08/26/2020	03/23/2021	10/11/2021	05/17/2022
Appendix IV										
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.000507	<0.000508	<0.000508
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	0.000145 J	0.00013 J	0.000132 J

Notes:

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



ANALYTICAL DATA SUMMARY
Ash Pond (12/06/2017 - 11/08/2023)
APC Plant Gadsden
Gadsden County Alabama

Analyte	Units	GROUNDWATER MONITORING WELLS		
		GSD-AP-MW-20H		
		10/26/2022	06/05/2023	11/07/2023
Appendix IV				
Selenium	mg/L	<0.000508	<0.000508	<0.000508
Thallium	mg/L	0.000149 J	0.000125 J	0.000133 J

Notes:

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

Appendix B



Appendix B. Historical Groundwater Elevations Summary

Plant Gadsden Ash Pond 12/04/2017 - 10/31/2023

Well	Hydraulic Location	Geologic Unit	Measure Date															
			12/04/17	02/06/18	04/23/18	04/25/18	06/25/18	08/06/18	10/22/18	12/03/18	02/04/19	02/25/19	06/10/19	06/17/19	08/19/19	04/13/20	08/24/20	03/15/21
GSD-AP-MW-14	Upgradient	Alluvium					526.46	526.24	525.80	526.19	527.65	528.41	527.07	526.95	526.25	528.26	526.07	527.24
GSD-AP-MW-16	Upgradient	Alluvium							529.67	529.75	531.32	531.98	530.55	530.43	529.71	531.91	529.60	530.64
GSD-AP-MW-17	Upgradient	Alluvium							531.30	530.77	532.25	534.03	531.23	531.08	530.30	532.80	530.65	531.68
GSD-AP-MW-10	Downgradient	Alluvium	509.82	509.66	509.75	509.95	509.54	509.79	508.95	509.64	509.91	511.85	509.34	509.22	508.72	509.73	509.13	508.82
GSD-AP-MW-11	Downgradient	Alluvium	507.46	507.93	508.66	509.31	508.09	508.26	507.53	509.29	509.06	511.67	508.12	508.07	507.59	509.18	507.99	507.92
GSD-AP-MW-12	Downgradient	Alluvium	511.62	513.11	514.13	514.06	510.80	510.99	509.64	512.76	514.11	515.43	511.29	510.97	508.94	514.20	509.66	513.06
GSD-AP-MW-1	Downgradient	Alluvium	513.72	514.90	517.40	517.34	513.69	512.90	511.57	513.12	517.76	519.26	514.50	514.19	511.97	517.91	512.36	516.98
GSD-AP-MW-2	Downgradient	Alluvium	513.78	514.70	516.38	516.33	513.63	513.03	511.73	513.15	516.64	518.15	514.30	514.01	512.01	516.67	512.37	516.10
GSD-AP-MW-3	Downgradient	Alluvium	513.81	514.75	516.19	515.79	513.55	513.09	511.90	513.50	515.98	517.38	514.21	512.85	512.03	516.42	512.48	515.58
GSD-AP-MW-4	Downgradient	Alluvium	513.76	514.69	516.05	515.63	513.46	513.08	511.89	513.54	515.78	517.13	514.13	513.76	512.00	515.99	512.57	515.41
GSD-AP-MW-5	Downgradient	Alluvium	510.81	511.80	512.49	512.17	510.60	510.60	509.64	511.52	512.09	513.01	511.13	510.89	508.72	512.38	510.36	511.63
GSD-AP-MW-6	Downgradient	Alluvium	509.89	510.60	511.08	510.78	509.72	509.85	509.05	510.58	510.70	511.64	510.02	509.87	507.89	511.28	509.81	510.32
GSD-AP-MW-7	Downgradient	Alluvium	507.66	508.62	509.52	509.68	507.90	507.96	507.54	509.41	509.82	513.85	508.34	508.20	506.95	510.09	507.64	508.87
GSD-AP-MW-8	Downgradient	Alluvium	506.85	506.90	508.02	508.88	507.88	507.98	507.37	508.98	508.46	511.45	507.78	507.86	507.62	509.16	507.98	507.18
GSD-AP-MW-9	Downgradient	Alluvium	505.87	506.86	507.85	508.67	507.90	508.06	507.39	508.69	508.46	511.42	507.83	508.02	507.61	508.71	508.06	507.19
GSD-AP-PZ-1	Downgradient	Alluvium	512.46	514.52	517.21	517.14	512.36	511.31	509.79	512.92	517.22	518.98	513.54	513.10	510.07	517.30	510.78	516.46
GSD-AP-PZ-2	Downgradient	Alluvium	506.92	507.81	508.58	509.21	507.98	508.19	507.51	509.29	509.02	511.33	508.15	508.11	507.31	509.12	508.13	507.85
GSD-AP-PZ-5	Downgradient	Alluvium			517.67	517.52	512.60	511.42	509.93	512.73	517.72	519.28	513.81	513.36	510.37	518.21	511.00	516.90
GSD-AP-PZ-6	Downgradient	Alluvium			517.39	517.27	512.57	511.44	509.95	513.05	517.43	518.72	513.82	513.32	510.30	517.75	510.99	516.73
GSD-AP-MW-2VA	Vertical Delineation	Conasauga Formation														519.33	512.43	516.13
GSD-AP-MW-2VB	Vertical Delineation	Conasauga Formation																516.15
GSD-AP-MW-4V	Vertical Delineation	Conasauga Formation														516.09	512.39	515.31
GSD-AP-MW-21VC	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)																
GSD-AP-MW-22VB	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)																
GSD-AP-MW-18H	Horizontal Delineation	Alluvium														518.59	511.07	517.02
GSD-AP-MW-19H	Horizontal Delineation	Alluvium														516.97	511.36	516.29
GSD-AP-MW-20H	Horizontal Delineation	Alluvium														516.28	512.47	515.39
GSD-AP-MW-2V	Piezometer	Conasauga Formation														516.60	512.43	516.13
GSD-AP-MW-2VC	Piezometer	Conasauga Formation																
GSD-AP-MW-21VB	Piezometer	Conasauga - Knox Contact (Fault Zone)																
GSD-AP-MW-23VB	Piezometer	Conasauga - Knox Contact (Fault Zone)																

Notes:

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

Well	Hydraulic Location	Geologic Unit					
			10/04/21	05/05/22	10/24/22	06/05/23	10/31/23
GSD-AP-MW-14	Upgradient	Alluvium		527.40	525.88	527.25	526.08
GSD-AP-MW-16	Upgradient	Alluvium		530.93	529.41	530.85	529.52
GSD-AP-MW-17	Upgradient	Alluvium		531.70	530.02	531.65	530.13
GSD-AP-MW-10	Downgradient	Alluvium		509.05	508.35	508.85	506.82
GSD-AP-MW-11	Downgradient	Alluvium		508.32	507.50	508.02	505.30
GSD-AP-MW-12	Downgradient	Alluvium		512.20	508.36	511.88	507.41
GSD-AP-MW-1	Downgradient	Alluvium	513.76	516.18	510.76	515.95	511.19
GSD-AP-MW-2	Downgradient	Alluvium	513.65	515.54	510.75	515.32	511.12
GSD-AP-MW-3	Downgradient	Alluvium		515.04	510.82	514.91	511.18
GSD-AP-MW-4	Downgradient	Alluvium		514.94	510.86	514.80	511.19
GSD-AP-MW-5	Downgradient	Alluvium		511.48	508.00	511.17	507.89
GSD-AP-MW-6	Downgradient	Alluvium		510.16	507.51	510.02	507.12
GSD-AP-MW-7	Downgradient	Alluvium		508.75	506.64	508.38	505.84
GSD-AP-MW-8	Downgradient	Alluvium		507.97	507.68	507.61	504.16
GSD-AP-MW-9	Downgradient	Alluvium		507.98	507.70	507.68	504.30
GSD-AP-PZ-1	Downgradient	Alluvium	513.04	515.45	508.63	515.00	509.33
GSD-AP-PZ-2	Downgradient	Alluvium		508.25	507.17	507.95	505.49
GSD-AP-PZ-5	Downgradient	Alluvium		515.92	509.05	515.30	509.53
GSD-AP-PZ-6	Downgradient	Alluvium		515.77	508.98	515.24	509.41
GSD-AP-MW-2VA	Vertical Delineation	Conasauga Formation	513.65	515.56	510.75	515.36	511.15
GSD-AP-MW-2VB	Vertical Delineation	Conasauga Formation	513.51	515.59	510.72	515.35	511.17
GSD-AP-MW-4V	Vertical Delineation	Conasauga Formation		514.81	510.75	514.67	511.04
GSD-AP-MW-21VC	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)		515.83	510.87	515.59	511.41
GSD-AP-MW-22VB	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)		515.68	509.52	515.22	509.69
GSD-AP-MW-18H	Horizontal Delineation	Alluvium		516.01	509.19	515.43	509.66
GSD-AP-MW-19H	Horizontal Delineation	Alluvium		515.58	509.60	515.18	510.03
GSD-AP-MW-20H	Horizontal Delineation	Alluvium		514.90	510.82	514.81	511.42
GSD-AP-MW-2V	Piezometer	Conasauga Formation	513.67	515.54	510.77		
GSD-AP-MW-2VC	Piezometer	Conasauga Formation		515.84	510.91	515.61	511.35
GSD-AP-MW-21VB	Piezometer	Conasauga - Knox Contact (Fault Zone)		515.61	510.62	515.60	511.18
GSD-AP-MW-23VB	Piezometer	Conasauga - Knox Contact (Fault Zone)		515.92	509.52	515.72	510.05

Notes:

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

Appendix C

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

Field Case Narrative



Plant Gadsden Ash Pond

2023 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.

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-4	COND	Conductivity	11/7/2023 8:11	533.71	uS/cm
APCO-GSD-AP-MW-4	DO	DO	11/7/2023 8:11	0.13	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	11/7/2023 8:11	9.64	ft
APCO-GSD-AP-MW-4	ORP	Reduction Potential	11/7/2023 8:11	-104.2	mv
APCO-GSD-AP-MW-4	PH	pH	11/7/2023 8:11	6.56	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	11/7/2023 8:11	19.97	C
APCO-GSD-AP-MW-4	TURB	Turbidity	11/7/2023 8:11	12	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	11/7/2023 8:16	534.65	uS/cm
APCO-GSD-AP-MW-4	DO	DO	11/7/2023 8:16	0.08	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	11/7/2023 8:16	9.64	ft
APCO-GSD-AP-MW-4	ORP	Reduction Potential	11/7/2023 8:16	-93.61	mv
APCO-GSD-AP-MW-4	PH	pH	11/7/2023 8:16	6.57	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	11/7/2023 8:16	20.13	C
APCO-GSD-AP-MW-4	TURB	Turbidity	11/7/2023 8:16	10.16	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	11/7/2023 8:21	535.24	uS/cm
APCO-GSD-AP-MW-4	DO	DO	11/7/2023 8:21	0.07	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	11/7/2023 8:21	9.64	ft
APCO-GSD-AP-MW-4	ORP	Reduction Potential	11/7/2023 8:21	-90.93	mv
APCO-GSD-AP-MW-4	PH	pH	11/7/2023 8:21	6.56	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	11/7/2023 8:21	20.17	C
APCO-GSD-AP-MW-4	TURB	Turbidity	11/7/2023 8:21	8.83	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	11/7/2023 8:26	535.6	uS/cm
APCO-GSD-AP-MW-4	DO	DO	11/7/2023 8:26	0.06	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	11/7/2023 8:26	9.64	ft
APCO-GSD-AP-MW-4	ORP	Reduction Potential	11/7/2023 8:26	-90.26	mv
APCO-GSD-AP-MW-4	PH	pH	11/7/2023 8:26	6.64	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	11/7/2023 8:26	20.18	C
APCO-GSD-AP-MW-4	TURB	Turbidity	11/7/2023 8:26	6.89	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	11/7/2023 8:31	534.02	uS/cm
APCO-GSD-AP-MW-4	DO	DO	11/7/2023 8:31	0.05	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	11/7/2023 8:31	9.64	ft
APCO-GSD-AP-MW-4	ORP	Reduction Potential	11/7/2023 8:31	-90.97	mv
APCO-GSD-AP-MW-4	PH	pH	11/7/2023 8:31	6.72	SU
APCO-GSD-AP-MW-4	SULFIDE	Sulfide	11/7/2023 8:31	0	mg/L
APCO-GSD-AP-MW-4	TEMP	Temperature	11/7/2023 8:31	20.24	C
APCO-GSD-AP-MW-4	TURB	Turbidity	11/7/2023 8:31	6.28	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-4V	COND	Conductivity	11/7/2023 9:02	384.68	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	11/7/2023 9:02	0.1	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	11/7/2023 9:02	9.47	ft
APCO-GSD-AP-MW-4V	ORP	Reduction Potential	11/7/2023 9:02	-140.5	mv
APCO-GSD-AP-MW-4V	PH	pH	11/7/2023 9:02	8.04	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	11/7/2023 9:02	19.49	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	11/7/2023 9:02	6.58	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	11/7/2023 9:07	383.86	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	11/7/2023 9:07	0.06	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	11/7/2023 9:07	9.47	ft
APCO-GSD-AP-MW-4V	ORP	Reduction Potential	11/7/2023 9:07	-154.83	mv
APCO-GSD-AP-MW-4V	PH	pH	11/7/2023 9:07	8.13	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	11/7/2023 9:07	19.56	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	11/7/2023 9:07	6.57	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	11/7/2023 9:12	383.87	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	11/7/2023 9:12	0.05	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	11/7/2023 9:12	9.47	ft
APCO-GSD-AP-MW-4V	ORP	Reduction Potential	11/7/2023 9:12	-162.14	mv
APCO-GSD-AP-MW-4V	PH	pH	11/7/2023 9:12	8.2	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	11/7/2023 9:12	19.48	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	11/7/2023 9:12	7.09	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	11/7/2023 9:17	383.81	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	11/7/2023 9:17	0.05	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	11/7/2023 9:17	9.47	ft
APCO-GSD-AP-MW-4V	ORP	Reduction Potential	11/7/2023 9:17	-168.07	mv
APCO-GSD-AP-MW-4V	PH	pH	11/7/2023 9:17	8.26	SU
APCO-GSD-AP-MW-4V	SULFIDE	Sulfide	11/7/2023 9:17	0	mg/L
APCO-GSD-AP-MW-4V	TEMP	Temperature	11/7/2023 9:17	19.49	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	11/7/2023 9:17	6.17	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-5	COND	Conductivity	11/7/2023 11:27	356.68	uS/cm
APCO-GSD-AP-MW-5	DO	DO	11/7/2023 11:27	0.22	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	11/7/2023 11:27	8.55	ft
APCO-GSD-AP-MW-5	ORP	Reduction Potential	11/7/2023 11:27	16.47	mv
APCO-GSD-AP-MW-5	PH	pH	11/7/2023 11:27	6.91	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	11/7/2023 11:27	21.35	C
APCO-GSD-AP-MW-5	TURB	Turbidity	11/7/2023 11:27	10.49	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	11/7/2023 11:32	327.1	uS/cm
APCO-GSD-AP-MW-5	DO	DO	11/7/2023 11:32	0.22	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	11/7/2023 11:32	8.55	ft
APCO-GSD-AP-MW-5	ORP	Reduction Potential	11/7/2023 11:32	68.17	mv
APCO-GSD-AP-MW-5	PH	pH	11/7/2023 11:32	6.57	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	11/7/2023 11:32	21.39	C
APCO-GSD-AP-MW-5	TURB	Turbidity	11/7/2023 11:32	9.5	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	11/7/2023 11:37	328.05	uS/cm
APCO-GSD-AP-MW-5	DO	DO	11/7/2023 11:37	0.13	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	11/7/2023 11:37	8.55	ft
APCO-GSD-AP-MW-5	ORP	Reduction Potential	11/7/2023 11:37	76.27	mv
APCO-GSD-AP-MW-5	PH	pH	11/7/2023 11:37	6.56	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	11/7/2023 11:37	21.53	C
APCO-GSD-AP-MW-5	TURB	Turbidity	11/7/2023 11:37	8.35	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	11/7/2023 11:42	328.07	uS/cm
APCO-GSD-AP-MW-5	DO	DO	11/7/2023 11:42	0.1	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	11/7/2023 11:42	8.55	ft
APCO-GSD-AP-MW-5	ORP	Reduction Potential	11/7/2023 11:42	78.47	mv
APCO-GSD-AP-MW-5	PH	pH	11/7/2023 11:42	6.56	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	11/7/2023 11:42	21.45	C
APCO-GSD-AP-MW-5	TURB	Turbidity	11/7/2023 11:42	9.52	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	11/7/2023 11:47	328.26	uS/cm
APCO-GSD-AP-MW-5	DO	DO	11/7/2023 11:47	0.08	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	11/7/2023 11:47	8.55	ft
APCO-GSD-AP-MW-5	ORP	Reduction Potential	11/7/2023 11:47	78.21	mv
APCO-GSD-AP-MW-5	PH	pH	11/7/2023 11:47	6.58	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	11/7/2023 11:47	21.63	C
APCO-GSD-AP-MW-5	TURB	Turbidity	11/7/2023 11:47	8.69	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	11/7/2023 11:52	328.58	uS/cm
APCO-GSD-AP-MW-5	DO	DO	11/7/2023 11:52	0.07	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	11/7/2023 11:52	8.55	ft
APCO-GSD-AP-MW-5	ORP	Reduction Potential	11/7/2023 11:52	77.95	mv
APCO-GSD-AP-MW-5	PH	pH	11/7/2023 11:52	6.6	SU
APCO-GSD-AP-MW-5	SULFIDE	Sulfide	11/7/2023 11:52	0	mg/L
APCO-GSD-AP-MW-5	TEMP	Temperature	11/7/2023 11:52	21.53	C
APCO-GSD-AP-MW-5	TURB	Turbidity	11/7/2023 11:52	6.82	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-6	COND	Conductivity	11/7/2023 12:30	148.44	uS/cm
APCO-GSD-AP-MW-6	DO	DO	11/7/2023 12:30	0.11	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	11/7/2023 12:30	8.3	ft
APCO-GSD-AP-MW-6	ORP	Reduction Potential	11/7/2023 12:30	133.66	mv
APCO-GSD-AP-MW-6	PH	pH	11/7/2023 12:30	6.29	SU
APCO-GSD-AP-MW-6	TEMP	Temperature	11/7/2023 12:30	20.31	C
APCO-GSD-AP-MW-6	TURB	Turbidity	11/7/2023 12:30	3.98	NTU
APCO-GSD-AP-MW-6	COND	Conductivity	11/7/2023 12:35	148.84	uS/cm
APCO-GSD-AP-MW-6	DO	DO	11/7/2023 12:35	0.08	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	11/7/2023 12:35	8.3	ft
APCO-GSD-AP-MW-6	ORP	Reduction Potential	11/7/2023 12:35	137.04	mv
APCO-GSD-AP-MW-6	PH	pH	11/7/2023 12:35	6.27	SU
APCO-GSD-AP-MW-6	TEMP	Temperature	11/7/2023 12:35	20.37	C
APCO-GSD-AP-MW-6	TURB	Turbidity	11/7/2023 12:35	3.12	NTU
APCO-GSD-AP-MW-6	COND	Conductivity	11/7/2023 12:40	148.43	uS/cm
APCO-GSD-AP-MW-6	DO	DO	11/7/2023 12:40	0.07	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	11/7/2023 12:40	8.3	ft
APCO-GSD-AP-MW-6	ORP	Reduction Potential	11/7/2023 12:40	141.23	mv
APCO-GSD-AP-MW-6	PH	pH	11/7/2023 12:40	6.24	SU
APCO-GSD-AP-MW-6	TEMP	Temperature	11/7/2023 12:40	20.54	C
APCO-GSD-AP-MW-6	TURB	Turbidity	11/7/2023 12:40	3.26	NTU
APCO-GSD-AP-MW-6	COND	Conductivity	11/7/2023 12:45	147.82	uS/cm
APCO-GSD-AP-MW-6	DO	DO	11/7/2023 12:45	0.06	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	11/7/2023 12:45	8.3	ft
APCO-GSD-AP-MW-6	ORP	Reduction Potential	11/7/2023 12:45	144.22	mv
APCO-GSD-AP-MW-6	PH	pH	11/7/2023 12:45	6.22	SU
APCO-GSD-AP-MW-6	SULFIDE	Sulfide	11/7/2023 12:45	0	mg/L
APCO-GSD-AP-MW-6	TEMP	Temperature	11/7/2023 12:45	20.22	C
APCO-GSD-AP-MW-6	TURB	Turbidity	11/7/2023 12:45	3.22	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-20H	COND	Conductivity	11/7/2023 9:43	583.27	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	11/7/2023 9:43	0.1	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	11/7/2023 9:43	5.7	ft
APCO-GSD-AP-MW-20H	ORP	Reduction Potential	11/7/2023 9:43	13.66	mv
APCO-GSD-AP-MW-20H	PH	pH	11/7/2023 9:43	6.8	SU
APCO-GSD-AP-MW-20H	TEMP	Temperature	11/7/2023 9:43	19.13	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	11/7/2023 9:43	16.5	NTU
APCO-GSD-AP-MW-20H	COND	Conductivity	11/7/2023 9:48	584.1	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	11/7/2023 9:48	0.06	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	11/7/2023 9:48	5.7	ft
APCO-GSD-AP-MW-20H	ORP	Reduction Potential	11/7/2023 9:48	15.19	mv
APCO-GSD-AP-MW-20H	PH	pH	11/7/2023 9:48	6.82	SU
APCO-GSD-AP-MW-20H	TEMP	Temperature	11/7/2023 9:48	19.16	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	11/7/2023 9:48	12.2	NTU
APCO-GSD-AP-MW-20H	COND	Conductivity	11/7/2023 9:53	583.89	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	11/7/2023 9:53	0.05	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	11/7/2023 9:53	5.7	ft
APCO-GSD-AP-MW-20H	ORP	Reduction Potential	11/7/2023 9:53	17.05	mv
APCO-GSD-AP-MW-20H	PH	pH	11/7/2023 9:53	6.8	SU
APCO-GSD-AP-MW-20H	TEMP	Temperature	11/7/2023 9:53	19.21	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	11/7/2023 9:53	11.5	NTU
APCO-GSD-AP-MW-20H	COND	Conductivity	11/7/2023 9:58	584.15	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	11/7/2023 9:58	0.04	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	11/7/2023 9:58	5.7	ft
APCO-GSD-AP-MW-20H	ORP	Reduction Potential	11/7/2023 9:58	17.08	mv
APCO-GSD-AP-MW-20H	PH	pH	11/7/2023 9:58	6.81	SU
APCO-GSD-AP-MW-20H	SULFIDE	Sulfide	11/7/2023 9:58	0	mg/L
APCO-GSD-AP-MW-20H	TEMP	Temperature	11/7/2023 9:58	19.17	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	11/7/2023 9:58	7.86	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-1	COND	Conductivity	11/7/2023 10:45	188.95	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	11/7/2023 10:45	1.73	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	11/7/2023 10:45	12.8	ft
APCO-GSD-AP-PZ-1	ORP	Reduction Potential	11/7/2023 10:45	106.9	mv
APCO-GSD-AP-PZ-1	PH	pH	11/7/2023 10:45	6.8	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	11/7/2023 10:45	19.6	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	11/7/2023 10:45	6.08	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	11/7/2023 10:50	213.66	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	11/7/2023 10:50	1.46	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	11/7/2023 10:50	12.8	ft
APCO-GSD-AP-PZ-1	ORP	Reduction Potential	11/7/2023 10:50	106.58	mv
APCO-GSD-AP-PZ-1	PH	pH	11/7/2023 10:50	6.88	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	11/7/2023 10:50	19.5	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	11/7/2023 10:50	3.91	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	11/7/2023 10:55	211.49	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	11/7/2023 10:55	1.44	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	11/7/2023 10:55	12.8	ft
APCO-GSD-AP-PZ-1	ORP	Reduction Potential	11/7/2023 10:55	109.9	mv
APCO-GSD-AP-PZ-1	PH	pH	11/7/2023 10:55	6.85	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	11/7/2023 10:55	19.49	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	11/7/2023 10:55	3.01	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	11/7/2023 11:00	212.97	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	11/7/2023 11:00	1.38	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	11/7/2023 11:00	12.8	ft
APCO-GSD-AP-PZ-1	ORP	Reduction Potential	11/7/2023 11:00	113.28	mv
APCO-GSD-AP-PZ-1	PH	pH	11/7/2023 11:00	6.83	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	11/7/2023 11:00	19.54	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	11/7/2023 11:00	3.1	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-2	COND	Conductivity	11/7/2023 13:31	191.8	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	11/7/2023 13:31	0.09	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	11/7/2023 13:31	11.3	ft
APCO-GSD-AP-PZ-2	ORP	Reduction Potential	11/7/2023 13:31	69.13	mv
APCO-GSD-AP-PZ-2	PH	pH	11/7/2023 13:31	6.34	SU
APCO-GSD-AP-PZ-2	TEMP	Temperature	11/7/2023 13:31	21.41	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	11/7/2023 13:31	11.3	NTU
APCO-GSD-AP-PZ-2	COND	Conductivity	11/7/2023 13:36	206.23	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	11/7/2023 13:36	0.07	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	11/7/2023 13:36	11.3	ft
APCO-GSD-AP-PZ-2	ORP	Reduction Potential	11/7/2023 13:36	62.72	mv
APCO-GSD-AP-PZ-2	PH	pH	11/7/2023 13:36	6.34	SU
APCO-GSD-AP-PZ-2	TEMP	Temperature	11/7/2023 13:36	21.37	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	11/7/2023 13:36	7.87	NTU
APCO-GSD-AP-PZ-2	COND	Conductivity	11/7/2023 13:41	201.88	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	11/7/2023 13:41	0.07	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	11/7/2023 13:41	11.3	ft
APCO-GSD-AP-PZ-2	ORP	Reduction Potential	11/7/2023 13:41	77.15	mv
APCO-GSD-AP-PZ-2	PH	pH	11/7/2023 13:41	6.33	SU
APCO-GSD-AP-PZ-2	TEMP	Temperature	11/7/2023 13:41	21.33	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	11/7/2023 13:41	6.03	NTU
APCO-GSD-AP-PZ-2	COND	Conductivity	11/7/2023 13:46	201.9	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	11/7/2023 13:46	0.07	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	11/7/2023 13:46	11.3	ft
APCO-GSD-AP-PZ-2	ORP	Reduction Potential	11/7/2023 13:46	83.77	mv
APCO-GSD-AP-PZ-2	PH	pH	11/7/2023 13:46	6.32	SU
APCO-GSD-AP-PZ-2	TEMP	Temperature	11/7/2023 13:46	21.33	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	11/7/2023 13:46	5.26	NTU
APCO-GSD-AP-PZ-2	COND	Conductivity	11/7/2023 13:51	196.11	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	11/7/2023 13:51	0.07	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	11/7/2023 13:51	11.3	ft
APCO-GSD-AP-PZ-2	ORP	Reduction Potential	11/7/2023 13:51	88.07	mv
APCO-GSD-AP-PZ-2	PH	pH	11/7/2023 13:51	6.32	SU
APCO-GSD-AP-PZ-2	SULFIDE	Sulfide	11/7/2023 13:51	0	mg/L
APCO-GSD-AP-PZ-2	TEMP	Temperature	11/7/2023 13:51	21.36	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	11/7/2023 13:51	4	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-1	COND	Conductivity	11/7/2023 7:41	854.86	uS/cm
APCO-GSD-AP-MW-1	DO	DO	11/7/2023 7:41	0.15	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	11/7/2023 7:41	15.4	ft
APCO-GSD-AP-MW-1	ORP	Reduction Potential	11/7/2023 7:41	78.23	mv
APCO-GSD-AP-MW-1	PH	pH	11/7/2023 7:41	5.93	SU
APCO-GSD-AP-MW-1	TEMP	Temperature	11/7/2023 7:41	17.77	C
APCO-GSD-AP-MW-1	TURB	Turbidity	11/7/2023 7:41	2.32	NTU
APCO-GSD-AP-MW-1	COND	Conductivity	11/7/2023 7:46	852.44	uS/cm
APCO-GSD-AP-MW-1	DO	DO	11/7/2023 7:46	0.13	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	11/7/2023 7:46	15.4	ft
APCO-GSD-AP-MW-1	ORP	Reduction Potential	11/7/2023 7:46	83.41	mv
APCO-GSD-AP-MW-1	PH	pH	11/7/2023 7:46	5.94	SU
APCO-GSD-AP-MW-1	TEMP	Temperature	11/7/2023 7:46	17.86	C
APCO-GSD-AP-MW-1	TURB	Turbidity	11/7/2023 7:46	1.92	NTU
APCO-GSD-AP-MW-1	COND	Conductivity	11/7/2023 7:51	855.19	uS/cm
APCO-GSD-AP-MW-1	DO	DO	11/7/2023 7:51	0.13	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	11/7/2023 7:51	15.4	ft
APCO-GSD-AP-MW-1	ORP	Reduction Potential	11/7/2023 7:51	86.42	mv
APCO-GSD-AP-MW-1	PH	pH	11/7/2023 7:51	5.94	SU
APCO-GSD-AP-MW-1	TEMP	Temperature	11/7/2023 7:51	17.87	C
APCO-GSD-AP-MW-1	TURB	Turbidity	11/7/2023 7:51	1.86	NTU
APCO-GSD-AP-MW-1	COND	Conductivity	11/7/2023 7:56	859.33	uS/cm
APCO-GSD-AP-MW-1	DO	DO	11/7/2023 7:56	0.11	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	11/7/2023 7:56	15.4	ft
APCO-GSD-AP-MW-1	ORP	Reduction Potential	11/7/2023 7:56	88.52	mv
APCO-GSD-AP-MW-1	PH	pH	11/7/2023 7:56	5.94	SU
APCO-GSD-AP-MW-1	SULFIDE	Sulfide	11/7/2023 7:56	0	mg/L
APCO-GSD-AP-MW-1	TEMP	Temperature	11/7/2023 7:56	17.9	C
APCO-GSD-AP-MW-1	TURB	Turbidity	11/7/2023 7:56	1.67	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 8:38	43.69	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 8:38	8.11	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 8:38	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 8:38	284.43	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 8:38	4.87	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 8:38	17.29	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 8:38	3.78	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 8:43	48.43	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 8:43	8.22	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 8:43	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 8:43	312.99	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 8:43	4.8	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 8:43	17.29	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 8:43	3.21	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 8:48	53.43	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 8:48	8.19	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 8:48	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 8:48	329.92	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 8:48	4.75	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 8:48	17.26	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 8:48	2.97	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 8:53	62.72	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 8:53	8.12	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 8:53	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 8:53	336.97	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 8:53	4.77	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 8:53	17.3	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 8:53	2.95	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 8:58	76.77	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 8:58	7.95	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 8:58	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 8:58	340.45	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 8:58	4.85	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 8:58	17.35	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 8:58	2.79	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 9:03	87.7	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 9:03	7.8	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 9:03	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 9:03	340.28	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 9:03	4.9	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 9:03	17.34	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 9:03	2.74	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 9:08	92.48	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 9:08	7.76	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 9:08	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 9:08	335.85	mv

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 9:08	5.07	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 9:08	17.33	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 9:08	2.26	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 9:13	98.07	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 9:13	7.75	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 9:13	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 9:13	338	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 9:13	5.07	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 9:13	17.36	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 9:13	2.08	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 9:18	104.64	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 9:18	7.66	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 9:18	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 9:18	339.99	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 9:18	5.08	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 9:18	17.37	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 9:18	1.98	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 9:23	105.13	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 9:23	7.63	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 9:23	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 9:23	342.03	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 9:23	5.08	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 9:23	17.39	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 9:23	1.89	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	11/7/2023 9:28	103.65	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	11/7/2023 9:28	7.71	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	11/7/2023 9:28	14.98	ft
APCO-GSD-AP-MW-18H	ORP	Reduction Potential	11/7/2023 9:28	343.79	mv
APCO-GSD-AP-MW-18H	PH	pH	11/7/2023 9:28	5.07	SU
APCO-GSD-AP-MW-18H	SULFIDE	Sulfide	11/7/2023 9:28	0	mg/L
APCO-GSD-AP-MW-18H	TEMP	Temperature	11/7/2023 9:28	17.41	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	11/7/2023 9:28	2.01	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-19H	COND	Conductivity	11/7/2023 11:34	318.88	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	11/7/2023 11:34	0.09	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	11/7/2023 11:34	7.7	ft
APCO-GSD-AP-MW-19H	ORP	Reduction Potential	11/7/2023 11:34	37.07	mv
APCO-GSD-AP-MW-19H	PH	pH	11/7/2023 11:34	6.49	SU
APCO-GSD-AP-MW-19H	TEMP	Temperature	11/7/2023 11:34	19.72	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	11/7/2023 11:34	2.66	NTU
APCO-GSD-AP-MW-19H	COND	Conductivity	11/7/2023 11:39	307	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	11/7/2023 11:39	0.07	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	11/7/2023 11:39	7.7	ft
APCO-GSD-AP-MW-19H	ORP	Reduction Potential	11/7/2023 11:39	45.26	mv
APCO-GSD-AP-MW-19H	PH	pH	11/7/2023 11:39	6.41	SU
APCO-GSD-AP-MW-19H	TEMP	Temperature	11/7/2023 11:39	19.65	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	11/7/2023 11:39	2.41	NTU
APCO-GSD-AP-MW-19H	COND	Conductivity	11/7/2023 11:44	303.61	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	11/7/2023 11:44	0.06	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	11/7/2023 11:44	7.7	ft
APCO-GSD-AP-MW-19H	ORP	Reduction Potential	11/7/2023 11:44	48.77	mv
APCO-GSD-AP-MW-19H	PH	pH	11/7/2023 11:44	6.37	SU
APCO-GSD-AP-MW-19H	TEMP	Temperature	11/7/2023 11:44	19.75	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	11/7/2023 11:44	1.69	NTU
APCO-GSD-AP-MW-19H	COND	Conductivity	11/7/2023 11:49	298.45	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	11/7/2023 11:49	0.06	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	11/7/2023 11:49	7.7	ft
APCO-GSD-AP-MW-19H	ORP	Reduction Potential	11/7/2023 11:49	53.02	mv
APCO-GSD-AP-MW-19H	PH	pH	11/7/2023 11:49	6.31	SU
APCO-GSD-AP-MW-19H	SULFIDE	Sulfide	11/7/2023 11:49	0	mg/L
APCO-GSD-AP-MW-19H	TEMP	Temperature	11/7/2023 11:49	19.8	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	11/7/2023 11:49	1.56	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-5	COND	Conductivity	11/7/2023 10:46	43.4	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	11/7/2023 10:46	4.18	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	11/7/2023 10:46	14.97	ft
APCO-GSD-AP-PZ-5	ORP	Reduction Potential	11/7/2023 10:46	288.69	mv
APCO-GSD-AP-PZ-5	PH	pH	11/7/2023 10:46	5.32	SU
APCO-GSD-AP-PZ-5	TEMP	Temperature	11/7/2023 10:46	17.44	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	11/7/2023 10:46	2.91	NTU
APCO-GSD-AP-PZ-5	COND	Conductivity	11/7/2023 10:51	43.25	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	11/7/2023 10:51	4.18	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	11/7/2023 10:51	14.97	ft
APCO-GSD-AP-PZ-5	ORP	Reduction Potential	11/7/2023 10:51	292.75	mv
APCO-GSD-AP-PZ-5	PH	pH	11/7/2023 10:51	5.35	SU
APCO-GSD-AP-PZ-5	TEMP	Temperature	11/7/2023 10:51	17.46	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	11/7/2023 10:51	2.76	NTU
APCO-GSD-AP-PZ-5	COND	Conductivity	11/7/2023 10:56	43.11	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	11/7/2023 10:56	4.17	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	11/7/2023 10:56	14.97	ft
APCO-GSD-AP-PZ-5	ORP	Reduction Potential	11/7/2023 10:56	297.58	mv
APCO-GSD-AP-PZ-5	PH	pH	11/7/2023 10:56	5.33	SU
APCO-GSD-AP-PZ-5	TEMP	Temperature	11/7/2023 10:56	17.45	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	11/7/2023 10:56	2.54	NTU
APCO-GSD-AP-PZ-5	COND	Conductivity	11/7/2023 11:01	43.23	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	11/7/2023 11:01	4.19	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	11/7/2023 11:01	14.97	ft
APCO-GSD-AP-PZ-5	ORP	Reduction Potential	11/7/2023 11:01	301.32	mv
APCO-GSD-AP-PZ-5	PH	pH	11/7/2023 11:01	5.32	SU
APCO-GSD-AP-PZ-5	SULFIDE	Sulfide	11/7/2023 11:01	0	mg/L
APCO-GSD-AP-PZ-5	TEMP	Temperature	11/7/2023 11:01	17.44	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	11/7/2023 11:01	2.58	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-6	COND	Conductivity	11/7/2023 9:58	44.29	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	11/7/2023 9:58	5.15	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	11/7/2023 9:58	10.4	ft
APCO-GSD-AP-PZ-6	ORP	Reduction Potential	11/7/2023 9:58	271.25	mv
APCO-GSD-AP-PZ-6	PH	pH	11/7/2023 9:58	5.46	SU
APCO-GSD-AP-PZ-6	TEMP	Temperature	11/7/2023 9:58	19.36	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	11/7/2023 9:58	3.64	NTU
APCO-GSD-AP-PZ-6	COND	Conductivity	11/7/2023 10:03	43.86	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	11/7/2023 10:03	5.25	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	11/7/2023 10:03	10.4	ft
APCO-GSD-AP-PZ-6	ORP	Reduction Potential	11/7/2023 10:03	280.64	mv
APCO-GSD-AP-PZ-6	PH	pH	11/7/2023 10:03	5.41	SU
APCO-GSD-AP-PZ-6	TEMP	Temperature	11/7/2023 10:03	19.37	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	11/7/2023 10:03	3.45	NTU
APCO-GSD-AP-PZ-6	COND	Conductivity	11/7/2023 10:08	43.78	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	11/7/2023 10:08	5.29	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	11/7/2023 10:08	10.4	ft
APCO-GSD-AP-PZ-6	ORP	Reduction Potential	11/7/2023 10:08	290.34	mv
APCO-GSD-AP-PZ-6	PH	pH	11/7/2023 10:08	5.32	SU
APCO-GSD-AP-PZ-6	TEMP	Temperature	11/7/2023 10:08	19.34	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	11/7/2023 10:08	2.66	NTU
APCO-GSD-AP-PZ-6	COND	Conductivity	11/7/2023 10:13	43.74	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	11/7/2023 10:13	5.31	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	11/7/2023 10:13	10.4	ft
APCO-GSD-AP-PZ-6	ORP	Reduction Potential	11/7/2023 10:13	294.94	mv
APCO-GSD-AP-PZ-6	PH	pH	11/7/2023 10:13	5.27	SU
APCO-GSD-AP-PZ-6	SULFIDE	Sulfide	11/7/2023 10:13	0	mg/L
APCO-GSD-AP-PZ-6	TEMP	Temperature	11/7/2023 10:13	19.36	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	11/7/2023 10:13	2.21	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-22VB	COND	Conductivity	11/7/2023 12:47	347.04	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	11/7/2023 12:47	0.16	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	11/7/2023 12:47	9.81	ft
APCO-GSD-AP-MW-22VB	ORP	Reduction Potential	11/7/2023 12:47	-133.55	mv
APCO-GSD-AP-MW-22VB	PH	pH	11/7/2023 12:47	8.09	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	11/7/2023 12:47	19.11	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	11/7/2023 12:47	1.98	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	11/7/2023 12:52	360.66	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	11/7/2023 12:52	0.22	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	11/7/2023 12:52	10.16	ft
APCO-GSD-AP-MW-22VB	ORP	Reduction Potential	11/7/2023 12:52	-152.69	mv
APCO-GSD-AP-MW-22VB	PH	pH	11/7/2023 12:52	8.1	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	11/7/2023 12:52	19	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	11/7/2023 12:52	2.12	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	11/7/2023 12:57	336.87	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	11/7/2023 12:57	0.27	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	11/7/2023 12:57	10.67	ft
APCO-GSD-AP-MW-22VB	ORP	Reduction Potential	11/7/2023 12:57	-156.78	mv
APCO-GSD-AP-MW-22VB	PH	pH	11/7/2023 12:57	8.1	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	11/7/2023 12:57	18.89	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	11/7/2023 12:57	1.91	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	11/7/2023 13:02	325.7	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	11/7/2023 13:02	0.25	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	11/7/2023 13:02	10.71	ft
APCO-GSD-AP-MW-22VB	ORP	Reduction Potential	11/7/2023 13:02	-159.72	mv
APCO-GSD-AP-MW-22VB	PH	pH	11/7/2023 13:02	8.1	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	11/7/2023 13:02	18.82	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	11/7/2023 13:02	1.77	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	11/7/2023 13:07	335.17	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	11/7/2023 13:07	0.23	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	11/7/2023 13:07	10.78	ft
APCO-GSD-AP-MW-22VB	ORP	Reduction Potential	11/7/2023 13:07	-161.8	mv
APCO-GSD-AP-MW-22VB	PH	pH	11/7/2023 13:07	8.1	SU
APCO-GSD-AP-MW-22VB	SULFIDE	Sulfide	11/7/2023 13:07	0	mg/L
APCO-GSD-AP-MW-22VB	TEMP	Temperature	11/7/2023 13:07	18.82	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	11/7/2023 13:07	1.75	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 13:38	1593.25	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 13:38	0.03	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 13:38	13.59	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 13:38	-168.14	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 13:38	8.3	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 13:38	19.34	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 13:38	1.72	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 13:43	1586.2	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 13:43	0.02	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 13:43	14.65	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 13:43	-182.34	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 13:43	8.3	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 13:43	19.19	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 13:43	1.62	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 13:48	1546.31	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 13:48	0.03	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 13:48	15.52	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 13:48	-188.91	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 13:48	8.31	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 13:48	19.7	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 13:48	1.28	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 13:53	1572.46	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 13:53	0.02	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 13:53	15.68	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 13:53	-192.33	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 13:53	8.32	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 13:53	19.68	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 13:53	1.34	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 13:58	1600	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 13:58	0.02	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 13:58	16.02	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 13:58	-193.82	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 13:58	8.34	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 13:58	19.62	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 13:58	1.32	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 14:03	1593.24	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 14:03	0.02	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 14:03	16.24	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 14:03	-194.62	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 14:03	8.35	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 14:03	19.41	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 14:03	1.12	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 14:08	1587.92	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 14:08	0.03	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 14:08	16.41	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 14:08	-195.11	mv

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 14:08	8.35	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 14:08	19.44	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 14:08	1.08	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 14:13	1580.05	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 14:13	0.02	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 14:13	16.57	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 14:13	-195.14	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 14:13	8.35	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 14:13	19.35	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 14:13	1.03	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	11/7/2023 14:18	1589.84	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	11/7/2023 14:18	0.02	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	11/7/2023 14:18	16.69	ft
APCO-GSD-AP-MW-21VC	ORP	Reduction Potential	11/7/2023 14:18	-194.99	mv
APCO-GSD-AP-MW-21VC	PH	pH	11/7/2023 14:18	8.35	SU
APCO-GSD-AP-MW-21VC	SULFIDE	Sulfide	11/7/2023 14:18	0	mg/L
APCO-GSD-AP-MW-21VC	TEMP	Temperature	11/7/2023 14:18	19.44	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	11/7/2023 14:18	1.11	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 13:30	165.67	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 13:30	4.41	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 13:30	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 13:30	257.45	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 13:30	4.12	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 13:30	19.68	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 13:30	71.7	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 13:35	153.13	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 13:35	4.39	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 13:35	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 13:35	254.76	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 13:35	4.22	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 13:35	19.63	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 13:35	98.1	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 13:40	146.17	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 13:40	4.38	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 13:40	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 13:40	251.38	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 13:40	4.29	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 13:40	19.63	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 13:40	88.6	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 13:45	138.62	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 13:45	4.38	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 13:45	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 13:45	244.87	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 13:45	4.34	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 13:45	19.52	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 13:45	105.2	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 13:50	136.08	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 13:50	4.37	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 13:50	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 13:50	240.89	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 13:50	4.38	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 13:50	19.56	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 13:50	91.6	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 13:55	132.53	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 13:55	4.39	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 13:55	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 13:55	235.49	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 13:55	4.42	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 13:55	19.59	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 13:55	39	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 14:00	130.04	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 14:00	4.37	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 14:00	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 14:00	231.71	mv

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 14:00	4.46	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 14:00	19.49	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 14:00	22.2	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 14:05	129.2	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 14:05	4.36	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 14:05	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 14:05	228.03	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 14:05	4.48	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 14:05	19.59	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 14:05	12	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/31/2023 14:10	128.06	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/31/2023 14:10	4.35	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/31/2023 14:10	26.5	ft
APCO-GSD-AP-MW-16	ORP	Reduction Potential	10/31/2023 14:10	224.4	mv
APCO-GSD-AP-MW-16	PH	pH	10/31/2023 14:10	4.5	SU
APCO-GSD-AP-MW-16	SULFIDE	Sulfide	10/31/2023 14:10	0	mg/L
APCO-GSD-AP-MW-16	TEMP	Temperature	10/31/2023 14:10	19.52	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/31/2023 14:10	7.56	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-17	COND	Conductivity	10/31/2023 14:56	247.61	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/31/2023 14:56	1.14	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/31/2023 14:56	21.51	ft
APCO-GSD-AP-MW-17	ORP	Reduction Potential	10/31/2023 14:56	8.93	mv
APCO-GSD-AP-MW-17	PH	pH	10/31/2023 14:56	7.55	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/31/2023 14:56	20.07	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/31/2023 14:56	7.45	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/31/2023 15:01	249.14	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/31/2023 15:01	1.01	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/31/2023 15:01	22.01	ft
APCO-GSD-AP-MW-17	ORP	Reduction Potential	10/31/2023 15:01	18.75	mv
APCO-GSD-AP-MW-17	PH	pH	10/31/2023 15:01	7.71	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/31/2023 15:01	20.16	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/31/2023 15:01	4.34	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/31/2023 15:06	249.03	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/31/2023 15:06	0.97	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/31/2023 15:06	22.29	ft
APCO-GSD-AP-MW-17	ORP	Reduction Potential	10/31/2023 15:06	25.92	mv
APCO-GSD-AP-MW-17	PH	pH	10/31/2023 15:06	7.8	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/31/2023 15:06	20.21	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/31/2023 15:06	2.62	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/31/2023 15:11	248.24	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/31/2023 15:11	0.92	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/31/2023 15:11	22.55	ft
APCO-GSD-AP-MW-17	ORP	Reduction Potential	10/31/2023 15:11	26.52	mv
APCO-GSD-AP-MW-17	PH	pH	10/31/2023 15:11	7.9	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/31/2023 15:11	20.17	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/31/2023 15:11	1.75	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/31/2023 15:16	247.68	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/31/2023 15:16	0.89	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/31/2023 15:16	22.68	ft
APCO-GSD-AP-MW-17	ORP	Reduction Potential	10/31/2023 15:16	26.83	mv
APCO-GSD-AP-MW-17	PH	pH	10/31/2023 15:16	7.94	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/31/2023 15:16	19.93	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/31/2023 15:16	1.69	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/31/2023 15:21	247.39	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/31/2023 15:21	0.88	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/31/2023 15:21	22.82	ft
APCO-GSD-AP-MW-17	ORP	Reduction Potential	10/31/2023 15:21	26.52	mv
APCO-GSD-AP-MW-17	PH	pH	10/31/2023 15:21	7.98	SU
APCO-GSD-AP-MW-17	SULFIDE	Sulfide	10/31/2023 15:21	0	mg/L
APCO-GSD-AP-MW-17	TEMP	Temperature	10/31/2023 15:21	19.97	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/31/2023 15:21	0.62	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2	COND	Conductivity	11/1/2023 14:15	386.59	uS/cm
APCO-GSD-AP-MW-2	DO	DO	11/1/2023 14:15	0.11	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	11/1/2023 14:15	15.16	ft
APCO-GSD-AP-MW-2	ORP	Reduction Potential	11/1/2023 14:15	-65.42	mv
APCO-GSD-AP-MW-2	PH	pH	11/1/2023 14:15	6.57	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	11/1/2023 14:15	20.57	C
APCO-GSD-AP-MW-2	TURB	Turbidity	11/1/2023 14:15	14.3	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	11/1/2023 14:20	391.59	uS/cm
APCO-GSD-AP-MW-2	DO	DO	11/1/2023 14:20	0.08	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	11/1/2023 14:20	15.16	ft
APCO-GSD-AP-MW-2	ORP	Reduction Potential	11/1/2023 14:20	-56.6	mv
APCO-GSD-AP-MW-2	PH	pH	11/1/2023 14:20	6.49	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	11/1/2023 14:20	20.53	C
APCO-GSD-AP-MW-2	TURB	Turbidity	11/1/2023 14:20	7.13	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	11/1/2023 14:25	411.74	uS/cm
APCO-GSD-AP-MW-2	DO	DO	11/1/2023 14:25	0.08	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	11/1/2023 14:25	15.16	ft
APCO-GSD-AP-MW-2	ORP	Reduction Potential	11/1/2023 14:25	-53.1	mv
APCO-GSD-AP-MW-2	PH	pH	11/1/2023 14:25	6.47	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	11/1/2023 14:25	20.58	C
APCO-GSD-AP-MW-2	TURB	Turbidity	11/1/2023 14:25	4.43	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	11/1/2023 14:30	425.85	uS/cm
APCO-GSD-AP-MW-2	DO	DO	11/1/2023 14:30	0.08	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	11/1/2023 14:30	15.16	ft
APCO-GSD-AP-MW-2	ORP	Reduction Potential	11/1/2023 14:30	-51.78	mv
APCO-GSD-AP-MW-2	PH	pH	11/1/2023 14:30	6.46	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	11/1/2023 14:30	20.51	C
APCO-GSD-AP-MW-2	TURB	Turbidity	11/1/2023 14:30	3.98	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	11/1/2023 14:35	433.39	uS/cm
APCO-GSD-AP-MW-2	DO	DO	11/1/2023 14:35	0.07	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	11/1/2023 14:35	15.16	ft
APCO-GSD-AP-MW-2	ORP	Reduction Potential	11/1/2023 14:35	-51.55	mv
APCO-GSD-AP-MW-2	PH	pH	11/1/2023 14:35	6.48	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	11/1/2023 14:35	20.44	C
APCO-GSD-AP-MW-2	TURB	Turbidity	11/1/2023 14:35	3.25	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	11/1/2023 14:40	434.97	uS/cm
APCO-GSD-AP-MW-2	DO	DO	11/1/2023 14:40	0.07	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	11/1/2023 14:40	15.16	ft
APCO-GSD-AP-MW-2	ORP	Reduction Potential	11/1/2023 14:40	-51.96	mv
APCO-GSD-AP-MW-2	PH	pH	11/1/2023 14:40	6.49	SU
APCO-GSD-AP-MW-2	SULFIDE	Sulfide	11/1/2023 14:40	0	mg/L
APCO-GSD-AP-MW-2	TEMP	Temperature	11/1/2023 14:40	20.5	C
APCO-GSD-AP-MW-2	TURB	Turbidity	11/1/2023 14:40	1.78	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2VA	COND	Conductivity	11/1/2023 10:41	493.75	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	11/1/2023 10:41	0.37	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	11/1/2023 10:41	29.21	ft
APCO-GSD-AP-MW-2VA	ORP	Reduction Potential	11/1/2023 10:41	-147.91	mv
APCO-GSD-AP-MW-2VA	PH	pH	11/1/2023 10:41	8.3	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	11/1/2023 10:41	17.8	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	11/1/2023 10:41	0.55	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	11/1/2023 10:46	492.62	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	11/1/2023 10:46	0.29	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	11/1/2023 10:46	29.6	ft
APCO-GSD-AP-MW-2VA	ORP	Reduction Potential	11/1/2023 10:46	-163.19	mv
APCO-GSD-AP-MW-2VA	PH	pH	11/1/2023 10:46	8.31	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	11/1/2023 10:46	18.02	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	11/1/2023 10:46	0.37	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	11/1/2023 10:51	491.01	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	11/1/2023 10:51	0.24	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	11/1/2023 10:51	30.21	ft
APCO-GSD-AP-MW-2VA	ORP	Reduction Potential	11/1/2023 10:51	-169.56	mv
APCO-GSD-AP-MW-2VA	PH	pH	11/1/2023 10:51	8.34	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	11/1/2023 10:51	18.13	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	11/1/2023 10:51	0.55	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	11/1/2023 10:56	489.54	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	11/1/2023 10:56	0.21	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	11/1/2023 10:56	30.6	ft
APCO-GSD-AP-MW-2VA	ORP	Reduction Potential	11/1/2023 10:56	-174.54	mv
APCO-GSD-AP-MW-2VA	PH	pH	11/1/2023 10:56	8.37	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	11/1/2023 10:56	18.07	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	11/1/2023 10:56	0.31	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	11/1/2023 11:01	486.82	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	11/1/2023 11:01	0.2	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	11/1/2023 11:01	31.03	ft
APCO-GSD-AP-MW-2VA	ORP	Reduction Potential	11/1/2023 11:01	-175.13	mv
APCO-GSD-AP-MW-2VA	PH	pH	11/1/2023 11:01	8.36	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	11/1/2023 11:01	17.36	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	11/1/2023 11:01	0.22	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	11/1/2023 11:06	485.7	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	11/1/2023 11:06	0.2	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	11/1/2023 11:06	31.1	ft
APCO-GSD-AP-MW-2VA	ORP	Reduction Potential	11/1/2023 11:06	-176.54	mv
APCO-GSD-AP-MW-2VA	PH	pH	11/1/2023 11:06	8.4	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	11/1/2023 11:06	17.42	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	11/1/2023 11:06	0.2	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	11/1/2023 11:11	481.08	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	11/1/2023 11:11	0.21	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	11/1/2023 11:11	31.22	ft
APCO-GSD-AP-MW-2VA	ORP	Reduction Potential	11/1/2023 11:11	-177.59	mv

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2VA	PH	pH	11/1/2023 11:11	8.47	SU
APCO-GSD-AP-MW-2VA	SULFIDE	Sulfide	11/1/2023 11:11	0	mg/L
APCO-GSD-AP-MW-2VA	TEMP	Temperature	11/1/2023 11:11	17.53	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	11/1/2023 11:11	0.13	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-3	COND	Conductivity	11/1/2023 15:39	406.35	uS/cm
APCO-GSD-AP-MW-3	DO	DO	11/1/2023 15:39	0.11	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	11/1/2023 15:39	15.69	ft
APCO-GSD-AP-MW-3	ORP	Reduction Potential	11/1/2023 15:39	75.93	mv
APCO-GSD-AP-MW-3	PH	pH	11/1/2023 15:39	5.97	SU
APCO-GSD-AP-MW-3	TEMP	Temperature	11/1/2023 15:39	21.34	C
APCO-GSD-AP-MW-3	TURB	Turbidity	11/1/2023 15:39	0.22	NTU
APCO-GSD-AP-MW-3	COND	Conductivity	11/1/2023 15:44	414.41	uS/cm
APCO-GSD-AP-MW-3	DO	DO	11/1/2023 15:44	0.09	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	11/1/2023 15:44	15.69	ft
APCO-GSD-AP-MW-3	ORP	Reduction Potential	11/1/2023 15:44	82.78	mv
APCO-GSD-AP-MW-3	PH	pH	11/1/2023 15:44	5.96	SU
APCO-GSD-AP-MW-3	TEMP	Temperature	11/1/2023 15:44	21.31	C
APCO-GSD-AP-MW-3	TURB	Turbidity	11/1/2023 15:44	0.07	NTU
APCO-GSD-AP-MW-3	COND	Conductivity	11/1/2023 15:49	417.12	uS/cm
APCO-GSD-AP-MW-3	DO	DO	11/1/2023 15:49	0.08	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	11/1/2023 15:49	15.69	ft
APCO-GSD-AP-MW-3	ORP	Reduction Potential	11/1/2023 15:49	85.56	mv
APCO-GSD-AP-MW-3	PH	pH	11/1/2023 15:49	5.97	SU
APCO-GSD-AP-MW-3	TEMP	Temperature	11/1/2023 15:49	21.28	C
APCO-GSD-AP-MW-3	TURB	Turbidity	11/1/2023 15:49	0.04	NTU
APCO-GSD-AP-MW-3	COND	Conductivity	11/1/2023 15:54	418.32	uS/cm
APCO-GSD-AP-MW-3	DO	DO	11/1/2023 15:54	0.08	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	11/1/2023 15:54	15.69	ft
APCO-GSD-AP-MW-3	ORP	Reduction Potential	11/1/2023 15:54	88.04	mv
APCO-GSD-AP-MW-3	PH	pH	11/1/2023 15:54	5.98	SU
APCO-GSD-AP-MW-3	SULFIDE	Sulfide	11/1/2023 15:54	0	mg/L
APCO-GSD-AP-MW-3	TEMP	Temperature	11/1/2023 15:54	21.27	C
APCO-GSD-AP-MW-3	TURB	Turbidity	11/1/2023 15:54	0.01	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2VB	COND	Conductivity	11/1/2023 12:54	1014.04	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	11/1/2023 12:54	0.17	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	11/1/2023 12:54	28.45	ft
APCO-GSD-AP-MW-2VB	ORP	Reduction Potential	11/1/2023 12:54	-211.65	mv
APCO-GSD-AP-MW-2VB	PH	pH	11/1/2023 12:54	8.28	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	11/1/2023 12:54	19.28	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	11/1/2023 12:54	0.71	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	11/1/2023 12:59	983.28	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	11/1/2023 12:59	0.16	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	11/1/2023 12:59	28.8	ft
APCO-GSD-AP-MW-2VB	ORP	Reduction Potential	11/1/2023 12:59	-209.63	mv
APCO-GSD-AP-MW-2VB	PH	pH	11/1/2023 12:59	8.35	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	11/1/2023 12:59	19.49	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	11/1/2023 12:59	0.38	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	11/1/2023 13:04	963.95	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	11/1/2023 13:04	0.15	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	11/1/2023 13:04	29.12	ft
APCO-GSD-AP-MW-2VB	ORP	Reduction Potential	11/1/2023 13:04	-210.95	mv
APCO-GSD-AP-MW-2VB	PH	pH	11/1/2023 13:04	8.39	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	11/1/2023 13:04	19.23	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	11/1/2023 13:04	0.11	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	11/1/2023 13:09	963.32	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	11/1/2023 13:09	0.16	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	11/1/2023 13:09	29.16	ft
APCO-GSD-AP-MW-2VB	ORP	Reduction Potential	11/1/2023 13:09	-211.22	mv
APCO-GSD-AP-MW-2VB	PH	pH	11/1/2023 13:09	8.41	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	11/1/2023 13:09	19.74	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	11/1/2023 13:09	0.12	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	11/1/2023 13:14	950.47	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	11/1/2023 13:14	0.16	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	11/1/2023 13:14	29.19	ft
APCO-GSD-AP-MW-2VB	ORP	Reduction Potential	11/1/2023 13:14	-211.25	mv
APCO-GSD-AP-MW-2VB	PH	pH	11/1/2023 13:14	8.45	SU
APCO-GSD-AP-MW-2VB	SULFIDE	Sulfide	11/1/2023 13:14	0	mg/L
APCO-GSD-AP-MW-2VB	TEMP	Temperature	11/1/2023 13:14	19.27	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	11/1/2023 13:14	0.13	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-7	COND	Conductivity	11/7/2023 8:45	182.15	uS/cm
APCO-GSD-AP-MW-7	DO	DO	11/7/2023 8:45	0.22	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	11/7/2023 8:45	14.36	ft
APCO-GSD-AP-MW-7	ORP	Reduction Potential	11/7/2023 8:45	157.16	mv
APCO-GSD-AP-MW-7	PH	pH	11/7/2023 8:45	6.54	SU
APCO-GSD-AP-MW-7	TEMP	Temperature	11/7/2023 8:45	17.83	C
APCO-GSD-AP-MW-7	TURB	Turbidity	11/7/2023 8:45	0.51	NTU
APCO-GSD-AP-MW-7	COND	Conductivity	11/7/2023 8:50	180.39	uS/cm
APCO-GSD-AP-MW-7	DO	DO	11/7/2023 8:50	0.17	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	11/7/2023 8:50	14.36	ft
APCO-GSD-AP-MW-7	ORP	Reduction Potential	11/7/2023 8:50	143.8	mv
APCO-GSD-AP-MW-7	PH	pH	11/7/2023 8:50	6.5	SU
APCO-GSD-AP-MW-7	TEMP	Temperature	11/7/2023 8:50	18.02	C
APCO-GSD-AP-MW-7	TURB	Turbidity	11/7/2023 8:50	0.46	NTU
APCO-GSD-AP-MW-7	COND	Conductivity	11/7/2023 8:55	175.8	uS/cm
APCO-GSD-AP-MW-7	DO	DO	11/7/2023 8:55	0.17	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	11/7/2023 8:55	14.36	ft
APCO-GSD-AP-MW-7	ORP	Reduction Potential	11/7/2023 8:55	139.36	mv
APCO-GSD-AP-MW-7	PH	pH	11/7/2023 8:55	6.49	SU
APCO-GSD-AP-MW-7	TEMP	Temperature	11/7/2023 8:55	18.04	C
APCO-GSD-AP-MW-7	TURB	Turbidity	11/7/2023 8:55	0.29	NTU
APCO-GSD-AP-MW-7	COND	Conductivity	11/7/2023 9:00	176.3	uS/cm
APCO-GSD-AP-MW-7	DO	DO	11/7/2023 9:00	0.15	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	11/7/2023 9:00	14.36	ft
APCO-GSD-AP-MW-7	ORP	Reduction Potential	11/7/2023 9:00	138.72	mv
APCO-GSD-AP-MW-7	PH	pH	11/7/2023 9:00	6.47	SU
APCO-GSD-AP-MW-7	SULFIDE	Sulfide	11/7/2023 9:00	0	mg/L
APCO-GSD-AP-MW-7	TEMP	Temperature	11/7/2023 9:00	18.18	C
APCO-GSD-AP-MW-7	TURB	Turbidity	11/7/2023 9:00	0.27	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-8	COND	Conductivity	11/7/2023 9:44	278.46	uS/cm
APCO-GSD-AP-MW-8	DO	DO	11/7/2023 9:44	0.1	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	11/7/2023 9:44	14.58	ft
APCO-GSD-AP-MW-8	ORP	Reduction Potential	11/7/2023 9:44	-6.2	mv
APCO-GSD-AP-MW-8	PH	pH	11/7/2023 9:44	6.54	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	11/7/2023 9:44	18.56	C
APCO-GSD-AP-MW-8	TURB	Turbidity	11/7/2023 9:44	17	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	11/7/2023 9:49	316.35	uS/cm
APCO-GSD-AP-MW-8	DO	DO	11/7/2023 9:49	0.09	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	11/7/2023 9:49	14.58	ft
APCO-GSD-AP-MW-8	ORP	Reduction Potential	11/7/2023 9:49	-31.67	mv
APCO-GSD-AP-MW-8	PH	pH	11/7/2023 9:49	6.68	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	11/7/2023 9:49	18.53	C
APCO-GSD-AP-MW-8	TURB	Turbidity	11/7/2023 9:49	7.93	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	11/7/2023 9:54	326.95	uS/cm
APCO-GSD-AP-MW-8	DO	DO	11/7/2023 9:54	0.09	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	11/7/2023 9:54	14.58	ft
APCO-GSD-AP-MW-8	ORP	Reduction Potential	11/7/2023 9:54	-42.39	mv
APCO-GSD-AP-MW-8	PH	pH	11/7/2023 9:54	6.73	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	11/7/2023 9:54	18.52	C
APCO-GSD-AP-MW-8	TURB	Turbidity	11/7/2023 9:54	5.42	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	11/7/2023 9:59	326.68	uS/cm
APCO-GSD-AP-MW-8	DO	DO	11/7/2023 9:59	0.09	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	11/7/2023 9:59	14.58	ft
APCO-GSD-AP-MW-8	ORP	Reduction Potential	11/7/2023 9:59	-47.36	mv
APCO-GSD-AP-MW-8	PH	pH	11/7/2023 9:59	6.75	SU
APCO-GSD-AP-MW-8	SULFIDE	Sulfide	11/7/2023 9:59	0	mg/L
APCO-GSD-AP-MW-8	TEMP	Temperature	11/7/2023 9:59	18.54	C
APCO-GSD-AP-MW-8	TURB	Turbidity	11/7/2023 9:59	3.5	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-9	COND	Conductivity	11/7/2023 10:40	232.12	uS/cm
APCO-GSD-AP-MW-9	DO	DO	11/7/2023 10:40	0.15	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	11/7/2023 10:40	15.71	ft
APCO-GSD-AP-MW-9	ORP	Reduction Potential	11/7/2023 10:40	25.02	mv
APCO-GSD-AP-MW-9	PH	pH	11/7/2023 10:40	6.72	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	11/7/2023 10:40	18.99	C
APCO-GSD-AP-MW-9	TURB	Turbidity	11/7/2023 10:40	3.49	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	11/7/2023 10:45	244.25	uS/cm
APCO-GSD-AP-MW-9	DO	DO	11/7/2023 10:45	0.11	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	11/7/2023 10:45	15.71	ft
APCO-GSD-AP-MW-9	ORP	Reduction Potential	11/7/2023 10:45	27.22	mv
APCO-GSD-AP-MW-9	PH	pH	11/7/2023 10:45	6.79	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	11/7/2023 10:45	18.93	C
APCO-GSD-AP-MW-9	TURB	Turbidity	11/7/2023 10:45	2	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	11/7/2023 10:50	255.89	uS/cm
APCO-GSD-AP-MW-9	DO	DO	11/7/2023 10:50	0.11	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	11/7/2023 10:50	15.71	ft
APCO-GSD-AP-MW-9	ORP	Reduction Potential	11/7/2023 10:50	15.41	mv
APCO-GSD-AP-MW-9	PH	pH	11/7/2023 10:50	6.88	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	11/7/2023 10:50	18.95	C
APCO-GSD-AP-MW-9	TURB	Turbidity	11/7/2023 10:50	2.85	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	11/7/2023 10:55	261.78	uS/cm
APCO-GSD-AP-MW-9	DO	DO	11/7/2023 10:55	0.1	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	11/7/2023 10:55	15.71	ft
APCO-GSD-AP-MW-9	ORP	Reduction Potential	11/7/2023 10:55	2.53	mv
APCO-GSD-AP-MW-9	PH	pH	11/7/2023 10:55	6.94	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	11/7/2023 10:55	18.94	C
APCO-GSD-AP-MW-9	TURB	Turbidity	11/7/2023 10:55	1.76	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	11/7/2023 11:00	265.65	uS/cm
APCO-GSD-AP-MW-9	DO	DO	11/7/2023 11:00	0.1	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	11/7/2023 11:00	15.71	ft
APCO-GSD-AP-MW-9	ORP	Reduction Potential	11/7/2023 11:00	-7.51	mv
APCO-GSD-AP-MW-9	PH	pH	11/7/2023 11:00	6.98	SU
APCO-GSD-AP-MW-9	SULFIDE	Sulfide	11/7/2023 11:00	0	mg/L
APCO-GSD-AP-MW-9	TEMP	Temperature	11/7/2023 11:00	18.92	C
APCO-GSD-AP-MW-9	TURB	Turbidity	11/7/2023 11:00	1.24	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-10	COND	Conductivity	11/7/2023 11:55	312.96	uS/cm
APCO-GSD-AP-MW-10	DO	DO	11/7/2023 11:55	0.13	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	11/7/2023 11:55	24.51	ft
APCO-GSD-AP-MW-10	ORP	Reduction Potential	11/7/2023 11:55	-96.8	mv
APCO-GSD-AP-MW-10	PH	pH	11/7/2023 11:55	6.93	SU
APCO-GSD-AP-MW-10	TEMP	Temperature	11/7/2023 11:55	20.08	C
APCO-GSD-AP-MW-10	TURB	Turbidity	11/7/2023 11:55	28	NTU
APCO-GSD-AP-MW-10	COND	Conductivity	11/7/2023 12:00	312.78	uS/cm
APCO-GSD-AP-MW-10	DO	DO	11/7/2023 12:00	0.1	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	11/7/2023 12:00	24.51	ft
APCO-GSD-AP-MW-10	ORP	Reduction Potential	11/7/2023 12:00	-102.51	mv
APCO-GSD-AP-MW-10	PH	pH	11/7/2023 12:00	6.93	SU
APCO-GSD-AP-MW-10	TEMP	Temperature	11/7/2023 12:00	20.06	C
APCO-GSD-AP-MW-10	TURB	Turbidity	11/7/2023 12:00	9.61	NTU
APCO-GSD-AP-MW-10	COND	Conductivity	11/7/2023 12:05	312.76	uS/cm
APCO-GSD-AP-MW-10	DO	DO	11/7/2023 12:05	0.09	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	11/7/2023 12:05	24.51	ft
APCO-GSD-AP-MW-10	ORP	Reduction Potential	11/7/2023 12:05	-105.95	mv
APCO-GSD-AP-MW-10	PH	pH	11/7/2023 12:05	6.94	SU
APCO-GSD-AP-MW-10	TEMP	Temperature	11/7/2023 12:05	20.06	C
APCO-GSD-AP-MW-10	TURB	Turbidity	11/7/2023 12:05	5.58	NTU
APCO-GSD-AP-MW-10	COND	Conductivity	11/7/2023 12:10	311.93	uS/cm
APCO-GSD-AP-MW-10	DO	DO	11/7/2023 12:10	0.09	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	11/7/2023 12:10	24.51	ft
APCO-GSD-AP-MW-10	ORP	Reduction Potential	11/7/2023 12:10	-107.88	mv
APCO-GSD-AP-MW-10	PH	pH	11/7/2023 12:10	6.94	SU
APCO-GSD-AP-MW-10	SULFIDE	Sulfide	11/7/2023 12:10	0	mg/L
APCO-GSD-AP-MW-10	TEMP	Temperature	11/7/2023 12:10	20.06	C
APCO-GSD-AP-MW-10	TURB	Turbidity	11/7/2023 12:10	3.67	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-11	COND	Conductivity	11/7/2023 14:06	689.45	uS/cm
APCO-GSD-AP-MW-11	DO	DO	11/7/2023 14:06	0.1	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	11/7/2023 14:06	12.51	ft
APCO-GSD-AP-MW-11	ORP	Reduction Potential	11/7/2023 14:06	-9.47	mv
APCO-GSD-AP-MW-11	PH	pH	11/7/2023 14:06	6.27	SU
APCO-GSD-AP-MW-11	TEMP	Temperature	11/7/2023 14:06	20.84	C
APCO-GSD-AP-MW-11	TURB	Turbidity	11/7/2023 14:06	11.4	NTU
APCO-GSD-AP-MW-11	COND	Conductivity	11/7/2023 14:11	683.78	uS/cm
APCO-GSD-AP-MW-11	DO	DO	11/7/2023 14:11	0.08	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	11/7/2023 14:11	12.51	ft
APCO-GSD-AP-MW-11	ORP	Reduction Potential	11/7/2023 14:11	-16.89	mv
APCO-GSD-AP-MW-11	PH	pH	11/7/2023 14:11	6.28	SU
APCO-GSD-AP-MW-11	TEMP	Temperature	11/7/2023 14:11	20.6	C
APCO-GSD-AP-MW-11	TURB	Turbidity	11/7/2023 14:11	9.68	NTU
APCO-GSD-AP-MW-11	COND	Conductivity	11/7/2023 14:16	679.38	uS/cm
APCO-GSD-AP-MW-11	DO	DO	11/7/2023 14:16	0.22	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	11/7/2023 14:16	12.51	ft
APCO-GSD-AP-MW-11	ORP	Reduction Potential	11/7/2023 14:16	-20.89	mv
APCO-GSD-AP-MW-11	PH	pH	11/7/2023 14:16	6.31	SU
APCO-GSD-AP-MW-11	TEMP	Temperature	11/7/2023 14:16	20.59	C
APCO-GSD-AP-MW-11	TURB	Turbidity	11/7/2023 14:16	8.96	NTU
APCO-GSD-AP-MW-11	COND	Conductivity	11/7/2023 14:21	672.33	uS/cm
APCO-GSD-AP-MW-11	DO	DO	11/7/2023 14:21	0.25	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	11/7/2023 14:21	12.51	ft
APCO-GSD-AP-MW-11	ORP	Reduction Potential	11/7/2023 14:21	-23.06	mv
APCO-GSD-AP-MW-11	PH	pH	11/7/2023 14:21	6.33	SU
APCO-GSD-AP-MW-11	TEMP	Temperature	11/7/2023 14:21	20.55	C
APCO-GSD-AP-MW-11	TURB	Turbidity	11/7/2023 14:21	6.27	NTU
APCO-GSD-AP-MW-11	COND	Conductivity	11/7/2023 14:26	672.19	uS/cm
APCO-GSD-AP-MW-11	DO	DO	11/7/2023 14:26	0.25	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	11/7/2023 14:26	12.51	ft
APCO-GSD-AP-MW-11	ORP	Reduction Potential	11/7/2023 14:26	-25.99	mv
APCO-GSD-AP-MW-11	PH	pH	11/7/2023 14:26	6.36	SU
APCO-GSD-AP-MW-11	SULFIDE	Sulfide	11/7/2023 14:26	0	mg/L
APCO-GSD-AP-MW-11	TEMP	Temperature	11/7/2023 14:26	20.53	C
APCO-GSD-AP-MW-11	TURB	Turbidity	11/7/2023 14:26	3.9	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-12	COND	Conductivity	11/7/2023 12:54	557.41	uS/cm
APCO-GSD-AP-MW-12	DO	DO	11/7/2023 12:54	0.15	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	11/7/2023 12:54	14.65	ft
APCO-GSD-AP-MW-12	ORP	Reduction Potential	11/7/2023 12:54	126.55	mv
APCO-GSD-AP-MW-12	PH	pH	11/7/2023 12:54	5.51	SU
APCO-GSD-AP-MW-12	TEMP	Temperature	11/7/2023 12:54	21.64	C
APCO-GSD-AP-MW-12	TURB	Turbidity	11/7/2023 12:54	0.32	NTU
APCO-GSD-AP-MW-12	COND	Conductivity	11/7/2023 12:59	638.08	uS/cm
APCO-GSD-AP-MW-12	DO	DO	11/7/2023 12:59	0.12	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	11/7/2023 12:59	14.65	ft
APCO-GSD-AP-MW-12	ORP	Reduction Potential	11/7/2023 12:59	137.34	mv
APCO-GSD-AP-MW-12	PH	pH	11/7/2023 12:59	5.5	SU
APCO-GSD-AP-MW-12	TEMP	Temperature	11/7/2023 12:59	21.71	C
APCO-GSD-AP-MW-12	TURB	Turbidity	11/7/2023 12:59	0.06	NTU
APCO-GSD-AP-MW-12	COND	Conductivity	11/7/2023 13:04	643.73	uS/cm
APCO-GSD-AP-MW-12	DO	DO	11/7/2023 13:04	0.11	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	11/7/2023 13:04	14.65	ft
APCO-GSD-AP-MW-12	ORP	Reduction Potential	11/7/2023 13:04	142.88	mv
APCO-GSD-AP-MW-12	PH	pH	11/7/2023 13:04	5.52	SU
APCO-GSD-AP-MW-12	TEMP	Temperature	11/7/2023 13:04	21.39	C
APCO-GSD-AP-MW-12	TURB	Turbidity	11/7/2023 13:04	0.2	NTU
APCO-GSD-AP-MW-12	COND	Conductivity	11/7/2023 13:09	642.72	uS/cm
APCO-GSD-AP-MW-12	DO	DO	11/7/2023 13:09	0.1	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	11/7/2023 13:09	14.65	ft
APCO-GSD-AP-MW-12	ORP	Reduction Potential	11/7/2023 13:09	146.15	mv
APCO-GSD-AP-MW-12	PH	pH	11/7/2023 13:09	5.54	SU
APCO-GSD-AP-MW-12	SULFIDE	Sulfide	11/7/2023 13:09	0	mg/L
APCO-GSD-AP-MW-12	TEMP	Temperature	11/7/2023 13:09	22.13	C
APCO-GSD-AP-MW-12	TURB	Turbidity	11/7/2023 13:09	0.12	NTU

**Plant Gadsden Ash Pond
Field Parameters**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-14	COND	Conductivity	11/8/2023 8:05	168.07	uS/cm
APCO-GSD-AP-MW-14	DO	DO	11/8/2023 8:05	4.21	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	11/8/2023 8:05	22.8	ft
APCO-GSD-AP-MW-14	ORP	Reduction Potential	11/8/2023 8:05	278.07	mv
APCO-GSD-AP-MW-14	PH	pH	11/8/2023 8:05	4.04	SU
APCO-GSD-AP-MW-14	TEMP	Temperature	11/8/2023 8:05	19.16	C
APCO-GSD-AP-MW-14	TURB	Turbidity	11/8/2023 8:05	3.45	NTU
APCO-GSD-AP-MW-14	COND	Conductivity	11/8/2023 8:10	171.48	uS/cm
APCO-GSD-AP-MW-14	DO	DO	11/8/2023 8:10	4.19	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	11/8/2023 8:10	22.8	ft
APCO-GSD-AP-MW-14	ORP	Reduction Potential	11/8/2023 8:10	291.18	mv
APCO-GSD-AP-MW-14	PH	pH	11/8/2023 8:10	4.04	SU
APCO-GSD-AP-MW-14	TEMP	Temperature	11/8/2023 8:10	19.19	C
APCO-GSD-AP-MW-14	TURB	Turbidity	11/8/2023 8:10	3.33	NTU
APCO-GSD-AP-MW-14	COND	Conductivity	11/8/2023 8:15	173.26	uS/cm
APCO-GSD-AP-MW-14	DO	DO	11/8/2023 8:15	4.19	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	11/8/2023 8:15	22.8	ft
APCO-GSD-AP-MW-14	ORP	Reduction Potential	11/8/2023 8:15	303.97	mv
APCO-GSD-AP-MW-14	PH	pH	11/8/2023 8:15	4.03	SU
APCO-GSD-AP-MW-14	TEMP	Temperature	11/8/2023 8:15	19.21	C
APCO-GSD-AP-MW-14	TURB	Turbidity	11/8/2023 8:15	2.41	NTU
APCO-GSD-AP-MW-14	COND	Conductivity	11/8/2023 8:20	173.96	uS/cm
APCO-GSD-AP-MW-14	DO	DO	11/8/2023 8:20	4.19	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	11/8/2023 8:20	22.8	ft
APCO-GSD-AP-MW-14	ORP	Reduction Potential	11/8/2023 8:20	316.68	mv
APCO-GSD-AP-MW-14	PH	pH	11/8/2023 8:20	4.03	SU
APCO-GSD-AP-MW-14	SULFIDE	Sulfide	11/8/2023 8:20	0	mg/L
APCO-GSD-AP-MW-14	TEMP	Temperature	11/8/2023 8:20	19.23	C
APCO-GSD-AP-MW-14	TURB	Turbidity	11/8/2023 8:20	1.72	NTU

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

Analytical Report



Sample Group : WMWGADAP_1432

Project/Site : Gadsden Ash Pond
Gadsden, AL 35903

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

Attention : Dustin Brooks & Greg Budd

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

December 13, 2023

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory between November 02, 2023 and November 08, 2023. 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, 2024

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

Sincerely,

Quality Control: **Brooke
Caton**

Digitally signed by Brooke
Caton
Date: 2023.12.13
13:53:42 -06'00'

Supervision: **T Durant
Maske**

Digitally signed by T Durant Maske
DN: cn=T Durant Maske, o=T Durant Maske c=US
United States |u=US United States
e=tmaske@southernco.com
Reason: I am the author of this document
Location:
Date: 2023-12-13 15:00:08:00



REPORT OF LABORATORY ANALYSIS

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



Case Narrative

Total Metals ICP

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	770839	WMWGADAP_1432
BD20074	770839	WMWGADAP_1432
BD20075	770839	WMWGADAP_1432
BD20076	770839	WMWGADAP_1432
BD20077	770839	WMWGADAP_1432
BD20078	770839	WMWGADAP_1432
BD20079	770839	WMWGADAP_1432
BD20080	770839	WMWGADAP_1432
BD20297	771017	WMWGADAP_1432
BD20298	771017	WMWGADAP_1432
BD20299	771017	WMWGADAP_1432
BD20300	771017	WMWGADAP_1432
BD20301	771017	WMWGADAP_1432
BD20302	771017	WMWGADAP_1432
BD20303	771017	WMWGADAP_1432
BD20304	771017	WMWGADAP_1432
BD20305	771017	WMWGADAP_1432
BD20306	771017	WMWGADAP_1432
BD20307	771018	WMWGADAP_1432
BD20308	771018	WMWGADAP_1432
BD20309	771018	WMWGADAP_1432
BD20310	771018	WMWGADAP_1432
BD20311	771018	WMWGADAP_1432
BD20312	771018	WMWGADAP_1432
BD20313	771018	WMWGADAP_1432
BD20314	771018	WMWGADAP_1432
BD20315	771018	WMWGADAP_1432
BD20316	771018	WMWGADAP_1432
BD20317	771019	WMWGADAP_1432
BD20318	771019	WMWGADAP_1432
BD20319	771019	WMWGADAP_1432
BD20320	771019	WMWGADAP_1432

BD20321	771019	WMWGADAP_1432
BD20322	771019	WMWGADAP_1432

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

General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met, except for the following:
 - BD20306 Calcium & Iron MS/MSD spike levels were less than 30% of the sample concentrations.
 - BD20316 Iron MS/MSD spike levels were less than 30% of the sample concentrations.
 - A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

Case Narrative

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BD20075	Sodium	10.15
BD20076	Sodium	10.15
BD20077	Calcium, Iron	10.15
BD20078	Calcium, Iron	10.15
BD20079	Calcium	10.15
BD20297	Calcium	10.15
BD20303	Sodium	10.15
BD20304	Sodium	101.5
BD20306	Calcium	10.15
BD20306	Iron	101.5
BD20307	Sodium	10.15
BD20308	Calcium	10.15
BD20310	Calcium	10.15
BD20314	Calcium, Iron	10.15
BD20316	Iron	10.15
BD20317	Calcium	10.15
BD20318	Calcium, Iron	10.15

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

Case Narrative

Dissolved Metals ICP

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	770822	WMWGADAP_1432
BD20074	770822	WMWGADAP_1432
BD20075	770822	WMWGADAP_1432
BD20076	770822	WMWGADAP_1432
BD20077	770822	WMWGADAP_1432
BD20078	770822	WMWGADAP_1432
BD20079	770822	WMWGADAP_1432
BD20297	771028	WMWGADAP_1432
BD20298	771028	WMWGADAP_1432
BD20299	771028	WMWGADAP_1432
BD20300	771028	WMWGADAP_1432
BD20301	771028	WMWGADAP_1432
BD20302	771028	WMWGADAP_1432
BD20303	771028	WMWGADAP_1432
BD20304	771028	WMWGADAP_1432
BD20306	771028, 773099	WMWGADAP_1432
BD20307	771028, 773099	WMWGADAP_1432
BD20308	771029, 773099	WMWGADAP_1432
BD20309	771029	WMWGADAP_1432
BD20310	771029	WMWGADAP_1432
BD20311	771029	WMWGADAP_1432
BD20312	771029	WMWGADAP_1432
BD20313	771029	WMWGADAP_1432
BD20314	771029	WMWGADAP_1432
BD20315	771029	WMWGADAP_1432
BD20316	771029	WMWGADAP_1432
BD20317	771029	WMWGADAP_1432
BD20318	771030	WMWGADAP_1432
BD20320	771030	WMWGADAP_1432
BD20321	771030	WMWGADAP_1432

4. All of the above samples were analyzed and prepared by EPA 200.7 for dissolved analysis.

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

General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met, except for the following:
 - BD20079 Calcium MS/MSD spike levels were less than 30% of the sample concentrations.
 - BD20307 Sodium MS/MSD spike levels were less than 30% of the sample concentrations.
 - BD20317 Calcium MS/MSD spike levels were less than 30% of the sample concentrations.
 - A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BD20075	Sodium	10.15
BD20076	Sodium	10.15

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BD20077	Calcium, Iron	10.15
BD20078	Calcium, Iron	10.15
BD20079	Calcium	10.15
BD20297	Calcium	10.15
BD20303	Sodium	10.15
BD20304	Sodium	101.5
BD20306	Calcium	10.15
BD20306	Iron	101.5
BD20307	Sodium	10.15
BD20308	Calcium	10.15
BD20310	Calcium	10.15
BD20314	Calcium, Iron	10.15
BD20316	Iron	10.15
BD20317	Calcium	10.15
BD20318	Calcium, Iron	10.15

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

Case Narrative

Total Metals ICPMS

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	771375	WMWGADAP_1432
BD20074	771375	WMWGADAP_1432
BD20075	771375, 773282	WMWGADAP_1432
BD20076	771375	WMWGADAP_1432
BD20077	771375	WMWGADAP_1432
BD20078	771375	WMWGADAP_1432
BD20079	771375	WMWGADAP_1432
BD20080	771375	WMWGADAP_1432
BD20297	772182	WMWGADAP_1432
BD20298	772182	WMWGADAP_1432
BD20299	772182	WMWGADAP_1432
BD20300	772182	WMWGADAP_1432
BD20301	772182	WMWGADAP_1432
BD20302	772182	WMWGADAP_1432
BD20303	772182	WMWGADAP_1432
BD20304	772182	WMWGADAP_1432
BD20305	772182	WMWGADAP_1432
BD20306	772182	WMWGADAP_1432
BD20307	772183	WMWGADAP_1432
BD20308	772183	WMWGADAP_1432
BD20309	772183	WMWGADAP_1432
BD20310	772183	WMWGADAP_1432
BD20311	772183	WMWGADAP_1432
BD20312	772183	WMWGADAP_1432
BD20313	772183	WMWGADAP_1432
BD20314	772183	WMWGADAP_1432
BD20315	772183	WMWGADAP_1432
BD20316	772183	WMWGADAP_1432
BD20317	772184	WMWGADAP_1432
BD20318	772184	WMWGADAP_1432
BD20319	772184	WMWGADAP_1432
BD20320	772184	WMWGADAP_1432

BD20321	772184	WMWGADAP_1432
BD20322	772184	WMWGADAP_1432

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

General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
 - BD20306 Manganese MS/MSD spike levels were less than 30% of the sample concentrations.
 - BD20316 Manganese MS/MSD spike levels were less than 30% of the sample concentrations.
 - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

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<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BD20073	Aluminum	5.075
BD20077	Manganese	10.15
BD20078	Manganese	10.15
BD20079	Manganese	92.365
BD20297	Manganese	5.075
BD20306	Manganese	5.075
BD20308	Manganese	92.365
BD20315	Manganese	5.075
BD20317	Manganese	5.075
BD20318	Manganese	10.15
BD20320	Aluminum	5.075
BD20321	Aluminum	5.075

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

Case Narrative

Dissolved Metals ICPMS

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	771345	WMWGADAP_1432
BD20074	771345	WMWGADAP_1432
BD20075	771345, 773208	WMWGADAP_1432
BD20076	771345	WMWGADAP_1432
BD20077	771345	WMWGADAP_1432
BD20078	771345	WMWGADAP_1432
BD20079	771345	WMWGADAP_1432
BD20297	772090	WMWGADAP_1432
BD20298	772090	WMWGADAP_1432
BD20299	772090	WMWGADAP_1432
BD20300	772090	WMWGADAP_1432
BD20301	772090	WMWGADAP_1432
BD20302	772090	WMWGADAP_1432
BD20303	772090	WMWGADAP_1432
BD20304	772090	WMWGADAP_1432
BD20306	772090	WMWGADAP_1432
BD20307	772090	WMWGADAP_1432
BD20308	772091	WMWGADAP_1432
BD20309	772091	WMWGADAP_1432
BD20310	772091	WMWGADAP_1432
BD20311	772091	WMWGADAP_1432
BD20312	772091	WMWGADAP_1432
BD20313	772091	WMWGADAP_1432
BD20314	772091	WMWGADAP_1432
BD20315	772091	WMWGADAP_1432
BD20316	772091	WMWGADAP_1432
BD20317	772091	WMWGADAP_1432
BD20318	772092	WMWGADAP_1432
BD20320	772092	WMWGADAP_1432
BD20321	772092	WMWGADAP_1432

4. All of the above samples were analyzed and prepared by EPA 200.8 for dissolved analysis.

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

General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
 - BD20079 Manganese MS/MSD spike levels were less than 30% of the sample concentrations.
 - BD20317 Manganese MS/MSD spike levels were less than 30% of the sample concentrations.
 - BD20321 Aluminum MS/MSD spike levels were less than 30% of the sample concentrations.
 - A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BD20073	Aluminum	5.075
BD20077	Manganese	10.15

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BD20078	Manganese	10.15
BD20079	Manganese	92.365
BD20297	Manganese	5.075
BD20306	Manganese	5.075
BD20308	Manganese	92.365
BD20315	Manganese	5.075
BD20317	Manganese	5.075
BD20318	Manganese	10.15
BD20320	Aluminum	5.075
BD20321	Aluminum	5.075

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

Case Narrative

Mercury

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	770796	WMWGADAP_1432
BD20074	770796	WMWGADAP_1432
BD20075	770796	WMWGADAP_1432
BD20076	770796	WMWGADAP_1432
BD20077	770796	WMWGADAP_1432
BD20078	770796	WMWGADAP_1432
BD20079	770796	WMWGADAP_1432
BD20080	770796	WMWGADAP_1432
BD20297	771518	WMWGADAP_1432
BD20298	771518	WMWGADAP_1432
BD20299	771518	WMWGADAP_1432
BD20300	771518	WMWGADAP_1432
BD20301	771518	WMWGADAP_1432
BD20302	771518	WMWGADAP_1432
BD20303	771518	WMWGADAP_1432
BD20304	771518	WMWGADAP_1432
BD20305	771518	WMWGADAP_1432
BD20306	771518	WMWGADAP_1432
BD20307	771519	WMWGADAP_1432
BD20308	771519	WMWGADAP_1432
BD20309	771519	WMWGADAP_1432
BD20310	771519	WMWGADAP_1432
BD20311	771519	WMWGADAP_1432
BD20312	771519	WMWGADAP_1432
BD20313	771519	WMWGADAP_1432
BD20314	771519	WMWGADAP_1432
BD20315	771519	WMWGADAP_1432
BD20316	771519	WMWGADAP_1432
BD20317	771520	WMWGADAP_1432
BD20318	771520	WMWGADAP_1432
BD20319	771520	WMWGADAP_1432
BD20320	771520	WMWGADAP_1432

BD20321	771520	WMWGADAP_1432
BD20322	771520	WMWGADAP_1432

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

General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

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

Case Narrative

Total Dissolved Solids

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	770677	WMWGADAP_1432
BD20074	770680	WMWGADAP_1432
BD20075	770680	WMWGADAP_1432
BD20076	770680	WMWGADAP_1432
BD20077	770680	WMWGADAP_1432
BD20078	770680	WMWGADAP_1432
BD20079	770680	WMWGADAP_1432
BD20080	770680	WMWGADAP_1432
BD20297	770956	WMWGADAP_1432
BD20298	770956	WMWGADAP_1432
BD20299	770956	WMWGADAP_1432
BD20300	770957	WMWGADAP_1432
BD20301	770957	WMWGADAP_1432
BD20302	770957	WMWGADAP_1432
BD20303	770957	WMWGADAP_1432
BD20304	770957	WMWGADAP_1432
BD20305	770957	WMWGADAP_1432
BD20306	770957	WMWGADAP_1432
BD20307	770957	WMWGADAP_1432
BD20308	770957	WMWGADAP_1432
BD20309	770957	WMWGADAP_1432
BD20310	771072	WMWGADAP_1432
BD20311	771072	WMWGADAP_1432
BD20312	771072	WMWGADAP_1432
BD20313	771072	WMWGADAP_1432
BD20314	771072	WMWGADAP_1432
BD20315	771072	WMWGADAP_1432
BD20316	771072	WMWGADAP_1432
BD20317	771073	WMWGADAP_1432
BD20318	771072	WMWGADAP_1432
BD20319	771072	WMWGADAP_1432
BD20320	771072	WMWGADAP_1432

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BD20321	771073	WMWGADAP_1432
BD20322	771073	WMWGADAP_1432

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

General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch, and RPD was $\leq 10\%$.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue $< 2.5\text{mg}$ had the maximum volume of 150mL filtered. Affected samples are as follows:
 - BD20080
 - BD20305
 - BD20319
 - BD20322

Alkalinity

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	771491, 771493	WMWGADAP_1432
BD20074	771490, 771491, 771492, 771493	WMWGADAP_1432
BD20075	771490, 771491, 771492, 771493	WMWGADAP_1432
BD20076	771490, 771491, 771492, 771493	WMWGADAP_1432
BD20077	771490, 771491, 771492, 771493	WMWGADAP_1432
BD20078	771490, 771491, 771492, 771493	WMWGADAP_1432
BD20079	771490, 771491, 771492, 771493	WMWGADAP_1432
BD20297	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20298	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20299	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20300	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20301	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20302	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20303	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20304	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20306	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20307	771837, 771838, 771839, 771840	WMWGADAP_1432
BD20308	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20309	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20310	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20311	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20312	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20313	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20314	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20315	771862, 771863, 771864, 771865	WMWGADAP_1432
BD20316	772038, 772039, 772040, 772041	WMWGADAP_1432
BD20317	772038, 772039, 772040, 772041	WMWGADAP_1432
BD20318	772038, 772039, 772040, 772041	WMWGADAP_1432
BD20320	772039, 772041	WMWGADAP_1432
BD20321	772039, 772041	WMWGADAP_1432

4. All of the above samples were prepared and analyzed by Standard Method 2320B, except for the following:

Case Narrative

- BD20073 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 - BD20320 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 - BD20321 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
5. All samples were prepared and analyzed within the established hold times.
 6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- An initial pH check was analyzed with each batch. The acceptance criteria were met.
 - A final pH check was analyzed with each batch. The acceptance criteria were met.
 - An alkalinity laboratory control sample was analyzed with each batch. Range criteria of within 10% of true value was met.
 - An alkalinity sample duplicate was analyzed with each batch. Precision criteria less than 10 RPD was met.
7. The following samples had pH>10 and/or TDS>500mg/L. Therefore, the calculations for carbonate and bicarbonate are estimates:
 - BD20076
 - BD20297
 - BD20304
 - BD20318

Case Narrative

Anions

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	770711, 771698, 770804	WMWGADAP_1432
BD20074	770711, 771698, 770804	WMWGADAP_1432
BD20075	770711, 771698, 770804	WMWGADAP_1432
BD20076	770711, 771698, 770804	WMWGADAP_1432
BD20077	770711, 771698, 770804	WMWGADAP_1432
BD20078	770711, 771698, 770804	WMWGADAP_1432
BD20079	770711, 771698, 770804	WMWGADAP_1432
BD20080	770711, 771698, 770804	WMWGADAP_1432
BD20297	771066, 771699, 771944	WMWGADAP_1432
BD20298	771066, 771699, 771944	WMWGADAP_1432
BD20299	771066, 771699, 771944	WMWGADAP_1432
BD20300	771066, 771699, 771944	WMWGADAP_1432
BD20301	771066, 771699, 771944	WMWGADAP_1432
BD20302	771066, 771699, 771944	WMWGADAP_1432
BD20303	771066, 771699, 771944	WMWGADAP_1432
BD20304	771066, 771699, 771944	WMWGADAP_1432
BD20305	771066, 771699, 771944	WMWGADAP_1432
BD20306	771066, 771699, 771944	WMWGADAP_1432
BD20307	771067, 771700, 771945	WMWGADAP_1432
BD20308	771067, 771700, 771945	WMWGADAP_1432
BD20309	771067, 771700, 771945	WMWGADAP_1432
BD20310	771067, 771700, 771945	WMWGADAP_1432
BD20311	771067, 771700, 771945	WMWGADAP_1432
BD20312	771067, 771700, 771945	WMWGADAP_1432
BD20313	771067, 771700, 771945	WMWGADAP_1432
BD20314	771067, 771700, 771945	WMWGADAP_1432
BD20315	771067, 771700, 771945	WMWGADAP_1432
BD20316	771067, 771700, 771945	WMWGADAP_1432
BD20317	771068, 771701, 771946	WMWGADAP_1432
BD20318	771068, 771701, 771946	WMWGADAP_1432
BD20319	771068, 771701, 771946	WMWGADAP_1432

BD20320	771068, 771701, 771946	WMWGADAP_1432
BD20321	771068, 771701, 771946	WMWGADAP_1432
BD20322	771068, 771701, 771946	WMWGADAP_1432

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

Matrix Specific Quality Control Procedures:

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

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

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BD20073	Sulfate	2
BD20076	Chloride, Fluoride	5, 2
BD20077	Sulfate	4
BD20078	Sulfate	4
BD20079	Sulfate	8
BD20297	Sulfate	25

Case Narrative

BD20301	Sulfate	3
BD20302	Sulfate	3
BD20304	Chloride, Fluoride	16, 2
BD20306	Sulfate	8
BD20308	Sulfate	8
BD20317	Sulfate	20
BD20318	Sulfate	16
BD20320	Sulfate	3
BD20321	Sulfate	3

8. The raw data results are shown with dilution factors included.
9. Fluoride may have potential matrix interference for the following:
 - BD20320
 - BD20321

Case Narrative

Nitrate-Nitrite

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	770788	WMWGADAP_1432
BD20074	770788	WMWGADAP_1432
BD20075	770788	WMWGADAP_1432
BD20076	770788	WMWGADAP_1432
BD20077	770788	WMWGADAP_1432
BD20078	770788	WMWGADAP_1432
BD20079	770788	WMWGADAP_1432
BD20080	770788	WMWGADAP_1432
BD20297	771403	WMWGADAP_1432
BD20298	771403	WMWGADAP_1432
BD20299	771403	WMWGADAP_1432
BD20300	771403	WMWGADAP_1432
BD20301	771403	WMWGADAP_1432
BD20302	771403	WMWGADAP_1432
BD20303	771403	WMWGADAP_1432
BD20304	771403	WMWGADAP_1432
BD20305	771403	WMWGADAP_1432
BD20306	771404	WMWGADAP_1432
BD20307	771404	WMWGADAP_1432
BD20308	771404	WMWGADAP_1432
BD20309	771404	WMWGADAP_1432
BD20310	771404	WMWGADAP_1432
BD20311	771404	WMWGADAP_1432
BD20312	771404	WMWGADAP_1432
BD20313	771404	WMWGADAP_1432
BD20314	771404	WMWGADAP_1432
BD20315	771404	WMWGADAP_1432
BD20316	771405	WMWGADAP_1432
BD20317	771405	WMWGADAP_1432
BD20318	771405	WMWGADAP_1432
BD20319	771405	WMWGADAP_1432

BD20320	771405	WMWGADAP_1432
BD20321	771405	WMWGADAP_1432
BD20322	771405	WMWGADAP_1432

4. All of the above samples were prepared and analyzed for NO_x by EPA 353.2.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

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

EPA 353.2 Specific QC:

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

Case Narrative

Total Organic Carbon

Gadsden Ash Pond

WMWGADAP_1432

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

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BD20073	770763	WMWGADAP_1432
BD20074	770763	WMWGADAP_1432
BD20075	770763	WMWGADAP_1432
BD20076	770763	WMWGADAP_1432
BD20077	770763	WMWGADAP_1432
BD20078	770763	WMWGADAP_1432
BD20079	770763	WMWGADAP_1432
BD20080	770764	WMWGADAP_1432
BD20297	770958	WMWGADAP_1432
BD20298	770958	WMWGADAP_1432
BD20299	770958	WMWGADAP_1432
BD20300	770958	WMWGADAP_1432
BD20301	770958	WMWGADAP_1432
BD20302	770958	WMWGADAP_1432
BD20303	770958	WMWGADAP_1432
BD20304	770958	WMWGADAP_1432
BD20305	770958	WMWGADAP_1432
BD20306	770958	WMWGADAP_1432
BD20307	770959	WMWGADAP_1432
BD20308	770959	WMWGADAP_1432
BD20309	770959	WMWGADAP_1432
BD20310	770959	WMWGADAP_1432
BD20311	770959	WMWGADAP_1432
BD20312	770959	WMWGADAP_1432
BD20313	770959	WMWGADAP_1432
BD20314	770959	WMWGADAP_1432
BD20315	770959	WMWGADAP_1432
BD20316	770959	WMWGADAP_1432
BD20317	770960	WMWGADAP_1432
BD20318	770960	WMWGADAP_1432
BD20319	770960	WMWGADAP_1432
BD20320	770960	WMWGADAP_1432

BD20321	770960	WMWGADAP_1432
BD20322	770960	WMWGADAP_1432

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

General Quality Control Procedures:

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

Matrix Specific Quality Control Procedures:

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-16

Location Code: WMWGADAP
Collected: 10/31/23 14:13
Customer ID:
Submittal Date: 11/2/23 11:42

Laboratory ID Number: BD20073

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638					
* Boron, Total	11/2/23 15:10	11/7/23 12:32		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/2/23 15:10	11/7/23 12:32		1.015	8.31	mg/L	0.070035	0.406		
* Iron, Total	11/2/23 15:10	11/7/23 12:32		1.015	0.0916	mg/L	0.008120	0.0406		
* Lithium, Total	11/2/23 15:10	11/7/23 12:32		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/2/23 15:10	11/7/23 12:32		1.015	2.87	mg/L	0.021315	0.406		
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:32		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:32		1	8.84	mg/L				
* Silicon, Total	11/2/23 15:10	11/7/23 12:32		1.015	4.13	mg/L	0.02030	0.25375		
* Sodium, Total	11/2/23 15:10	11/7/23 12:32		1.015	2.83	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638					
* Boron, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	8.32	mg/L	0.070035	0.406		
* Iron, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	2.82	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/2/23 15:12	11/7/23 11:51		1	8.69	mg/L				
* Silicon, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	4.06	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/2/23 15:12	11/7/23 11:51		1.015	2.91	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/3/23 11:25	11/3/23 13:39		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/3/23 11:25	11/7/23 15:20		5.075	2.89	mg/L	0.045675	0.25375		
* Arsenic, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.000919	mg/L	0.000112	0.000203		
* Barium, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.0273	mg/L	0.000508	0.001015		
* Beryllium, Total	11/3/23 11:25	11/3/23 13:39		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.000203	mg/L	0.000068	0.000203		
* Chromium, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.000505	mg/L	0.000203	0.001015	J	
* Cobalt, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.0167	mg/L	0.000068	0.000203		
* Lead, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.000767	mg/L	0.000068	0.000203		
* Manganese, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.180	mg/L	0.000152	0.001015		

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-16

Location Code: WMWGADAP
Collected: 10/31/23 14:13
Customer ID:
Submittal Date: 11/2/23 11:42

Laboratory ID Number: BD20073

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.445	mg/L	0.169505	0.5075	J
* Selenium, Total	11/3/23 11:25	11/3/23 13:39		1.015	0.00145	mg/L	0.000508	0.001015	
* Thallium, Total	11/3/23 11:25	11/3/23 13:39		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/2/23 15:12	11/7/23 14:54		5.075	2.44	mg/L	0.045675	0.25375	
* Arsenic, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.000850	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.0272	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.000341	mg/L	0.000068	0.000203	
* Chromium, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.000213	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.0169	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.000734	mg/L	0.000068	0.000203	
* Manganese, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.176	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.378	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	0.00124	mg/L	0.000508	0.001015	
* Thallium, Dissolved	11/2/23 15:12	11/3/23 12:45		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 16:56		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/7/23 17:37	11/7/23 17:37		1	0.950	mg/L as N	0.20	0.3	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	76.7	mg/L		25	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 10:57	11/7/23 10:57		1	Not Detected	mg/L	1.00	2	U
Analytical Method: SM4500CI E		Analyst: JCC							
* Chloride	11/3/23 09:07	11/3/23 09:07		1	3.17	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:01	11/17/23 09:01		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:48	11/7/23 09:48		2	40.2	mg/L	1.2	4	

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-16

Location Code: WMWGADAP
Collected: 10/31/23 14:13
Customer ID:
Submittal Date: 11/2/23 11:42

Laboratory ID Number: BD20073

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	10/31/23 14:10	10/31/23 14:10			128.06	uS/cm			FA
pH	10/31/23 14:10	10/31/23 14:10			4.50	SU			FA
Temperature	10/31/23 14:10	10/31/23 14:10			19.52	C			FA
Turbidity	10/31/23 14:10	10/31/23 14:10			7.56	NTU			FA
Sulfide	10/31/23 14:10	10/31/23 14:10			0	mg/L			FA

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 10/31/23 14:13
Customer ID:
Delivery Date: 11/2/23 11:42

Description: Gadsden Ash Pond - MW-16

Laboratory ID Number: BD20073

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20079	Aluminum, Dissolved	mg/L	0.000293	0.0198	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20079	Antimony, Dissolved	mg/L	0.000363	0.00100	0.100	0.108	0.102	0.0936	0.0850 to 0.115	108	70.0 to 130	5.71	20.0
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20079	Arsenic, Dissolved	mg/L	0.0000024	0.000200	0.100	0.0968	0.0955	0.0929	0.0850 to 0.115	96.6	70.0 to 130	1.35	20.0
BD20080	Arsenic, Total	mg/L	-0.0000158	0.000200	0.100	0.0960	0.0936	0.0977	0.0850 to 0.115	96.0	70.0 to 130	2.53	20.0
BD20079	Barium, Dissolved	mg/L	0.0000160	0.00100	0.100	0.132	0.127	0.0984	0.0850 to 0.115	100	70.0 to 130	3.86	20.0
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0
BD20079	Beryllium, Dissolved	mg/L	0.0000121	0.000880	0.100	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Boron, Dissolved	mg/L	-0.000456	0.0650	1.00	1.81	1.80	1.00	0.850 to 1.15	103	70.0 to 130	0.554	20.0
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0
BD20079	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.0985	0.0983	0.102	0.0850 to 0.115	98.3	70.0 to 130	0.203	20.0
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0
BD20079	Calcium, Dissolved	mg/L	-0.0460	0.152	5.00	70.8	66.3	4.81	4.25 to 5.75	158	70.0 to 130	6.56	20.0
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0
BD20079	Chromium, Dissolved	mg/L	-0.0000068	0.000440	0.100	0.0997	0.102	0.106	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20079	Cobalt, Dissolved	mg/L	-0.0000009	0.000147	0.100	0.115	0.116	0.109	0.0850 to 0.115	104	70.0 to 130	0.866	20.0
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0
BD20079	Iron, Dissolved	mg/L	-0.000619	0.0176	0.2	0.374	0.373	0.201	0.170 to 0.230	102	70.0 to 130	0.268	20.0
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 10/31/23 14:13
Customer ID:
Delivery Date: 11/2/23 11:42

Description: Gadsden Ash Pond - MW-16

Laboratory ID Number: BD20073

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20079	Lead, Dissolved	mg/L	0.0000059	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20079	Lithium, Dissolved	mg/L	-0.000216	0.0154	0.200	0.203	0.204	0.199	0.170 to 0.230	102	70.0 to 130	0.491	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20079	Magnesium, Dissolved	mg/L	-0.00908	0.0462	5.00	20.2	20.2	5.02	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20079	Manganese, Dissolved	mg/L	0.0000120	0.00033	0.100	17.8	17.9	0.105	0.0850 to 0.115	300	70.0 to 130	0.560	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20079	Molybdenum, Dissolved	mg/L	0.000125	0.0100	0.2	0.206	0.205	0.204	0.170 to 0.230	103	70.0 to 130	0.487	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20079	Potassium, Dissolved	mg/L	0.0394	0.367	10.0	13.4	13.4	10.7	8.50 to 11.5	104	70.0 to 130	0.00	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20079	Selenium, Dissolved	mg/L	-0.0000006	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20079	Silicon, Dissolved	mg/L	0.000496	0.0440	1.00	5.81	5.78	1.04	0.850 to 1.15	102	70.0 to 130	0.518	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20079	Sodium, Dissolved	mg/L	0.00172	0.0880	5.00	14.7	14.7	5.05	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0
BD20079	Thallium, Dissolved	mg/L	0.0000097	0.000147	0.100	0.102	0.103	0.101	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Total Organic Carbon	mg/L	0.142	1.00	10.0	11.5	11.6	10.4		102	80.0 to 120	0.866	20.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 10/31/23 14:13
Customer ID:
Delivery Date: 11/2/23 11:42

Description: Gadsden Ash Pond - MW-16

Laboratory ID Number: BD20073

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20073	Solids, Dissolved	mg/L	1.00	25.0			75.3	51.0	40.0 to 60.0			1.84	10.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-17

Location Code: WMWGADAP
Collected: 10/31/23 15:25
Customer ID:
Submittal Date: 11/2/23 11:42

Laboratory ID Number: BD20074

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638				
* Boron, Total	11/2/23 15:10	11/7/23 12:35		1.015	0.0316	mg/L	0.030000	0.1015	J
* Calcium, Total	11/2/23 15:10	11/7/23 12:35		1.015	28.2	mg/L	0.070035	0.406	
* Iron, Total	11/2/23 15:10	11/7/23 12:35		1.015	0.0348	mg/L	0.008120	0.0406	J
* Lithium, Total	11/2/23 15:10	11/7/23 12:35		1.015	0.00864	mg/L	0.007105	0.01999956	J
* Magnesium, Total	11/2/23 15:10	11/7/23 12:35		1.015	5.27	mg/L	0.021315	0.406	
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:35		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:35		1	17.5	mg/L			
* Silicon, Total	11/2/23 15:10	11/7/23 12:35		1.015	8.19	mg/L	0.02030	0.25375	
* Sodium, Total	11/2/23 15:10	11/7/23 12:35		1.015	25.8	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ELH							
* Boron, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	0.0300	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	27.6	mg/L	0.070035	0.406	
* Iron, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	0.0108	mg/L	0.008120	0.0406	J
* Lithium, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	0.00792	mg/L	0.007105	0.01999956	J
* Magnesium, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	5.15	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/2/23 15:12	11/7/23 11:54		1	17.5	mg/L			
* Silicon, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	8.19	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/2/23 15:12	11/7/23 11:54		1.015	25.3	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/3/23 11:25	11/3/23 13:43		1.015	0.0449	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/3/23 11:25	11/3/23 13:43		1.015	0.000235	mg/L	0.000112	0.000203	
* Barium, Total	11/3/23 11:25	11/3/23 13:43		1.015	0.294	mg/L	0.000508	0.001015	
* Beryllium, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/3/23 11:25	11/3/23 13:43		1.015	0.0128	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-17

Location Code: WMWGADAP
Collected: 10/31/23 15:25
Customer ID:
Submittal Date: 11/2/23 11:42

Laboratory ID Number: BD20074

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/3/23 11:25	11/3/23 13:43		1.015	0.611	mg/L	0.169505	0.5075	
* Selenium, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/3/23 11:25	11/3/23 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	0.293	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	0.0139	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	0.636	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/2/23 15:12	11/3/23 12:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 16:58		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/7/23 17:39	11/7/23 17:39		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/14/23 10:55	11/14/23 15:13		1	4.52	SU		2.00	
* Alkalinity	11/14/23 10:55	11/14/23 15:13		1	134	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	160	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 15:13		1	132	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 15:13		1	1.60	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 11:11	11/7/23 11:11		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-17

Location Code: WMWGADAP
Collected: 10/31/23 15:25
Customer ID:
Submittal Date: 11/2/23 11:42

Laboratory ID Number: BD20074

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/3/23 09:08	11/3/23 09:08		1	2.82	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:02	11/17/23 09:02		1	0.148	mg/L	0.06	0.125	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:37	11/7/23 09:37		1	11.5	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	10/31/23 15:21	10/31/23 15:21			247.39	uS/cm			FA
pH	10/31/23 15:21	10/31/23 15:21			7.98	SU			FA
Temperature	10/31/23 15:21	10/31/23 15:21			19.97	C			FA
Turbidity	10/31/23 15:21	10/31/23 15:21			0.62	NTU			FA
Sulfide	10/31/23 15:21	10/31/23 15:21			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 10/31/23 15:25
Customer ID:
Delivery Date: 11/2/23 11:42

Description: Gadsden Ash Pond - MW-17

Laboratory ID Number: BD20074

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20079	Aluminum, Dissolved	mg/L	0.000293	0.0198	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20079	Antimony, Dissolved	mg/L	0.000363	0.00100	0.100	0.108	0.102	0.0936	0.0850 to 0.115	108	70.0 to 130	5.71	20.0
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20079	Arsenic, Dissolved	mg/L	0.0000024	0.000200	0.100	0.0968	0.0955	0.0929	0.0850 to 0.115	96.6	70.0 to 130	1.35	20.0
BD20080	Arsenic, Total	mg/L	-0.0000158	0.000200	0.100	0.0960	0.0936	0.0977	0.0850 to 0.115	96.0	70.0 to 130	2.53	20.0
BD20079	Barium, Dissolved	mg/L	0.0000160	0.00100	0.100	0.132	0.127	0.0984	0.0850 to 0.115	100	70.0 to 130	3.86	20.0
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0
BD20079	Beryllium, Dissolved	mg/L	0.0000121	0.000880	0.100	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Boron, Dissolved	mg/L	-0.000456	0.0650	1.00	1.81	1.80	1.00	0.850 to 1.15	103	70.0 to 130	0.554	20.0
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0
BD20079	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.0985	0.0983	0.102	0.0850 to 0.115	98.3	70.0 to 130	0.203	20.0
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0
BD20079	Calcium, Dissolved	mg/L	-0.0460	0.152	5.00	70.8	66.3	4.81	4.25 to 5.75	158	70.0 to 130	6.56	20.0
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0
BD20079	Chromium, Dissolved	mg/L	-0.0000068	0.000440	0.100	0.0997	0.102	0.106	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20079	Cobalt, Dissolved	mg/L	-0.0000009	0.000147	0.100	0.115	0.116	0.109	0.0850 to 0.115	104	70.0 to 130	0.866	20.0
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0
BD20079	Iron, Dissolved	mg/L	-0.000619	0.0176	0.2	0.374	0.373	0.201	0.170 to 0.230	102	70.0 to 130	0.268	20.0
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 10/31/23 15:25
Customer ID:
Delivery Date: 11/2/23 11:42

Description: Gadsden Ash Pond - MW-17

Laboratory ID Number: BD20074

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20079	Lead, Dissolved	mg/L	0.0000059	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20079	Lithium, Dissolved	mg/L	-0.000216	0.0154	0.200	0.203	0.204	0.199	0.170 to 0.230	102	70.0 to 130	0.491	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20079	Magnesium, Dissolved	mg/L	-0.00908	0.0462	5.00	20.2	20.2	5.02	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20079	Manganese, Dissolved	mg/L	0.0000120	0.00033	0.100	17.8	17.9	0.105	0.0850 to 0.115	300	70.0 to 130	0.560	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20079	Molybdenum, Dissolved	mg/L	0.000125	0.0100	0.2	0.206	0.205	0.204	0.170 to 0.230	103	70.0 to 130	0.487	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20079	Potassium, Dissolved	mg/L	0.0394	0.367	10.0	13.4	13.4	10.7	8.50 to 11.5	104	70.0 to 130	0.00	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20079	Selenium, Dissolved	mg/L	-0.0000006	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20079	Silicon, Dissolved	mg/L	0.000496	0.0440	1.00	5.81	5.78	1.04	0.850 to 1.15	102	70.0 to 130	0.518	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20079	Sodium, Dissolved	mg/L	0.00172	0.0880	5.00	14.7	14.7	5.05	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0
BD20079	Thallium, Dissolved	mg/L	0.0000097	0.000147	0.100	0.102	0.103	0.101	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Total Organic Carbon	mg/L	0.142	1.00	10.0	11.5	11.6	10.4		102	80.0 to 120	0.866	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 10/31/23 15:25
Customer ID:
Delivery Date: 11/2/23 11:42

Description: Gadsden Ash Pond - MW-17

Laboratory ID Number: BD20074

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20079	Alkalinity	mg CaCO3/L					72.0	51.6	45.0 to 55.0			1.79	10.0
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20091	Solids, Dissolved	mg/L	1.00	25.0			58.7	51.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2VA

Location Code: WMWGADAP
Collected: 11/1/23 11:15
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20075

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638				
* Boron, Total	11/2/23 15:10	11/7/23 12:38		1.015	0.603	mg/L	0.030000	0.1015	
* Calcium, Total	11/2/23 15:10	11/7/23 12:38		1.015	4.52	mg/L	0.070035	0.406	
* Iron, Total	11/2/23 15:10	11/7/23 12:38		1.015	0.111	mg/L	0.008120	0.0406	
* Lithium, Total	11/2/23 15:10	11/7/23 12:38		1.015	0.0682	mg/L	0.007105	0.01999956	
* Magnesium, Total	11/2/23 15:10	11/7/23 12:38		1.015	1.30	mg/L	0.021315	0.406	
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:38		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:38		1	10.1	mg/L			
* Silicon, Total	11/2/23 15:10	11/7/23 12:38		1.015	4.73	mg/L	0.02030	0.25375	
* Sodium, Total	11/2/23 15:10	11/7/23 16:18		10.15	149	mg/L	0.4060	4.06	
Analytical Method: EPA 200.7		Analyst: ELH							
* Boron, Dissolved	11/2/23 15:12	11/7/23 11:57		1.015	0.580	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/2/23 15:12	11/7/23 11:57		1.015	5.33	mg/L	0.070035	0.406	
* Iron, Dissolved	11/2/23 15:12	11/7/23 11:57		1.015	0.100	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/2/23 15:12	11/7/23 11:57		1.015	0.0653	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	11/2/23 15:12	11/7/23 11:57		1.015	1.47	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/2/23 15:12	11/7/23 11:57		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/2/23 15:12	11/7/23 11:57		1	9.50	mg/L			
* Silicon, Dissolved	11/2/23 15:12	11/7/23 11:57		1.015	4.44	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/2/23 15:12	11/7/23 15:56		10.15	130	mg/L	0.4060	4.06	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/3/23 11:25	11/3/23 13:46		1.015	0.0283	mg/L	0.009135	0.05075	J
* Arsenic, Total	12/11/23 15:25	12/12/23 13:17		1.015	0.000904	mg/L	0.000112	0.000203	C
* Barium, Total	11/3/23 11:25	11/3/23 13:46		1.015	0.169	mg/L	0.000508	0.001015	
* Beryllium, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/3/23 11:25	11/3/23 13:46		1.015	0.0141	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2VA

Location Code: WMWGADAP
Collected: 11/1/23 11:15
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20075

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/3/23 11:25	11/3/23 13:46		1.015	0.706	mg/L	0.169505	0.5075	
* Selenium, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/3/23 11:25	11/3/23 13:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	12/11/23 14:10	12/11/23 14:26		1.015	0.00187	mg/L	0.000112	0.000203	C
* Barium, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	0.163	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	0.0204	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	0.743	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/2/23 15:12	11/3/23 12:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 17:00		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/7/23 17:41	11/7/23 17:41		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/14/23 10:55	11/14/23 10:57		1	4.50	SU		2.00	
* Alkalinity	11/14/23 10:55	11/14/23 10:57		1	281	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	317	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 10:57		1	276	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 10:57		1	5.06	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 11:24	11/7/23 11:24		1	1.58	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2VA

Location Code: WMWGADAP

Collected: 11/1/23 11:15

Customer ID:

Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20075

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/3/23 09:09	11/3/23 09:09		1	6.43	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:04	11/17/23 09:04		1	2.39	mg/L	0.06	0.125	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:38	11/7/23 09:38		1	2.10	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/1/23 11:11	11/1/23 11:11			481.08	uS/cm			FA
pH	11/1/23 11:11	11/1/23 11:11			8.47	SU			FA
Temperature	11/1/23 11:11	11/1/23 11:11			17.53	C			FA
Turbidity	11/1/23 11:11	11/1/23 11:11			0.13	NTU			FA
Sulfide	11/1/23 11:11	11/1/23 11:11			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 11:15

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2VA

Laboratory ID Number: BD20075

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20079	Aluminum, Dissolved	mg/L	0.000293	0.0198	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20079	Antimony, Dissolved	mg/L	0.000363	0.00100	0.100	0.108	0.102	0.0936	0.0850 to 0.115	108	70.0 to 130	5.71	20.0
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20075	Arsenic, Dissolved	mg/L	-0.0000247	0.000200	0.100	0.101	0.104	0.101	0.0850 to 0.115	99.1	70.0 to 130	2.93	20.0
BD20075	Arsenic, Total	mg/L	0.0000244	0.000200	0.100	0.103	0.103	0.104	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BD20079	Barium, Dissolved	mg/L	0.0000160	0.00100	0.100	0.132	0.127	0.0984	0.0850 to 0.115	100	70.0 to 130	3.86	20.0
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0
BD20079	Beryllium, Dissolved	mg/L	0.0000121	0.000880	0.100	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Boron, Dissolved	mg/L	-0.000456	0.0650	1.00	1.81	1.80	1.00	0.850 to 1.15	103	70.0 to 130	0.554	20.0
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0
BD20079	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.0985	0.0983	0.102	0.0850 to 0.115	98.3	70.0 to 130	0.203	20.0
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0
BD20079	Calcium, Dissolved	mg/L	-0.0460	0.152	5.00	70.8	66.3	4.81	4.25 to 5.75	158	70.0 to 130	6.56	20.0
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0
BD20079	Chromium, Dissolved	mg/L	-0.0000068	0.000440	0.100	0.0997	0.102	0.106	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20079	Cobalt, Dissolved	mg/L	-0.0000009	0.000147	0.100	0.115	0.116	0.109	0.0850 to 0.115	104	70.0 to 130	0.866	20.0
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0
BD20079	Iron, Dissolved	mg/L	-0.000619	0.0176	0.2	0.374	0.373	0.201	0.170 to 0.230	102	70.0 to 130	0.268	20.0
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 11:15

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2VA

Laboratory ID Number: BD20075

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20079	Lead, Dissolved	mg/L	0.0000059	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20079	Lithium, Dissolved	mg/L	-0.000216	0.0154	0.200	0.203	0.204	0.199	0.170 to 0.230	102	70.0 to 130	0.491	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20079	Magnesium, Dissolved	mg/L	-0.00908	0.0462	5.00	20.2	20.2	5.02	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20079	Manganese, Dissolved	mg/L	0.0000120	0.00033	0.100	17.8	17.9	0.105	0.0850 to 0.115	300	70.0 to 130	0.560	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20079	Molybdenum, Dissolved	mg/L	0.000125	0.0100	0.2	0.206	0.205	0.204	0.170 to 0.230	103	70.0 to 130	0.487	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20079	Potassium, Dissolved	mg/L	0.0394	0.367	10.0	13.4	13.4	10.7	8.50 to 11.5	104	70.0 to 130	0.00	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20079	Selenium, Dissolved	mg/L	-0.0000006	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20079	Silicon, Dissolved	mg/L	0.000496	0.0440	1.00	5.81	5.78	1.04	0.850 to 1.15	102	70.0 to 130	0.518	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20079	Sodium, Dissolved	mg/L	0.00172	0.0880	5.00	14.7	14.7	5.05	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0
BD20079	Thallium, Dissolved	mg/L	0.0000097	0.000147	0.100	0.102	0.103	0.101	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Total Organic Carbon	mg/L	0.142	1.00	10.0	11.5	11.6	10.4		102	80.0 to 120	0.866	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 11:15

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2VA

Laboratory ID Number: BD20075

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
BD20079	Alkalinity	mg CaCO3/L					72.0	51.6	45.0 to 55.0			1.79	10.0
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20091	Solids, Dissolved	mg/L	1.00	25.0			58.7	51.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2VB

Location Code: WMWGADAP
Collected: 11/1/23 13:17
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20076

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638				
* Boron, Total	11/2/23 15:10	11/7/23 12:41		1.015	0.650	mg/L	0.030000	0.1015	
* Calcium, Total	11/2/23 15:10	11/7/23 12:41		1.015	5.32	mg/L	0.070035	0.406	
* Iron, Total	11/2/23 15:10	11/7/23 12:41		1.015	0.0490	mg/L	0.008120	0.0406	
* Lithium, Total	11/2/23 15:10	11/7/23 12:41		1.015	0.121	mg/L	0.007105	0.01999956	
* Magnesium, Total	11/2/23 15:10	11/7/23 12:41		1.015	1.96	mg/L	0.021315	0.406	
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:41		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:41		1	9.99	mg/L			
* Silicon, Total	11/2/23 15:10	11/7/23 12:41		1.015	4.67	mg/L	0.02030	0.25375	
* Sodium, Total	11/2/23 15:10	11/7/23 16:21		10.15	294	mg/L	0.4060	4.06	
Analytical Method: EPA 200.7		Analyst: ELH							
* Boron, Dissolved	11/2/23 15:12	11/7/23 12:00		1.015	0.644	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/2/23 15:12	11/7/23 12:00		1.015	5.14	mg/L	0.070035	0.406	
* Iron, Dissolved	11/2/23 15:12	11/7/23 12:00		1.015	0.0297	mg/L	0.008120	0.0406	J
* Lithium, Dissolved	11/2/23 15:12	11/7/23 12:00		1.015	0.119	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	11/2/23 15:12	11/7/23 12:00		1.015	1.87	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/2/23 15:12	11/7/23 12:00		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/2/23 15:12	11/7/23 12:00		1	9.91	mg/L			
* Silicon, Dissolved	11/2/23 15:12	11/7/23 12:00		1.015	4.63	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/2/23 15:12	11/7/23 15:59		10.15	268	mg/L	0.4060	4.06	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/3/23 11:25	11/3/23 13:50		1.015	0.0359	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/3/23 11:25	11/3/23 13:50		1.015	0.000352	mg/L	0.000112	0.000203	
* Barium, Total	11/3/23 11:25	11/3/23 13:50		1.015	0.333	mg/L	0.000508	0.001015	
* Beryllium, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/3/23 11:25	11/3/23 13:50		1.015	0.0158	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2VB

Location Code: WMWGADAP

Collected: 11/1/23 13:17

Customer ID:

Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20076

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/3/23 11:25	11/3/23 13:50		1.015	1.49	mg/L	0.169505	0.5075	
* Selenium, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/3/23 11:25	11/3/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	0.0126	mg/L	0.009135	0.05075	J
* Arsenic, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	0.000267	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	0.321	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	0.0150	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	1.46	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/2/23 15:12	11/3/23 12:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 17:03		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/7/23 17:43	11/7/23 17:43		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/14/23 10:55	11/14/23 11:06		1	4.50	SU		2.00	
* Alkalinity	11/14/23 10:55	11/14/23 11:06		1	431	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	602	mg/L		50	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 11:06		1	423	mg CaCO3/L		1	A
* Carbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 11:06		1	7.41	mg CaCO3/L		0.5	A
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 11:37	11/7/23 11:37		1	5.66	mg/L	1.00	2	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2VB

Location Code: WMWGADAP
Collected: 11/1/23 13:17
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20076

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/3/23 09:19	11/3/23 09:19		5	57.2	mg/L	2.50	5	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:13	11/17/23 09:13		2	5.71	mg/L	0.12	0.25	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:40	11/7/23 09:40		1	25.0	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/1/23 13:14	11/1/23 13:14			950.47	uS/cm			FA
pH	11/1/23 13:14	11/1/23 13:14			8.45	SU			FA
Temperature	11/1/23 13:14	11/1/23 13:14			19.27	C			FA
Turbidity	11/1/23 13:14	11/1/23 13:14			0.13	NTU			FA
Sulfide	11/1/23 13:14	11/1/23 13:14			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 13:17

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2VB

Laboratory ID Number: BD20076

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20079	Aluminum, Dissolved	mg/L	0.000293	0.0198	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20079	Antimony, Dissolved	mg/L	0.000363	0.00100	0.100	0.108	0.102	0.0936	0.0850 to 0.115	108	70.0 to 130	5.71	20.0
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20079	Arsenic, Dissolved	mg/L	0.0000024	0.000200	0.100	0.0968	0.0955	0.0929	0.0850 to 0.115	96.6	70.0 to 130	1.35	20.0
BD20080	Arsenic, Total	mg/L	-0.0000158	0.000200	0.100	0.0960	0.0936	0.0977	0.0850 to 0.115	96.0	70.0 to 130	2.53	20.0
BD20079	Barium, Dissolved	mg/L	0.0000160	0.00100	0.100	0.132	0.127	0.0984	0.0850 to 0.115	100	70.0 to 130	3.86	20.0
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0
BD20079	Beryllium, Dissolved	mg/L	0.0000121	0.000880	0.100	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Boron, Dissolved	mg/L	-0.000456	0.0650	1.00	1.81	1.80	1.00	0.850 to 1.15	103	70.0 to 130	0.554	20.0
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0
BD20079	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.0985	0.0983	0.102	0.0850 to 0.115	98.3	70.0 to 130	0.203	20.0
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0
BD20079	Calcium, Dissolved	mg/L	-0.0460	0.152	5.00	70.8	66.3	4.81	4.25 to 5.75	158	70.0 to 130	6.56	20.0
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0
BD20079	Chromium, Dissolved	mg/L	-0.0000068	0.000440	0.100	0.0997	0.102	0.106	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20079	Cobalt, Dissolved	mg/L	-0.0000009	0.000147	0.100	0.115	0.116	0.109	0.0850 to 0.115	104	70.0 to 130	0.866	20.0
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0
BD20079	Iron, Dissolved	mg/L	-0.000619	0.0176	0.2	0.374	0.373	0.201	0.170 to 0.230	102	70.0 to 130	0.268	20.0
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 13:17

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2VB

Laboratory ID Number: BD20076

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20079	Lead, Dissolved	mg/L	0.0000059	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20079	Lithium, Dissolved	mg/L	-0.000216	0.0154	0.200	0.203	0.204	0.199	0.170 to 0.230	102	70.0 to 130	0.491	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20079	Magnesium, Dissolved	mg/L	-0.00908	0.0462	5.00	20.2	20.2	5.02	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20079	Manganese, Dissolved	mg/L	0.0000120	0.00033	0.100	17.8	17.9	0.105	0.0850 to 0.115	300	70.0 to 130	0.560	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20079	Molybdenum, Dissolved	mg/L	0.000125	0.0100	0.2	0.206	0.205	0.204	0.170 to 0.230	103	70.0 to 130	0.487	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20079	Potassium, Dissolved	mg/L	0.0394	0.367	10.0	13.4	13.4	10.7	8.50 to 11.5	104	70.0 to 130	0.00	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20079	Selenium, Dissolved	mg/L	-0.0000006	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20079	Silicon, Dissolved	mg/L	0.000496	0.0440	1.00	5.81	5.78	1.04	0.850 to 1.15	102	70.0 to 130	0.518	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20079	Sodium, Dissolved	mg/L	0.00172	0.0880	5.00	14.7	14.7	5.05	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0
BD20079	Thallium, Dissolved	mg/L	0.0000097	0.000147	0.100	0.102	0.103	0.101	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Total Organic Carbon	mg/L	0.142	1.00	10.0	11.5	11.6	10.4		102	80.0 to 120	0.866	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 13:17

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2VB

Laboratory ID Number: BD20076

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20079	Alkalinity	mg CaCO3/L					72.0	51.6	45.0 to 55.0			1.79	10.0
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20091	Solids, Dissolved	mg/L	1.00	25.0			58.7	51.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2

Location Code: WMWGADAP
Collected: 11/1/23 14:43
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20077

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638				
* Boron, Total	11/2/23 15:10	11/7/23 12:44		1.015	0.453	mg/L	0.030000	0.1015	
* Calcium, Total	11/2/23 15:10	11/7/23 16:24		10.15	91.0	mg/L	0.70035	4.06	
* Iron, Total	11/2/23 15:10	11/7/23 16:24		10.15	12.9	mg/L	0.08120	0.406	
* Lithium, Total	11/2/23 15:10	11/7/23 12:44		1.015	0.0233	mg/L	0.007105	0.01999956	
* Magnesium, Total	11/2/23 15:10	11/7/23 12:44		1.015	8.93	mg/L	0.021315	0.406	
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:44		1.015	0.0222	mg/L	0.005075	0.01015	
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:44		1	11.4	mg/L			
* Silicon, Total	11/2/23 15:10	11/7/23 12:44		1.015	5.34	mg/L	0.02030	0.25375	
* Sodium, Total	11/2/23 15:10	11/7/23 12:44		1.015	5.15	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ELH							
* Boron, Dissolved	11/2/23 15:12	11/7/23 12:03		1.015	0.451	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/2/23 15:12	11/7/23 16:02		10.15	81.4	mg/L	0.70035	4.06	
* Iron, Dissolved	11/2/23 15:12	11/7/23 16:02		10.15	11.5	mg/L	0.08120	0.406	
* Lithium, Dissolved	11/2/23 15:12	11/7/23 12:03		1.015	0.0231	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	11/2/23 15:12	11/7/23 12:03		1.015	8.86	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/2/23 15:12	11/7/23 12:03		1.015	0.0220	mg/L	0.005075	0.01015	
* Silica, Dissolved (calc.)	11/2/23 15:12	11/7/23 12:03		1	11.3	mg/L			
* Silicon, Dissolved	11/2/23 15:12	11/7/23 12:03		1.015	5.28	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/2/23 15:12	11/7/23 12:03		1.015	5.05	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/3/23 11:25	11/3/23 13:54		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/3/23 11:25	11/3/23 13:54		1.015	0.0324	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/3/23 11:25	11/3/23 13:54		1.015	0.542	mg/L	0.000112	0.000203	
* Barium, Total	11/3/23 11:25	11/3/23 13:54		1.015	0.136	mg/L	0.000508	0.001015	
* Beryllium, Total	11/3/23 11:25	11/3/23 13:54		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/3/23 11:25	11/3/23 13:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/3/23 11:25	11/3/23 13:54		1.015	0.000270	mg/L	0.000203	0.001015	J
* Cobalt, Total	11/3/23 11:25	11/3/23 13:54		1.015	0.0300	mg/L	0.000068	0.000203	
* Lead, Total	11/3/23 11:25	11/3/23 13:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/3/23 11:25	11/7/23 15:24		10.15	6.64	mg/L	0.001522	0.01015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2

Location Code: WMWGADAP
Collected: 11/1/23 14:43
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20077

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/3/23 11:25	11/3/23 13:54		1.015	8.38	mg/L	0.169505	0.5075	
* Selenium, Total	11/3/23 11:25	11/3/23 13:54		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/3/23 11:25	11/3/23 13:54		1.015	0.000337	mg/L	0.000068	0.000203	
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	0.533	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	0.131	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	0.0296	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/2/23 15:12	11/7/23 14:57		10.15	6.60	mg/L	0.001522	0.01015	
* Potassium, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	8.25	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/2/23 15:12	11/3/23 13:00		1.015	0.000360	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 17:05		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/7/23 17:45	11/7/23 17:45		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/14/23 10:55	11/14/23 14:09		1	4.49	SU		2.00	
* Alkalinity	11/14/23 10:55	11/14/23 14:09		1	115	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	309	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 14:09		1	115	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 14:09		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 11:52	11/7/23 11:52		1	1.36	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2

Location Code: WMWGADAP

Collected: 11/1/23 14:43

Customer ID:

Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20077

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/3/23 09:12	11/3/23 09:12		1	2.21	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:06	11/17/23 09:06		1	0.217	mg/L	0.06	0.125	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:49	11/7/23 09:49		4	89.5	mg/L	2.4	8	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/1/23 14:40	11/1/23 14:40			434.97	uS/cm			FA
pH	11/1/23 14:40	11/1/23 14:40			6.49	SU			FA
Temperature	11/1/23 14:40	11/1/23 14:40			20.50	C			FA
Turbidity	11/1/23 14:40	11/1/23 14:40			1.78	NTU			FA
Sulfide	11/1/23 14:40	11/1/23 14:40			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 14:43

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2

Laboratory ID Number: BD20077

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20079	Aluminum, Dissolved	mg/L	0.000293	0.0198	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20079	Antimony, Dissolved	mg/L	0.000363	0.00100	0.100	0.108	0.102	0.0936	0.0850 to 0.115	108	70.0 to 130	5.71	20.0
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20079	Arsenic, Dissolved	mg/L	0.0000024	0.000200	0.100	0.0968	0.0955	0.0929	0.0850 to 0.115	96.6	70.0 to 130	1.35	20.0
BD20080	Arsenic, Total	mg/L	-0.0000158	0.000200	0.100	0.0960	0.0936	0.0977	0.0850 to 0.115	96.0	70.0 to 130	2.53	20.0
BD20079	Barium, Dissolved	mg/L	0.0000160	0.00100	0.100	0.132	0.127	0.0984	0.0850 to 0.115	100	70.0 to 130	3.86	20.0
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0
BD20079	Beryllium, Dissolved	mg/L	0.0000121	0.000880	0.100	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Boron, Dissolved	mg/L	-0.000456	0.0650	1.00	1.81	1.80	1.00	0.850 to 1.15	103	70.0 to 130	0.554	20.0
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0
BD20079	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.0985	0.0983	0.102	0.0850 to 0.115	98.3	70.0 to 130	0.203	20.0
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0
BD20079	Calcium, Dissolved	mg/L	-0.0460	0.152	5.00	70.8	66.3	4.81	4.25 to 5.75	158	70.0 to 130	6.56	20.0
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0
BD20079	Chromium, Dissolved	mg/L	-0.0000068	0.000440	0.100	0.0997	0.102	0.106	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20079	Cobalt, Dissolved	mg/L	-0.0000009	0.000147	0.100	0.115	0.116	0.109	0.0850 to 0.115	104	70.0 to 130	0.866	20.0
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0
BD20079	Iron, Dissolved	mg/L	-0.000619	0.0176	0.2	0.374	0.373	0.201	0.170 to 0.230	102	70.0 to 130	0.268	20.0
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 14:43

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2

Laboratory ID Number: BD20077

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20079	Lead, Dissolved	mg/L	0.0000059	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20079	Lithium, Dissolved	mg/L	-0.000216	0.0154	0.200	0.203	0.204	0.199	0.170 to 0.230	102	70.0 to 130	0.491	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20079	Magnesium, Dissolved	mg/L	-0.00908	0.0462	5.00	20.2	20.2	5.02	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20079	Manganese, Dissolved	mg/L	0.0000120	0.00033	0.100	17.8	17.9	0.105	0.0850 to 0.115	300	70.0 to 130	0.560	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20079	Molybdenum, Dissolved	mg/L	0.000125	0.0100	0.2	0.206	0.205	0.204	0.170 to 0.230	103	70.0 to 130	0.487	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20079	Potassium, Dissolved	mg/L	0.0394	0.367	10.0	13.4	13.4	10.7	8.50 to 11.5	104	70.0 to 130	0.00	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20079	Selenium, Dissolved	mg/L	-0.0000006	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20079	Silicon, Dissolved	mg/L	0.000496	0.0440	1.00	5.81	5.78	1.04	0.850 to 1.15	102	70.0 to 130	0.518	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20079	Sodium, Dissolved	mg/L	0.00172	0.0880	5.00	14.7	14.7	5.05	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0
BD20079	Thallium, Dissolved	mg/L	0.0000097	0.000147	0.100	0.102	0.103	0.101	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Total Organic Carbon	mg/L	0.142	1.00	10.0	11.5	11.6	10.4		102	80.0 to 120	0.866	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 14:43

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2

Laboratory ID Number: BD20077

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20079	Alkalinity	mg CaCO3/L					72.0	51.6	45.0 to 55.0			1.79	10.0
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20091	Solids, Dissolved	mg/L	1.00	25.0			58.7	51.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2 Dup

Location Code: WMWGADAP
Collected: 11/1/23 14:43
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20078

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638				
* Boron, Total	11/2/23 15:10	11/7/23 12:48		1.015	0.455	mg/L	0.030000	0.1015	
* Calcium, Total	11/2/23 15:10	11/7/23 16:28		10.15	93.4	mg/L	0.70035	4.06	
* Iron, Total	11/2/23 15:10	11/7/23 16:28		10.15	13.0	mg/L	0.08120	0.406	
* Lithium, Total	11/2/23 15:10	11/7/23 12:48		1.015	0.0233	mg/L	0.007105	0.01999956	
* Magnesium, Total	11/2/23 15:10	11/7/23 12:48		1.015	8.93	mg/L	0.021315	0.406	
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:48		1.015	0.0220	mg/L	0.005075	0.01015	
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:48		1	11.5	mg/L			
* Silicon, Total	11/2/23 15:10	11/7/23 12:48		1.015	5.37	mg/L	0.02030	0.25375	
* Sodium, Total	11/2/23 15:10	11/7/23 12:48		1.015	5.08	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638				
* Boron, Dissolved	11/2/23 15:12	11/7/23 12:07		1.015	0.450	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/2/23 15:12	11/7/23 16:05		10.15	80.7	mg/L	0.70035	4.06	
* Iron, Dissolved	11/2/23 15:12	11/7/23 16:05		10.15	11.5	mg/L	0.08120	0.406	
* Lithium, Dissolved	11/2/23 15:12	11/7/23 12:07		1.015	0.0230	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	11/2/23 15:12	11/7/23 12:07		1.015	8.73	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/2/23 15:12	11/7/23 12:07		1.015	0.0222	mg/L	0.005075	0.01015	
* Silica, Dissolved (calc.)	11/2/23 15:12	11/7/23 12:07		1	11.4	mg/L			
* Silicon, Dissolved	11/2/23 15:12	11/7/23 12:07		1.015	5.31	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/2/23 15:12	11/7/23 12:07		1.015	5.01	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/3/23 11:25	11/3/23 13:58		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/3/23 11:25	11/3/23 13:58		1.015	0.0192	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/3/23 11:25	11/3/23 13:58		1.015	0.536	mg/L	0.000112	0.000203	
* Barium, Total	11/3/23 11:25	11/3/23 13:58		1.015	0.140	mg/L	0.000508	0.001015	
* Beryllium, Total	11/3/23 11:25	11/3/23 13:58		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/3/23 11:25	11/3/23 13:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/3/23 11:25	11/3/23 13:58		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/3/23 11:25	11/3/23 13:58		1.015	0.0295	mg/L	0.000068	0.000203	
* Lead, Total	11/3/23 11:25	11/3/23 13:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/3/23 11:25	11/7/23 15:28		10.15	6.80	mg/L	0.001522	0.01015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2 Dup

Location Code: WMWGADAP
Collected: 11/1/23 14:43
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20078

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/3/23 11:25	11/3/23 13:58		1.015	8.24	mg/L	0.169505	0.5075	
* Selenium, Total	11/3/23 11:25	11/3/23 13:58		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/3/23 11:25	11/3/23 13:58		1.015	0.000362	mg/L	0.000068	0.000203	
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	0.516	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	0.134	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	0.0287	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/2/23 15:12	11/7/23 15:01		10.15	6.57	mg/L	0.001522	0.01015	
* Potassium, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	8.28	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/2/23 15:12	11/3/23 13:04		1.015	0.000369	mg/L	0.000068	0.000203	
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 17:07		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/7/23 17:46	11/7/23 17:46		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/14/23 10:55	11/14/23 14:18		1	4.49	SU		2.00	
* Alkalinity	11/14/23 10:55	11/14/23 14:18		1	115	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	314	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 14:18		1	115	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 14:18		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 12:09	11/7/23 12:09		1	1.45	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-2 Dup

Location Code: WMWGADAP

Collected: 11/1/23 14:43

Customer ID:

Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20078

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/3/23 09:13	11/3/23 09:13		1	2.28	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:07	11/17/23 09:07		1	0.213	mg/L	0.06	0.125	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:51	11/7/23 09:51		4	93.6	mg/L	2.4	8	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/1/23 14:40	11/1/23 14:40			434.97	uS/cm			FA
pH	11/1/23 14:40	11/1/23 14:40			6.49	SU			FA
Temperature	11/1/23 14:40	11/1/23 14:40			20.50	C			FA
Turbidity	11/1/23 14:40	11/1/23 14:40			1.78	NTU			FA
Sulfide	11/1/23 14:40	11/1/23 14:40			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 14:43

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2 Dup

Laboratory ID Number: BD20078

Sample	Analysis	Units	MB				Standard			Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20079	Aluminum, Dissolved	mg/L	0.000293	0.0198	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20079	Antimony, Dissolved	mg/L	0.000363	0.00100	0.100	0.108	0.102	0.0936	0.0850 to 0.115	108	70.0 to 130	5.71	20.0
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20079	Arsenic, Dissolved	mg/L	0.0000024	0.000200	0.100	0.0968	0.0955	0.0929	0.0850 to 0.115	96.6	70.0 to 130	1.35	20.0
BD20080	Arsenic, Total	mg/L	-0.0000158	0.000200	0.100	0.0960	0.0936	0.0977	0.0850 to 0.115	96.0	70.0 to 130	2.53	20.0
BD20079	Barium, Dissolved	mg/L	0.0000160	0.00100	0.100	0.132	0.127	0.0984	0.0850 to 0.115	100	70.0 to 130	3.86	20.0
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0
BD20079	Beryllium, Dissolved	mg/L	0.0000121	0.000880	0.100	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Boron, Dissolved	mg/L	-0.000456	0.0650	1.00	1.81	1.80	1.00	0.850 to 1.15	103	70.0 to 130	0.554	20.0
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0
BD20079	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.0985	0.0983	0.102	0.0850 to 0.115	98.3	70.0 to 130	0.203	20.0
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0
BD20079	Calcium, Dissolved	mg/L	-0.0460	0.152	5.00	70.8	66.3	4.81	4.25 to 5.75	158	70.0 to 130	6.56	20.0
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0
BD20079	Chromium, Dissolved	mg/L	-0.0000068	0.000440	0.100	0.0997	0.102	0.106	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20079	Cobalt, Dissolved	mg/L	-0.0000009	0.000147	0.100	0.115	0.116	0.109	0.0850 to 0.115	104	70.0 to 130	0.866	20.0
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0
BD20079	Iron, Dissolved	mg/L	-0.000619	0.0176	0.2	0.374	0.373	0.201	0.170 to 0.230	102	70.0 to 130	0.268	20.0
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 14:43

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2 Dup

Laboratory ID Number: BD20078

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20079	Lead, Dissolved	mg/L	0.0000059	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20079	Lithium, Dissolved	mg/L	-0.000216	0.0154	0.200	0.203	0.204	0.199	0.170 to 0.230	102	70.0 to 130	0.491	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20079	Magnesium, Dissolved	mg/L	-0.00908	0.0462	5.00	20.2	20.2	5.02	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20079	Manganese, Dissolved	mg/L	0.0000120	0.00033	0.100	17.8	17.9	0.105	0.0850 to 0.115	300	70.0 to 130	0.560	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20079	Molybdenum, Dissolved	mg/L	0.000125	0.0100	0.2	0.206	0.205	0.204	0.170 to 0.230	103	70.0 to 130	0.487	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20079	Potassium, Dissolved	mg/L	0.0394	0.367	10.0	13.4	13.4	10.7	8.50 to 11.5	104	70.0 to 130	0.00	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20079	Selenium, Dissolved	mg/L	-0.0000006	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20079	Silicon, Dissolved	mg/L	0.000496	0.0440	1.00	5.81	5.78	1.04	0.850 to 1.15	102	70.0 to 130	0.518	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20079	Sodium, Dissolved	mg/L	0.00172	0.0880	5.00	14.7	14.7	5.05	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0
BD20079	Thallium, Dissolved	mg/L	0.0000097	0.000147	0.100	0.102	0.103	0.101	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Total Organic Carbon	mg/L	0.142	1.00	10.0	11.5	11.6	10.4		102	80.0 to 120	0.866	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 14:43

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-2 Dup

Laboratory ID Number: BD20078

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20079	Alkalinity	mg CaCO3/L					72.0	51.6	45.0 to 55.0			1.79	10.0
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20091	Solids, Dissolved	mg/L	1.00	25.0			58.7	51.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-3

Location Code: WMWGADAP
Collected: 11/1/23 15:58
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20079

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638				
* Boron, Total	11/2/23 15:10	11/7/23 12:51		1.015	0.792	mg/L	0.030000	0.1015	
* Calcium, Total	11/2/23 15:10	11/7/23 16:31		10.15	63.1	mg/L	0.70035	4.06	
* Iron, Total	11/2/23 15:10	11/7/23 12:51		1.015	0.183	mg/L	0.008120	0.0406	
* Lithium, Total	11/2/23 15:10	11/7/23 12:51		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/2/23 15:10	11/7/23 12:51		1.015	15.4	mg/L	0.021315	0.406	
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:51		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:51		1	10.2	mg/L			
* Silicon, Total	11/2/23 15:10	11/7/23 12:51		1.015	4.78	mg/L	0.02030	0.25375	
* Sodium, Total	11/2/23 15:10	11/7/23 12:51		1.015	9.86	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ELH							
* Boron, Dissolved	11/2/23 15:12	11/7/23 12:10		1.015	0.783	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/2/23 15:12	11/7/23 16:08		10.15	62.9	mg/L	0.70035	4.06	RA
* Iron, Dissolved	11/2/23 15:12	11/7/23 12:10		1.015	0.171	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/2/23 15:12	11/7/23 12:10		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/2/23 15:12	11/7/23 12:10		1.015	15.2	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/2/23 15:12	11/7/23 12:10		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/2/23 15:12	11/7/23 12:10		1	10.3	mg/L			
* Silicon, Dissolved	11/2/23 15:12	11/7/23 12:10		1.015	4.79	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/2/23 15:12	11/7/23 12:10		1.015	9.64	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/3/23 11:25	11/3/23 14:02		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/3/23 11:25	11/3/23 14:02		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Total	11/3/23 11:25	11/3/23 14:02		1.015	0.000144	mg/L	0.000112	0.000203	J
* Barium, Total	11/3/23 11:25	11/3/23 14:02		1.015	0.0314	mg/L	0.000508	0.001015	
* Beryllium, Total	11/3/23 11:25	11/3/23 14:02		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/3/23 11:25	11/3/23 14:02		1.015	0.000212	mg/L	0.000068	0.000203	
* Chromium, Total	11/3/23 11:25	11/3/23 14:02		1.015	0.000486	mg/L	0.000203	0.001015	J
* Cobalt, Total	11/3/23 11:25	11/3/23 14:02		1.015	0.0116	mg/L	0.000068	0.000203	
* Lead, Total	11/3/23 11:25	11/3/23 14:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/3/23 11:25	11/7/23 15:32		92.365	18.0	mg/L	0.013855	0.092365	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-3

Location Code: WMWGADAP

Collected: 11/1/23 15:58

Customer ID:

Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20079

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/3/23 11:25	11/3/23 14:02		1.015	3.07	mg/L	0.169505	0.5075	
* Selenium, Total	11/3/23 11:25	11/3/23 14:02		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/3/23 11:25	11/3/23 14:02		1.015	0.000109	mg/L	0.000068	0.000203	J
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	0.000150	mg/L	0.000112	0.000203	J
* Barium, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	0.0317	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	0.000209	mg/L	0.000068	0.000203	
* Chromium, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	0.0112	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/2/23 15:12	11/7/23 15:05		92.365	17.5	mg/L	0.013855	0.092365	RA
* Potassium, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	2.95	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/2/23 15:12	11/3/23 13:08		1.015	0.000126	mg/L	0.000068	0.000203	J
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 17:10		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/7/23 17:48	11/7/23 17:48		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/14/23 10:55	11/14/23 15:13		1	4.49	SU		2.00	
* Alkalinity	11/14/23 10:55	11/14/23 15:13		1	73.3	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	313	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 15:13		1	73.3	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/14/23 10:55	11/14/23 15:13		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 12:26	11/7/23 12:26		1	1.25	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-3

Location Code: WMWGADAP
Collected: 11/1/23 15:58
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20079

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/3/23 09:14	11/3/23 09:14		1	4.21	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:08	11/17/23 09:08		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:52	11/7/23 09:52		8	158	mg/L	4.8	16	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/1/23 15:54	11/1/23 15:54			418.32	uS/cm			FA
pH	11/1/23 15:54	11/1/23 15:54			5.98	SU			FA
Temperature	11/1/23 15:54	11/1/23 15:54			21.27	C			FA
Turbidity	11/1/23 15:54	11/1/23 15:54			0.01	NTU			FA
Sulfide	11/1/23 15:54	11/1/23 15:54			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 15:58

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-3

Laboratory ID Number: BD20079

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20079	Aluminum, Dissolved	mg/L	0.000293	0.0198	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0	
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0	
BD20079	Antimony, Dissolved	mg/L	0.000363	0.00100	0.100	0.108	0.102	0.0936	0.0850 to 0.115	108	70.0 to 130	5.71	20.0	
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0	
BD20079	Arsenic, Dissolved	mg/L	0.0000024	0.000200	0.100	0.0968	0.0955	0.0929	0.0850 to 0.115	96.6	70.0 to 130	1.35	20.0	
BD20080	Arsenic, Total	mg/L	-0.0000158	0.000200	0.100	0.0960	0.0936	0.0977	0.0850 to 0.115	96.0	70.0 to 130	2.53	20.0	
BD20079	Barium, Dissolved	mg/L	0.0000160	0.00100	0.100	0.132	0.127	0.0984	0.0850 to 0.115	100	70.0 to 130	3.86	20.0	
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0	
BD20079	Beryllium, Dissolved	mg/L	0.0000121	0.000880	0.100	0.102	0.103	0.102	0.0850 to 0.115	102	70.0 to 130	0.976	20.0	
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0	
BD20079	Boron, Dissolved	mg/L	-0.000456	0.0650	1.00	1.81	1.80	1.00	0.850 to 1.15	103	70.0 to 130	0.554	20.0	
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0	
BD20079	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.0985	0.0983	0.102	0.0850 to 0.115	98.3	70.0 to 130	0.203	20.0	
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0	
BD20079	Calcium, Dissolved	mg/L	-0.0460	0.152	5.00	70.8	66.3	4.81	4.25 to 5.75	158	70.0 to 130	6.56	20.0	
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0	
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0	
BD20079	Chromium, Dissolved	mg/L	-0.0000068	0.000440	0.100	0.0997	0.102	0.106	0.0850 to 0.115	99.7	70.0 to 130	2.28	20.0	
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0	
BD20079	Cobalt, Dissolved	mg/L	-0.0000009	0.000147	0.100	0.115	0.116	0.109	0.0850 to 0.115	104	70.0 to 130	0.866	20.0	
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0	
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0	
BD20079	Iron, Dissolved	mg/L	-0.000619	0.0176	0.2	0.374	0.373	0.201	0.170 to 0.230	102	70.0 to 130	0.268	20.0	
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/1/23 15:58
Customer ID:
Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-3

Laboratory ID Number: BD20079

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20079	Lead, Dissolved	mg/L	0.0000059	0.000147	0.100	0.101	0.102	0.101	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20079	Lithium, Dissolved	mg/L	-0.000216	0.0154	0.200	0.203	0.204	0.199	0.170 to 0.230	102	70.0 to 130	0.491	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20079	Magnesium, Dissolved	mg/L	-0.00908	0.0462	5.00	20.2	20.2	5.02	4.25 to 5.75	100	70.0 to 130	0.00	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20079	Manganese, Dissolved	mg/L	0.0000120	0.00033	0.100	17.8	17.9	0.105	0.0850 to 0.115	300	70.0 to 130	0.560	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20079	Molybdenum, Dissolved	mg/L	0.000125	0.0100	0.2	0.206	0.205	0.204	0.170 to 0.230	103	70.0 to 130	0.487	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20079	Potassium, Dissolved	mg/L	0.0394	0.367	10.0	13.4	13.4	10.7	8.50 to 11.5	104	70.0 to 130	0.00	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20079	Selenium, Dissolved	mg/L	-0.0000006	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20079	Silicon, Dissolved	mg/L	0.000496	0.0440	1.00	5.81	5.78	1.04	0.850 to 1.15	102	70.0 to 130	0.518	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20079	Sodium, Dissolved	mg/L	0.00172	0.0880	5.00	14.7	14.7	5.05	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0
BD20079	Thallium, Dissolved	mg/L	0.0000097	0.000147	0.100	0.102	0.103	0.101	0.0850 to 0.115	102	70.0 to 130	0.976	20.0
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20079	Total Organic Carbon	mg/L	0.142	1.00	10.0	11.5	11.6	10.4		102	80.0 to 120	0.866	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/1/23 15:58

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond - MW-3

Laboratory ID Number: BD20079

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20079	Alkalinity	mg CaCO3/L					72.0	51.6	45.0 to 55.0			1.79	10.0
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20091	Solids, Dissolved	mg/L	1.00	25.0			58.7	51.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond Field Blank-1

Location Code: WMWGADAPFB
Collected: 11/1/23 16:15
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20080

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ELH			Preparation Method: EPA 1638					
* Boron, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.021315	0.406	U	
* Molybdenum, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/2/23 15:10	11/7/23 12:54		1	Not Detected	mg/L				
* Silicon, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	11/2/23 15:10	11/7/23 12:54		1.015	Not Detected	mg/L	0.04060	0.406	U	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000152	0.001015	U	
* Potassium, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	11/3/23 11:25	11/3/23 14:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
Analytical Method: EPA 245.1		Analyst: ABB								
* Mercury, Total by CVAA	11/8/23 08:30	11/8/23 17:12		1	Not Detected	mg/L	0.0003	0.0005	U	
Analytical Method: EPA 353.2		Analyst: CES								
* Nitrogen, Nitrate/Nitrite	11/7/23 17:50	11/7/23 17:50		1	Not Detected	mg/L as N	0.20	0.3	U	
Analytical Method: SM 2540C		Analyst: CNJ								
* Solids, Dissolved	11/2/23 13:50	11/7/23 13:25		1	Not Detected	mg/L		25	U	

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

Comments:

Certificate Of Analysis

Description: Gadsden Ash Pond Field Blank-1

Location Code: WMWGADAPFB
Collected: 11/1/23 16:15
Customer ID:
Submittal Date: 11/2/23 11:43

Laboratory ID Number: BD20080

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/7/23 13:40	11/7/23 13:40		1	Not Detected	mg/L	1.00	2	U
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/3/23 09:15	11/3/23 09:15		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:10	11/17/23 09:10		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/7/23 09:44	11/7/23 09:44		1	Not Detected	mg/L	0.6	2	U

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

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/1/23 16:15

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond Field Blank-1

Laboratory ID Number: BD20080

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20080	Aluminum, Total	mg/L	0.000810	0.0198	0.100	0.101	0.102	0.100	0.0850 to 0.115	101	70.0 to 130	0.985	20.0
BD20080	Antimony, Total	mg/L	0.000311	0.00100	0.100	0.103	0.103	0.103	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20080	Arsenic, Total	mg/L	-0.0000158	0.000200	0.100	0.0960	0.0936	0.0977	0.0850 to 0.115	96.0	70.0 to 130	2.53	20.0
BD20080	Barium, Total	mg/L	0.0000002	0.00100	0.100	0.0984	0.0947	0.0989	0.0850 to 0.115	98.4	70.0 to 130	3.83	20.0
BD20080	Beryllium, Total	mg/L	0.0000075	0.000880	0.100	0.101	0.100	0.104	0.0850 to 0.115	101	70.0 to 130	0.995	20.0
BD20080	Boron, Total	mg/L	0.000362	0.0650	1.00	1.01	1.00	1.00	0.850 to 1.15	101	70.0 to 130	0.995	20.0
BD20080	Cadmium, Total	mg/L	0.0000000	0.000147	0.100	0.0994	0.103	0.100	0.0850 to 0.115	99.4	70.0 to 130	3.56	20.0
BD20080	Calcium, Total	mg/L	-0.0506	0.152	5.00	4.83	4.93	5.00	4.25 to 5.75	96.6	70.0 to 130	2.05	20.0
BD20080	Chloride	mg/L	0.0283	1.00	10.0	10.1	10.3	10.2	9.00 to 11.0	101	80.0 to 120	1.96	20.0
BD20080	Chromium, Total	mg/L	0.0000050	0.000440	0.100	0.100	0.103	0.101	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20080	Cobalt, Total	mg/L	-0.0000004	0.000147	0.100	0.105	0.107	0.106	0.0850 to 0.115	105	70.0 to 130	1.89	20.0
BD20080	Fluoride	mg/L	0.0386	0.125	2.50	2.46	2.56	2.67	2.25 to 2.75	98.4	80.0 to 120	3.98	20.0
BD20080	Iron, Total	mg/L	-0.000545	0.0176	0.2	0.202	0.202	0.202	0.170 to 0.230	101	70.0 to 130	0.00	20.0
BD20080	Lead, Total	mg/L	0.0000063	0.000147	0.100	0.101	0.0995	0.100	0.0850 to 0.115	101	70.0 to 130	1.50	20.0
BD20080	Lithium, Total	mg/L	0.000249	0.0154	0.200	0.202	0.201	0.204	0.170 to 0.230	101	70.0 to 130	0.496	20.0
BD20080	Magnesium, Total	mg/L	-0.0124	0.0462	5.00	5.05	5.06	5.12	4.25 to 5.75	101	70.0 to 130	0.198	20.0
BD20080	Manganese, Total	mg/L	0.0000976	0.00033	0.100	0.100	0.102	0.101	0.0850 to 0.115	100	70.0 to 130	1.98	20.0
BD20080	Mercury, Total by CVAA	mg/L	-1.000E-05	0.000500	0.004	0.00379	0.00379	0.00379	0.00340 to 0.00460	94.8	70.0 to 130	0.00	20.0
BD20080	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.208	0.207	0.206	0.170 to 0.230	104	70.0 to 130	0.482	20.0
BD20080	Potassium, Total	mg/L	-0.0266	0.367	10.0	10.4	10.6	10.4	8.50 to 11.5	104	70.0 to 130	1.90	20.0
BD20080	Selenium, Total	mg/L	0.0000630	0.00100	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BD20080	Silicon, Total	mg/L	0.00146	0.0440	1.00	1.04	1.04	1.04	0.850 to 1.15	104	70.0 to 130	0.00	20.0
BD20080	Sodium, Total	mg/L	-0.00444	0.0880	5.00	5.10	5.07	5.10	4.25 to 5.75	102	70.0 to 130	0.590	20.0
BD20080	Sulfate	mg/L	-0.00802	2.0	20.0	19.8	20.1	20.0	18.0 to 22.0	99.0	80.0 to 120	1.50	20.0

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/1/23 16:15

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond Field Blank-1

Laboratory ID Number: BD20080

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec		
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	Limit	
BD20080	Thallium, Total	mg/L	0.0000240	0.000147	0.100	0.101	0.100	0.102	0.0850 to 0.115		101	70.0 to 130	0.995	20.0
BD20097	Total Organic Carbon	mg/L	0.253	1.00	10.0	10.9	11.5	10.3			91.2	80.0 to 120	5.36	20.0

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/1/23 16:15

Customer ID:

Delivery Date: 11/2/23 11:43

Description: Gadsden Ash Pond Field Blank-1

Laboratory ID Number: BD20080

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20080	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.01	0.200	2.00	2.08	0.039	1.96	1.80 to 2.20	104	90.0 to 110	0.00	15.0
BD20091	Solids, Dissolved	mg/L	1.00	25.0			58.7	51.0	40.0 to 60.0			0.00	10.0

Comments:

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-1

Location Code: WMWGADAP
Collected: 11/7/23 07:59
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20297

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 16:47		1.015	0.934	mg/L	0.030000	0.1015	
* Calcium, Total	11/9/23 13:50	11/20/23 14:28		10.15	192	mg/L	0.70035	4.06	
* Iron, Total	11/9/23 13:50	11/14/23 16:47		1.015	1.07	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 16:47		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 16:47		1.015	32.5	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 16:47		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 16:47		1	11.1	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 16:47		1.015	5.17	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 16:47		1.015	15.8	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 14:43		1.015	0.926	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 18:57		10.15	218	mg/L	0.70035	4.06	
* Iron, Dissolved	11/9/23 11:49	11/14/23 14:43		1.015	1.08	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 14:43		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 14:43		1.015	32.6	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 14:43		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 14:43		1	11.0	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 14:43		1.015	5.13	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 14:43		1.015	15.9	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 12:46		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 12:46		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Total	11/9/23 13:50	11/14/23 12:46		1.015	0.00166	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 12:46		1.015	0.0259	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 12:46		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 12:46		1.015	0.000155	mg/L	0.000068	0.000203	J
* Chromium, Total	11/9/23 13:50	11/14/23 12:46		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 12:46		1.015	0.0127	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 12:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 19:20		5.075	2.27	mg/L	0.000761	0.005075	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-1

Location Code: WMWGADAP
Collected: 11/7/23 07:59
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20297

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 12:46		1.015	7.59	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 12:46		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 12:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	0.00193	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	0.0287	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	0.000116	mg/L	0.000068	0.000203	J
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	0.0128	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/14/23 18:24		5.075	2.28	mg/L	0.000761	0.005075	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	7.37	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:03		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 19:47		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:21	11/14/23 10:21		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.51	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	69.2	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	732	mg/L		50	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	69.2	mg CaCO3/L		1	A
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	Not Detected	mg CaCO3/L		0.5	A
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 09:27	11/9/23 09:27		1	1.42	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-1

Location Code: WMWGADAP
Collected: 11/7/23 07:59
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20297

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:27	11/9/23 09:27		1	5.89	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:29	11/17/23 09:29		1	0.0626	mg/L	0.06	0.125	J
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:45	11/20/23 13:45		25	428	mg/L	15.0	50	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 07:56	11/7/23 07:56			859.33	uS/cm			FA
pH	11/7/23 07:56	11/7/23 07:56			5.94	SU			FA
Temperature	11/7/23 07:56	11/7/23 07:56			17.90	C			FA
Turbidity	11/7/23 07:56	11/7/23 07:56			1.67	NTU			FA
Sulfide	11/7/23 07:56	11/7/23 07:56			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 07:59

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-1

Laboratory ID Number: BD20297

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Aluminum, Dissolved	mg/L	-0.000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20306	Aluminum, Total	mg/L	-0.000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0
BD20306	Beryllium, Total	mg/L	0.000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 07:59

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-1

Laboratory ID Number: BD20297

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 07:59

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-1

Laboratory ID Number: BD20297

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20297	Solids, Dissolved	mg/L	1.00	25.0			732	53.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-18H

Location Code: WMWGADAP
Collected: 11/7/23 09:31
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20298

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 16:50		1.015	0.0703	mg/L	0.030000	0.1015	J
* Calcium, Total	11/9/23 13:50	11/14/23 16:50		1.015	8.62	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 16:50		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	11/9/23 13:50	11/14/23 16:50		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 16:50		1.015	3.89	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 16:50		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 16:50		1	7.92	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 16:50		1.015	3.70	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 16:50		1.015	5.04	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB							
* Boron, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	0.0721	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	8.78	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	4.06	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 14:47		1	7.92	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	3.70	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 14:47		1.015	5.21	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 12:50		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 12:50		1.015	0.0421	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/9/23 13:50	11/14/23 12:50		1.015	0.000212	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 12:50		1.015	0.0355	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 12:50		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 12:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 12:50		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 12:50		1.015	0.000469	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 12:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 12:50		1.015	0.0180	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-18H

Location Code: WMWGADAP
Collected: 11/7/23 09:31
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20298

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 12:50		1.015	0.964	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 12:50		1.015	0.00113	mg/L	0.000508	0.001015	
* Thallium, Total	11/9/23 13:50	11/14/23 12:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	0.0405	mg/L	0.009135	0.05075	J
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	0.000152	mg/L	0.000112	0.000203	J
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	0.0386	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	0.000497	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	0.0183	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	0.951	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	0.00107	mg/L	0.000508	0.001015	
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 19:51		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:22	11/14/23 10:22		1	1.07	mg/L as N	0.20	0.3	
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.19	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	3.56	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	76.0	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	3.56	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 09:41	11/9/23 09:41		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-18H

Location Code: WMWGADAP
Collected: 11/7/23 09:31
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20298

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:28	11/9/23 09:28		1	5.01	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:30	11/17/23 09:30		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:31	11/20/23 13:31		1	31.7	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 09:28	11/7/23 09:28			103.65	uS/cm			FA
pH	11/7/23 09:28	11/7/23 09:28			5.07	SU			FA
Temperature	11/7/23 09:28	11/7/23 09:28			17.41	C			FA
Turbidity	11/7/23 09:28	11/7/23 09:28			2.01	NTU			FA
Sulfide	11/7/23 09:28	11/7/23 09:28			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 09:31
Customer ID:
Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-18H

Laboratory ID Number: BD20298

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0	
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0	
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0	
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0	
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0	
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0	
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0	
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0	
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0	
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0	
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0	
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0	
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0	
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0	
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0	
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0	
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0	
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0	
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0	
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0	
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0	
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0	
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0	
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 09:31

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-18H

Laboratory ID Number: BD20298

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 09:31

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-18H

Laboratory ID Number: BD20298

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20297	Solids, Dissolved	mg/L	1.00	25.0			732	53.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-6

Location Code: WMWGADAP
Collected: 11/7/23 10:16
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20299

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 16:53		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/9/23 13:50	11/14/23 16:53		1.015	3.32	mg/L	0.070035	0.406		
* Iron, Total	11/9/23 13:50	11/14/23 16:53		1.015	0.0147	mg/L	0.008120	0.0406	J	
* Lithium, Total	11/9/23 13:50	11/14/23 16:53		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 16:53		1.015	1.07	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 16:53		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 16:53		1	13.7	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 16:53		1.015	6.42	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 16:53		1.015	4.08	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	3.25	mg/L	0.070035	0.406		
* Iron, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	1.06	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 14:50		1	13.6	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	6.37	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 14:50		1.015	4.10	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/9/23 13:50	11/14/23 12:54		1.015	0.0303	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 12:54		1.015	0.0000702	mg/L	0.000068	0.000203	J	
* Lead, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 12:54		1.015	0.00175	mg/L	0.000152	0.001015		

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-6

Location Code: WMWGADAP
Collected: 11/7/23 10:16
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20299

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 12:54		1.015	0.469	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 12:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	0.0300	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	0.0000764	mg/L	0.000068	0.000203	J
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	0.00175	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	0.451	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 19:55		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:24	11/14/23 10:24		1	0.944	mg/L as N	0.20	0.3	
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.21	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	10.7	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	44.0	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	10.7	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 09:57	11/9/23 09:57		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-6

Location Code: WMWGADAP
Collected: 11/7/23 10:16
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20299

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:29	11/9/23 09:29		1	3.54	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:31	11/17/23 09:31		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:33	11/20/23 13:33		1	1.34	mg/L	0.6	2	J
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 10:13	11/7/23 10:13			43.74	uS/cm			FA
pH	11/7/23 10:13	11/7/23 10:13			5.27	SU			FA
Temperature	11/7/23 10:13	11/7/23 10:13			19.36	C			FA
Turbidity	11/7/23 10:13	11/7/23 10:13			2.21	NTU			FA
Sulfide	11/7/23 10:13	11/7/23 10:13			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 10:16

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - PZ-6

Laboratory ID Number: BD20299

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 10:16

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - PZ-6

Laboratory ID Number: BD20299

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 10:16

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - PZ-6

Laboratory ID Number: BD20299

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20297	Solids, Dissolved	mg/L	1.00	25.0			732	53.0	40.0 to 60.0			0.00	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-5

Location Code: WMWGADAP
Collected: 11/7/23 11:04
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20300

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 16:56		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/9/23 13:50	11/14/23 16:56		1.015	3.02	mg/L	0.070035	0.406		
* Iron, Total	11/9/23 13:50	11/14/23 16:56		1.015	0.0120	mg/L	0.008120	0.0406	J	
* Lithium, Total	11/9/23 13:50	11/14/23 16:56		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 16:56		1.015	1.17	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 16:56		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 16:56		1	15.6	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 16:56		1.015	7.28	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 16:56		1.015	4.03	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	3.02	mg/L	0.070035	0.406		
* Iron, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	1.18	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 14:53		1	15.7	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	7.34	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 14:53		1.015	4.07	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/9/23 13:50	11/14/23 12:57		1.015	0.0473	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 12:57		1.015	0.000284	mg/L	0.000203	0.001015	J	
* Cobalt, Total	11/9/23 13:50	11/14/23 12:57		1.015	0.0000778	mg/L	0.000068	0.000203	J	
* Lead, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 12:57		1.015	0.00801	mg/L	0.000152	0.001015		

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-5

Location Code: WMWGADAP
Collected: 11/7/23 11:04
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20300

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 12:57		1.015	0.505	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 12:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	0.0486	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	0.000209	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	0.00396	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	0.525	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:14		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 19:59		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:26	11/14/23 10:26		1	0.889	mg/L as N	0.20	0.3	
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.20	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	10.5	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	43.3	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	10.5	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 10:12	11/9/23 10:12		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-5

Location Code: WMWGADAP
Collected: 11/7/23 11:04
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20300

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:31	11/9/23 09:31		1	3.99	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:32	11/17/23 09:32		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:34	11/20/23 13:34		1	Not Detected	mg/L	0.6	2	U
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 11:01	11/7/23 11:01			43.23	uS/cm			FA
pH	11/7/23 11:01	11/7/23 11:01			5.32	SU			FA
Temperature	11/7/23 11:01	11/7/23 11:01			17.44	C			FA
Turbidity	11/7/23 11:01	11/7/23 11:01			2.58	NTU			FA
Sulfide	11/7/23 11:01	11/7/23 11:01			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 11:04
Customer ID:
Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - PZ-5

Laboratory ID Number: BD20300

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0	
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0	
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0	
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0	
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0	
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0	
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0	
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0	
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0	
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0	
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0	
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0	
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0	
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0	
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0	
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0	
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0	
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0	
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0	
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0	
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0	
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0	
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0	
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:04

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - PZ-5

Laboratory ID Number: BD20300

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:04

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - PZ-5

Laboratory ID Number: BD20300

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-19H

Location Code: WMWGADAP
Collected: 11/7/23 11:52
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20301

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 16:59		1.015	0.350	mg/L	0.030000	0.1015	
* Calcium, Total	11/9/23 13:50	11/14/23 16:59		1.015	39.7	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 16:59		1.015	0.412	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 16:59		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 16:59		1.015	7.73	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 16:59		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 16:59		1	17.8	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 16:59		1.015	8.34	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 16:59		1.015	14.6	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	0.344	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	39.7	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	0.376	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	7.85	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 14:56		1	17.8	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	8.34	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 14:56		1.015	14.7	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Total	11/9/23 13:50	11/14/23 13:01		1.015	0.000242	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 13:01		1.015	0.144	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 13:01		1.015	0.00224	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 13:01		1.015	0.466	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-19H

Location Code: WMWGADAP
Collected: 11/7/23 11:52
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20301

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:01		1.015	0.970	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	0.000265	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	0.150	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	0.00222	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	0.487	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	1.01	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:03		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:28	11/14/23 10:28		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.48	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	95.4	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	202	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	95.3	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 10:28	11/9/23 10:28		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-19H

Location Code: WMWGADAP
Collected: 11/7/23 11:52
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20301

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:32	11/9/23 09:32		1	7.16	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:34	11/17/23 09:34		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:46	11/20/23 13:46		3	51.6	mg/L	1.8	6	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 11:49	11/7/23 11:49			298.45	uS/cm			FA
pH	11/7/23 11:49	11/7/23 11:49			6.31	SU			FA
Temperature	11/7/23 11:49	11/7/23 11:49			19.80	C			FA
Turbidity	11/7/23 11:49	11/7/23 11:49			1.56	NTU			FA
Sulfide	11/7/23 11:49	11/7/23 11:49			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:52

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-19H

Laboratory ID Number: BD20301

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 11:52
Customer ID:
Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-19H

Laboratory ID Number: BD20301

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:52

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-19H

Laboratory ID Number: BD20301

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-19H Dup

Location Code: WMWGADAP
Collected: 11/7/23 11:52
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20302

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:03		1.015	0.349	mg/L	0.030000	0.1015	
* Calcium, Total	11/9/23 13:50	11/14/23 17:03		1.015	39.1	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 17:03		1.015	0.414	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:03		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 17:03		1.015	7.72	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:03		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:03		1	18.0	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:03		1.015	8.39	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 17:03		1.015	14.6	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	0.339	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	39.8	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	0.373	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	7.74	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 14:59		1	17.8	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	8.32	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 14:59		1.015	14.5	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Total	11/9/23 13:50	11/14/23 13:05		1.015	0.000313	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 13:05		1.015	0.144	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 13:05		1.015	0.00221	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 13:05		1.015	0.484	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-19H Dup

Location Code: WMWGADAP
Collected: 11/7/23 11:52
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20302

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:05		1.015	1.02	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	0.000410	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	0.156	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	0.00221	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	0.501	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	1.03	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:07		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:30	11/14/23 10:30		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.48	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	96.6	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	203	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	96.5	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 10:45	11/9/23 10:45		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-19H Dup

Location Code: WMWGADAP
Collected: 11/7/23 11:52
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20302

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:33	11/9/23 09:33		1	7.19	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:35	11/17/23 09:35		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:47	11/20/23 13:47		3	51.9	mg/L	1.8	6	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 11:49	11/7/23 11:49			298.45	uS/cm			FA
pH	11/7/23 11:49	11/7/23 11:49			6.31	SU			FA
Temperature	11/7/23 11:49	11/7/23 11:49			19.80	C			FA
Turbidity	11/7/23 11:49	11/7/23 11:49			1.56	NTU			FA
Sulfide	11/7/23 11:49	11/7/23 11:49			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 11:52
Customer ID:
Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-19H Dup

Laboratory ID Number: BD20302

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:52

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-19H Dup

Laboratory ID Number: BD20302

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:52

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-19H Dup

Laboratory ID Number: BD20302

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-22VB

Location Code: WMWGADAP
Collected: 11/7/23 13:10
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20303

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:06		1.015	0.432	mg/L	0.030000	0.1015	
* Calcium, Total	11/9/23 13:50	11/14/23 17:06		1.015	9.48	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 17:06		1.015	0.0871	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:06		1.015	0.0580	mg/L	0.007105	0.01999956	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:06		1.015	2.19	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:06		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:06		1	10.3	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:06		1.015	4.79	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/20/23 14:32		10.15	104	mg/L	0.4060	4.06	
Analytical Method: EPA 200.7		Analyst: ABB							
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:02		1.015	0.429	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:02		1.015	9.27	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:02		1.015	0.0717	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:02		1.015	0.0593	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:02		1.015	2.19	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:02		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:02		1	10.2	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:02		1.015	4.77	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 19:01		10.15	115	mg/L	0.4060	4.06	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 13:09		1.015	0.0197	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/9/23 13:50	11/14/23 13:09		1.015	0.00180	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 13:09		1.015	0.268	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 13:09		1.015	0.0168	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-22VB

Location Code: WMWGADAP
Collected: 11/7/23 13:10
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20303

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:09		1.015	0.475	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	0.00922	mg/L	0.009135	0.05075	J
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	0.00202	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	0.276	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	0.0171	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	0.538	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:26		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:11		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:32	11/14/23 10:32		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.48	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	211	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	244	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	204	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	6.65	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 10:59	11/9/23 10:59		1	1.25	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-22VB

Location Code: WMWGADAP
Collected: 11/7/23 13:10
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20303

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:34	11/9/23 09:34		1	1.48	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:36	11/17/23 09:36		1	1.30	mg/L	0.06	0.125	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:37	11/20/23 13:37		1	2.63	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 13:07	11/7/23 13:07			335.17	uS/cm			FA
pH	11/7/23 13:07	11/7/23 13:07			8.10	SU			FA
Temperature	11/7/23 13:07	11/7/23 13:07			18.82	C			FA
Turbidity	11/7/23 13:07	11/7/23 13:07			1.75	NTU			FA
Sulfide	11/7/23 13:07	11/7/23 13:07			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 13:10
Customer ID:
Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-22VB

Laboratory ID Number: BD20303

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0	
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0	
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0	
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0	
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0	
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0	
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0	
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0	
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0	
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0	
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0	
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0	
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0	
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0	
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0	
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0	
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0	
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0	
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0	
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0	
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0	
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0	
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0	
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 13:10

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-22VB

Laboratory ID Number: BD20303

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 13:10

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-22VB

Laboratory ID Number: BD20303

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-21VC

Location Code: WMWGADAP
Collected: 11/7/23 14:21
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20304

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:09		1.015	0.580	mg/L	0.030000	0.1015	
* Calcium, Total	11/9/23 13:50	11/14/23 17:09		1.015	3.31	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 17:09		1.015	0.0514	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:09		1.015	0.216	mg/L	0.007105	0.01999956	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:09		1.015	1.14	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:09		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:09		1	8.60	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:09		1.015	4.02	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/20/23 14:35		101.5	467	mg/L	4.060	40.6	
Analytical Method: EPA 200.7		Analyst: ABB							
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:06		1.015	0.584	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:06		1.015	3.20	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:06		1.015	0.0452	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:06		1.015	0.216	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:06		1.015	1.11	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:06		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:06		1	8.65	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:06		1.015	4.04	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 19:04		101.5	403	mg/L	4.060	40.6	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 13:13		1.015	0.0143	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/9/23 13:50	11/14/23 13:13		1.015	0.000810	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 13:13		1.015	0.441	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 13:13		1.015	0.00550	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-21VC

Location Code: WMWGADAP
Collected: 11/7/23 14:21
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20304

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:13		1.015	1.07	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	0.000864	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	0.454	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	0.00539	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	1.09	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	0.00198	mg/L	0.000508	0.001015	
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:30		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:15		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:33	11/14/23 10:33		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.52	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	581	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	961	mg/L		75.8	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	562	mg CaCO3/L		1	A
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	19.2	mg CaCO3/L		0.5	A
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 11:17	11/9/23 11:17		1	3.73	mg/L	1.00	2	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-21VC

Location Code: WMWGADAP
Collected: 11/7/23 14:21
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20304

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:51	11/9/23 09:51		16	179	mg/L	8.00	16	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:43	11/17/23 09:43		2	7.70	mg/L	0.12	0.25	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:39	11/20/23 13:39		1	19.4	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: DKG							
Conductivity	11/7/23 14:18	11/7/23 14:18			1589.84	uS/cm			FA
pH	11/7/23 14:18	11/7/23 14:18			8.35	SU			FA
Temperature	11/7/23 14:18	11/7/23 14:18			19.44	C			FA
Turbidity	11/7/23 14:18	11/7/23 14:18			1.11	NTU			FA
Sulfide	11/7/23 14:18	11/7/23 14:18			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 14:21

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-21VC

Laboratory ID Number: BD20304

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 14:21

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-21VC

Laboratory ID Number: BD20304

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 14:21

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond - MW-21VC

Laboratory ID Number: BD20304

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond Equipment Blank-1

Location Code: WMWGADAPEB
Collected: 11/7/23 14:55
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20305

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 17:12		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/9/23 13:50	11/14/23 17:12		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	11/9/23 13:50	11/14/23 17:12		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	11/9/23 13:50	11/14/23 17:12		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:12		1.015	Not Detected	mg/L	0.021315	0.406	U	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:12		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:12		1	Not Detected	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 17:12		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	11/9/23 13:50	11/14/23 17:12		1.015	0.0488	mg/L	0.04060	0.406	J	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000152	0.001015	U	
* Potassium, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	11/9/23 13:50	11/14/23 13:16		1.015	Not Detected	mg/L	0.000068	0.000203	U	
Analytical Method: EPA 245.1		Analyst: ABB								
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:19		1	Not Detected	mg/L	0.0003	0.0005	U	
Analytical Method: EPA 353.2		Analyst: CES								
* Nitrogen, Nitrate/Nitrite	11/14/23 10:35	11/14/23 10:35		1	Not Detected	mg/L as N	0.20	0.3	U	
Analytical Method: SM 2540C		Analyst: CNJ								
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	Not Detected	mg/L		25	U	

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

Comments:

Certificate Of Analysis

Description: Gadsden Ash Pond Equipment Blank-1

Location Code: WMWGADAPEB
Collected: 11/7/23 14:55
Customer ID:
Submittal Date: 11/8/23 12:43

Laboratory ID Number: BD20305

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 11:34	11/9/23 11:34		1	Not Detected	mg/L	1.00	2	U
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:36	11/9/23 09:36		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:38	11/17/23 09:38		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:40	11/20/23 13:40		1	Not Detected	mg/L	0.6	2	U

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

Comments:

Batch QC Summary

Customer Account: WMWGADAPEB

Sample Date: 11/7/23 14:55

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond Equipment Blank-1

Laboratory ID Number: BD20305

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20306	Aluminum, Total	mg/L	-0.000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0
BD20306	Beryllium, Total	mg/L	0.000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0

Comments:

Batch QC Summary

Customer Account: WMWGADAPEB

Sample Date: 11/7/23 14:55

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond Equipment Blank-1

Laboratory ID Number: BD20305

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20306	Thallium, Total	mg/L	0.000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

Comments:

Batch QC Summary

Customer Account: WMWGADAPEB

Sample Date: 11/7/23 14:55

Customer ID:

Delivery Date: 11/8/23 12:43

Description: Gadsden Ash Pond Equipment Blank-1

Laboratory ID Number: BD20305

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20305	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.092	0.200	2.00	1.98	-0.108	1.81	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

Comments:

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-4

Location Code: WMWGADAP
Collected: 11/7/23 08:32
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20306

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 17:15		1.015	0.466	mg/L	0.030000	0.1015		
* Calcium, Total	11/9/23 13:50	11/20/23 14:38		10.15	48.6	mg/L	0.70035	4.06	RA	
* Iron, Total	11/9/23 13:50	11/20/23 14:47		101.5	57.0	mg/L	0.8120	4.06	RA	
* Lithium, Total	11/9/23 13:50	11/14/23 17:15		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:15		1.015	14.5	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:15		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:15		1	10.4	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 17:15		1.015	4.87	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 17:15		1.015	16.1	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:09		1.015	0.470	mg/L	0.030000	0.1015		
* Calcium, Dissolved	12/7/23 09:04	12/7/23 10:11		10.15	43.8	mg/L	0.70035	4.06		
* Iron, Dissolved	11/9/23 11:49	11/14/23 19:10		101.5	52.4	mg/L	0.8120	4.06		
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:09		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:09		1.015	14.5	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:09		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:09		1	10.5	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:09		1.015	4.89	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:09		1.015	16.3	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 13:20		1.015	0.0150	mg/L	0.000112	0.000203		
* Barium, Total	11/9/23 13:50	11/14/23 13:20		1.015	0.257	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 13:20		1.015	0.0306	mg/L	0.000068	0.000203		
* Lead, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 19:24		5.075	3.00	mg/L	0.000761	0.005075	RA	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-4

Location Code: WMWGADAP
Collected: 11/7/23 08:32
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20306

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:20		1.015	2.90	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:20		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	0.0154	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	0.271	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	0.0314	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/14/23 18:27		5.075	2.96	mg/L	0.000761	0.005075	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	2.93	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:23		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:44	11/14/23 10:44		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.50	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	103	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	318	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	103	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 11:47	11/9/23 11:47		1	1.98	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-4

Location Code: WMWGADAP
Collected: 11/7/23 08:32
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20306

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 09:38	11/9/23 09:38		1	7.87	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:40	11/17/23 09:40		1	0.168	mg/L	0.06	0.125	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 13:48	11/20/23 13:48		8	91.6	mg/L	4.8	16	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	11/7/23 08:31	11/7/23 08:31			534.02	uS/cm			FA
pH	11/7/23 08:31	11/7/23 08:31			6.72	SU			FA
Temperature	11/7/23 08:31	11/7/23 08:31			20.24	C			FA
Turbidity	11/7/23 08:31	11/7/23 08:31			6.28	NTU			FA
Sulfide	11/7/23 08:31	11/7/23 08:31			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 08:32
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-4

Laboratory ID Number: BD20306

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0	
BD20306	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.103	0.0982	0.0969	0.0850 to 0.115	103	70.0 to 130	4.77	20.0	
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0	
BD20306	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.109	0.104	0.0964	0.0850 to 0.115	109	70.0 to 130	4.69	20.0	
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0	
BD20306	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.119	0.112	0.102	0.0850 to 0.115	104	70.0 to 130	6.06	20.0	
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0	
BD20306	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.369	0.346	0.0990	0.0850 to 0.115	112	70.0 to 130	6.43	20.0	
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0	
BD20306	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0907	0.0905	0.100	0.0850 to 0.115	90.7	70.0 to 130	0.221	20.0	
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0	
BD20306	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.51	1.50	1.05	0.850 to 1.15	104	70.0 to 130	0.664	20.0	
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0	
BD20306	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0990	0.0997	0.103	0.0850 to 0.115	99.0	70.0 to 130	0.705	20.0	
BD20308	Calcium, Dissolved	mg/L	0.0130	0.152	5.00	71.2	73.3	5.08	4.25 to 5.75	88.0	70.0 to 130	2.91	20.0	
BD20306	Calcium, Total	mg/L	-0.0343	0.152	5.00	62.3	59.4	5.04	4.25 to 5.75	274	70.0 to 130	4.77	20.0	
BD20306	Chloride	mg/L	0.0216	1.00	10.0	18.0	17.9	10.2	9.00 to 11.0	101	80.0 to 120	0.557	20.0	
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0	
BD20306	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.101	0.0984	0.0995	0.0850 to 0.115	101	70.0 to 130	2.61	20.0	
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0	
BD20306	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.131	0.127	0.101	0.0850 to 0.115	100	70.0 to 130	3.10	20.0	
BD20306	Fluoride	mg/L	0.0314	0.125	2.50	2.79	2.85	2.67	2.25 to 2.75	105	80.0 to 120	2.13	20.0	
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0	
BD20306	Iron, Total	mg/L	0.00264	0.0176	0.2	58.8	52.0	0.214	0.170 to 0.230	900	70.0 to 130	12.3	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 08:32

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-4

Laboratory ID Number: BD20306

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20306	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.100	0.0997	0.103	0.0850 to 0.115	100	70.0 to 130	0.300	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20306	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.217	0.215	0.216	0.170 to 0.230	108	70.0 to 130	0.926	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20306	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	19.6	19.5	5.27	4.25 to 5.75	102	70.0 to 130	0.512	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20306	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	3.04	3.06	0.0999	0.0850 to 0.115	40.0	70.0 to 130	0.656	20.0
BD20306	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00399	0.00399	0.00401	0.00340 to 0.00460	99.8	70.0 to 130	0.00	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20306	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.214	0.212	0.219	0.170 to 0.230	107	70.0 to 130	0.939	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20306	Potassium, Total	mg/L	-0.0332	0.367	10.0	13.3	13.1	10.4	8.50 to 11.5	104	70.0 to 130	1.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20306	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.102	0.101	0.106	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20306	Silicon, Total	mg/L	-0.000422	0.0440	1.00	5.86	5.87	1.06	0.850 to 1.15	99.0	70.0 to 130	0.171	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20306	Sodium, Total	mg/L	-0.000752	0.0880	5.00	21.3	21.3	5.34	4.25 to 5.75	104	70.0 to 130	0.00	20.0
BD20306	Sulfate	mg/L	-0.0743	2.0	160	244	244	19.9	18.0 to 22.0	95.2	80.0 to 120	0.00	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20306	Thallium, Total	mg/L	0.000005	0.000147	0.100	0.0945	0.0934	0.101	0.0850 to 0.115	94.5	70.0 to 130	1.17	20.0
BD20306	Total Organic Carbon	mg/L	0.123	1.00	10.0	12.2	11.3	9.93		102	80.0 to 120	7.66	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 08:32

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-4

Laboratory ID Number: BD20306

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-4V

Location Code: WMWGADAP
Collected: 11/7/23 09:20
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20307

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:31		1.015	0.0642	mg/L	0.030000	0.1015	J
* Calcium, Total	11/9/23 13:50	11/14/23 17:31		1.015	23.6	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 17:31		1.015	0.543	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:31		1.015	0.0207	mg/L	0.007105	0.01999956	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:31		1.015	5.67	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:31		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:31		1	18.4	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:31		1.015	8.61	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/20/23 14:57		10.15	69.0	mg/L	0.4060	4.06	
Analytical Method: EPA 200.7		Analyst: ABB							
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:12		1.015	0.0641	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:12		1.015	23.2	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:12		1.015	0.436	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:12		1.015	0.0206	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:12		1.015	5.69	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:12		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:12		1	19.0	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:12		1.015	8.86	mg/L	0.02030	0.25375	
* Sodium, Dissolved	12/7/23 09:04	12/7/23 10:14		10.15	69.9	mg/L	0.4060	4.06	RA
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 13:43		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 13:43		1.015	0.0512	mg/L	0.009135	0.05075	
* Arsenic, Total	11/9/23 13:50	11/14/23 13:43		1.015	0.000502	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 13:43		1.015	0.484	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 13:43		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 13:43		1.015	0.000243	mg/L	0.000203	0.001015	J
* Cobalt, Total	11/9/23 13:50	11/14/23 13:43		1.015	0.0000961	mg/L	0.000068	0.000203	J
* Lead, Total	11/9/23 13:50	11/14/23 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 13:43		1.015	0.0474	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-4V

Location Code: WMWGADAP

Collected: 11/7/23 09:20

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20307

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:43		1.015	0.850	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:43		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	0.000498	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	0.523	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	0.0478	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	0.898	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 15:37		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:42		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:46	11/14/23 10:46		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/16/23 10:10	11/16/23 12:24		1	4.48	SU		2.00	
* Alkalinity	11/16/23 10:10	11/16/23 12:24		1	204	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	235	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	201	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/16/23 10:10	11/16/23 12:24		1	2.73	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 13:01	11/9/23 13:01		1	1.06	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-4V

Location Code: WMWGADAP
Collected: 11/7/23 09:20
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20307

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:03	11/9/23 10:03		1	5.69	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:54	11/17/23 09:54		1	0.218	mg/L	0.06	0.125	
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:00	11/20/23 14:00		1	1.00	mg/L	0.6	2	J
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	11/7/23 09:17	11/7/23 09:17			383.81	uS/cm			FA
pH	11/7/23 09:17	11/7/23 09:17			8.26	SU			FA
Temperature	11/7/23 09:17	11/7/23 09:17			19.49	C			FA
Turbidity	11/7/23 09:17	11/7/23 09:17			6.17	NTU			FA
Sulfide	11/7/23 09:17	11/7/23 09:17			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 09:20
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-4V

Laboratory ID Number: BD20307

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec
				Limit					Standard	Limit	Rec	Limit	
BD20307	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.0998	0.101	0.103	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0
BD20307	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.102	0.104	0.100	0.0850 to 0.115	102	70.0 to 130	1.94	20.0
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20307	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.105	0.106	0.105	0.0850 to 0.115	105	70.0 to 130	0.948	20.0
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0
BD20307	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.620	0.631	0.0999	0.0850 to 0.115	97.0	70.0 to 130	1.76	20.0
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0
BD20307	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0965	0.0964	0.0966	0.0850 to 0.115	96.5	70.0 to 130	0.104	20.0
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0
BD20307	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.12	1.12	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0
BD20307	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.103	0.104	0.104	0.0850 to 0.115	103	70.0 to 130	0.966	20.0
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0
BD20307	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	27.8	28.0	5.12	4.25 to 5.75	92.0	70.0 to 130	0.717	20.0
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0
BD20307	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.0970	0.101	0.100	0.0850 to 0.115	97.0	70.0 to 130	4.04	20.0
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0
BD20307	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.0998	0.103	0.103	0.0850 to 0.115	99.8	70.0 to 130	3.16	20.0
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0
BD20307	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.633	0.641	0.210	0.170 to 0.230	98.5	70.0 to 130	1.26	20.0
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 09:20

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-4V

Laboratory ID Number: BD20307

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20307	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0947	0.0980	0.0960	0.0850 to 0.115	94.7	70.0 to 130	3.43	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20307	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.236	0.240	0.215	0.170 to 0.230	108	70.0 to 130	1.68	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20307	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	10.9	11.0	5.34	4.25 to 5.75	104	70.0 to 130	0.913	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20307	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	0.145	0.150	0.103	0.0850 to 0.115	97.2	70.0 to 130	3.39	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20307	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.216	0.215	0.215	0.170 to 0.230	108	70.0 to 130	0.464	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20307	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	10.9	11.0	10.4	8.50 to 11.5	100	70.0 to 130	0.913	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20307	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.103	0.105	0.106	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20307	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.91	9.91	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20307	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	67.0	65.7	5.31	4.25 to 5.75	-58.0	70.0 to 130	1.96	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20307	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0918	0.0952	0.0939	0.0850 to 0.115	91.8	70.0 to 130	3.64	20.0
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 09:20

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-4V

Laboratory ID Number: BD20307

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20307	Alkalinity	mg CaCO3/L					206	51.2	45.0 to 55.0			0.976	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-20H

Location Code: WMWGADAP
Collected: 11/7/23 10:02
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20308

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:34		1.015	0.740	mg/L	0.030000	0.1015	
* Calcium, Total	11/9/23 13:50	11/20/23 15:00		10.15	64.7	mg/L	0.70035	4.06	
* Iron, Total	11/9/23 13:50	11/14/23 17:34		1.015	2.12	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:34		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 17:34		1.015	19.5	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:34		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:34		1	8.39	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:34		1.015	3.92	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 17:34		1.015	15.3	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB							
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:28		1.015	0.749	mg/L	0.030000	0.1015	
* Calcium, Dissolved	12/7/23 09:04	12/7/23 10:24		10.15	66.8	mg/L	0.70035	4.06	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:28		1.015	1.34	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:28		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:28		1.015	19.8	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:28		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:28		1	8.43	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:28		1.015	3.94	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:28		1.015	15.5	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 13:46		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 13:46		1.015	0.0282	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/9/23 13:50	11/14/23 13:46		1.015	0.00178	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 13:46		1.015	0.0819	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 13:46		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 13:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 13:46		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 13:46		1.015	0.00823	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 13:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 19:35		92.365	28.8	mg/L	0.013855	0.092365	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-20H

Location Code: WMWGADAP

Collected: 11/7/23 10:02

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20308

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:46		1.015	2.78	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:46		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:46		1.015	0.000133	mg/L	0.000068	0.000203	J
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	0.00125	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	0.0895	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	0.00843	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/14/23 18:31		92.365	28.5	mg/L	0.013855	0.092365	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	2.84	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:00		1.015	0.000122	mg/L	0.000068	0.000203	J
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:46		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:48	11/14/23 10:48		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.48	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	142	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	378	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	142	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 13:18	11/9/23 13:18		1	1.45	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-20H

Location Code: WMWGADAP

Collected: 11/7/23 10:02

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20308

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:04	11/9/23 10:04		1	4.93	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:55	11/17/23 09:55		1	0.0912	mg/L	0.06	0.125	J
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:14	11/20/23 14:14		8	149	mg/L	4.8	16	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	11/7/23 09:58	11/7/23 09:58			584.15	uS/cm			FA
pH	11/7/23 09:58	11/7/23 09:58			6.81	SU			FA
Temperature	11/7/23 09:58	11/7/23 09:58			19.17	C			FA
Turbidity	11/7/23 09:58	11/7/23 09:58			7.86	NTU			FA
Sulfide	11/7/23 09:58	11/7/23 09:58			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 10:02
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-20H

Laboratory ID Number: BD20308

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0
BD20308	Calcium, Dissolved	mg/L	0.0130	0.152	5.00	71.2	73.3	5.08	4.25 to 5.75	88.0	70.0 to 130	2.91	20.0
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 10:02
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-20H

Laboratory ID Number: BD20308

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 10:02

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-20H

Laboratory ID Number: BD20308

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-1

Location Code: WMWGADAP
Collected: 11/7/23 11:02
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20309

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 17:38		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/9/23 13:50	11/14/23 17:38		1.015	30.7	mg/L	0.070035	0.406		
* Iron, Total	11/9/23 13:50	11/14/23 17:38		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	11/9/23 13:50	11/14/23 17:38		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:38		1.015	4.46	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:38		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:38		1	16.2	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 17:38		1.015	7.58	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 17:38		1.015	4.36	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	29.0	mg/L	0.070035	0.406		
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	4.27	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:31		1	16.5	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	7.72	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:31		1.015	4.37	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/9/23 13:50	11/14/23 13:50		1.015	0.0787	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 13:50		1.015	0.0148	mg/L	0.000152	0.001015		

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-1

Location Code: WMWGADAP
Collected: 11/7/23 11:02
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20309

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:50		1.015	0.505	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	0.0830	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	0.0148	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	0.528	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:50		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:50	11/14/23 10:50		1	0.520	mg/L as N	0.20	0.3	
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.45	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	89.7	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/8/23 14:50	11/9/23 14:35		1	122	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	89.5	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 13:35	11/9/23 13:35		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-1

Location Code: WMWGADAP
Collected: 11/7/23 11:02
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20309

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:06	11/9/23 10:06		1	3.34	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:56	11/17/23 09:56		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:02	11/20/23 14:02		1	3.69	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	11/7/23 11:00	11/7/23 11:00			212.97	uS/cm			FA
pH	11/7/23 11:00	11/7/23 11:00			6.83	SU			FA
Temperature	11/7/23 11:00	11/7/23 11:00			19.54	C			FA
Turbidity	11/7/23 11:00	11/7/23 11:00			3.1	NTU			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 11:02
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - PZ-1

Laboratory ID Number: BD20309

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 11:02
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - PZ-1

Laboratory ID Number: BD20309

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:02

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - PZ-1

Laboratory ID Number: BD20309

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20309	Solids, Dissolved	mg/L	1.00	25.0			120	53.0	40.0 to 60.0			1.65	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-5

Location Code: WMWGADAP
Collected: 11/7/23 11:55
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20310

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 17:41		1.015	0.227	mg/L	0.030000	0.1015		
* Calcium, Total	11/9/23 13:50	11/20/23 15:03		10.15	44.7	mg/L	0.70035	4.06		
* Iron, Total	11/9/23 13:50	11/14/23 17:41		1.015	0.290	mg/L	0.008120	0.0406		
* Lithium, Total	11/9/23 13:50	11/14/23 17:41		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:41		1.015	9.51	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:41		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:41		1	16.5	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 17:41		1.015	7.72	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 17:41		1.015	15.9	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:34		1.015	0.231	mg/L	0.030000	0.1015		
* Calcium, Dissolved	11/9/23 11:49	11/14/23 19:26		10.15	52.5	mg/L	0.70035	4.06		
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:34		1.015	0.0814	mg/L	0.008120	0.0406		
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:34		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:34		1.015	9.60	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:34		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:34		1	16.3	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:34		1.015	7.62	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:34		1.015	16.2	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 13:54		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 13:54		1.015	0.0930	mg/L	0.009135	0.05075		
* Arsenic, Total	11/9/23 13:50	11/14/23 13:54		1.015	0.000177	mg/L	0.000112	0.000203	J	
* Barium, Total	11/9/23 13:50	11/14/23 13:54		1.015	0.248	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 13:54		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 13:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 13:54		1.015	0.000266	mg/L	0.000203	0.001015	J	
* Cobalt, Total	11/9/23 13:50	11/14/23 13:54		1.015	0.000837	mg/L	0.000068	0.000203		
* Lead, Total	11/9/23 13:50	11/14/23 13:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 13:54		1.015	0.150	mg/L	0.000152	0.001015		

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-5

Location Code: WMWGADAP

Collected: 11/7/23 11:55

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20310

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:54		1.015	0.800	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:54		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:54		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	0.000143	mg/L	0.000112	0.000203	J
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	0.261	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	0.0000831	mg/L	0.000068	0.000203	J
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	0.000772	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	0.151	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	0.804	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:54		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:52	11/14/23 10:52		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.45	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	135	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	191	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	135	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 13:47	11/9/23 13:47		1	1.21	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-5

Location Code: WMWGADAP

Collected: 11/7/23 11:55

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20310

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:07	11/9/23 10:07		1	6.07	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:57	11/17/23 09:57		1	0.0639	mg/L	0.06	0.125	J
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:03	11/20/23 14:03		1	29.3	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	11/7/23 11:52	11/7/23 11:52			328.58	uS/cm			FA
pH	11/7/23 11:52	11/7/23 11:52			6.60	SU			FA
Temperature	11/7/23 11:52	11/7/23 11:52			21.53	C			FA
Turbidity	11/7/23 11:52	11/7/23 11:52			6.82	NTU			FA
Sulfide	11/7/23 11:52	11/7/23 11:52			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:55

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-5

Laboratory ID Number: BD20310

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0	
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0	
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0	
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0	
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0	
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0	
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0	
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0	
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0	
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0	
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0	
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0	
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0	
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0	
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0	
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0	
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0	
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0	
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0	
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0	
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0	
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0	
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0	
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:55

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-5

Laboratory ID Number: BD20310

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:55

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-5

Laboratory ID Number: BD20310

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-6

Location Code: WMWGADAP
Collected: 11/7/23 12:48
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20311

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 17:44		1.015	0.0957	mg/L	0.030000	0.1015	J	
* Calcium, Total	11/9/23 13:50	11/14/23 17:44		1.015	11.8	mg/L	0.070035	0.406		
* Iron, Total	11/9/23 13:50	11/14/23 17:44		1.015	0.0595	mg/L	0.008120	0.0406		
* Lithium, Total	11/9/23 13:50	11/14/23 17:44		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 17:44		1.015	3.58	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:44		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:44		1	13.2	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 17:44		1.015	6.19	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 17:44		1.015	12.6	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	0.0966	mg/L	0.030000	0.1015	J	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	11.8	mg/L	0.070035	0.406		
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	0.0561	mg/L	0.008120	0.0406		
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	3.67	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:37		1	13.5	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	6.31	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:37		1.015	12.9	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/9/23 13:50	11/14/23 13:58		1.015	0.0759	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 13:58		1.015	0.00123	mg/L	0.000068	0.000203		
* Lead, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 13:58		1.015	0.318	mg/L	0.000152	0.001015		

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-6

Location Code: WMWGADAP

Collected: 11/7/23 12:48

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20311

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 13:58		1.015	0.992	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 13:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	0.0811	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	0.00124	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	0.340	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	1.08	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 20:58		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:54	11/14/23 10:54		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.47	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	46.9	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	82.7	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	46.9	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 14:04	11/9/23 14:04		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-6

Location Code: WMWGADAP
Collected: 11/7/23 12:48
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20311

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:08	11/9/23 10:08		1	9.61	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 09:58	11/17/23 09:58		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:05	11/20/23 14:05		1	12.5	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	11/7/23 12:45	11/7/23 12:45			147.82	uS/cm			FA
pH	11/7/23 12:45	11/7/23 12:45			6.22	SU			FA
Temperature	11/7/23 12:45	11/7/23 12:45			20.22	C			FA
Turbidity	11/7/23 12:45	11/7/23 12:45			3.22	NTU			FA
Sulfide	11/7/23 12:45	11/7/23 12:45			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 12:48

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-6

Laboratory ID Number: BD20311

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0	
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0	
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0	
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0	
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0	
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0	
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0	
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0	
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0	
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0	
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0	
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0	
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0	
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0	
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0	
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0	
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0	
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0	
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0	
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0	
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0	
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0	
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0	
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 12:48
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-6

Laboratory ID Number: BD20311

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 12:48

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-6

Laboratory ID Number: BD20311

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-2

Location Code: WMWGADAP
Collected: 11/7/23 13:55
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20312

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: ABB		Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:47		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	11/9/23 13:50	11/14/23 17:47		1.015	24.9	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 17:47		1.015	0.181	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:47		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 17:47		1.015	5.10	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:47		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:47		1	17.6	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:47		1.015	8.22	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 17:47		1.015	8.62	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7			Analyst: ABB		Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	24.1	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	0.153	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	4.99	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:40		1	17.9	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	8.38	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:40		1.015	8.42	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 14:01		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 14:01		1.015	0.0190	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/9/23 13:50	11/14/23 14:01		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Total	11/9/23 13:50	11/14/23 14:01		1.015	0.130	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 14:01		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 14:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 14:01		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 14:01		1.015	0.00184	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 14:01		1.015	0.000136	mg/L	0.000068	0.000203	J
* Manganese, Total	11/9/23 13:50	11/14/23 14:01		1.015	0.184	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-2

Location Code: WMWGADAP
Collected: 11/7/23 13:55
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20312

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:01		1.015	0.546	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 14:01		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 14:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	0.134	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	0.00190	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	0.0000955	mg/L	0.000068	0.000203	J
* Manganese, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	0.201	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	0.587	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:02		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:56	11/14/23 10:56		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.51	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	80.0	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	109	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	80.0	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 14:20	11/9/23 14:20		1	1.08	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - PZ-2

Location Code: WMWGADAP
Collected: 11/7/23 13:55
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20312

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:09	11/9/23 10:09		1	5.27	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:00	11/17/23 10:00		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:06	11/20/23 14:06		1	8.98	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: AWG							
Conductivity	11/7/23 13:51	11/7/23 13:51			196.11	uS/cm			FA
pH	11/7/23 13:51	11/7/23 13:51			6.32	SU			FA
Temperature	11/7/23 13:51	11/7/23 13:51			21.36	C			FA
Turbidity	11/7/23 13:51	11/7/23 13:51			4	NTU			FA
Sulfide	11/7/23 13:51	11/7/23 13:51			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 13:55
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - PZ-2

Laboratory ID Number: BD20312

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 13:55
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - PZ-2

Laboratory ID Number: BD20312

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 13:55

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - PZ-2

Laboratory ID Number: BD20312

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-7

Location Code: WMWGADAP
Collected: 11/7/23 09:05
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20313

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: ABB		Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:50		1.015	0.0780	mg/L	0.030000	0.1015	J
* Calcium, Total	11/9/23 13:50	11/14/23 17:50		1.015	17.0	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 17:50		1.015	0.0167	mg/L	0.008120	0.0406	J
* Lithium, Total	11/9/23 13:50	11/14/23 17:50		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 17:50		1.015	3.60	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:50		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:50		1	17.0	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:50		1.015	7.95	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 17:50		1.015	17.6	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7			Analyst: ABB		Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	0.0790	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	17.4	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	0.0421	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	3.67	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:43		1	17.1	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	8.01	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:43		1.015	17.6	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 14:05		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 14:05		1.015	0.0141	mg/L	0.009135	0.05075	J
* Arsenic, Total	11/9/23 13:50	11/14/23 14:05		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Total	11/9/23 13:50	11/14/23 14:05		1.015	0.0713	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 14:05		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 14:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 14:05		1.015	0.000203	mg/L	0.000203	0.001015	J
* Cobalt, Total	11/9/23 13:50	11/14/23 14:05		1.015	0.000168	mg/L	0.000068	0.000203	J
* Lead, Total	11/9/23 13:50	11/14/23 14:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 14:05		1.015	0.0335	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-7

Location Code: WMWGADAP
Collected: 11/7/23 09:05
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20313

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:05		1.015	0.269	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 14:05		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 14:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	0.0767	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	0.000148	mg/L	0.000068	0.000203	J
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	0.0347	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	0.284	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:06		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:57	11/14/23 10:57		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.30	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	77.0	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	106	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	76.9	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 14:37	11/9/23 14:37		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-7

Location Code: WMWGADAP
Collected: 11/7/23 09:05
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20313

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:10	11/9/23 10:10		1	6.52	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:01	11/17/23 10:01		1	0.0652	mg/L	0.06	0.125	J
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:07	11/20/23 14:07		1	10.5	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/7/23 09:00	11/7/23 09:00			176.30	uS/cm			FA
pH	11/7/23 09:00	11/7/23 09:00			6.47	SU			FA
Temperature	11/7/23 09:00	11/7/23 09:00			18.18	C			FA
Turbidity	11/7/23 09:00	11/7/23 09:00			0.27	NTU			FA
Sulfide	11/7/23 09:00	11/7/23 09:00			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 09:05
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-7

Laboratory ID Number: BD20313

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 09:05
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-7

Laboratory ID Number: BD20313

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 09:05

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-7

Laboratory ID Number: BD20313

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-8

Location Code: WMWGADAP
Collected: 11/7/23 10:03
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20314

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:54		1.015	0.0480	mg/L	0.030000	0.1015	J
* Calcium, Total	11/9/23 13:50	11/20/23 15:06		10.15	58.0	mg/L	0.70035	4.06	
* Iron, Total	11/9/23 13:50	11/20/23 15:06		10.15	7.86	mg/L	0.08120	0.406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:54		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 17:54		1.015	6.37	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:54		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:54		1	24.6	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:54		1.015	11.5	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 17:54		1.015	11.9	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:47		1.015	0.0494	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	11/9/23 11:49	11/17/23 12:21		10.15	65.6	mg/L	0.70035	4.06	
* Iron, Dissolved	11/9/23 11:49	11/17/23 12:21		10.15	8.34	mg/L	0.08120	0.406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:47		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:47		1.015	6.49	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:47		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:47		1	24.8	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:47		1.015	11.6	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:47		1.015	12.1	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Total	11/9/23 13:50	11/14/23 14:09		1.015	0.00340	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 14:09		1.015	0.323	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 14:09		1.015	0.00262	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 14:09		1.015	1.16	mg/L	0.000152	0.001015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-8

Location Code: WMWGADAP
Collected: 11/7/23 10:03
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20314

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:09		1.015	0.479	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 14:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	0.00384	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	0.339	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	0.00261	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	1.24	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	0.495	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:23		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:10		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 10:59	11/14/23 10:59		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.54	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	168	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	208	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	168	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 14:51	11/9/23 14:51		1	1.14	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-8

Location Code: WMWGADAP
Collected: 11/7/23 10:03
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20314

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:12	11/9/23 10:12		1	5.39	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:02	11/17/23 10:02		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:08	11/20/23 14:08		1	8.10	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/7/23 09:59	11/7/23 09:59			326.68	uS/cm			FA
pH	11/7/23 09:59	11/7/23 09:59			6.75	SU			FA
Temperature	11/7/23 09:59	11/7/23 09:59			18.54	C			FA
Turbidity	11/7/23 09:59	11/7/23 09:59			3.5	NTU			FA
Sulfide	11/7/23 09:59	11/7/23 09:59			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 10:03

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-8

Laboratory ID Number: BD20314

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 10:03

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-8

Laboratory ID Number: BD20314

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 10:03

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-8

Laboratory ID Number: BD20314

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-9

Location Code: WMWGADAP
Collected: 11/7/23 11:05
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20315

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 17:57		1.015	0.0693	mg/L	0.030000	0.1015	J
* Calcium, Total	11/9/23 13:50	11/14/23 17:57		1.015	35.4	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 17:57		1.015	1.02	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 17:57		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 17:57		1.015	8.16	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 17:57		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 17:57		1	21.0	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 17:57		1.015	9.80	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 17:57		1.015	14.0	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	0.0683	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	35.4	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	0.903	mg/L	0.008120	0.0406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	8.12	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:50		1	21.2	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	9.89	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:50		1.015	14.2	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 14:13		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 14:13		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Total	11/9/23 13:50	11/14/23 14:13		1.015	0.000460	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 14:13		1.015	0.133	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 14:13		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 14:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 14:13		1.015	0.000252	mg/L	0.000203	0.001015	J
* Cobalt, Total	11/9/23 13:50	11/14/23 14:13		1.015	0.00115	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 14:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 19:39		5.075	1.77	mg/L	0.000761	0.005075	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-9

Location Code: WMWGADAP
Collected: 11/7/23 11:05
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20315

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:13		1.015	2.05	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 14:13		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 14:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	0.000524	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	0.144	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	0.000933	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/14/23 18:35		5.075	1.66	mg/L	0.000761	0.005075	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	2.12	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:27		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:14		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/14/23 11:01	11/14/23 11:01		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/17/23 10:00	11/17/23 11:20		1	4.33	SU		2.00	
* Alkalinity	11/17/23 10:00	11/17/23 11:20		1	129	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	171	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	129	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/17/23 10:00	11/17/23 11:20		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 15:08	11/9/23 15:08		1	Not Detected	mg/L	1.00	2	U

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-9

Location Code: WMWGADAP

Collected: 11/7/23 11:05

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20315

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:13	11/9/23 10:13		1	7.13	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:03	11/17/23 10:03		1	0.105	mg/L	0.06	0.125	J
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:09	11/20/23 14:09		1	17.4	mg/L	0.6	2	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/7/23 11:00	11/7/23 11:00			265.65	uS/cm			FA
pH	11/7/23 11:00	11/7/23 11:00			6.98	SU			FA
Temperature	11/7/23 11:00	11/7/23 11:00			18.92	C			FA
Turbidity	11/7/23 11:00	11/7/23 11:00			1.24	NTU			FA
Sulfide	11/7/23 11:00	11/7/23 11:00			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 11:05
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-9

Laboratory ID Number: BD20315

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 11:05
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-9

Laboratory ID Number: BD20315

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0	
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0	
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0	
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0	
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0	
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0	
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0	
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0	
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0	
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0	
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0	
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0	
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0	
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0	
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0	
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0	
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0	
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0	
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0	
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0	
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0	
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0	
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 11:05

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-9

Laboratory ID Number: BD20315

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Prec Limit
BD20315	Alkalinity	mg CaCO3/L					128	51.1	45.0 to 55.0			0.778	10.0
BD20315	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.055	0.200	2.00	1.98	-0.067	1.94	1.80 to 2.20	99.0	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-10

Location Code: WMWGADAP
Collected: 11/7/23 12:14
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20316

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 18:00		1.015	0.0890	mg/L	0.030000	0.1015	J	
* Calcium, Total	11/9/23 13:50	11/14/23 18:00		1.015	38.2	mg/L	0.070035	0.406		
* Iron, Total	11/9/23 13:50	11/20/23 15:09		10.15	23.1	mg/L	0.08120	0.406	RA	
* Lithium, Total	11/9/23 13:50	11/14/23 18:00		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 18:00		1.015	6.44	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 18:00		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 18:00		1	36.0	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 18:00		1.015	16.8	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 18:00		1.015	13.0	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:53		1.015	0.0894	mg/L	0.030000	0.1015	J	
* Calcium, Dissolved	11/9/23 11:49	11/14/23 15:53		1.015	38.7	mg/L	0.070035	0.406		
* Iron, Dissolved	11/9/23 11:49	11/17/23 12:24		10.15	25.1	mg/L	0.08120	0.406		
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:53		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:53		1.015	6.53	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:53		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:53		1	36.0	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:53		1.015	16.8	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:53		1.015	13.2	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 14:17		1.015	0.00398	mg/L	0.000112	0.000203		
* Barium, Total	11/9/23 13:50	11/14/23 14:17		1.015	0.280	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 14:17		1.015	0.000909	mg/L	0.000068	0.000203		
* Lead, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 14:17		1.015	0.712	mg/L	0.000152	0.001015	RA	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-10

Location Code: WMWGADAP
Collected: 11/7/23 12:14
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20316

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:17		1.015	0.609	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 14:17		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	0.00442	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	0.296	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	0.000892	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	0.731	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	0.634	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:30		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:18		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/16/23 13:44	11/16/23 13:44		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/20/23 14:55	11/20/23 16:04		1	4.47	SU		2.00	
* Alkalinity	11/20/23 14:55	11/20/23 16:04		1	142	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	195	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/20/23 14:55	11/20/23 16:04		1	142	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/20/23 14:55	11/20/23 16:04		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 15:25	11/9/23 15:25		1	1.09	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-10

Location Code: WMWGADAP
Collected: 11/7/23 12:14
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20316

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:14	11/9/23 10:14		1	5.68	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:04	11/17/23 10:04		1	0.0804	mg/L	0.06	0.125	J
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:11	11/20/23 14:11		1	1.75	mg/L	0.6	2	J
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/7/23 12:10	11/7/23 12:10			311.93	uS/cm			FA
pH	11/7/23 12:10	11/7/23 12:10			6.94	SU			FA
Temperature	11/7/23 12:10	11/7/23 12:10			20.06	C			FA
Turbidity	11/7/23 12:10	11/7/23 12:10			3.67	NTU			FA
Sulfide	11/7/23 12:10	11/7/23 12:10			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 12:14

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-10

Laboratory ID Number: BD20316

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0	
BD20316	Aluminum, Total	mg/L	-0.0000055	0.0198	0.100	0.0986	0.102	0.0969	0.0850 to 0.115	98.6	70.0 to 130	3.39	20.0	
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0	
BD20316	Antimony, Total	mg/L	0.000301	0.00100	0.100	0.103	0.105	0.0964	0.0850 to 0.115	103	70.0 to 130	1.92	20.0	
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0	
BD20316	Arsenic, Total	mg/L	0.0000279	0.000200	0.100	0.102	0.104	0.102	0.0850 to 0.115	98.0	70.0 to 130	1.94	20.0	
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0	
BD20316	Barium, Total	mg/L	0.0000179	0.00100	0.100	0.377	0.384	0.0990	0.0850 to 0.115	97.0	70.0 to 130	1.84	20.0	
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0	
BD20316	Beryllium, Total	mg/L	0.0000009	0.000880	0.100	0.0941	0.0939	0.100	0.0850 to 0.115	94.1	70.0 to 130	0.213	20.0	
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0	
BD20316	Boron, Total	mg/L	-0.00067	0.0650	1.00	1.15	1.14	1.05	0.850 to 1.15	106	70.0 to 130	0.873	20.0	
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0	
BD20316	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0975	0.101	0.103	0.0850 to 0.115	97.5	70.0 to 130	3.53	20.0	
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0	
BD20316	Calcium, Total	mg/L	-0.0343	0.152	5.00	43.4	43.7	5.04	4.25 to 5.75	104	70.0 to 130	0.689	20.0	
BD20316	Chloride	mg/L	0.0436	1.00	10.0	16.2	16.1	10.3	9.00 to 11.0	105	80.0 to 120	0.619	20.0	
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0	
BD20316	Chromium, Total	mg/L	-0.0000983	0.000440	0.100	0.0971	0.100	0.0995	0.0850 to 0.115	97.1	70.0 to 130	2.94	20.0	
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0	
BD20316	Cobalt, Total	mg/L	-0.0000026	0.000147	0.100	0.0998	0.104	0.101	0.0850 to 0.115	98.9	70.0 to 130	4.12	20.0	
BD20316	Fluoride	mg/L	0.0317	0.125	2.50	2.69	2.73	2.67	2.25 to 2.75	104	80.0 to 120	1.48	20.0	
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0	
BD20316	Iron, Total	mg/L	0.00264	0.0176	0.2	24.0	22.1	0.214	0.170 to 0.230	450	70.0 to 130	8.24	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 12:14
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-10

Laboratory ID Number: BD20316

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.0000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0
BD20316	Lead, Total	mg/L	-0.0000024	0.000147	0.100	0.0995	0.102	0.103	0.0850 to 0.115	99.5	70.0 to 130	2.48	20.0
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0
BD20316	Lithium, Total	mg/L	0.00134	0.0154	0.200	0.218	0.215	0.216	0.170 to 0.230	109	70.0 to 130	1.39	20.0
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0
BD20316	Magnesium, Total	mg/L	-0.00512	0.0462	5.00	11.7	11.7	5.27	4.25 to 5.75	105	70.0 to 130	0.00	20.0
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0
BD20316	Manganese, Total	mg/L	-0.0000006	0.00033	0.100	0.769	0.795	0.0999	0.0850 to 0.115	57.0	70.0 to 130	3.32	20.0
BD20316	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00406	0.00405	0.00401	0.00340 to 0.00460	102	70.0 to 130	0.247	20.0
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0
BD20316	Molybdenum, Total	mg/L	0.000	0.0100	0.2	0.215	0.215	0.219	0.170 to 0.230	108	70.0 to 130	0.00	20.0
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0
BD20316	Potassium, Total	mg/L	-0.0332	0.367	10.0	10.8	11.3	10.4	8.50 to 11.5	102	70.0 to 130	4.52	20.0
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0
BD20316	Selenium, Total	mg/L	0.0000874	0.00100	0.100	0.100	0.101	0.106	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0
BD20316	Silicon, Total	mg/L	-0.000422	0.0440	1.00	17.8	17.8	1.06	0.850 to 1.15	100	70.0 to 130	0.00	20.0
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0
BD20316	Sodium, Total	mg/L	-0.000752	0.0880	5.00	18.4	18.3	5.34	4.25 to 5.75	108	70.0 to 130	0.545	20.0
BD20316	Sulfate	mg/L	-0.0989	2.0	20.0	21.4	21.1	20.0	18.0 to 22.0	98.2	80.0 to 120	1.41	20.0
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0
BD20316	Thallium, Total	mg/L	0.0000005	0.000147	0.100	0.0950	0.0930	0.101	0.0850 to 0.115	95.0	70.0 to 130	2.13	20.0
BD20316	Total Organic Carbon	mg/L	0.112	1.00	10.0	11.4	11.4	9.36		103	80.0 to 120	0.00	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 12:14

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-10

Laboratory ID Number: BD20316

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20318	Alkalinity	mg CaCO3/L					135	50.4	45.0 to 55.0			0.738	10.0
BD20322	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.021	0.200	2.00	1.99	-0.025	1.94	1.80 to 2.20	99.5	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-12

Location Code: WMWGADAP
Collected: 11/7/23 13:13
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20317

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 18:22		1.015	0.183	mg/L	0.030000	0.1015		
* Calcium, Total	11/9/23 13:50	11/20/23 15:25		10.15	85.2	mg/L	0.70035	4.06		
* Iron, Total	11/9/23 13:50	11/14/23 18:22		1.015	0.130	mg/L	0.008120	0.0406		
* Lithium, Total	11/9/23 13:50	11/14/23 18:22		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 18:22		1.015	37.9	mg/L	0.021315	0.406		
* Molybdenum, Total	11/9/23 13:50	11/14/23 18:22		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 18:22		1	19.0	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 18:22		1.015	8.88	mg/L	0.02030	0.25375		
* Sodium, Total	11/9/23 13:50	11/14/23 18:22		1.015	18.1	mg/L	0.04060	0.406		
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Dissolved	11/9/23 11:49	11/14/23 15:56		1.015	0.183	mg/L	0.030000	0.1015		
* Calcium, Dissolved	11/9/23 11:49	11/17/23 12:27		10.15	97.0	mg/L	0.70035	4.06	RA	
* Iron, Dissolved	11/9/23 11:49	11/14/23 15:56		1.015	0.127	mg/L	0.008120	0.0406		
* Lithium, Dissolved	11/9/23 11:49	11/14/23 15:56		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 15:56		1.015	38.0	mg/L	0.021315	0.406		
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 15:56		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 15:56		1	19.3	mg/L				
* Silicon, Dissolved	11/9/23 11:49	11/14/23 15:56		1.015	9.00	mg/L	0.02030	0.25375		
* Sodium, Dissolved	11/9/23 11:49	11/14/23 15:56		1.015	18.3	mg/L	0.04060	0.406		
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 14:47		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 14:47		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 14:47		1.015	0.000117	mg/L	0.000112	0.000203	J	
* Barium, Total	11/9/23 13:50	11/14/23 14:47		1.015	0.0415	mg/L	0.000508	0.001015		
* Beryllium, Total	11/9/23 13:50	11/14/23 14:47		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 14:47		1.015	0.000372	mg/L	0.000068	0.000203		
* Chromium, Total	11/9/23 13:50	11/14/23 14:47		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 14:47		1.015	0.00850	mg/L	0.000068	0.000203		
* Lead, Total	11/9/23 13:50	11/14/23 14:47		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 19:43		5.075	2.83	mg/L	0.000761	0.005075		

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-12

Location Code: WMWGADAP
Collected: 11/7/23 13:13
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20317

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:47		1.015	0.966	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 14:47		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 14:47		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	Not Detected	mg/L	0.000112	0.000203	U
* Barium, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	0.0442	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	0.000454	mg/L	0.000068	0.000203	
* Chromium, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	0.000265	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	0.00839	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/14/23 18:39		5.075	2.78	mg/L	0.000761	0.005075	RA
* Potassium, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	1.01	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 16:34		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:45		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/16/23 13:46	11/16/23 13:46		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/20/23 14:55	11/20/23 16:04		1	4.47	SU		2.00	
* Alkalinity	11/20/23 14:55	11/20/23 16:04		1	36.5	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	496	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/20/23 14:55	11/20/23 16:04		1	36.5	mg CaCO3/L		1	
* Carbonate Alkalinity, (calc.)	11/20/23 14:55	11/20/23 16:04		1	Not Detected	mg CaCO3/L		0.5	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 16:39	11/9/23 16:39		1	1.10	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-12

Location Code: WMWGADAP
Collected: 11/7/23 13:13
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20317

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:28	11/9/23 10:28		1	4.92	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:18	11/17/23 10:18		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:36	11/20/23 14:36		20	297	mg/L	12.0	40	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/7/23 13:09	11/7/23 13:09			642.72	uS/cm			FA
pH	11/7/23 13:09	11/7/23 13:09			5.54	SU			FA
Temperature	11/7/23 13:09	11/7/23 13:09			22.13	C			FA
Turbidity	11/7/23 13:09	11/7/23 13:09			0.12	NTU			FA
Sulfide	11/7/23 13:09	11/7/23 13:09			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 13:13
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-12

Laboratory ID Number: BD20317

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BD20317	Aluminum, Dissolved	mg/L	-0.0000843	0.0198	0.100	0.111	0.102	0.103	0.0850 to 0.115	111	70.0 to 130	8.45	20.0
BD20322	Aluminum, Total	mg/L	-0.0000352	0.0198	0.100	0.0953	0.106	0.0999	0.0850 to 0.115	95.3	70.0 to 130	10.6	20.0
BD20317	Antimony, Dissolved	mg/L	0.000309	0.00100	0.100	0.114	0.105	0.100	0.0850 to 0.115	114	70.0 to 130	8.22	20.0
BD20322	Antimony, Total	mg/L	0.000240	0.00100	0.100	0.0979	0.0977	0.0977	0.0850 to 0.115	97.9	70.0 to 130	0.204	20.0
BD20317	Arsenic, Dissolved	mg/L	0.0000173	0.000200	0.100	0.116	0.109	0.105	0.0850 to 0.115	116	70.0 to 130	6.22	20.0
BD20322	Arsenic, Total	mg/L	0.0000026	0.000200	0.100	0.0983	0.101	0.101	0.0850 to 0.115	98.3	70.0 to 130	2.71	20.0
BD20317	Barium, Dissolved	mg/L	0.0000120	0.00100	0.100	0.159	0.146	0.0999	0.0850 to 0.115	115	70.0 to 130	8.52	20.0
BD20322	Barium, Total	mg/L	0.0000507	0.00100	0.100	0.100	0.0993	0.0969	0.0850 to 0.115	100	70.0 to 130	0.702	20.0
BD20317	Beryllium, Dissolved	mg/L	-0.0000006	0.000880	0.100	0.0978	0.0986	0.0966	0.0850 to 0.115	97.8	70.0 to 130	0.815	20.0
BD20322	Beryllium, Total	mg/L	0.0000176	0.000880	0.100	0.0939	0.0930	0.0950	0.0850 to 0.115	93.9	70.0 to 130	0.963	20.0
BD20317	Boron, Dissolved	mg/L	-0.00073	0.0650	1.00	1.24	1.24	1.04	0.850 to 1.15	106	70.0 to 130	0.00	20.0
BD20322	Boron, Total	mg/L	-0.000727	0.0650	1.00	1.02	1.02	1.02	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BD20317	Cadmium, Dissolved	mg/L	0.0000205	0.000147	0.100	0.113	0.103	0.104	0.0850 to 0.115	113	70.0 to 130	9.26	20.0
BD20322	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.102	0.101	0.101	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20317	Calcium, Dissolved	mg/L	-0.0147	0.152	5.00	110	102	5.12	4.25 to 5.75	260	70.0 to 130	7.55	20.0
BD20322	Calcium, Total	mg/L	-0.0170	0.152	5.00	5.00	5.07	5.03	4.25 to 5.75	100	70.0 to 130	1.39	20.0
BD20322	Chloride	mg/L	0.0579	1.00	10.0	9.92	10.1	10.2	9.00 to 11.0	99.2	80.0 to 120	1.80	20.0
BD20317	Chromium, Dissolved	mg/L	-0.0000642	0.000440	0.100	0.109	0.0995	0.100	0.0850 to 0.115	109	70.0 to 130	9.11	20.0
BD20322	Chromium, Total	mg/L	-0.0000784	0.000440	0.100	0.0971	0.102	0.103	0.0850 to 0.115	97.1	70.0 to 130	4.92	20.0
BD20317	Cobalt, Dissolved	mg/L	-0.0000007	0.000147	0.100	0.119	0.109	0.103	0.0850 to 0.115	111	70.0 to 130	8.77	20.0
BD20322	Cobalt, Total	mg/L	0.0000002	0.000147	0.100	0.100	0.103	0.104	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20322	Fluoride	mg/L	0.0339	0.125	2.50	2.26	2.42	2.61	2.25 to 2.75	90.4	80.0 to 120	6.84	20.0
BD20317	Iron, Dissolved	mg/L	0.00419	0.0176	0.2	0.331	0.330	0.210	0.170 to 0.230	102	70.0 to 130	0.303	20.0
BD20322	Iron, Total	mg/L	0.00315	0.0176	0.2	0.209	0.212	0.209	0.170 to 0.230	104	70.0 to 130	1.43	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 13:13

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-12

Laboratory ID Number: BD20317

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20317	Lead, Dissolved	mg/L	0.000055	0.000147	0.100	0.0958	0.0962	0.0960	0.0850 to 0.115	95.8	70.0 to 130	0.417	20.0	
BD20322	Lead, Total	mg/L	0.000033	0.000147	0.100	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0	
BD20317	Lithium, Dissolved	mg/L	0.00107	0.0154	0.200	0.222	0.222	0.215	0.170 to 0.230	111	70.0 to 130	0.00	20.0	
BD20322	Lithium, Total	mg/L	0.00151	0.0154	0.200	0.211	0.209	0.209	0.170 to 0.230	106	70.0 to 130	0.952	20.0	
BD20317	Magnesium, Dissolved	mg/L	-0.0216	0.0462	5.00	43.1	43.2	5.34	4.25 to 5.75	102	70.0 to 130	0.232	20.0	
BD20322	Magnesium, Total	mg/L	-0.00650	0.0462	5.00	5.16	5.18	5.15	4.25 to 5.75	103	70.0 to 130	0.387	20.0	
BD20317	Manganese, Dissolved	mg/L	0.0000172	0.00033	0.100	3.20	2.95	0.103	0.0850 to 0.115	420	70.0 to 130	8.13	20.0	
BD20322	Manganese, Total	mg/L	0.0000102	0.00033	0.100	0.0998	0.101	0.104	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0	
BD20322	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00389	0.00395	0.00393	0.00340 to 0.00460	97.2	70.0 to 130	1.53	20.0	
BD20317	Molybdenum, Dissolved	mg/L	-0.000238	0.0100	0.2	0.214	0.214	0.215	0.170 to 0.230	107	70.0 to 130	0.00	20.0	
BD20322	Molybdenum, Total	mg/L	0.001	0.0100	0.2	0.214	0.216	0.212	0.170 to 0.230	107	70.0 to 130	0.930	20.0	
BD20317	Potassium, Dissolved	mg/L	-0.00348	0.367	10.0	12.2	11.5	10.4	8.50 to 11.5	112	70.0 to 130	5.91	20.0	
BD20322	Potassium, Total	mg/L	-0.0148	0.367	10.0	10.1	10.3	10.6	8.50 to 11.5	101	70.0 to 130	1.96	20.0	
BD20317	Selenium, Dissolved	mg/L	0.0000908	0.00100	0.100	0.113	0.104	0.106	0.0850 to 0.115	113	70.0 to 130	8.29	20.0	
BD20322	Selenium, Total	mg/L	0.0000351	0.00100	0.100	0.102	0.105	0.103	0.0850 to 0.115	102	70.0 to 130	2.90	20.0	
BD20317	Silicon, Dissolved	mg/L	0.00644	0.0440	1.00	9.96	9.97	1.05	0.850 to 1.15	96.0	70.0 to 130	0.100	20.0	
BD20322	Silicon, Total	mg/L	-0.00102	0.0440	1.00	1.04	1.05	1.03	0.850 to 1.15	104	70.0 to 130	0.957	20.0	
BD20317	Sodium, Dissolved	mg/L	0.00848	0.0880	5.00	23.7	23.6	5.31	4.25 to 5.75	108	70.0 to 130	0.423	20.0	
BD20322	Sodium, Total	mg/L	0.00177	0.0880	5.00	5.22	5.17	5.21	4.25 to 5.75	104	70.0 to 130	0.962	20.0	
BD20322	Sulfate	mg/L	-0.0296	2.0	20.0	19.3	18.9	20.8	18.0 to 22.0	91.2	80.0 to 120	2.09	20.0	
BD20317	Thallium, Dissolved	mg/L	-0.0000005	0.000147	0.100	0.0935	0.0941	0.0939	0.0850 to 0.115	93.5	70.0 to 130	0.640	20.0	
BD20322	Thallium, Total	mg/L	0.0000049	0.000147	0.100	0.0962	0.0942	0.0954	0.0850 to 0.115	96.2	70.0 to 130	2.10	20.0	
BD20321	Total Organic Carbon	mg/L	0.112	1.00	10.0	9.81	10.3	9.42		87.9	80.0 to 120	4.87	20.0	

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 13:13

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-12

Laboratory ID Number: BD20317

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20318	Alkalinity	mg CaCO3/L					135	50.4	45.0 to 55.0			0.738	10.0
BD20322	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.021	0.200	2.00	1.99	-0.025	1.94	1.80 to 2.20	99.5	90.0 to 110	0.00	15.0
BD20317	Solids, Dissolved	mg/L	0.0000	25.0			497	51.0	40.0 to 60.0			0.201	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-11

Location Code: WMWGADAP
Collected: 11/7/23 14:30
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20318

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 18:26		1.015	0.238	mg/L	0.030000	0.1015	
* Calcium, Total	11/9/23 13:50	11/20/23 15:28		10.15	113	mg/L	0.70035	4.06	
* Iron, Total	11/9/23 13:50	11/20/23 15:28		10.15	15.0	mg/L	0.08120	0.406	
* Lithium, Total	11/9/23 13:50	11/14/23 18:26		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 18:26		1.015	17.7	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 18:26		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 18:26		1	24.8	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 18:26		1.015	11.6	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 18:26		1.015	15.2	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638				
* Boron, Dissolved	11/9/23 11:49	11/14/23 16:18		1.015	0.240	mg/L	0.030000	0.1015	
* Calcium, Dissolved	11/9/23 11:49	11/17/23 12:37		10.15	137	mg/L	0.70035	4.06	
* Iron, Dissolved	11/9/23 11:49	11/17/23 12:37		10.15	16.5	mg/L	0.08120	0.406	
* Lithium, Dissolved	11/9/23 11:49	11/14/23 16:18		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 16:18		1.015	18.0	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 16:18		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 16:18		1	24.6	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 16:18		1.015	11.5	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 16:18		1.015	15.6	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Total	11/9/23 13:50	11/14/23 14:51		1.015	0.00266	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 14:51		1.015	0.118	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	11/9/23 13:50	11/14/23 14:51		1.015	0.00381	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	11/9/23 13:50	11/14/23 19:47		10.15	5.89	mg/L	0.001522	0.01015	

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-11

Location Code: WMWGADAP
Collected: 11/7/23 14:30
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20318

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:51		1.015	2.08	mg/L	0.169505	0.5075	
* Selenium, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	11/9/23 13:50	11/14/23 14:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.009135	0.05075	U
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	0.00280	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	0.119	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	0.00389	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	11/9/23 11:49	11/14/23 18:50		10.15	5.90	mg/L	0.001522	0.01015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	2.08	mg/L	0.169505	0.5075	
* Selenium, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	11/9/23 11:49	11/9/23 17:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:49		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/16/23 13:48	11/16/23 13:48		1	Not Detected	mg/L as N	0.20	0.3	U
Analytical Method: SM 2320 B		Analyst: ALH							
Alkalinity pH Endpoint	11/20/23 14:55	11/20/23 16:04		1	4.50	SU		2.00	
* Alkalinity	11/20/23 14:55	11/20/23 16:04		1	136	mg CaCO3/L		0.10	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	508	mg/L		25	
Analytical Method: SM 4500CO2 D		Analyst: ALH							
* Bicarbonate Alkalinity, (calc.)	11/20/23 14:55	11/20/23 16:04		1	136	mg CaCO3/L		1	A
* Carbonate Alkalinity, (calc.)	11/20/23 14:55	11/20/23 16:04		1	Not Detected	mg CaCO3/L		0.5	A
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 16:56	11/9/23 16:56		1	1.06	mg/L	1.00	2	J

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

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

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-11

Location Code: WMWGADAP
Collected: 11/7/23 14:30
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20318

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:29	11/9/23 10:29		1	5.08	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:19	11/17/23 10:19		1	0.0709	mg/L	0.06	0.125	J
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:37	11/20/23 14:37		16	230	mg/L	9.6	32	
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/7/23 14:26	11/7/23 14:26			672.19	uS/cm			FA
pH	11/7/23 14:26	11/7/23 14:26			6.36	SU			FA
Temperature	11/7/23 14:26	11/7/23 14:26			20.53	C			FA
Turbidity	11/7/23 14:26	11/7/23 14:26			3.9	NTU			FA
Sulfide	11/7/23 14:26	11/7/23 14:26			0	mg/L			FA

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

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 14:30

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-11

Laboratory ID Number: BD20318

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20321	Aluminum, Dissolved	mg/L	-0.000235	0.0198	0.100	4.89	4.94	0.101	0.0850 to 0.115	60.0	70.0 to 130	1.02	20.0
BD20322	Aluminum, Total	mg/L	-0.0000352	0.0198	0.100	0.0953	0.106	0.0999	0.0850 to 0.115	95.3	70.0 to 130	10.6	20.0
BD20321	Antimony, Dissolved	mg/L	0.000286	0.00100	0.100	0.0974	0.102	0.105	0.0850 to 0.115	97.4	70.0 to 130	4.61	20.0
BD20322	Antimony, Total	mg/L	0.000240	0.00100	0.100	0.0979	0.0977	0.0977	0.0850 to 0.115	97.9	70.0 to 130	0.204	20.0
BD20321	Arsenic, Dissolved	mg/L	-0.0000074	0.000200	0.100	0.105	0.109	0.108	0.0850 to 0.115	104	70.0 to 130	3.74	20.0
BD20322	Arsenic, Total	mg/L	0.0000026	0.000200	0.100	0.0983	0.101	0.101	0.0850 to 0.115	98.3	70.0 to 130	2.71	20.0
BD20321	Barium, Dissolved	mg/L	-0.0000021	0.00100	0.100	0.122	0.123	0.107	0.0850 to 0.115	97.2	70.0 to 130	0.816	20.0
BD20322	Barium, Total	mg/L	0.0000507	0.00100	0.100	0.100	0.0993	0.0969	0.0850 to 0.115	100	70.0 to 130	0.702	20.0
BD20321	Beryllium, Dissolved	mg/L	-0.0000012	0.000880	0.100	0.0941	0.0969	0.0991	0.0850 to 0.115	93.3	70.0 to 130	2.93	20.0
BD20322	Beryllium, Total	mg/L	0.0000176	0.000880	0.100	0.0939	0.0930	0.0950	0.0850 to 0.115	93.9	70.0 to 130	0.963	20.0
BD20321	Boron, Dissolved	mg/L	-0.000886	0.0650	1.00	1.05	1.05	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20322	Boron, Total	mg/L	-0.000727	0.0650	1.00	1.02	1.02	1.02	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BD20321	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.102	0.109	0.104	0.0850 to 0.115	102	70.0 to 130	6.64	20.0
BD20322	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.102	0.101	0.101	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20321	Calcium, Dissolved	mg/L	-0.0269	0.152	5.00	14.1	14.1	5.09	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20322	Calcium, Total	mg/L	-0.0170	0.152	5.00	5.00	5.07	5.03	4.25 to 5.75	100	70.0 to 130	1.39	20.0
BD20322	Chloride	mg/L	0.0579	1.00	10.0	9.92	10.1	10.2	9.00 to 11.0	99.2	80.0 to 120	1.80	20.0
BD20321	Chromium, Dissolved	mg/L	-0.0000462	0.000440	0.100	0.0939	0.0981	0.100	0.0850 to 0.115	93.6	70.0 to 130	4.38	20.0
BD20322	Chromium, Total	mg/L	-0.0000784	0.000440	0.100	0.0971	0.102	0.103	0.0850 to 0.115	97.1	70.0 to 130	4.92	20.0
BD20321	Cobalt, Dissolved	mg/L	-0.0000014	0.000147	0.100	0.116	0.120	0.102	0.0850 to 0.115	94.6	70.0 to 130	3.39	20.0
BD20322	Cobalt, Total	mg/L	0.0000002	0.000147	0.100	0.100	0.103	0.104	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20322	Fluoride	mg/L	0.0339	0.125	2.50	2.26	2.42	2.61	2.25 to 2.75	90.4	80.0 to 120	6.84	20.0
BD20321	Iron, Dissolved	mg/L	0.00237	0.0176	0.2	0.216	0.212	0.212	0.170 to 0.230	108	70.0 to 130	1.87	20.0
BD20322	Iron, Total	mg/L	0.00315	0.0176	0.2	0.209	0.212	0.209	0.170 to 0.230	104	70.0 to 130	1.43	20.0

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

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/7/23 14:30
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-11

Laboratory ID Number: BD20318

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec
				Limit					Standard	Limit	Rec	Limit	
BD20321	Lead, Dissolved	mg/L	0.000056	0.000147	0.100	0.0950	0.0967	0.0968	0.0850 to 0.115	93.8	70.0 to 130	1.77	20.0
BD20322	Lead, Total	mg/L	0.000033	0.000147	0.100	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20321	Lithium, Dissolved	mg/L	0.00120	0.0154	0.200	0.220	0.221	0.219	0.170 to 0.230	110	70.0 to 130	0.454	20.0
BD20322	Lithium, Total	mg/L	0.00151	0.0154	0.200	0.211	0.209	0.209	0.170 to 0.230	106	70.0 to 130	0.952	20.0
BD20321	Magnesium, Dissolved	mg/L	-0.0246	0.0462	5.00	8.54	8.53	5.35	4.25 to 5.75	105	70.0 to 130	0.117	20.0
BD20322	Magnesium, Total	mg/L	-0.00650	0.0462	5.00	5.16	5.18	5.15	4.25 to 5.75	103	70.0 to 130	0.387	20.0
BD20321	Manganese, Dissolved	mg/L	0.0000545	0.00033	0.100	0.393	0.407	0.103	0.0850 to 0.115	73.0	70.0 to 130	3.50	20.0
BD20322	Manganese, Total	mg/L	0.0000102	0.00033	0.100	0.0998	0.101	0.104	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20322	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00389	0.00395	0.00393	0.00340 to 0.00460	97.2	70.0 to 130	1.53	20.0
BD20321	Molybdenum, Dissolved	mg/L	0.00007	0.0100	0.2	0.213	0.213	0.218	0.170 to 0.230	106	70.0 to 130	0.00	20.0
BD20322	Molybdenum, Total	mg/L	0.001	0.0100	0.2	0.214	0.216	0.212	0.170 to 0.230	107	70.0 to 130	0.930	20.0
BD20321	Potassium, Dissolved	mg/L	0.00925	0.367	10.0	10.3	10.8	10.3	8.50 to 11.5	99.7	70.0 to 130	4.74	20.0
BD20322	Potassium, Total	mg/L	-0.0148	0.367	10.0	10.1	10.3	10.6	8.50 to 11.5	101	70.0 to 130	1.96	20.0
BD20321	Selenium, Dissolved	mg/L	0.000125	0.00100	0.100	0.0982	0.0991	0.104	0.0850 to 0.115	97.0	70.0 to 130	0.912	20.0
BD20322	Selenium, Total	mg/L	0.0000351	0.00100	0.100	0.102	0.105	0.103	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BD20321	Silicon, Dissolved	mg/L	0.000052	0.0440	1.00	5.09	5.08	1.06	0.850 to 1.15	103	70.0 to 130	0.197	20.0
BD20322	Silicon, Total	mg/L	-0.00102	0.0440	1.00	1.04	1.05	1.03	0.850 to 1.15	104	70.0 to 130	0.957	20.0
BD20321	Sodium, Dissolved	mg/L	0.000322	0.0880	5.00	7.34	7.32	5.42	4.25 to 5.75	106	70.0 to 130	0.273	20.0
BD20322	Sodium, Total	mg/L	0.00177	0.0880	5.00	5.22	5.17	5.21	4.25 to 5.75	104	70.0 to 130	0.962	20.0
BD20322	Sulfate	mg/L	-0.0296	2.0	20.0	19.3	18.9	20.8	18.0 to 22.0	91.2	80.0 to 120	2.09	20.0
BD20321	Thallium, Dissolved	mg/L	-0.0000012	0.000147	0.100	0.0921	0.0938	0.0947	0.0850 to 0.115	92.1	70.0 to 130	1.83	20.0
BD20322	Thallium, Total	mg/L	0.0000049	0.000147	0.100	0.0962	0.0942	0.0954	0.0850 to 0.115	96.2	70.0 to 130	2.10	20.0
BD20321	Total Organic Carbon	mg/L	0.112	1.00	10.0	9.81	10.3	9.42		87.9	80.0 to 120	4.87	20.0

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

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/7/23 14:30

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-11

Laboratory ID Number: BD20318

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20318	Alkalinity	mg CaCO3/L					135	50.4	45.0 to 55.0			0.738	10.0
BD20322	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.021	0.200	2.00	1.99	-0.025	1.94	1.80 to 2.20	99.5	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

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

Certificate Of Analysis

Description: Gadsden Ash Pond Field Blank-2

Location Code: WMWGADAPFB
Collected: 11/7/23 15:00
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20319

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.021315	0.406	U	
* Molybdenum, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 18:29		1	Not Detected	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	11/9/23 13:50	11/14/23 18:29		1.015	Not Detected	mg/L	0.04060	0.406	U	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000152	0.001015	U	
* Potassium, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	11/9/23 13:50	11/14/23 14:54		1.015	Not Detected	mg/L	0.000068	0.000203	U	
Analytical Method: EPA 245.1		Analyst: ABB								
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:53		1	Not Detected	mg/L	0.0003	0.0005	U	
Analytical Method: EPA 353.2		Analyst: CES								
* Nitrogen, Nitrate/Nitrite	11/16/23 13:50	11/16/23 13:50		1	Not Detected	mg/L as N	0.20	0.3	U	
Analytical Method: SM 2540C		Analyst: CNJ								
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	Not Detected	mg/L		25	U	

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

Comments:

Certificate Of Analysis

Description: Gadsden Ash Pond Field Blank-2

Location Code: WMWGADAPFB
Collected: 11/7/23 15:00
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20319

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 17:10	11/9/23 17:10		1	Not Detected	mg/L	1.00	2	U
Analytical Method: SM4500Cl E		Analyst: JCC							
* Chloride	11/9/23 10:30	11/9/23 10:30		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:20	11/17/23 10:20		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:29	11/20/23 14:29		1	Not Detected	mg/L	0.6	2	U

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

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/7/23 15:00

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond Field Blank-2

Laboratory ID Number: BD20319

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BD20322	Aluminum, Total	mg/L	-0.0000352	0.0198	0.100	0.0953	0.106	0.0999	0.0850 to 0.115	95.3	70.0 to 130	10.6	20.0	
BD20322	Antimony, Total	mg/L	0.000240	0.00100	0.100	0.0979	0.0977	0.0977	0.0850 to 0.115	97.9	70.0 to 130	0.204	20.0	
BD20322	Arsenic, Total	mg/L	0.0000026	0.000200	0.100	0.0983	0.101	0.101	0.0850 to 0.115	98.3	70.0 to 130	2.71	20.0	
BD20322	Barium, Total	mg/L	0.0000507	0.00100	0.100	0.100	0.0993	0.0969	0.0850 to 0.115	100	70.0 to 130	0.702	20.0	
BD20322	Beryllium, Total	mg/L	0.0000176	0.000880	0.100	0.0939	0.0930	0.0950	0.0850 to 0.115	93.9	70.0 to 130	0.963	20.0	
BD20322	Boron, Total	mg/L	-0.000727	0.0650	1.00	1.02	1.02	1.02	0.850 to 1.15	102	70.0 to 130	0.00	20.0	
BD20322	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.102	0.101	0.101	0.0850 to 0.115	102	70.0 to 130	0.985	20.0	
BD20322	Calcium, Total	mg/L	-0.0170	0.152	5.00	5.00	5.07	5.03	4.25 to 5.75	100	70.0 to 130	1.39	20.0	
BD20322	Chloride	mg/L	0.0579	1.00	10.0	9.92	10.1	10.2	9.00 to 11.0	99.2	80.0 to 120	1.80	20.0	
BD20322	Chromium, Total	mg/L	-0.0000784	0.000440	0.100	0.0971	0.102	0.103	0.0850 to 0.115	97.1	70.0 to 130	4.92	20.0	
BD20322	Cobalt, Total	mg/L	0.0000002	0.000147	0.100	0.100	0.103	0.104	0.0850 to 0.115	100	70.0 to 130	2.96	20.0	
BD20322	Fluoride	mg/L	0.0339	0.125	2.50	2.26	2.42	2.61	2.25 to 2.75	90.4	80.0 to 120	6.84	20.0	
BD20322	Iron, Total	mg/L	0.00315	0.0176	0.2	0.209	0.212	0.209	0.170 to 0.230	104	70.0 to 130	1.43	20.0	
BD20322	Lead, Total	mg/L	0.0000033	0.000147	0.100	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0	
BD20322	Lithium, Total	mg/L	0.00151	0.0154	0.200	0.211	0.209	0.209	0.170 to 0.230	106	70.0 to 130	0.952	20.0	
BD20322	Magnesium, Total	mg/L	-0.00650	0.0462	5.00	5.16	5.18	5.15	4.25 to 5.75	103	70.0 to 130	0.387	20.0	
BD20322	Manganese, Total	mg/L	0.0000102	0.00033	0.100	0.0998	0.101	0.104	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0	
BD20322	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00389	0.00395	0.00393	0.00340 to 0.00460	97.2	70.0 to 130	1.53	20.0	
BD20322	Molybdenum, Total	mg/L	0.001	0.0100	0.2	0.214	0.216	0.212	0.170 to 0.230	107	70.0 to 130	0.930	20.0	
BD20322	Potassium, Total	mg/L	-0.0148	0.367	10.0	10.1	10.3	10.6	8.50 to 11.5	101	70.0 to 130	1.96	20.0	
BD20322	Selenium, Total	mg/L	0.0000351	0.00100	0.100	0.102	0.105	0.103	0.0850 to 0.115	102	70.0 to 130	2.90	20.0	
BD20322	Silicon, Total	mg/L	-0.00102	0.0440	1.00	1.04	1.05	1.03	0.850 to 1.15	104	70.0 to 130	0.957	20.0	
BD20322	Sodium, Total	mg/L	0.00177	0.0880	5.00	5.22	5.17	5.21	4.25 to 5.75	104	70.0 to 130	0.962	20.0	
BD20322	Sulfate	mg/L	-0.0296	2.0	20.0	19.3	18.9	20.8	18.0 to 22.0	91.2	80.0 to 120	2.09	20.0	

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/7/23 15:00

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond Field Blank-2

Laboratory ID Number: BD20319

Sample	Analysis	Units	MB	MB				MSD	Standard	Standard		Rec		Prec	Limit
				Limit	Spike	MS	Standard			Limit	Rec	Limit	Prec		
BD20322	Thallium, Total	mg/L	0.0000049	0.000147	0.100	0.0962	0.0942	0.0954	0.0850 to 0.115		96.2	70.0 to 130		2.10	20.0
BD20321	Total Organic Carbon	mg/L	0.112	1.00	10.0	9.81	10.3	9.42			87.9	80.0 to 120		4.87	20.0

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/7/23 15:00

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond Field Blank-2

Laboratory ID Number: BD20319

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20322	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.021	0.200	2.00	1.99	-0.025	1.94	1.80 to 2.20	99.5	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

Comments:

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-14

Location Code: WMWGADAP
Collected: 11/8/23 08:23
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20320

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: ABB		Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 18:32		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	11/9/23 13:50	11/14/23 18:32		1.015	9.10	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 18:32		1.015	0.0521	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 18:32		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 18:32		1.015	3.28	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 18:32		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 18:32		1	8.71	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 18:32		1.015	4.07	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 18:32		1.015	1.96	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7			Analyst: ABB						
* Boron, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	9.20	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	3.34	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 16:21		1	8.67	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	4.05	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 16:21		1.015	2.02	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 14:58		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 19:50		5.075	4.75	mg/L	0.045675	0.25375	
* Arsenic, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.000788	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.0265	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.000778	mg/L	0.000406	0.001015	J
* Cadmium, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.000403	mg/L	0.000068	0.000203	
* Chromium, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.000422	mg/L	0.000203	0.001015	J
* Cobalt, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.0208	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.00125	mg/L	0.000068	0.000203	
* Manganese, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.297	mg/L	0.000152	0.001015	

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-14

Location Code: WMWGADAP
Collected: 11/8/23 08:23
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20320

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.320	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 14:58		1.015	0.00175	mg/L	0.000508	0.001015	
* Thallium, Total	11/9/23 13:50	11/14/23 14:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/14/23 18:54		5.075	4.84	mg/L	0.045675	0.25375	
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.000891	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.0260	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.000802	mg/L	0.000406	0.001015	J
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.000352	mg/L	0.000068	0.000203	
* Chromium, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.000390	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.0209	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.00116	mg/L	0.000068	0.000203	
* Manganese, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.313	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.326	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	0.00157	mg/L	0.000508	0.001015	
* Thallium, Dissolved	11/9/23 11:49	11/9/23 17:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 21:57		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/16/23 13:52	11/16/23 13:52		1	0.309	mg/L as N	0.20	0.3	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	96.7	mg/L		25	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 17:25	11/9/23 17:25		1	Not Detected	mg/L	1.00	2	U
Analytical Method: SM4500CI E		Analyst: JCC							
* Chloride	11/9/23 10:32	11/9/23 10:32		1	2.44	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:22	11/17/23 10:22		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:39	11/20/23 14:39		3	52.9	mg/L	1.8	6	

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-14

Location Code: WMWGADAP

Collected: 11/8/23 08:23

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20320

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/8/23 08:20	11/8/23 08:20			173.96	uS/cm			FA
pH	11/8/23 08:20	11/8/23 08:20			4.03	SU			FA
Temperature	11/8/23 08:20	11/8/23 08:20			19.23	C			FA
Turbidity	11/8/23 08:20	11/8/23 08:20			1.72	NTU			FA
Sulfide	11/8/23 08:20	11/8/23 08:20			0	mg/L			FA

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/8/23 08:23
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-14

Laboratory ID Number: BD20320

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20321	Aluminum, Dissolved	mg/L	-0.000235	0.0198	0.100	4.89	4.94	0.101	0.0850 to 0.115	60.0	70.0 to 130	1.02	20.0
BD20322	Aluminum, Total	mg/L	-0.0000352	0.0198	0.100	0.0953	0.106	0.0999	0.0850 to 0.115	95.3	70.0 to 130	10.6	20.0
BD20321	Antimony, Dissolved	mg/L	0.000286	0.00100	0.100	0.0974	0.102	0.105	0.0850 to 0.115	97.4	70.0 to 130	4.61	20.0
BD20322	Antimony, Total	mg/L	0.000240	0.00100	0.100	0.0979	0.0977	0.0977	0.0850 to 0.115	97.9	70.0 to 130	0.204	20.0
BD20321	Arsenic, Dissolved	mg/L	-0.0000074	0.000200	0.100	0.105	0.109	0.108	0.0850 to 0.115	104	70.0 to 130	3.74	20.0
BD20322	Arsenic, Total	mg/L	0.0000026	0.000200	0.100	0.0983	0.101	0.101	0.0850 to 0.115	98.3	70.0 to 130	2.71	20.0
BD20321	Barium, Dissolved	mg/L	-0.0000021	0.00100	0.100	0.122	0.123	0.107	0.0850 to 0.115	97.2	70.0 to 130	0.816	20.0
BD20322	Barium, Total	mg/L	0.0000507	0.00100	0.100	0.100	0.0993	0.0969	0.0850 to 0.115	100	70.0 to 130	0.702	20.0
BD20321	Beryllium, Dissolved	mg/L	-0.0000012	0.000880	0.100	0.0941	0.0969	0.0991	0.0850 to 0.115	93.3	70.0 to 130	2.93	20.0
BD20322	Beryllium, Total	mg/L	0.0000176	0.000880	0.100	0.0939	0.0930	0.0950	0.0850 to 0.115	93.9	70.0 to 130	0.963	20.0
BD20321	Boron, Dissolved	mg/L	-0.000886	0.0650	1.00	1.05	1.05	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20322	Boron, Total	mg/L	-0.000727	0.0650	1.00	1.02	1.02	1.02	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BD20321	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.102	0.109	0.104	0.0850 to 0.115	102	70.0 to 130	6.64	20.0
BD20322	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.102	0.101	0.101	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20321	Calcium, Dissolved	mg/L	-0.0269	0.152	5.00	14.1	14.1	5.09	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20322	Calcium, Total	mg/L	-0.0170	0.152	5.00	5.00	5.07	5.03	4.25 to 5.75	100	70.0 to 130	1.39	20.0
BD20322	Chloride	mg/L	0.0579	1.00	10.0	9.92	10.1	10.2	9.00 to 11.0	99.2	80.0 to 120	1.80	20.0
BD20321	Chromium, Dissolved	mg/L	-0.0000462	0.000440	0.100	0.0939	0.0981	0.100	0.0850 to 0.115	93.6	70.0 to 130	4.38	20.0
BD20322	Chromium, Total	mg/L	-0.0000784	0.000440	0.100	0.0971	0.102	0.103	0.0850 to 0.115	97.1	70.0 to 130	4.92	20.0
BD20321	Cobalt, Dissolved	mg/L	-0.0000014	0.000147	0.100	0.116	0.120	0.102	0.0850 to 0.115	94.6	70.0 to 130	3.39	20.0
BD20322	Cobalt, Total	mg/L	0.0000002	0.000147	0.100	0.100	0.103	0.104	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20322	Fluoride	mg/L	0.0339	0.125	2.50	2.26	2.42	2.61	2.25 to 2.75	90.4	80.0 to 120	6.84	20.0
BD20321	Iron, Dissolved	mg/L	0.00237	0.0176	0.2	0.216	0.212	0.212	0.170 to 0.230	108	70.0 to 130	1.87	20.0
BD20322	Iron, Total	mg/L	0.00315	0.0176	0.2	0.209	0.212	0.209	0.170 to 0.230	104	70.0 to 130	1.43	20.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/8/23 08:23

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-14

Laboratory ID Number: BD20320

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20321	Lead, Dissolved	mg/L	0.000056	0.000147	0.100	0.0950	0.0967	0.0968	0.0850 to 0.115	93.8	70.0 to 130	1.77	20.0
BD20322	Lead, Total	mg/L	0.000033	0.000147	0.100	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20321	Lithium, Dissolved	mg/L	0.00120	0.0154	0.200	0.220	0.221	0.219	0.170 to 0.230	110	70.0 to 130	0.454	20.0
BD20322	Lithium, Total	mg/L	0.00151	0.0154	0.200	0.211	0.209	0.209	0.170 to 0.230	106	70.0 to 130	0.952	20.0
BD20321	Magnesium, Dissolved	mg/L	-0.0246	0.0462	5.00	8.54	8.53	5.35	4.25 to 5.75	105	70.0 to 130	0.117	20.0
BD20322	Magnesium, Total	mg/L	-0.00650	0.0462	5.00	5.16	5.18	5.15	4.25 to 5.75	103	70.0 to 130	0.387	20.0
BD20321	Manganese, Dissolved	mg/L	0.0000545	0.00033	0.100	0.393	0.407	0.103	0.0850 to 0.115	73.0	70.0 to 130	3.50	20.0
BD20322	Manganese, Total	mg/L	0.0000102	0.00033	0.100	0.0998	0.101	0.104	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20322	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00389	0.00395	0.00393	0.00340 to 0.00460	97.2	70.0 to 130	1.53	20.0
BD20321	Molybdenum, Dissolved	mg/L	0.00007	0.0100	0.2	0.213	0.213	0.218	0.170 to 0.230	106	70.0 to 130	0.00	20.0
BD20322	Molybdenum, Total	mg/L	0.001	0.0100	0.2	0.214	0.216	0.212	0.170 to 0.230	107	70.0 to 130	0.930	20.0
BD20321	Potassium, Dissolved	mg/L	0.00925	0.367	10.0	10.3	10.8	10.3	8.50 to 11.5	99.7	70.0 to 130	4.74	20.0
BD20322	Potassium, Total	mg/L	-0.0148	0.367	10.0	10.1	10.3	10.6	8.50 to 11.5	101	70.0 to 130	1.96	20.0
BD20321	Selenium, Dissolved	mg/L	0.000125	0.00100	0.100	0.0982	0.0991	0.104	0.0850 to 0.115	97.0	70.0 to 130	0.912	20.0
BD20322	Selenium, Total	mg/L	0.0000351	0.00100	0.100	0.102	0.105	0.103	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BD20321	Silicon, Dissolved	mg/L	0.000052	0.0440	1.00	5.09	5.08	1.06	0.850 to 1.15	103	70.0 to 130	0.197	20.0
BD20322	Silicon, Total	mg/L	-0.00102	0.0440	1.00	1.04	1.05	1.03	0.850 to 1.15	104	70.0 to 130	0.957	20.0
BD20321	Sodium, Dissolved	mg/L	0.000322	0.0880	5.00	7.34	7.32	5.42	4.25 to 5.75	106	70.0 to 130	0.273	20.0
BD20322	Sodium, Total	mg/L	0.00177	0.0880	5.00	5.22	5.17	5.21	4.25 to 5.75	104	70.0 to 130	0.962	20.0
BD20322	Sulfate	mg/L	-0.0296	2.0	20.0	19.3	18.9	20.8	18.0 to 22.0	91.2	80.0 to 120	2.09	20.0
BD20321	Thallium, Dissolved	mg/L	-0.0000012	0.000147	0.100	0.0921	0.0938	0.0947	0.0850 to 0.115	92.1	70.0 to 130	1.83	20.0
BD20322	Thallium, Total	mg/L	0.0000049	0.000147	0.100	0.0962	0.0942	0.0954	0.0850 to 0.115	96.2	70.0 to 130	2.10	20.0
BD20321	Total Organic Carbon	mg/L	0.112	1.00	10.0	9.81	10.3	9.42		87.9	80.0 to 120	4.87	20.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/8/23 08:23
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-14

Laboratory ID Number: BD20320

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20322	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.021	0.200	2.00	1.99	-0.025	1.94	1.80 to 2.20	99.5	90.0 to 110	0.00	15.0
BD20318	Solids, Dissolved	mg/L	0.0000	25.0			505	51.0	40.0 to 60.0			0.592	10.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-14 Dup

Location Code: WMWGADAP
Collected: 11/8/23 08:23
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20321

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: EPA 200.7			Analyst: ABB		Preparation Method: EPA 1638				
* Boron, Total	11/9/23 13:50	11/14/23 18:35		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	11/9/23 13:50	11/14/23 18:35		1.015	9.00	mg/L	0.070035	0.406	
* Iron, Total	11/9/23 13:50	11/14/23 18:35		1.015	0.0507	mg/L	0.008120	0.0406	
* Lithium, Total	11/9/23 13:50	11/14/23 18:35		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	11/9/23 13:50	11/14/23 18:35		1.015	3.25	mg/L	0.021315	0.406	
* Molybdenum, Total	11/9/23 13:50	11/14/23 18:35		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 18:35		1	8.73	mg/L			
* Silicon, Total	11/9/23 13:50	11/14/23 18:35		1.015	4.08	mg/L	0.02030	0.25375	
* Sodium, Total	11/9/23 13:50	11/14/23 18:35		1.015	1.99	mg/L	0.04060	0.406	
Analytical Method: EPA 200.7			Analyst: ABB						
* Boron, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	9.06	mg/L	0.070035	0.406	
* Iron, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	3.30	mg/L	0.021315	0.406	
* Molybdenum, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	Not Detected	mg/L	0.005075	0.01015	U
* Silica, Dissolved (calc.)	11/9/23 11:49	11/14/23 16:24		1	8.69	mg/L			
* Silicon, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	4.06	mg/L	0.02030	0.25375	
* Sodium, Dissolved	11/9/23 11:49	11/14/23 16:24		1.015	2.02	mg/L	0.04060	0.406	
Analytical Method: EPA 200.8			Analyst: DLJ		Preparation Method: EPA 1638				
* Antimony, Total	11/9/23 13:50	11/14/23 15:02		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Total	11/9/23 13:50	11/14/23 19:54		5.075	4.92	mg/L	0.045675	0.25375	
* Arsenic, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.000789	mg/L	0.000112	0.000203	
* Barium, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.0261	mg/L	0.000508	0.001015	
* Beryllium, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.00153	mg/L	0.000406	0.001015	
* Cadmium, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.000280	mg/L	0.000068	0.000203	
* Chromium, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.000402	mg/L	0.000203	0.001015	J
* Cobalt, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.0199	mg/L	0.000068	0.000203	
* Lead, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.00132	mg/L	0.000068	0.000203	
* Manganese, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.294	mg/L	0.000152	0.001015	

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-14 Dup

Location Code: WMWGADAP
Collected: 11/8/23 08:23
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20321

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Potassium, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.303	mg/L	0.169505	0.5075	J
* Selenium, Total	11/9/23 13:50	11/14/23 15:02		1.015	0.00127	mg/L	0.000508	0.001015	
* Thallium, Total	11/9/23 13:50	11/14/23 15:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 200.8		Analyst: DLJ							
* Antimony, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	Not Detected	mg/L	0.000710	0.001015	U
* Aluminum, Dissolved	11/9/23 11:49	11/14/23 18:57		5.075	4.83	mg/L	0.045675	0.25375	RA
* Arsenic, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.000810	mg/L	0.000112	0.000203	
* Barium, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.0248	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.000792	mg/L	0.000406	0.001015	J
* Cadmium, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.000385	mg/L	0.000068	0.000203	
* Chromium, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.000347	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.0214	mg/L	0.000068	0.000203	
* Lead, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.00122	mg/L	0.000068	0.000203	
* Manganese, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.320	mg/L	0.000152	0.001015	
* Potassium, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.326	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	0.00124	mg/L	0.000508	0.001015	
* Thallium, Dissolved	11/9/23 11:49	11/9/23 17:12		1.015	Not Detected	mg/L	0.000068	0.000203	U
Analytical Method: EPA 245.1		Analyst: ABB							
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 22:01		1	Not Detected	mg/L	0.0003	0.0005	U
Analytical Method: EPA 353.2		Analyst: CES							
* Nitrogen, Nitrate/Nitrite	11/16/23 13:54	11/16/23 13:54		1	0.322	mg/L as N	0.20	0.3	
Analytical Method: SM 2540C		Analyst: CNJ							
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	92.0	mg/L		25	
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 17:40	11/9/23 17:40		1	1.02	mg/L	1.00	2	J
Analytical Method: SM4500CI E		Analyst: JCC							
* Chloride	11/9/23 10:33	11/9/23 10:33		1	2.44	mg/L	0.50	1	
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:23	11/17/23 10:23		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:40	11/20/23 14:40		3	55.6	mg/L	1.8	6	

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond - MW-14 Dup

Location Code: WMWGADAP

Collected: 11/8/23 08:23

Customer ID:

Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20321

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: Field Measurements		Analyst: TJD							
Conductivity	11/8/23 08:20	11/8/23 08:20			173.96	uS/cm			FA
pH	11/8/23 08:20	11/8/23 08:20			4.03	SU			FA
Temperature	11/8/23 08:20	11/8/23 08:20			19.23	C			FA
Turbidity	11/8/23 08:20	11/8/23 08:20			1.72	NTU			FA
Sulfide	11/8/23 08:20	11/8/23 08:20			0	mg/L			FA

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

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/8/23 08:23

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-14 Dup

Laboratory ID Number: BD20321

Sample	Analysis	Units	MB				Standard			Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BD20321	Aluminum, Dissolved	mg/L	-0.000235	0.0198	0.100	4.89	4.94	0.101	0.0850 to 0.115	60.0	70.0 to 130	1.02	20.0
BD20322	Aluminum, Total	mg/L	-0.0000352	0.0198	0.100	0.0953	0.106	0.0999	0.0850 to 0.115	95.3	70.0 to 130	10.6	20.0
BD20321	Antimony, Dissolved	mg/L	0.000286	0.00100	0.100	0.0974	0.102	0.105	0.0850 to 0.115	97.4	70.0 to 130	4.61	20.0
BD20322	Antimony, Total	mg/L	0.000240	0.00100	0.100	0.0979	0.0977	0.0977	0.0850 to 0.115	97.9	70.0 to 130	0.204	20.0
BD20321	Arsenic, Dissolved	mg/L	-0.0000074	0.000200	0.100	0.105	0.109	0.108	0.0850 to 0.115	104	70.0 to 130	3.74	20.0
BD20322	Arsenic, Total	mg/L	0.0000026	0.000200	0.100	0.0983	0.101	0.101	0.0850 to 0.115	98.3	70.0 to 130	2.71	20.0
BD20321	Barium, Dissolved	mg/L	-0.0000021	0.00100	0.100	0.122	0.123	0.107	0.0850 to 0.115	97.2	70.0 to 130	0.816	20.0
BD20322	Barium, Total	mg/L	0.0000507	0.00100	0.100	0.100	0.0993	0.0969	0.0850 to 0.115	100	70.0 to 130	0.702	20.0
BD20321	Beryllium, Dissolved	mg/L	-0.0000012	0.000880	0.100	0.0941	0.0969	0.0991	0.0850 to 0.115	93.3	70.0 to 130	2.93	20.0
BD20322	Beryllium, Total	mg/L	0.0000176	0.000880	0.100	0.0939	0.0930	0.0950	0.0850 to 0.115	93.9	70.0 to 130	0.963	20.0
BD20321	Boron, Dissolved	mg/L	-0.000886	0.0650	1.00	1.05	1.05	1.05	0.850 to 1.15	105	70.0 to 130	0.00	20.0
BD20322	Boron, Total	mg/L	-0.000727	0.0650	1.00	1.02	1.02	1.02	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BD20321	Cadmium, Dissolved	mg/L	0.0000000	0.000147	0.100	0.102	0.109	0.104	0.0850 to 0.115	102	70.0 to 130	6.64	20.0
BD20322	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.102	0.101	0.101	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20321	Calcium, Dissolved	mg/L	-0.0269	0.152	5.00	14.1	14.1	5.09	4.25 to 5.75	101	70.0 to 130	0.00	20.0
BD20322	Calcium, Total	mg/L	-0.0170	0.152	5.00	5.00	5.07	5.03	4.25 to 5.75	100	70.0 to 130	1.39	20.0
BD20322	Chloride	mg/L	0.0579	1.00	10.0	9.92	10.1	10.2	9.00 to 11.0	99.2	80.0 to 120	1.80	20.0
BD20321	Chromium, Dissolved	mg/L	-0.0000462	0.000440	0.100	0.0939	0.0981	0.100	0.0850 to 0.115	93.6	70.0 to 130	4.38	20.0
BD20322	Chromium, Total	mg/L	-0.0000784	0.000440	0.100	0.0971	0.102	0.103	0.0850 to 0.115	97.1	70.0 to 130	4.92	20.0
BD20321	Cobalt, Dissolved	mg/L	-0.0000014	0.000147	0.100	0.116	0.120	0.102	0.0850 to 0.115	94.6	70.0 to 130	3.39	20.0
BD20322	Cobalt, Total	mg/L	0.0000002	0.000147	0.100	0.100	0.103	0.104	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20322	Fluoride	mg/L	0.0339	0.125	2.50	2.26	2.42	2.61	2.25 to 2.75	90.4	80.0 to 120	6.84	20.0
BD20321	Iron, Dissolved	mg/L	0.00237	0.0176	0.2	0.216	0.212	0.212	0.170 to 0.230	108	70.0 to 130	1.87	20.0
BD20322	Iron, Total	mg/L	0.00315	0.0176	0.2	0.209	0.212	0.209	0.170 to 0.230	104	70.0 to 130	1.43	20.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP
Sample Date: 11/8/23 08:23
Customer ID:
Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-14 Dup

Laboratory ID Number: BD20321

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec
				Limit					Standard	Limit	Rec	Limit	
BD20321	Lead, Dissolved	mg/L	0.000056	0.000147	0.100	0.0950	0.0967	0.0968	0.0850 to 0.115	93.8	70.0 to 130	1.77	20.0
BD20322	Lead, Total	mg/L	0.000033	0.000147	0.100	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20321	Lithium, Dissolved	mg/L	0.00120	0.0154	0.200	0.220	0.221	0.219	0.170 to 0.230	110	70.0 to 130	0.454	20.0
BD20322	Lithium, Total	mg/L	0.00151	0.0154	0.200	0.211	0.209	0.209	0.170 to 0.230	106	70.0 to 130	0.952	20.0
BD20321	Magnesium, Dissolved	mg/L	-0.0246	0.0462	5.00	8.54	8.53	5.35	4.25 to 5.75	105	70.0 to 130	0.117	20.0
BD20322	Magnesium, Total	mg/L	-0.00650	0.0462	5.00	5.16	5.18	5.15	4.25 to 5.75	103	70.0 to 130	0.387	20.0
BD20321	Manganese, Dissolved	mg/L	0.0000545	0.00033	0.100	0.393	0.407	0.103	0.0850 to 0.115	73.0	70.0 to 130	3.50	20.0
BD20322	Manganese, Total	mg/L	0.0000102	0.00033	0.100	0.0998	0.101	0.104	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20322	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00389	0.00395	0.00393	0.00340 to 0.00460	97.2	70.0 to 130	1.53	20.0
BD20321	Molybdenum, Dissolved	mg/L	0.00007	0.0100	0.2	0.213	0.213	0.218	0.170 to 0.230	106	70.0 to 130	0.00	20.0
BD20322	Molybdenum, Total	mg/L	0.001	0.0100	0.2	0.214	0.216	0.212	0.170 to 0.230	107	70.0 to 130	0.930	20.0
BD20321	Potassium, Dissolved	mg/L	0.00925	0.367	10.0	10.3	10.8	10.3	8.50 to 11.5	99.7	70.0 to 130	4.74	20.0
BD20322	Potassium, Total	mg/L	-0.0148	0.367	10.0	10.1	10.3	10.6	8.50 to 11.5	101	70.0 to 130	1.96	20.0
BD20321	Selenium, Dissolved	mg/L	0.000125	0.00100	0.100	0.0982	0.0991	0.104	0.0850 to 0.115	97.0	70.0 to 130	0.912	20.0
BD20322	Selenium, Total	mg/L	0.0000351	0.00100	0.100	0.102	0.105	0.103	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BD20321	Silicon, Dissolved	mg/L	0.000052	0.0440	1.00	5.09	5.08	1.06	0.850 to 1.15	103	70.0 to 130	0.197	20.0
BD20322	Silicon, Total	mg/L	-0.00102	0.0440	1.00	1.04	1.05	1.03	0.850 to 1.15	104	70.0 to 130	0.957	20.0
BD20321	Sodium, Dissolved	mg/L	0.000322	0.0880	5.00	7.34	7.32	5.42	4.25 to 5.75	106	70.0 to 130	0.273	20.0
BD20322	Sodium, Total	mg/L	0.00177	0.0880	5.00	5.22	5.17	5.21	4.25 to 5.75	104	70.0 to 130	0.962	20.0
BD20322	Sulfate	mg/L	-0.0296	2.0	20.0	19.3	18.9	20.8	18.0 to 22.0	91.2	80.0 to 120	2.09	20.0
BD20321	Thallium, Dissolved	mg/L	-0.0000012	0.000147	0.100	0.0921	0.0938	0.0947	0.0850 to 0.115	92.1	70.0 to 130	1.83	20.0
BD20322	Thallium, Total	mg/L	0.0000049	0.000147	0.100	0.0962	0.0942	0.0954	0.0850 to 0.115	96.2	70.0 to 130	2.10	20.0
BD20321	Total Organic Carbon	mg/L	0.112	1.00	10.0	9.81	10.3	9.42		87.9	80.0 to 120	4.87	20.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Batch QC Summary

Customer Account: WMWGADAP

Sample Date: 11/8/23 08:23

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond - MW-14 Dup

Laboratory ID Number: BD20321

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Limit	Prec	Limit
BD20322	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.021	0.200	2.00	1.99	-0.025	1.94	1.80 to 2.20	99.5	90.0 to 110	0.00	15.0
BD20317	Solids, Dissolved	mg/L	0.0000	25.0			497	51.0	40.0 to 60.0			0.201	10.0

Comments: Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.
 Alkalinity could not be performed, pH at or below titration end point of 4.5 SU.
 Fluoride may have potential matrix interference.

Certificate Of Analysis

Description: Gadsden Ash Pond Field Blank-3

Location Code: WMWGADAPFB
Collected: 11/8/23 09:00
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20322

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
Analytical Method: EPA 200.7		Analyst: ABB			Preparation Method: EPA 1638					
* Boron, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.021315	0.406	U	
* Molybdenum, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.005075	0.01015	U	
* Silica, Total (calc.)	11/9/23 13:50	11/14/23 18:38		1	Not Detected	mg/L				
* Silicon, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	11/9/23 13:50	11/14/23 18:38		1.015	Not Detected	mg/L	0.04060	0.406	U	
Analytical Method: EPA 200.8		Analyst: DLJ			Preparation Method: EPA 1638					
* Antimony, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000710	0.001015	U	
* Aluminum, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.009135	0.05075	U	
* Arsenic, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000112	0.000203	U	
* Barium, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000152	0.001015	U	
* Potassium, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	11/9/23 13:50	11/14/23 15:06		1.015	Not Detected	mg/L	0.000068	0.000203	U	
Analytical Method: EPA 245.1		Analyst: ABB								
* Mercury, Total by CVAA	11/15/23 15:50	11/15/23 22:05		1	Not Detected	mg/L	0.0003	0.0005	U	
Analytical Method: EPA 353.2		Analyst: CES								
* Nitrogen, Nitrate/Nitrite	11/16/23 13:56	11/16/23 13:56		1	Not Detected	mg/L as N	0.20	0.3	U	
Analytical Method: SM 2540C		Analyst: CNJ								
* Solids, Dissolved	11/9/23 10:45	11/13/23 14:40		1	Not Detected	mg/L		25	U	

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

Comments:

Certificate Of Analysis

Description: Gadsden Ash Pond Field Blank-3

Location Code: WMWGADAPFB
Collected: 11/8/23 09:00
Customer ID:
Submittal Date: 11/8/23 12:49

Laboratory ID Number: BD20322

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
Analytical Method: SM 5310 B		Analyst: JLR							
* Total Organic Carbon	11/9/23 18:25	11/9/23 18:25		1	Not Detected	mg/L	1.00	2	U
Analytical Method: SM4500CI E		Analyst: JCC							
* Chloride	11/9/23 10:34	11/9/23 10:34		1	Not Detected	mg/L	0.50	1	U
Analytical Method: SM4500F G 2017		Analyst: JCC							
* Fluoride	11/17/23 10:24	11/17/23 10:24		1	Not Detected	mg/L	0.06	0.125	U
Analytical Method: SM4500SO4 E 2011		Analyst: JCC							
* Sulfate	11/20/23 14:32	11/20/23 14:32		1	1.07	mg/L	0.6	2	J

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

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/8/23 09:00

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond Field Blank-3

Laboratory ID Number: BD20322

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BD20322	Aluminum, Total	mg/L	-0.000352	0.0198	0.100	0.0953	0.106	0.0999	0.0850 to 0.115	95.3	70.0 to 130	10.6	20.0
BD20322	Antimony, Total	mg/L	0.000240	0.00100	0.100	0.0979	0.0977	0.0977	0.0850 to 0.115	97.9	70.0 to 130	0.204	20.0
BD20322	Arsenic, Total	mg/L	0.0000026	0.000200	0.100	0.0983	0.101	0.101	0.0850 to 0.115	98.3	70.0 to 130	2.71	20.0
BD20322	Barium, Total	mg/L	0.0000507	0.00100	0.100	0.100	0.0993	0.0969	0.0850 to 0.115	100	70.0 to 130	0.702	20.0
BD20322	Beryllium, Total	mg/L	0.0000176	0.000880	0.100	0.0939	0.0930	0.0950	0.0850 to 0.115	93.9	70.0 to 130	0.963	20.0
BD20322	Boron, Total	mg/L	-0.000727	0.0650	1.00	1.02	1.02	1.02	0.850 to 1.15	102	70.0 to 130	0.00	20.0
BD20322	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.102	0.101	0.101	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BD20322	Calcium, Total	mg/L	-0.0170	0.152	5.00	5.00	5.07	5.03	4.25 to 5.75	100	70.0 to 130	1.39	20.0
BD20322	Chloride	mg/L	0.0579	1.00	10.0	9.92	10.1	10.2	9.00 to 11.0	99.2	80.0 to 120	1.80	20.0
BD20322	Chromium, Total	mg/L	-0.0000784	0.000440	0.100	0.0971	0.102	0.103	0.0850 to 0.115	97.1	70.0 to 130	4.92	20.0
BD20322	Cobalt, Total	mg/L	0.0000002	0.000147	0.100	0.100	0.103	0.104	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BD20322	Fluoride	mg/L	0.0339	0.125	2.50	2.26	2.42	2.61	2.25 to 2.75	90.4	80.0 to 120	6.84	20.0
BD20322	Iron, Total	mg/L	0.00315	0.0176	0.2	0.209	0.212	0.209	0.170 to 0.230	104	70.0 to 130	1.43	20.0
BD20322	Lead, Total	mg/L	0.0000033	0.000147	0.100	0.103	0.103	0.104	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BD20322	Lithium, Total	mg/L	0.00151	0.0154	0.200	0.211	0.209	0.209	0.170 to 0.230	106	70.0 to 130	0.952	20.0
BD20322	Magnesium, Total	mg/L	-0.00650	0.0462	5.00	5.16	5.18	5.15	4.25 to 5.75	103	70.0 to 130	0.387	20.0
BD20322	Manganese, Total	mg/L	0.0000102	0.00033	0.100	0.0998	0.101	0.104	0.0850 to 0.115	99.8	70.0 to 130	1.20	20.0
BD20322	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00389	0.00395	0.00393	0.00340 to 0.00460	97.2	70.0 to 130	1.53	20.0
BD20322	Molybdenum, Total	mg/L	0.001	0.0100	0.2	0.214	0.216	0.212	0.170 to 0.230	107	70.0 to 130	0.930	20.0
BD20322	Potassium, Total	mg/L	-0.0148	0.367	10.0	10.1	10.3	10.6	8.50 to 11.5	101	70.0 to 130	1.96	20.0
BD20322	Selenium, Total	mg/L	0.0000351	0.00100	0.100	0.102	0.105	0.103	0.0850 to 0.115	102	70.0 to 130	2.90	20.0
BD20322	Silicon, Total	mg/L	-0.00102	0.0440	1.00	1.04	1.05	1.03	0.850 to 1.15	104	70.0 to 130	0.957	20.0
BD20322	Sodium, Total	mg/L	0.00177	0.0880	5.00	5.22	5.17	5.21	4.25 to 5.75	104	70.0 to 130	0.962	20.0
BD20322	Sulfate	mg/L	-0.0296	2.0	20.0	19.3	18.9	20.8	18.0 to 22.0	91.2	80.0 to 120	2.09	20.0

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/8/23 09:00

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond Field Blank-3

Laboratory ID Number: BD20322

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	Limit
BD20322	Thallium, Total	mg/L	0.0000049	0.000147	0.100	0.0962	0.0942	0.0954	0.0850 to 0.115	96.2	70.0 to 130	2.10	20.0
BD20321	Total Organic Carbon	mg/L	0.112	1.00	10.0	9.81	10.3	9.42		87.9	80.0 to 120	4.87	20.0

Comments:

Batch QC Summary

Customer Account: WMWGADAPFB

Sample Date: 11/8/23 09:00

Customer ID:

Delivery Date: 11/8/23 12:49

Description: Gadsden Ash Pond Field Blank-3

Laboratory ID Number: BD20322

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BD20322	Nitrogen, Nitrate/Nitrite	mg/L as N	-0.021	0.200	2.00	1.99	-0.025	1.94	1.80 to 2.20	99.5	90.0 to 110	0.00	15.0
BD20317	Solids, Dissolved	mg/L	0.0000	25.0			497	51.0	40.0 to 60.0			0.201	10.0

Comments:

Definitions

Project Number: WMWGADAP_1432

Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
A	Bicarbonate alkalinity, carbonate alkalinity, hydroxide alkalinity, free carbon dioxide, and/or total carbon dioxide calculations are estimates due to pH>10SU and/or TDS>500mg/L.
C	Analyte was verified by re-analysis.
FA	Field results were reviewed by the Water Field Group. Refer to APC Field Case Narrative.
J	Reported value is an estimate because concentration is less than reporting limit.
RA	Matrix spike is invalid due to sample concentration.
U	Compound was analyzed, but not detected.



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Budd
	Collector: TJ Daugherty		Requested By: Greg Budd
		Location	Gadsden Ash Pond

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	TDS/Alkalinity	500 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	Nitrite, Nitrate; TOC	250 mL	6	Anions	500 mL	8	N/A	N/A

Comments: Submitted to lab @0815 11/2/23.

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-16	10/31/2023	14:13	6	Groundwater		BD20073	<input checked="" type="checkbox"/>
MW-17	10/31/2023	15:25	6	Groundwater		BD20074	<input checked="" type="checkbox"/>
MW-2VA	11/01/2023	11:15	6	Groundwater		BD20075	<input checked="" type="checkbox"/>
MW-2VB	11/01/2023	13:17	6	Groundwater		BD20076	<input checked="" type="checkbox"/>
MW-2	11/01/2023	14:43	6	Groundwater		BD20077	<input checked="" type="checkbox"/>
MW-2 Dup	11/01/2023	14:43	6	Sample Duplicate		BD20078	<input checked="" type="checkbox"/>
MW-3	11/01/2023	15:58	6	Groundwater		BD20079	<input checked="" type="checkbox"/>
FB-1	11/01/2023	16:15	6	Field Blank		BD20080	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
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Relinquished By	Received By	Date/Time
	Brooke Caton <small>Digitally signed by Brooke Caton Date: 2023.11.02 10:37:01 -05'00'</small>	11/02/2023 10:37

SmarTroll ID	7586-41445-5-4	Cooler Temp	0.8 °C
Turbidity ID	9900-57262-1-1	Thermometer ID	10614-61208-2-1
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Budd
	Collector: TJ Daugherty		Requested By: Greg Budd
		Location	Gadsden Ash Pond

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	TDS/Alkalinity	500 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	Nitrite, Nitrate; TOC	250 mL	6	Anions	500 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-7	11/07/2023	09:05	6	Groundwater		BD20313	<input checked="" type="checkbox"/>
MW-8	11/07/2023	10:03	6	Groundwater		BD20314	<input checked="" type="checkbox"/>
MW-9	11/07/2023	11:05	6	Groundwater		BD20315	<input checked="" type="checkbox"/>
MW-10	11/07/2023	12:14	6	Groundwater		BD20316	<input checked="" type="checkbox"/>
MW-12	11/07/2023	13:13	6	Groundwater		BD20317	<input checked="" type="checkbox"/>
MW-11	11/07/2023	14:30	6	Groundwater		BD20318	<input checked="" type="checkbox"/>
FB-2	11/07/2023	15:00	5	Field Blank		BD20319	<input checked="" type="checkbox"/>
MW-14	11/08/2023	08:23	6	Groundwater		BD20320	<input checked="" type="checkbox"/>
MW-14 Dup	11/08/2023	08:23	6	Sample Duplicate		BD20321	<input checked="" type="checkbox"/>
FB-3	11/08/2023	09:00	5	Field Blank		BD20322	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
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Relinquished By	Received By	Date/Time
<i>HAB</i>	<i>Bruce Carter</i>	11/08/2023 12:34

SmarTroll ID	7586-41445-5-4	Cooler Temp	0.2 °C
Turbidity ID	9900-57262-1-1	Thermometer ID	10614-61208-2-1
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks
	Collector: Dallas Gentry		Requested By: Greg Budd
		Location	Gadsden Ash Pond

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	TDS/Alkalinity	500 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	Nitrite, Nitrate; TOC	250 mL	6	Anions	500 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-1	11/07/2023	07:59	6	Groundwater		BD20297	<input checked="" type="checkbox"/>
MW-18H	11/07/2023	09:31	6	Groundwater		BD20298	<input checked="" type="checkbox"/>
PZ-6	11/07/2023	10:16	6	Groundwater		BD20299	<input checked="" type="checkbox"/>
PZ-5	11/07/2023	11:04	6	Groundwater		BD20300	<input checked="" type="checkbox"/>
MW-19H	11/07/2023	11:52	6	Groundwater		BD20301	<input checked="" type="checkbox"/>
MW-19H dup	11/07/2023	11:52	6	Sample Duplicate		BD20302	<input checked="" type="checkbox"/>
MW-22VB	11/07/2023	13:10	6	Groundwater		BD20303	<input checked="" type="checkbox"/>
MW-21VC	11/07/2023	14:21	6	Groundwater		BD20304	<input checked="" type="checkbox"/>
EB-1	11/07/2023	14:55	5	Equipment Blank		BD20305	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
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Relinquished By	Received By	Date/Time
<i>Dallas Gentry</i>	<i>Greg Budd</i>	11/08/2023 12:35

SmarTroll ID	7586-41443-5-2	Cooler Temp	1.8 °C
Turbidity ID	9901-57263-1-1	Thermometer ID	10614-61208-2-1
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Budd
	Collector: Anthony Goggins		Requested By: Greg Budd
		Location	Gadsden Ash Pond

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	TDS/Alkalinity	500 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	Nitrite, Nitrate; TOC	250 mL	6	Anions	500 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-4	11/07/2023	08:32	1	Groundwater		BD20306	<input checked="" type="checkbox"/>
MW-4V	11/07/2023	09:20	1	Groundwater		BD20307	<input checked="" type="checkbox"/>
MW-20H	11/07/2023	10:02	1	Groundwater		BD20308	<input checked="" type="checkbox"/>
PZ-1	11/07/2023	11:02	1	Groundwater		BD20309	<input checked="" type="checkbox"/>
MW-5	11/07/2023	11:55	1	Groundwater		BD20310	<input checked="" type="checkbox"/>
MW-6	11/07/2023	12:48	1	Groundwater		BD20311	<input checked="" type="checkbox"/>
PZ-2	11/07/2023	13:55	1	Groundwater		BD20312	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
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Relinquished By	Received By	Date/Time
<i>Anthony Goggins</i>	<i>Bob Budd</i>	11/08/2023 12:38

SmarTroll ID	7586-41446-5-5	Cooler Temp	1.4 °C
Turbidity ID	9830-57039-1-1	Thermometer ID	10614-61208-2-1
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Budd
	Collector: TJ Daugherty		Requested By: Greg Budd
		Location	Gadsden Ash Pond

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

Comments: Submitted to lab @0815 11/2/23. Rad ms/MSD @ MW-16

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-16	10/31/2023	14:13	3	Groundwater		BD20081	<input checked="" type="checkbox"/>
MW-17	10/31/2023	15:25	1	Groundwater		BD20082	<input checked="" type="checkbox"/>
MW-2VA	11/01/2023	11:15	1	Groundwater		BD20083	<input checked="" type="checkbox"/>
MW-2VB	11/01/2023	13:17	1	Groundwater		BD20084	<input checked="" type="checkbox"/>
MW-2	11/01/2023	14:43	1	Groundwater		BD20085	<input checked="" type="checkbox"/>
MW-2 Dup	11/01/2023	14:43	1	Sample Duplicate		BD20086	<input checked="" type="checkbox"/>
MW-3	11/01/2023	15:58	1	Groundwater		BD20087	<input checked="" type="checkbox"/>
FB-1	11/01/2023	16:15	1	Field Blank		BD20088	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
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Relinquished By	Received By	Date/Time
	Brooke Caton <small>Digitally signed by Brooke Caton Date: 2023.11.02 10:37:15 -05'00'</small>	11/02/2023 10:37

SmarTroll ID	7586-41445-5-4	Cooler Temp	N/A
Turbidity ID	9900-57262-1-1	Thermometer ID	N/A
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks
	Collector		Dallas Gentry
		Location	Gadsden Ash Pond

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

Comments: Radium MS/MSD collected at MW-1

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-1	11/07/2023	07:59	3	Groundwater		BD20323	<input checked="" type="checkbox"/>
MW-18H	11/07/2023	09:31	1	Groundwater		BD20324	<input checked="" type="checkbox"/>
PZ-6	11/07/2023	10:16	1	Groundwater		BD20325	<input checked="" type="checkbox"/>
PZ-5	11/07/2023	11:04	1	Groundwater		BD20326	<input checked="" type="checkbox"/>
MW-19H	11/07/2023	11:52	1	Groundwater		BD20327	<input checked="" type="checkbox"/>
MW-19H dup	11/07/2023	11:52	1	Sample Duplicate		BD20328	<input checked="" type="checkbox"/>
MW-22VB	11/07/2023	13:10	1	Groundwater		BD20329	<input checked="" type="checkbox"/>
MW-21VC	11/07/2023	14:21	1	Groundwater		BD20330	<input checked="" type="checkbox"/>
EB-1	11/07/2023	14:55	1	Equipment Blank		BD20331	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
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							<input type="checkbox"/>
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							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

Relinquished By	Received By	Date/Time
<i>Dallas Gentry</i>	<i>Greg Budd</i>	11/08/2023 12:35

SmarTroll ID	7586-41443-5-2	Cooler Temp	N/A
Turbidity ID	9901-57263-1-1	Thermometer ID	N/A
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Budd
	Collector: TJ Daugherty		Requested By: Greg Budd
		Location	Gadsden Ash Pond

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

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-7	11/07/2023	09:05	1	Groundwater		BD20339	<input checked="" type="checkbox"/>
MW-8	11/07/2023	10:03	1	Groundwater		BD20340	<input checked="" type="checkbox"/>
MW-9	11/07/2023	11:05	1	Groundwater		BD20341	<input checked="" type="checkbox"/>
MW-10	11/07/2023	12:14	1	Groundwater		BD20342	<input checked="" type="checkbox"/>
MW-12	11/07/2023	13:13	1	Groundwater		BD20343	<input checked="" type="checkbox"/>
MW-11	11/07/2023	14:30	1	Groundwater		BD20344	<input checked="" type="checkbox"/>
FB-2	11/07/2023	15:00	1	Field Blank		BD20345	<input checked="" type="checkbox"/>
MW-14	11/08/2023	08:23	1	Groundwater		BD20346	<input checked="" type="checkbox"/>
MW-14 Dup	11/08/2023	08:23	1	Sample Duplicate		BD20347	<input checked="" type="checkbox"/>
FB-3	11/08/2023	09:00	1	Field Blank		BD20348	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

Relinquished By	Received By	Date/Time
<i>HAB</i>	<i>Bruce Carter</i>	11/08/2023 12:34

SmarTroll ID	7586-41445-5-4	Cooler Temp	N/A
Turbidity ID	9900-57262-1-1	Thermometer ID	N/A
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



Chain of Custody

Groundwater

APC General Testing Laboratory

Field Complete
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Budd
	Collector: Anthony Goggins		Requested By: Greg Budd
		Location	Gadsden Ash Pond

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

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id	pH Check
MW-4	11/07/2023	08:32	1	Groundwater		BD20332	<input checked="" type="checkbox"/>
MW-4V	11/07/2023	09:20	1	Groundwater		BD20333	<input checked="" type="checkbox"/>
MW-20H	11/07/2023	10:02	1	Groundwater		BD20334	<input checked="" type="checkbox"/>
PZ-1	11/07/2023	11:02	1	Groundwater		BD20335	<input checked="" type="checkbox"/>
MW-5	11/07/2023	11:55	1	Groundwater		BD20336	<input checked="" type="checkbox"/>
MW-6	11/07/2023	12:48	1	Groundwater		BD20337	<input checked="" type="checkbox"/>
PZ-2	11/07/2023	13:55	1	Groundwater		BD20338	<input checked="" type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
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							<input type="checkbox"/>
							<input type="checkbox"/>

Relinquished By	Received By	Date/Time
<i>Anthony Goggins</i>	<i>Greg Budd</i>	11/08/2023 12:38

SmarTroll ID	7586-41446-5-5	Cooler Temp	N/A
Turbidity ID	9830-57039-1-1	Thermometer ID	N/A
Sample Event	1432	pH Strip ID	11044-63391-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.
 Total Metals and Alkalinity are not performed on Dissolved Sets
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



December 14, 2023

Brooke Caton
Alabama Power
744 Highway 87
Calera, AL 35040

RE: Project: WMWGADAP_1432
Pace Project No.: 30639034

Dear Brooke Caton:

Enclosed are the analytical results for sample(s) received by the laboratory on November 13, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Skyler C. Richmond
skyler.richmond@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Blaine Denton, Alabama Power
Renee Jernigan, Alabama Power



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: WMWGADAP_1432
Pace Project No.: 30639034

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: WMWGADAP_1432
Pace Project No.: 30639034

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30639034001	BD20081 MW-16	Water	10/31/23 14:13	11/13/23 10:20
30639034002	BD20081 MW-16 MS	Water	10/31/23 14:13	11/13/23 10:20
30639034003	BD20081 MW-16 MSD	Water	10/31/23 14:13	11/13/23 10:20
30639034004	BD20082 MW-17	Water	10/31/23 15:25	11/13/23 10:20
30639034005	BD20083 MW-2VA	Water	11/01/23 11:15	11/13/23 10:20
30639034006	BD20084 MW-2VB	Water	11/01/23 13:17	11/13/23 10:20
30639034007	BD20085 MW-2	Water	11/01/23 14:43	11/13/23 10:20
30639034008	BD20086 MW-2 Dup	Water	11/01/23 14:43	11/13/23 10:20
30639034009	BD20087 MW-3	Water	11/01/23 15:58	11/13/23 10:20
30639034010	BD20088 FB-1	Water	11/01/23 16:15	11/13/23 10:20
30639034011	BD20323 MW-1	Water	11/07/23 07:59	11/13/23 10:20
30639034012	BD20323 MW-1 MS	Water	11/07/23 07:59	11/13/23 10:20
30639034013	BD20323 MW-1 MSD	Water	11/07/23 07:59	11/13/23 10:20
30639034014	BD20324 MW-18H	Water	11/07/23 09:31	11/13/23 10:20
30639034015	BD20325 PZ-6	Water	11/07/23 10:16	11/13/23 10:20
30639034016	BD20326 PZ-5	Water	11/07/23 11:04	11/13/23 10:20
30639034017	BD20327 MW-19H	Water	11/07/23 11:52	11/13/23 10:20
30639034018	BD20328 MW-19H Dup	Water	11/07/23 11:52	11/13/23 10:20
30639034019	BD20329 MW-22VB	Water	11/07/23 13:10	11/13/23 10:20
30639034020	BD20330 MW-21VC	Water	11/07/23 14:21	11/13/23 10:20
30639034021	BD20331 EB-1	Water	11/07/23 14:55	11/13/23 10:20
30639034022	BD20332 MW-4	Water	11/07/23 08:32	11/13/23 10:20
30639034023	BD20333 MW-4V	Water	11/07/23 09:20	11/13/23 10:20
30639034024	BD20334 MW-20H	Water	11/07/23 10:02	11/13/23 10:20
30639034025	BD20335 PZ-1	Water	11/07/23 11:02	11/13/23 10:20
30639034026	BD20336 MW-5	Water	11/07/23 11:55	11/13/23 10:20
30639034027	BD20337 MW-6	Water	11/07/23 12:48	11/13/23 10:20
30639034028	BD20338 PZ-2	Water	11/07/23 13:55	11/13/23 10:20
30639034029	BD20339 MW-7	Water	11/07/23 09:05	11/13/23 10:20
30639034030	BD20340 MW-8	Water	11/07/23 10:03	11/13/23 10:20
30639034031	BD20341 MW-9	Water	11/07/23 11:05	11/13/23 10:20
30639034032	BD20342 MW-10	Water	11/07/23 12:14	11/13/23 10:20
30639034033	BD20343 MW-12	Water	11/07/23 13:13	11/13/23 10:20
30639034034	BD20344 MW-11	Water	11/07/23 14:30	11/13/23 10:20
30639034035	BD20345 FB-2	Water	11/07/23 15:00	11/13/23 10:20
30639034036	BD20346 MW-14	Water	11/08/23 08:23	11/13/23 10:20
30639034037	BD20347 MW-14 Dup	Water	11/08/23 08:23	11/13/23 10:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: WMWGADAP_1432
Pace Project No.: 30639034

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30639034038	BD20348 FB-3	Water	11/08/23 09:00	11/13/23 10:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30639034001	BD20081 MW-16	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034002	BD20081 MW-16 MS	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034003	BD20081 MW-16 MSD	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034004	BD20082 MW-17	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034005	BD20083 MW-2VA	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034006	BD20084 MW-2VB	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034007	BD20085 MW-2	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034008	BD20086 MW-2 Dup	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034009	BD20087 MW-3	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034010	BD20088 FB-1	EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034011	BD20323 MW-1	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034012	BD20323 MW-1 MS	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30639034013	BD20323 MW-1 MSD	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30639034014	BD20324 MW-18H	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30639034015	BD20325 PZ-6	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034016	BD20326 PZ-5	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034017	BD20327 MW-19H	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034018	BD20328 MW-19H Dup	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034019	BD20329 MW-22VB	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034020	BD20330 MW-21VC	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034021	BD20331 EB-1	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034022	BD20332 MW-4	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034023	BD20333 MW-4V	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30639034024	BD20334 MW-20H	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30639034025	BD20335 PZ-1	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30639034026	BD20336 MW-5	Total Radium Calculation	LAL	1	PASI-PA
		EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30639034027	BD20337 MW-6	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034028	BD20338 PZ-2	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034029	BD20339 MW-7	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034030	BD20340 MW-8	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034031	BD20341 MW-9	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034032	BD20342 MW-10	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034033	BD20343 MW-12	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034034	BD20344 MW-11	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034035	BD20345 FB-2	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034036	BD20346 MW-14	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034037	BD20347 MW-14 Dup	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
30639034038	BD20348 FB-3	EPA 9315	SLC	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: WMWGADAP_1432
Pace Project No.: 30639034

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: WMWGADAP_1432
Pace Project No.: 30639034

Method: EPA 9315
Description: 9315 Total Radium
Client: Alabama Power
Date: December 14, 2023

General Information:

38 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: WMWGADAP_1432
Pace Project No.: 30639034

Method: EPA 9320
Description: 9320 Radium 228
Client: Alabama Power
Date: December 14, 2023

General Information:

38 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: WMWGADAP_1432
Pace Project No.: 30639034

Method: Total Radium Calculation
Description: Total Radium 228+226
Client: Alabama Power
Date: December 14, 2023

General Information:

34 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20081 MW-16 **Lab ID: 30639034001** Collected: 10/31/23 14:13 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.411U ± 0.265 (0.412) C:98% T:NA	pCi/L	12/11/23 08:42	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.309U ± 0.377 (0.799) C:81% T:79%	pCi/L	12/06/23 12:03	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.720U ± 0.642 (1.21)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BD20081 MW-16 MS Lab ID: 30639034002 Collected: 10/31/23 14:13 Received: 11/13/23 10:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	100.61 %REC ± NA (NA) C:NA T:NA	pCi/L	12/11/23 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	87.10 %REC ± NA (NA) C:NA T:NA	pCi/L	12/06/23 12:03	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20081 MW-16 MSD **Lab ID: 30639034003** Collected: 10/31/23 14:13 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	99.43 %REC 1.18 RPD ± NA (NA) C:NA T:NA	pCi/L	12/11/23 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	114.24 %REC 26.96RPD ± NA (NA) C:NA T:NA	pCi/L	12/06/23 12:03	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20082 MW-17 **Lab ID: 30639034004** Collected: 10/31/23 15:25 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.285U ± 0.234 (0.417) C:99% T:NA	pCi/L	12/11/23 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0398U ± 0.347 (0.821) C:73% T:79%	pCi/L	12/06/23 12:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.285U ± 0.581 (1.24)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20083 MW-2VA **Lab ID: 30639034005** Collected: 11/01/23 11:15 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0855U ± 0.205 (0.487) C:89% T:NA	pCi/L	12/11/23 08:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.452U ± 0.351 (0.691) C:79% T:83%	pCi/L	12/06/23 12:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.538U ± 0.556 (1.18)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0687U ± 0.216 (0.524) C:100% T:NA	pCi/L	12/11/23 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.439U ± 0.390 (0.788) C:75% T:80%	pCi/L	12/06/23 12:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.508U ± 0.606 (1.31)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.337U ± 0.265 (0.478) C:94% T:NA	pCi/L	12/11/23 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.715U ± 0.406 (0.720) C:76% T:78%	pCi/L	12/06/23 12:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.05U ± 0.671 (1.20)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20086 MW-2 Dup **Lab ID: 30639034008** Collected: 11/01/23 14:43 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.354U ± 0.257 (0.436) C:96% T:NA	pCi/L	12/11/23 08:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.950 ± 0.451 (0.763) C:76% T:81%	pCi/L	12/06/23 12:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.30 ± 0.708 (1.20)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20087 MW-3 **Lab ID: 30639034009** Collected: 11/01/23 15:58 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.126U ± 0.204 (0.456) C:97% T:NA	pCi/L	12/11/23 08:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.717 ± 0.395 (0.689) C:79% T:73%	pCi/L	12/06/23 12:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.843U ± 0.599 (1.15)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BD20088 FB-1 Lab ID: 30639034010 Collected: 11/01/23 16:15 Received: 11/13/23 10:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0778U ± 0.0595 (0.308) C:100% T:NA	pCi/L	12/11/23 08:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.223U ± 0.351 (0.760) C:79% T:76%	pCi/L	12/06/23 12:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.223U ± 0.411 (1.07)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.305U ± 0.261 (0.483) C:92% T:NA	pCi/L	12/13/23 08:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.704 ± 0.383 (0.659) C:81% T:84%	pCi/L	12/07/23 10:27	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.01U ± 0.644 (1.14)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	102.36 %REC ± NA (NA) C:NA T:NA	pCi/L	12/13/23 08:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	103.0 %REC ± NA (NA) C:NA T:NA	pCi/L	12/07/23 10:28	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20323 MW-1 MSD **Lab ID: 30639034013** Collected: 11/07/23 07:59 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	103.14 %REC 0.75RPD ± NA (NA) C:NA T:NA	pCi/L	12/13/23 08:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	129.86 %REC 23.08RPD ± NA (NA) C:NA T:NA	pCi/L	12/07/23 10:28	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20324 MW-18H **Lab ID: 30639034014** Collected: 11/07/23 09:31 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.140U ± 0.178 (0.567) C:92% T:NA	pCi/L	12/11/23 08:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.793 ± 0.412 (0.714) C:83% T:79%	pCi/L	12/07/23 10:28	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.793U ± 0.590 (1.28)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.144U ± 0.221 (0.488) C:97% T:NA	pCi/L	12/11/23 08:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.286U ± 0.425 (0.917) C:75% T:81%	pCi/L	12/06/23 15:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.430U ± 0.646 (1.41)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BD20326 PZ-5 Lab ID: 30639034016 Collected: 11/07/23 11:04 Received: 11/13/23 10:20 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0619U ± 0.158 (0.383) C:95% T:NA	pCi/L	12/11/23 08:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.09 ± 0.537 (0.894) C:63% T:75%	pCi/L	12/06/23 15:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.15U ± 0.695 (1.28)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0699U ± 0.234 (0.568) C:97% T:NA	pCi/L	12/11/23 08:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.708U ± 0.474 (0.908) C:77% T:76%	pCi/L	12/06/23 15:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.778U ± 0.708 (1.48)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20328 MW-19H Dup **Lab ID: 30639034018** Collected: 11/07/23 11:52 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.168U ± 0.211 (0.445) C:96% T:NA	pCi/L	12/11/23 08:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.722U ± 0.438 (0.812) C:77% T:81%	pCi/L	12/06/23 15:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.890U ± 0.649 (1.26)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.386U ± 0.269 (0.450) C:91% T:NA	pCi/L	12/11/23 08:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.783U ± 0.443 (0.798) C:78% T:78%	pCi/L	12/06/23 15:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.17U ± 0.712 (1.25)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.131U ± 0.160 (0.315) C:95% T:NA	pCi/L	12/11/23 08:46	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.507U ± 0.434 (0.872) C:76% T:77%	pCi/L	12/06/23 15:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.638U ± 0.594 (1.19)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BD20331 EB-1 Lab ID: 30639034021 Collected: 11/07/23 14:55 Received: 11/13/23 10:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.116U ± 0.175 (0.383) C:101% T:NA	pCi/L	12/11/23 08:46	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.699U ± 0.424 (0.769) C:77% T:79%	pCi/L	12/06/23 15:32	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.815U ± 0.599 (1.15)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.476 ± 0.270 (0.393) C:92% T:NA	pCi/L	12/11/23 08:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.20 ± 0.571 (0.965) C:71% T:76%	pCi/L	12/06/23 15:32	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.68 ± 0.841 (1.36)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.232U ± 0.225 (0.433) C:95% T:NA	pCi/L	12/11/23 08:48	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.700U ± 0.487 (0.944) C:74% T:78%	pCi/L	12/06/23 15:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.932U ± 0.712 (1.38)	pCi/L	12/13/23 11:00	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.271U ± 0.249 (0.474) C:88% T:NA	pCi/L	12/13/23 08:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.905 ± 0.399 (0.634) C:88% T:79%	pCi/L	12/07/23 10:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.18 ± 0.648 (1.11)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BD20335 PZ-1 Lab ID: 30639034025 Collected: 11/07/23 11:02 Received: 11/13/23 10:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0499U ± 0.158 (0.474) C:93% T:NA	pCi/L	12/13/23 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.230U ± 0.290 (0.615) C:87% T:84%	pCi/L	12/07/23 10:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.230U ± 0.448 (1.09)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.349U ± 0.254 (0.427) C:92% T:NA	pCi/L	12/13/23 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.258U ± 0.347 (0.740) C:73% T:83%	pCi/L	12/07/23 10:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.607U ± 0.601 (1.17)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20337 MW-6 **Lab ID: 30639034027** Collected: 11/07/23 12:48 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.166U ± 0.216 (0.458) C:98% T:NA	pCi/L	12/13/23 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.405U ± 0.287 (0.552) C:92% T:86%	pCi/L	12/07/23 10:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.571U ± 0.503 (1.01)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.197U ± 0.238 (0.498) C:97% T:NA	pCi/L	12/13/23 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.417 ± 0.223 (0.388) C:122% T:85%	pCi/L	12/07/23 10:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.614U ± 0.461 (0.886)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BD20339 MW-7 Lab ID: 30639034029 Collected: 11/07/23 09:05 Received: 11/13/23 10:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0116U ± 0.209 (0.557) C:92% T:NA	pCi/L	12/13/23 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.507U ± 0.316 (0.587) C:90% T:84%	pCi/L	12/07/23 10:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.507U ± 0.525 (1.14)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.297U ± 0.249 (0.461) C:95% T:NA	pCi/L	12/13/23 08:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.468U ± 0.328 (0.628) C:85% T:83%	pCi/L	12/07/23 10:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.765U ± 0.577 (1.09)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.263U ± 0.233 (0.432) C:94% T:NA	pCi/L	12/13/23 08:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.386U ± 0.305 (0.599) C:90% T:81%	pCi/L	12/07/23 10:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.649U ± 0.538 (1.03)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.359U ± 0.259 (0.455) C:91% T:NA	pCi/L	12/13/23 08:26	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.883 ± 0.382 (0.610) C:88% T:81%	pCi/L	12/07/23 10:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.24 ± 0.641 (1.07)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20343 MW-12 **Lab ID: 30639034033** Collected: 11/07/23 13:13 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.473U ± 0.316 (0.557) C:92% T:NA	pCi/L	12/13/23 08:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.459U ± 0.302 (0.562) C:87% T:81%	pCi/L	12/07/23 10:29	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.932U ± 0.618 (1.12)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.191U ± 0.273 (0.598) C:90% T:NA	pCi/L	12/13/23 08:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.739 ± 0.357 (0.599) C:90% T:79%	pCi/L	12/07/23 10:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.930U ± 0.630 (1.20)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0399U ± 0.185 (0.467) C:98% T:NA	pCi/L	12/13/23 08:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.535U ± 0.350 (0.666) C:92% T:79%	pCi/L	12/07/23 10:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.575U ± 0.535 (1.13)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.197U ± 0.234 (0.482) C:83% T:NA	pCi/L	12/13/23 08:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.921 ± 0.428 (0.731) C:86% T:80%	pCi/L	12/07/23 10:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.12U ± 0.662 (1.21)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Sample: BD20347 MW-14 Dup **Lab ID: 30639034037** Collected: 11/08/23 08:23 Received: 11/13/23 10:20 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.222U ± 0.238 (0.469) C:83% T:NA	pCi/L	12/13/23 08:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.853 ± 0.388 (0.646) C:87% T:81%	pCi/L	12/07/23 10:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.08U ± 0.626 (1.12)	pCi/L	12/13/23 13:15	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: BD20348 FB-3 Lab ID: 30639034038 Collected: 11/08/23 09:00 Received: 11/13/23 10:20 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0401U ± 0.182 (0.463) C:89% T:NA	pCi/L	12/13/23 08:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.647U ± 0.366 (0.660) C:86% T:78%	pCi/L	12/07/23 10:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.687U ± 0.548 (1.12)	pCi/L	12/13/23 13:15	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

QC Batch: 629936	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30639034001, 30639034002, 30639034003, 30639034004, 30639034005, 30639034006, 30639034007, 30639034008, 30639034009, 30639034010, 30639034014, 30639034015, 30639034016, 30639034017, 30639034018, 30639034019, 30639034020, 30639034021, 30639034022, 30639034023

METHOD BLANK: 3070913 Matrix: Water

Associated Lab Samples: 30639034001, 30639034002, 30639034003, 30639034004, 30639034005, 30639034006, 30639034007, 30639034008, 30639034009, 30639034010, 30639034014, 30639034015, 30639034016, 30639034017, 30639034018, 30639034019, 30639034020, 30639034021, 30639034022, 30639034023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00517 ± 0.0762 (0.208) C:94% T:NA	pCi/L	12/11/23 08:42	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

QC Batch:	630238	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 30639034011, 30639034012, 30639034013, 30639034014, 30639034024, 30639034025, 30639034026, 30639034027, 30639034028, 30639034029, 30639034030, 30639034031, 30639034032, 30639034033, 30639034034, 30639034035, 30639034036, 30639034037, 30639034038

METHOD BLANK: 3072641 Matrix: Water

Associated Lab Samples: 30639034011, 30639034012, 30639034013, 30639034014, 30639034024, 30639034025, 30639034026, 30639034027, 30639034028, 30639034029, 30639034030, 30639034031, 30639034032, 30639034033, 30639034034, 30639034035, 30639034036, 30639034037, 30639034038

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.320 ± 0.300 (0.607) C:82% T:81%	pCi/L	12/07/23 10:27	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

QC Batch: 630080 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Laboratory: Pace Analytical Services - Greensburg
 Associated Lab Samples: 30639034011, 30639034012, 30639034013, 30639034024, 30639034025, 30639034026, 30639034027,
 30639034028, 30639034029, 30639034030, 30639034031, 30639034032, 30639034033, 30639034034,
 30639034035, 30639034036, 30639034037, 30639034038

METHOD BLANK: 3071705 Matrix: Water
 Associated Lab Samples: 30639034011, 30639034012, 30639034013, 30639034024, 30639034025, 30639034026, 30639034027,
 30639034028, 30639034029, 30639034030, 30639034031, 30639034032, 30639034033, 30639034034,
 30639034035, 30639034036, 30639034037, 30639034038

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00363 ± 0.0537 (0.157) C:94% T:NA	pCi/L	12/13/23 08:24	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP_1432
 Pace Project No.: 30639034

QC Batch:	630236	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 30639034001, 30639034002, 30639034003, 30639034004, 30639034005, 30639034006, 30639034007, 30639034008, 30639034009, 30639034010, 30639034015, 30639034016, 30639034017, 30639034018, 30639034019, 30639034020, 30639034021, 30639034022, 30639034023

METHOD BLANK: 3072630 Matrix: Water

Associated Lab Samples: 30639034001, 30639034002, 30639034003, 30639034004, 30639034005, 30639034006, 30639034007, 30639034008, 30639034009, 30639034010, 30639034015, 30639034016, 30639034017, 30639034018, 30639034019, 30639034020, 30639034021, 30639034022, 30639034023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.761 ± 0.453 (0.843) C:79% T:79%	pCi/L	12/06/23 12:03	

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QUALIFIERS

Project: WMWGADAP_1432
Pace Project No.: 30639034

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30639034001	BD20081 MW-16	EPA 9315	629936		
30639034002	BD20081 MW-16 MS	EPA 9315	629936		
30639034003	BD20081 MW-16 MSD	EPA 9315	629936		
30639034004	BD20082 MW-17	EPA 9315	629936		
30639034005	BD20083 MW-2VA	EPA 9315	629936		
30639034006	BD20084 MW-2VB	EPA 9315	629936		
30639034007	BD20085 MW-2	EPA 9315	629936		
30639034008	BD20086 MW-2 Dup	EPA 9315	629936		
30639034009	BD20087 MW-3	EPA 9315	629936		
30639034010	BD20088 FB-1	EPA 9315	629936		
30639034011	BD20323 MW-1	EPA 9315	630080		
30639034012	BD20323 MW-1 MS	EPA 9315	630080		
30639034013	BD20323 MW-1 MSD	EPA 9315	630080		
30639034014	BD20324 MW-18H	EPA 9315	629936		
30639034015	BD20325 PZ-6	EPA 9315	629936		
30639034016	BD20326 PZ-5	EPA 9315	629936		
30639034017	BD20327 MW-19H	EPA 9315	629936		
30639034018	BD20328 MW-19H Dup	EPA 9315	629936		
30639034019	BD20329 MW-22VB	EPA 9315	629936		
30639034020	BD20330 MW-21VC	EPA 9315	629936		
30639034021	BD20331 EB-1	EPA 9315	629936		
30639034022	BD20332 MW-4	EPA 9315	629936		
30639034023	BD20333 MW-4V	EPA 9315	629936		
30639034024	BD20334 MW-20H	EPA 9315	630080		
30639034025	BD20335 PZ-1	EPA 9315	630080		
30639034026	BD20336 MW-5	EPA 9315	630080		
30639034027	BD20337 MW-6	EPA 9315	630080		
30639034028	BD20338 PZ-2	EPA 9315	630080		
30639034029	BD20339 MW-7	EPA 9315	630080		
30639034030	BD20340 MW-8	EPA 9315	630080		
30639034031	BD20341 MW-9	EPA 9315	630080		
30639034032	BD20342 MW-10	EPA 9315	630080		
30639034033	BD20343 MW-12	EPA 9315	630080		
30639034034	BD20344 MW-11	EPA 9315	630080		
30639034035	BD20345 FB-2	EPA 9315	630080		
30639034036	BD20346 MW-14	EPA 9315	630080		
30639034037	BD20347 MW-14 Dup	EPA 9315	630080		
30639034038	BD20348 FB-3	EPA 9315	630080		
30639034001	BD20081 MW-16	EPA 9320	630236		
30639034002	BD20081 MW-16 MS	EPA 9320	630236		
30639034003	BD20081 MW-16 MSD	EPA 9320	630236		
30639034004	BD20082 MW-17	EPA 9320	630236		
30639034005	BD20083 MW-2VA	EPA 9320	630236		
30639034006	BD20084 MW-2VB	EPA 9320	630236		
30639034007	BD20085 MW-2	EPA 9320	630236		
30639034008	BD20086 MW-2 Dup	EPA 9320	630236		
30639034009	BD20087 MW-3	EPA 9320	630236		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30639034010	BD20088 FB-1	EPA 9320	630236		
30639034011	BD20323 MW-1	EPA 9320	630238		
30639034012	BD20323 MW-1 MS	EPA 9320	630238		
30639034013	BD20323 MW-1 MSD	EPA 9320	630238		
30639034014	BD20324 MW-18H	EPA 9320	630238		
30639034015	BD20325 PZ-6	EPA 9320	630236		
30639034016	BD20326 PZ-5	EPA 9320	630236		
30639034017	BD20327 MW-19H	EPA 9320	630236		
30639034018	BD20328 MW-19H Dup	EPA 9320	630236		
30639034019	BD20329 MW-22VB	EPA 9320	630236		
30639034020	BD20330 MW-21VC	EPA 9320	630236		
30639034021	BD20331 EB-1	EPA 9320	630236		
30639034022	BD20332 MW-4	EPA 9320	630236		
30639034023	BD20333 MW-4V	EPA 9320	630236		
30639034024	BD20334 MW-20H	EPA 9320	630238		
30639034025	BD20335 PZ-1	EPA 9320	630238		
30639034026	BD20336 MW-5	EPA 9320	630238		
30639034027	BD20337 MW-6	EPA 9320	630238		
30639034028	BD20338 PZ-2	EPA 9320	630238		
30639034029	BD20339 MW-7	EPA 9320	630238		
30639034030	BD20340 MW-8	EPA 9320	630238		
30639034031	BD20341 MW-9	EPA 9320	630238		
30639034032	BD20342 MW-10	EPA 9320	630238		
30639034033	BD20343 MW-12	EPA 9320	630238		
30639034034	BD20344 MW-11	EPA 9320	630238		
30639034035	BD20345 FB-2	EPA 9320	630238		
30639034036	BD20346 MW-14	EPA 9320	630238		
30639034037	BD20347 MW-14 Dup	EPA 9320	630238		
30639034038	BD20348 FB-3	EPA 9320	630238		
30639034001	BD20081 MW-16	Total Radium Calculation	635756		
30639034004	BD20082 MW-17	Total Radium Calculation	635756		
30639034005	BD20083 MW-2VA	Total Radium Calculation	635756		
30639034006	BD20084 MW-2VB	Total Radium Calculation	635756		
30639034007	BD20085 MW-2	Total Radium Calculation	635756		
30639034008	BD20086 MW-2 Dup	Total Radium Calculation	635756		
30639034009	BD20087 MW-3	Total Radium Calculation	635756		
30639034010	BD20088 FB-1	Total Radium Calculation	635756		
30639034011	BD20323 MW-1	Total Radium Calculation	635802		
30639034014	BD20324 MW-18H	Total Radium Calculation	635756		
30639034015	BD20325 PZ-6	Total Radium Calculation	635756		
30639034016	BD20326 PZ-5	Total Radium Calculation	635756		
30639034017	BD20327 MW-19H	Total Radium Calculation	635756		
30639034018	BD20328 MW-19H Dup	Total Radium Calculation	635756		
30639034019	BD20329 MW-22VB	Total Radium Calculation	635756		
30639034020	BD20330 MW-21VC	Total Radium Calculation	635756		
30639034021	BD20331 EB-1	Total Radium Calculation	635756		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WMWGADAP_1432
 Pace Project No.: 30639034

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30639034022	BD20332 MW-4	Total Radium Calculation	635756		
30639034023	BD20333 MW-4V	Total Radium Calculation	635756		
30639034024	BD20334 MW-20H	Total Radium Calculation	635802		
30639034025	BD20335 PZ-1	Total Radium Calculation	635802		
30639034026	BD20336 MW-5	Total Radium Calculation	635802		
30639034027	BD20337 MW-6	Total Radium Calculation	635802		
30639034028	BD20338 PZ-2	Total Radium Calculation	635802		
30639034029	BD20339 MW-7	Total Radium Calculation	635802		
30639034030	BD20340 MW-8	Total Radium Calculation	635802		
30639034031	BD20341 MW-9	Total Radium Calculation	635802		
30639034032	BD20342 MW-10	Total Radium Calculation	635802		
30639034033	BD20343 MW-12	Total Radium Calculation	635802		
30639034034	BD20344 MW-11	Total Radium Calculation	635802		
30639034035	BD20345 FB-2	Total Radium Calculation	635802		
30639034036	BD20346 MW-14	Total Radium Calculation	635802		
30639034037	BD20347 MW-14 Dup	Total Radium Calculation	635802		
30639034038	BD20348 FB-3	Total Radium Calculation	635802		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A

Required Client Information:
 Company: Alabama Power Company
 Address: 744 Highway 87 GSC Bldg #8
 Calera, AL 35040
 Email To: tbwill@southernco.com
 Phone: 205-664-6101 Fax:
 Requested Due Date: Normal

Section B

Required Project Information:
 Report To: Brooke Caton
 Copy To: Renee Jernigan & Blaine Denton
 Purchase Order #: APC87119-0001
 Project Name: Plant Gadsden_Ash Pond
 Project Number: VMWGADAP_1432

Section C

Invoice Information:
 Attention: Brooke Caton
 Company Name: Alabama Power Co.
 Address: 744 Highway 87 GSC Bldg #8
 Pace Quote: CCR
 Pace Project Manager: Skyler Richmond
 Pace Profile #: 16788

Regulatory Agency
 State / Location
 AL

ITEM #	Description	Station Name Location_Code	Site Name Facility_ID	Sample Duplicate	Matrix Spike/Matrix Spike Duplicate	Field Filtered	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Unpreserved	NaOH+ZnAcetate	HNO3	Preservatives	Y/N	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)
									START DATE	TIME							EPA 9315	EPA 9320	Total Radium Sum	Total Sulfide	
1	BD20081	MW-16	APCO_GSD-AP-MW-16	APCO_Plant_Gadsden_AshPond		x	GW	G	10/31/2023	14:13	3						X	X	X	X	001
2	BD20082	MW-17	APCO_GSD-AP-MW-17	APCO_Plant_Gadsden_AshPond			GW	G	10/31/2023	15:25	1						X	X	X	X	002
3	BD20083	MW-2VA	APCO_GSD-AP-MW-2VA	APCO_Plant_Gadsden_AshPond			GW	G	11/1/2023	11:15	1						X	X	X	X	003
4	BD20084	MW-2VB	APCO_GSD-AP-MW-2VB	APCO_Plant_Gadsden_AshPond			GW	G	11/1/2023	13:17	1						X	X	X	X	004
5	BD20085	MW-2	APCO_GSD-AP-MW-2	APCO_Plant_Gadsden_AshPond			GW	G	11/1/2023	14:43	1						X	X	X	X	005
6	BD20086	MW-2 Dup	APCO_GSD-AP-MW-2	APCO_Plant_Gadsden_AshPond			GW	G	11/1/2023	14:43	1						X	X	X	X	006
7	BD20087	MW-3	APCO_GSD-AP-MW-3	APCO_Plant_Gadsden_AshPond		x	GW	G	11/1/2023	15:58	1						X	X	X	X	007
8	BD20088	FB-1	APCO_GSD-AP-FB-01	APCO_Plant_Gadsden_AshPond			GW	G	11/1/2023	16:15	1						X	X	X	X	008
9	BD20323	MW-1	APCO_GSD-AP-MW-1	APCO_Plant_Gadsden_AshPond		x	GW	G	11/7/2023	7:59	3						X	X	X	X	009
10	BD20324	MW-18H	APCO_GSD-AP-MW-18H	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	9:31	1						X	X	X	X	010
11	BD20325	PZ-6	APCO_GSD-AP-PZ-6	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	10:16	1						X	X	X	X	011
12	BD20326	PZ-5	APCO_GSD-AP-PZ-5	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	11:04	1						X	X	X	X	012

ADDITIONAL COMMENTS
 BROOKE CATON / APC GTL


RELINQUISHED BY / AFFILIATION
 DATE: 11/8/2023 TIME: 9:16

ACCEPTED BY / AFFILIATION
 DATE: 11/13/23 TIME: 10:20

Rob Reese

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER:
 SIGNATURE of SAMPLER:
 DATE Signed:

NO#: 30639034



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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Alabama Power Company Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040 Email To: fbwill@southernco.com Phone: 205-664-6101 Fax: Requested Due Date: Normal	Report To: Brooke Caton Copy To: Renee Jernigan & Blaine Denton Purchase Order #: APC87119-0001 Project Name: Plant Gadsden Ash Pond Project Number: WMWGADAP_1432	Attention: Brooke Caton Company Name: Alabama Power Co. Address: 744 Highway 87 GSC Bldg #8 CCR Pace Quote: Skyler Richmond Pace Project Manager: Pace Profile #: 16788
Regulatory Agency		State / Location
AL		AL

ITEM #	Description	Station Name Location_Code	Site Name Facility ID	Sample Duplicate	Matrix Spike/Matrix Spike Duplicate	Field Filtered	MATRIX CODE	SAMPLER TYPE (G-GRAB C-COMP)	COLLECTED		# OF CONTAINERS	Unpreserved	NaOH+ZnAcetate	HNO3	Preservatives	Analytes Test Y/N	EPA 9315	EPA 9320	Total Radium Sum	Total Sulfide	Residual Chlorine (Y/N)														
									START DATE	TIME																									
1	BD20327	MW-19H	APCO-GSD-AP-MW-19H	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	11:52	1					X	X	X																	
2	BD20328	MW-19H Dup	APCO-GSD-AP-MW-19H	APCO_Plant_Gadsden_AshPond	X		GW	G	11/7/2023	11:52	1					X	X	X																	
3	BD20329	MW-22VB	APCO-GSD-AP-MW-22VB	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	13:10	1					X	X	X																	
4	BD20330	MW-21VC	APCO-GSD-AP-MW-21VC	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	14:21	1					X	X	X																	
5	BD20331	EB-1	APCO-GSD-AP-EB-01	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	14:55	1					X	X	X																	
6	BD20332	MW-4	APCO-GSD-AP-MW-4	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	8:32	1					X	X	X																	
7	BD20333	MW-4V	APCO-GSD-AP-MW-4V	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	9:20	1					X	X	X																	
8	BD20334	MW-20H	APCO-GSD-AP-MW-20H	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	10:02	1					X	X	X																	
9	BD20335	PZ-1	APCO-GSD-AP-PZ-1	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	11:02	1					X	X	X																	
10	BD20336	MW-5	APCO-GSD-AP-MW-5	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	11:55	1					X	X	X																	
11	BD20337	MW-6	APCO-GSD-AP-MW-6	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	12:48	1					X	X	X																	
12	BD20338	PZ-2	APCO-GSD-AP-PZ-2	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	13:55	1					X	X	X																	
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS		TEMP in C		Received on	Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)																	
		Brooke Caton APC GTL		11/9/2023	9:16	<i>Rup Packer</i>		11/13/23	10:20																										

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	DATE Signed:
SIGNATURE of SAMPLER:	

WO#: 30639034
PM: SCR Due Date: **12/13/23**
CLIENT: ALABAMA PWR

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Alabama Power Company	Report To:	Brooke Caton	Attention:	Brooke Caton
Address:	744 Highway 87 GSC Bldg #8 Catera, AL 35040	Copy To:	Renee Jernigan & Blaine Denton	Company Name:	Alabama Power Co.
Email To:	tbwill@southernco.com	Purchase Order #:	APC87119-0001	Address:	744 Highway 87 GSC Bldg #8 CCR
Phone:	205-664-6101	Project Name:	Plant Gadsden Ash Pond	Face Quote:	Skylar Richmond
Requested Due Date:	Normal	Project Number:	WMWGADAP_1432	Face Project Manager:	16788
Regulatory Agency:		State / Location:		AL	

ITEM #	Description	Station Name Location Code	Site Name Facility ID	Sample Duplicate	Matrix Spike/Matrix Spike Duplicate	Field Filtered	Matrix Code	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Preservatives			Analyses Test	EPA 9315	EPA 9320	Total Radium Sum	Total Sulfide	Residual Chlorine (Y/N)
									START DATE	TIME		Unpreserved	NaOH+ZnAcetate	HNO3						
1	BD20339	MW-7	APCO-GSD-AP-MW-7	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	9:05	1				X	X	X			
2	BD20340	MW-8	APCO-GSD-AP-MW-8	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	10:03	1				X	X	X			
3	BD20341	MW-9	APCO-GSD-AP-MW-9	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	11:05	1				X	X	X			
4	BD20342	MW-10	APCO-GSD-AP-MW-10	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	12:14	1				X	X	X			
5	BD20343	MW-12	APCO-GSD-AP-MW-12	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	13:13	1				X	X	X			
6	BD20344	MW-11	APCO-GSD-AP-MW-11	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	14:30	1				X	X	X			
7	BD20345	FB-2	APCO-GSD-AP-FB-02	APCO_Plant_Gadsden_AshPond			GW	G	11/7/2023	15:00	1				X	X	X			
8	BD20346	MW-14	APCO-GSD-AP-MW-14	APCO_Plant_Gadsden_AshPond			GW	G	11/8/2023	8:23	1				X	X	X			
9	BD20347	MW-14 Dup	APCO-GSD-AP-MW-14	APCO_Plant_Gadsden_AshPond	x		GW	G	11/8/2023	8:23	1				X	X	X			
10	BD20348	FB-3	APCO-GSD-AP-FB-03	APCO_Plant_Gadsden_AshPond			GW	G	11/8/2023	9:00	1				X	X	X			
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Brooke Caton / APC GTL	11/9/2023	9:16	<i>Brooke Caton</i>	11/13/23	10:20	

WO#: 30639034 Due Date: 12/13/23

PH: SCR CLIENT: ALABAMA PWR

SAMPLER NAME AND SIGNATURE: _____
 PRINT Name of SAMPLER: _____
 SIGNATURE of SAMPLER: _____
 DATE Signed: _____

Page 60 of 66

DC#_Title: ENV-FRM-GBUR-0088 v06_Sampl
Pittsburgh

Effective Date: 09/20/2023

WO# : 30639034

PM: SCR Due Date: 12/13/23
CLIENT: ALABAMA PWR



Client Name: Alabama Power

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking Number: Torn Initial / Date

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Thermometer Used: _____ Type of Ice: Wet Blue None

Cooler Temperature: Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Examined By: JS 11/14/23

Labeled By: JS 11/14/23

Temped By: _____

Comments:	Yes	No	NA	pH paper Lot#	D.P.D. Residual Chlorine Lot #
				<u>1000134</u>	_____
Chain of Custody Present	/			1.	
Chain of Custody Filled Out: -Were client corrections present on COC	/			2.	
Chain of Custody Relinquished	/			3.	
Sampler Name & Signature on COC:	/			4.	
Sample Labels match COC: -Includes date/time/ID Matrix:	/			5.	
Samples Arrived within Hold Time:	/			6.	
Short Hold Time Analysis (<72hr remaining):	/			7.	
Rush Turn Around Time Requested:	/			8.	
Sufficient Volume:	/			9.	
Correct Containers Used: -Pace Containers Used	/			10.	
Containers Intact:	/			11.	
Orthophosphate field filtered:			/	12.	
Hex Cr Aqueous samples field filtered:			/	13.	
Organic Samples checked for dechlorination			/	14.	
Filtered volume received for dissolved tests:			/	15.	
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	/			16.	
All containers meet method preservation requirements:	/			Initial when completed <u>JS</u>	Date/Time of Preservation
8260C/D: Headspace in VOA Vials (> 6mm)			/	Lot# of added Preservative	
624.1: Headspace in VOA Vials (0mm)			/	17.	
Trip Blank Present:			/	18.	
Rad Samples Screened <.05 mrem/hr.	/			Trip blank custody seal present? YES or NO	
Comments:				Initial when completed <u>PS</u>	Date: <u>11/13/23</u> Survey Meter SN: <u>25014380</u>

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office. PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Quality Control Sample Performance Assessment



Test: Ra-226
 Analyst: SLC
 Date: 11/20/2023
 Worklist: 76392
 Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3070913
MB concentration:	-0.005
MB 2 Sigma CSU:	0.076
MB MDC:	0.208
MB Numerical Performance Indicator:	-0.13
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment		LCS# (Y or N)?	Y
Count Date:	12/1/2023	LCS076392	
Spike I.D.:	23-014	LCS076392	
Decay Corrected Spike Concentration (pCi/mL):	25.028	23-014	25.028
Volume Used (mL):	0.10	0.10	0.10
Aliquot Volume (L, g, F):	0.504	0.507	0.507
Target Conc. (pCi/L, g, F):	4.962	4.938	4.938
Uncertainty (Calculated):	0.233	0.232	0.232
Result (pCi/L, g, F):	5.410	5.644	5.644
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.926	0.956	0.956
Numerical Performance Indicator:	0.92	1.41	1.41
Percent Recovery:	109.03%	114.30%	114.30%
Status vs Numerical Indicator:	Pass	Pass	Pass
Status vs Recovery:	N/A	N/A	N/A
Upper % Recovery Limits:	125%	125%	125%
Lower % Recovery Limits:	75%	75%	75%

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/31/2023		
Sample I.D.:	30639034001		
Sample MS I.D.:	30639034002		
Sample MSD I.D.:	30639034003		
Spike I.D.:	23-014		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	25.029		
Spike Volume Used in MS (mL):	0.20		
Spike Volume Used in MSD (mL):	0.20		
MS Aliquot (L, g, F):	0.216		
MS Target Conc. (pCi/L, g, F):	23.139		
MSD Aliquot (L, g, F):	0.201		
MSD Target Conc. (pCi/L, g, F):	24.912		
MS Spike Uncertainty (calculated):	1.088		
MSD Spike Uncertainty (calculated):	1.171		
MSD Percent Recovery:	0.411		
MSD Status vs Numerical Indicator:	0.265		
MSD Status vs Recovery:	23.691		
MS/MSD Upper % Recovery Limits:	3.773		
MS/MSD Lower % Recovery Limits:	25.181		
Matrix Spike Duplicate Result:	4.003		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.070		
MS Numerical Performance Indicator:	-0.067		
MS Percent Recovery:	100.61%		
MSD Percent Recovery:	99.43%		
MS Status vs Numerical Indicator:	Pass		
MSD Status vs Numerical Indicator:	Pass		
MS Status vs Recovery:	N/A		
MSD Status vs Recovery:	N/A		
MS/MSD Upper % Recovery Limits:	125%		
MS/MSD Lower % Recovery Limits:	75%		

Duplicate Sample Assessment		LCS# (Y or N)?	Y
Sample I.D.:	LCS076392	LCS076392	
Duplicate Sample I.D.:	LCS076392	LCS076392	
Sample Result (pCi/L, g, F):	5.410	5.410	5.410
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.926	0.926	0.926
Sample Duplicate Result (pCi/L, g, F):	5.644	5.644	5.644
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.956	0.956	0.956
Are sample and/or duplicate results below RL?	NO	NO	NO
Duplicate Numerical Performance Indicator:	-0.344	-0.344	-0.344
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	Pass	Pass	Pass
Duplicate Status vs Numerical Indicator:	N/A	N/A	N/A
Duplicate Status vs RPD:	25%	25%	25%
% RPD Limit:	25%	25%	25%

Matrix Spike/Matrix Spike Duplicate Sample Assessment		MS/MSD 1	MS/MSD 2
Sample I.D.:	30639034001		
Sample MS I.D.:	30639034002		
Sample MSD I.D.:	30639034003		
Matrix Spike Result:	23.691		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	3.773		
Matrix Matrix Spike Duplicate Result:	25.181		
Matrix Spike Duplicate Result:	4.003		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	-0.331		
Duplicate Numerical Performance Indicator:	1.189%		
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	Pass		
MS/MSD Duplicate Status vs Numerical Indicator:	N/A		
MS/MSD Duplicate Status vs RPD:	25%		
% RPD Limit:	25%		

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

Comments:

12/1/23
 SLC

AM121223



Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: SLC
 Date: 11/20/2023
 Worklist: 76403
 Matrix: WIT

Method Blank Assessment	
MB Sample ID	3071705
MB concentration:	-0.004
MB 2 Sigma CSU:	0.054
MB MDC:	0.157
MB Numerical Performance Indicator:	-0.13
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment		LCSD (Y or N)?	
Count Date:	Sample I.D.:	LCSD76403	LCSD76403
Decay Corrected Spike Concentration (pCi/mL):	23-014	23-014	23-014
Volume Used (mL):	25.028	25.028	25.028
Aliquot Volume (L, g, F):	0.10	0.10	0.510
Target Conc. (pCi/L, g, F):	4.893	4.906	4.906
Uncertainty (Calculated):	0.230	0.231	0.231
Result (pCi/L, g, F):	4.597	4.793	4.793
LCSD/CSU 2 Sigma CSU (pCi/L, g, F):	0.897	0.833	0.833
Numerical Performance Indicator:	-0.89	-0.25	-0.25
Percent Recovery:	93.93%	97.71%	97.71%
Status vs Numerical Indicator:	Pass	Pass	Pass
Status vs Recovery:	N/A	N/A	N/A
Upper % Recovery Limits:	125%	125%	125%
Lower % Recovery Limits:	75%	75%	75%

Duplicate Sample Assessment		Sample I.D.:	
Duplicate Sample I.D.:	Sample I.D.:	LCSD76403	LCSD76403
Sample Result (pCi/L, g, F):	Duplicate Sample I.D.:	LCSD76403	LCSD76403
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Result (pCi/L, g, F):	4.597	4.597
Sample Duplicate Result (pCi/L, g, F):	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.807	0.807
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Sample Duplicate Result (pCi/L, g, F):	4.793	4.793
Are sample and/or duplicate results below RL?	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.833	0.833
Duplicate Numerical Performance Indicator:	NO	NO	NO
(Based on the LCSD/CSU Percent Recoveries) Duplicate RPD:	Duplicate Numerical Performance Indicator:	-0.332	-0.332
Duplicate Status vs Numerical Indicator:	Duplicate Status vs Numerical Indicator:	Pass	Pass
Duplicate Status vs RPD:	Duplicate Status vs RPD:	N/A	N/A
% RPD Limit:	% RPD Limit:	25%	25%

Sample Matrix Spike Control Assessment		Sample Collection Date:	MS/MSD 1	MS/MSD 2
Sample I.D.:	Sample I.D.:	11/17/2023	MS/MSD 1	MS/MSD 2
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Sample I.D.:	30639034011	30639034011	30639034011
Spike Volume Used in MS (mL):	Sample MS I.D.:	30639034012	30639034012	30639034013
Spike Volume Used in MSD (mL):	Sample MSD I.D.:	30639034013	30639034013	30639034013
MS Aliquot (L, g, F):	Spike I.D.:	23-014	23-014	23-014
MS Target Conc. (pCi/L, g, F):	MS Aliquot (L, g, F):	0.20	0.20	0.20
MSD Aliquot (L, g, F):	MS Target Conc. (pCi/L, g, F):	0.213	0.213	0.213
MSD Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):	23.526	23.526	23.526
MS Spike Uncertainty (calculated):	MSD Target Conc. (pCi/L, g, F):	24.505	24.505	24.505
MSD Spike Uncertainty (calculated):	MS Spike Uncertainty (calculated):	1.106	1.106	1.106
MSD Status vs Recovery:	MSD Status vs Recovery:	1.152	1.152	1.152
MS/MSD Upper % Recovery Limits:	MS/MSD Upper % Recovery Limits:	0.305	0.305	0.305
MS/MSD Lower % Recovery Limits:	MS/MSD Lower % Recovery Limits:	0.261	0.261	0.261
	Sample Result:	24.387	24.387	24.387
	Sample Matrix Spike Result:	3.887	3.887	3.887
	Sample Result 2 Sigma CSU (pCi/L, g, F):	25.579	25.579	25.579
	Sample Matrix Spike Duplicate Result:	4.076	4.076	4.076
	Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.355	0.355	0.355
	MS Numerical Performance Indicator:	102.36%	102.36%	102.36%
	MS Percent Recovery:	103.14%	103.14%	103.14%
	MSD Percent Recovery:	Pass	Pass	Pass
	MS Status vs Numerical Indicator:	Pass	Pass	Pass
	MS Status vs Numerical Indicator:	N/A	N/A	N/A
	MSD Status vs Recovery:	N/A	N/A	N/A
	MS/MSD Upper % Recovery Limits:	125%	125%	125%
	MS/MSD Lower % Recovery Limits:	75%	75%	75%

Matrix Spike/Matrix Spike Duplicate Sample Assessment		Sample I.D.:	
Sample I.D.:	Sample I.D.:	30639034011	30639034011
Sample MS I.D.:	Sample MS I.D.:	30639034011	30639034011
Sample MSD I.D.:	Sample MSD I.D.:	30639034013	30639034013
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Result (pCi/L, g, F):	24.387	24.387
Matrix Matrix Spike Duplicate Result:	Matrix Matrix Spike Duplicate Result:	3.887	3.887
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	25.579	25.579
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:	4.076	4.076
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	Duplicate Numerical Performance Indicator:	-0.415	-0.415
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:	0.75%	0.75%
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:	Pass	Pass
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:	N/A	N/A
% RPD Limit:	% RPD Limit:	25%	25%

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

Comments:

VAM 12/13/23

Quality Control Sample Performance Assessment



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

Test: Ra-228
Analyst: VAL
Date: 11/27/2023
Worklist: 76428
Matrix: WT

Method Blank Assessment	
MB Sample ID	3072630
MB concentration:	0.761
M/B 2 Sigma CSU:	0.453
MB MDC:	0.843
MB Numerical Performance Indicator:	3.30
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD76428	LCSD76428
Count Date:	12/16/2023
Spike I.D.:	23-043
Decay Corrected Spike Concentration (pCi/mL):	38.749
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.816
Target Conc. (pCi/L, g, F):	4.748
Uncertainty (Calculated):	0.233
Result (pCi/L, g, F):	5.400
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	1.209
Numerical Performance Indicator:	1.04
Percent Recovery:	113.72%
Status vs Numerical Indicator:	N/A
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

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

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:		10/31/2023	
Sample MS I.D.:		30639034001	
Sample MSD I.D.:		30639034002	
Spike I.D.:		30639034003	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		23-043	
Spike Volume Used in MS (mL):		39.213	
Spike Volume Used in MSD (mL):		0.20	
MS Aliquot (L, g, F):		0.806	
MS Target Conc. (pCi/L, g, F):		9.735	
MSD Aliquot (L, g, F):		0.806	
MSD Target Conc. (pCi/L, g, F):		9.725	
MS Spike Uncertainty (calculated):		0.477	
MSD Spike Uncertainty (calculated):		0.477	
Sample Result 2 Sigma CSU (pCi/L, g, F):		0.309	
Sample Matrix Spike Result:		0.377	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		8.788	
Sample Matrix Spike Duplicate Result:		1.775	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		11.418	
MS Numerical Performance Indicator:		2.269	
MS Numerical Performance Indicator:		-1.311	
MS Percent Recovery:		1.155	
MSD Percent Recovery:		87.10%	
MS Status vs Numerical Indicator:		114.24%	
MSD Status vs Numerical Indicator:		Pass	
MS Status vs Recovery:		Pass	
MSD Status vs Recovery:		Pass	
MS/MSD Upper % Recovery Limits:		135%	
MS/MSD Lower % Recovery Limits:		60%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	30639034001
Sample MS I.D.:	30639034002
Sample MSD I.D.:	30639034003
Sample Matrix Spike Result:	8.788
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.775
Sample Matrix Spike Duplicate Result:	11.418
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.269
Duplicate Numerical Performance Indicator:	-1.789
Duplicate Numerical Performance Indicator:	26.96%
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	Pass
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

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

VAL
12/7/23

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JJS1
Date: 11/27/2023
Worklist: 76429
Matrix: WT

Method Blank Assessment	
MB Sample ID	3072641
MB concentration:	0.320
MB 2 Sigma CSU:	0.300
MB MDC:	0.607
MB Numerical Performance Indicator:	2.09
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD76429	LCSD76429
Count Date:	12/7/2023
Spike I.D.:	23-040
Decay Corrected Spike Concentration (pCi/mL):	37.341
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.819
Target Conc. (pCi/L, g, F):	4.561
Uncertainty (Calculated):	0.223
Result (pCi/L, g, F):	6.587
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.358
Numerical Performance Indicator:	2.89
Percent Recovery:	144.43%
Status vs Numerical Indicator:	Warning
Status vs Recovery:	Fall High**
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

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

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:		11/7/2023	
Sample I.D.:		30639034011	
Sample MS I.D.:		30639034012	
Sample MSD I.D.:		30639034013	
Spike I.D.:		23-040	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		37.714	
Spike Volume Used in MS (mL):		0.20	
Spike Volume Used in MSD (mL):		0.20	
MS Aliquot (L, g, F):		0.801	
MS Target Conc. (pCi/L, g, F):		9.412	
MSD Aliquot (L, g, F):		0.803	
MSD Target Conc. (pCi/L, g, F):		9.391	
MS Spike Uncertainty (calculated):		0.461	
MSD Spike Uncertainty (calculated):		0.460	
Sample Result:		0.704	
Sample Result 2 Sigma CSU (pCi/L, g, F):		0.383	
Sample Matrix Spike Result:		10.398	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		2.039	
Sample Matrix Spike Duplicate Result:		12.900	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		2.509	
MS Numerical Performance Indicator:		0.260	
MSD Numerical Performance Indicator:		2.131	
MS Percent Recovery:		103.00%	
MSD Percent Recovery:		129.86%	
MS Status vs Numerical Indicator:		Pass	
MSD Status vs Numerical Indicator:		Warning	
MS Status vs Recovery:		Pass	
MSD Status vs Recovery:		Pass	
MS/MSD Upper % Recovery Limits:		135%	
MS/MSD Lower % Recovery Limits:		60%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	30639034011
Sample MS I.D.:	30639034012
Sample MSD I.D.:	30639034013
Sample Matrix Spike Result:	10.398
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.039
Sample Matrix Spike Duplicate Result:	12.900
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.509
Duplicate Numerical Performance Indicator:	-1.516
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	23.08%
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

**If all sample results are below MDC, the batch is acceptable, otherwise this batch must be reprepared due to LCS failure.

[Handwritten signature]

VAC
12/8/23

Appendix D



Appendix D. Horizontal Groundwater Flow Velocity Calculations Plant Gadsden Ash Pond

2023 Semi-Annual Monitoring Event								
Date of Measurement	PZ-6	MW-10	Distance	Hydraulic Gradient	Hydraulic Conductivity	Effective Porosity	Calculated Groundwater Flow Velocity	Calculated Groundwater Flow Velocity
	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	K	n	(ft/d)	(ft/yr)
10/31/2023	509.41	506.82	1455.0	0.00178	12.33	0.20	0.11	40.06

Notes:

ft = feet

ft/d = feet/day

ft/ft = feet per foot

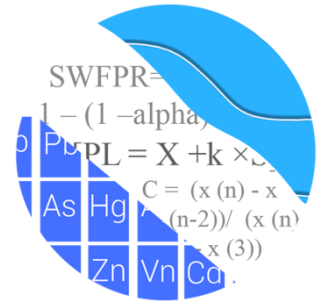
ft/yr = feet per year

Appendix E

GROUNDWATER STATS CONSULTING

January 5, 2024

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



Re: Plant Gadsden Ash Pond
1st Semi-Annual Background Update and Analysis – October/November 2023

Dear Mr. Budd,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the October/November 2023 1st semi-annual sample event for Alabama Power Company's Plant Gadsden Ash Pond. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for the Coal Combustion Residuals (CCR) program in December 2017, and at least 8 background samples have been collected at each of the groundwater monitoring wells.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** GSD-AP-MW-14, GSD-AP-MW-16, and GSD-AP-MW-17
- **Downgradient wells:** GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, and GSD-AP-PZ-6
- **Delineation wells:** GSD-AP-MW-2VA, GSD-AP-MW-2VB, GSD-AP-MW-4V, GSD-AP-MW-18H, GSD-AP-MW-19H, GSD-AP-MW-20H, GSD-AP-MW-21VC, and GSD-AP-MW-22VB

- **Piezometers:** GSD-AP-MW-2V

Delineation wells do not require statistics; therefore, data for these wells are plotted only on time series and box plots. Downgradient well GSD-AP-PZ-2 has recently been converted from a piezometer to a downgradient well. Since this well has the required minimum samples, data from this well are evaluated with confidence intervals for Appendix IV constituents and interwell prediction limits for boron, calcium, chloride, sulfate, and TDS. Intrawell prediction limits require a minimum of 8 background samples. Therefore, during the next sample event when the 9th sample is available for comparison, data from this well will be evaluated for Appendix III constituents that use intrawell prediction limits (fluoride and pH).

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Senior Statistician and Founder of Groundwater Stats Consulting.

The CCR program consists of the following constituents:

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

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

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A list of Appendix IV downgradient well/constituent pairs containing 100% non-detects follows this letter. Due to historic varying detection limits, the following reporting limits were substituted across all wells:

- Cadmium: 0.000203 mg/L
- Chromium: 0.001015 mg/L
- Cobalt: 0.000203 mg/L
- Lead: 0.000203 mg/L
- Selenium: 0.001015 mg/L
- Thallium: 0.000203 mg/L

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). A substitution of the most recent reporting limit is used for non-detect data. Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time

series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Previously flagged outliers may be seen in a lighter font and as a disconnected symbol on the graphs, and a summary of all flagged outliers follows this report (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on analysis of the spatial variability of groundwater quality data among wells upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves are provided in this report to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations. Power curves are based on the following statistical methods and site/data characteristics:

- Semi-Annual Sampling
- Intrawell Prediction Limits with 1-of-2 resample plan
- Interwell Prediction Limits with 1-of-2 resample plan
- # Background Samples (Intrawell): 17
- # Background Samples (Interwell): 55
- # Constituents: 7
- # Downgradient wells: 16

While the 1-of-3 resample plan was initially recommended for parameters that use intrawell statistical methods due to the sample size; the power curve included in this analysis demonstrates that the increased number of samples in background provide sufficient power using the 1-of-2 resample plan.

Summary of Statistical Methods – Appendix III Parameters

Based on the earlier evaluation described above, the following statistical methods were selected:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for fluoride and pH
- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, sulfate, and TDS

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of

data are non-detects, a nonparametric test is utilized. While the annual false positive rate associated with parametric limits is fixed at 10% as recommended by the EPA Unified Guidance (2009), the false positive rate associated with nonparametric limits is not fixed and depends upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (USEPA, 2009), data are analyzed using either parametric or non-parametric prediction limits as appropriate.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data for parametric limits. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new samples are available to determine whether earlier concentrations are representative of present-day groundwater quality. In the interwell case, prediction limits are updated with upgradient well data following each sampling event after careful screening for any new outliers. In some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Summary of Background Update – Conducted in January 2024

Intrawell prediction limits, which compare the most recent compliance sample from a given well to historical data from the same well, are periodically updated by testing for

the appropriateness of consolidating new sampling observations with the screened background data. As discussed in the Statistical Analysis Plan (August 2020), intrawell prediction limits are used to evaluate fluoride and pH at all wells due to spatial variation for these parameters. Interwell prediction limits are used to compare the most recent sample from each downgradient well to statistical limits constructed from pooled upgradient well data for boron, calcium, chloride, sulfate, and TDS.

Outlier Analysis

Prior to constructing prediction limits, proposed background data--through June 2023 for constituents using intrawell prediction limits and through October/November 2023 for constituents using interwell prediction limits--were reviewed through visual screening to identify any newly suspected outliers at all wells for fluoride and pH, and at upgradient wells for boron, calcium, chloride, sulfate, and TDS.

Tukey's outlier tests identified outliers for fluoride and pH; however, no measurements for Appendix III parameters were flagged as concentrations identified by Tukey's test appeared to be representative of spatial variation.

Outliers are flagged with "o" and excluded to reduce variation, better represent background conditions, and provide limits that are conservative (i.e., lower) from a regulatory perspective. As mentioned above, flagged data are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a lighter font on the accompanying data pages. A summary of Tukey's test results follows this report (Figure C).

Mann-Whitney Test of Medians

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through March 2021, to compliance data through June 2023 (Figure D). When the medians of the two groups are not statistically significantly different at the 99% confidence level, background data sets are updated to include the newer compliance data. No statistically significant differences (either an increase or decrease in median concentrations) were found between the two groups for the following well/constituent pairs; therefore, all records for fluoride and pH were updated through June 2023.

Typically, when the test concludes that the medians of the two groups are statistically significantly different, particularly in the downgradient wells, the background data are not updated to include the newer data unless it can be reasonably justified that the change

in concentrations reflects an occurring shift unrelated to practices at the site. In studies such as the current one, in which at least one of the segments being compared is of short duration, the comparison is complicated by the fact that normal short-term variation may be mistaken for long-term change in medians.

All records will be re-evaluated during the next background update and if future concentrations are similar to those observed currently, the earlier portion of the records may require deselection so only more recent data are used to construct statistical limits which are reflective of present-day water quality conditions. If, however, concentrations return to historical lower levels, more recent higher measurements may be flagged as outliers and deselected prior to construction of statistical limits.

Trend Tests – Upgradient Wells

The Sen’s Slope/Mann Kendall trend test was used to evaluate the entire record of data from upgradient wells for parameters utilizing interwell prediction limits (Figure E). When statistically significant increasing trends are identified in upgradient wells, the earlier portion of data may require deselection prior to construction of interwell statistical limits if the trending data would result in statistical limits that are not conservative from a regulatory perspective. The following upgradient well/constituent pairs were found to have statistically significant trends:

Increasing

- None

Decreasing

- Chloride: GSD-AP-MW-17

The slope for chloride at well GSD-AP-MW-17 is influenced by several similar and slightly higher values earlier in the record, but the median slope for the overall record was small relative to average concentrations at these wells and reported measurements were similar across all upgradient wells. Therefore, no adjustments were required.

Evaluation of Appendix III Parameters – October/November 2023

Intrawell limits constructed from carefully screened background data from within each well serve to provide statistical limits that are representative of the background data population, and that will rapidly identify a change in more recent compliance data from within a given well. The most recent sample from the same well is compared to its respective background. This statistical method removes the element of variation from across wells and eliminates the chance of mistaking spatial variation for a release from

the facility. Background data are re-evaluated when a minimum of 4 compliance samples are available.

Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

Prediction Limits

Intrawell prediction limits, combined with a 1-of-2 resample plan, were constructed for fluoride and pH using screened background data through June 2023 at each well (Figure F). The October/November 2023 sample at each well was compared to its respective intrawell prediction limit.

Interwell prediction limits combined with a 1-of-2 verification strategy were constructed for boron, calcium, chloride, sulfate, and TDS (Figure G).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified, and further research is required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If a resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no further action is necessary. A summary of the prediction limits results may be found in the Prediction Limit Summary tables following this letter. The following exceedances were noted for the intrawell and interwell prediction limits:

Intrawell

- pH (upper limit): GSD-AP-MW-5 and GSD-AP-MW-10

Interwell

- Boron: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-11, and GSD-AP-MW-12
- Calcium: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, and GSD-AP-MW-12
- Chloride: GSD-AP-MW-1, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, and GSD-AP-PZ-6

- Sulfate: GSD-AP-MW-1, GSD-AP-MW-11, and GSD-AP-MW-12
- TDS: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-11, and GSD-AP-MW-12

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen’s Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable at the 99% confidence level (Figure F). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. The existence of similar trends in both upgradient and downgradient wells is an indication of variability in groundwater that is unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing:

- Boron: GSD-AP-MW-11
- Calcium: GSD-AP-MW-11
- Sulfate: GSD-AP-MW-11
- TDS: GSD-AP-MW-11

Decreasing:

- Boron: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-4, and GSD-AP-MW-5
- Calcium: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3
- Chloride: GSD-AP-MW-17 (upgradient), GSD-AP-MW-3, GSD-AP-MW-5, and GSD-AP-MW-7
- pH: GSD-AP-MW-16 (upgradient)
- TDS: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3

Evaluation of Appendix IV Parameters – October/November 2023

Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis and no values were flagged as outliers. A summary of previously flagged outliers follows this report (Figure C).

Tukey’s outlier test on pooled upgradient well data for Appendix IV parameters through November 2023 identified values for beryllium and lithium (Figure C). However, no outliers were flagged for these constituents as all measurements appeared to be representative

of spatial variation or were similar to remaining concentrations among pooled upgradient well data.

Additionally, downgradient well data through November 2023 were screened through visual screening using time series graphs. Since the downgradient well data are used to construct confidence intervals, a regulatory conservative approach is taken in that values that are marginally high relative to the rest of the data are retained unless there is particular justification for excluding them. A previously flagged measurement of 7.45 pCi/L for combined radium 226 + 228 in downgradient well GSD-AP-MW-8 was unflagged during this update due to this observation being early in the record and since only the 8 most recent observations are used for constructing confidence intervals, unflagging this value has no impact on the analysis. No outliers were flagged among downgradient wells for Appendix IV parameters.

Interwell Upper Tolerance Limits

Background limits were determined using tolerance limits constructed from pooled upgradient well data through November 2023 (Figure I). The tolerance limits contain a known fraction (coverage) of the background population with a known level of confidence. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. As requested by ADEM to eliminate variation among upgradient well data, nonparametric tolerance limits, which use the highest value in screened background as the statistical limit, were constructed. A summary of the tolerance limits follows this report.

Groundwater Protection Standards

These background limits were then compared to the Maximum Contaminant Levels (MCLs) for each parameter, and the higher of the two was used as the GWPS (Figure J) in the confidence interval comparisons described below.

In accordance with Alabama Department of Environmental Management, the Groundwater Protections Standards (GWPS) were updated during this 2023 2nd semi-annual statistical analysis. The GWPS will be updated again during the 2025 2nd semi-annual statistical analysis. The methodology used to create the GWPS is described below.

Confidence Intervals

Confidence intervals were then constructed on downgradient wells using a maximum of the most recent 8 samples through November 2023 for each of the Appendix IV

parameters (Figure K). These intervals were either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. When data followed a normal or transformed-normal distribution, parametric confidence intervals were used for Appendix IV parameters. Nonparametric confidence intervals, which use the highest and lowest values as interval limits when n=8, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects. The lower confidence limit, which is constructed with 99% confidence for parametric confidence intervals, is compared to the GWPS prepared as described above. The confidence level associated with nonparametric confidence intervals is dependent upon the number samples available.

As mentioned above, well/constituent pairs containing 100% non-detects among the most recent 8 samples did not require statistics and were deselected prior to construction confidence intervals. A list of deselected well/constituent pairs also follows this report. Each confidence interval was compared with the corresponding GWPS. Only when the entire confidence interval is above the GWPS is the well/constituent pair considered to exceed its respective standard. Both a tabular summary and graphical presentation of the confidence interval results follow this letter.

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

Trend Test Evaluation – Appendix IV

When confidence interval exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable at the 95% confidence level. Utilizing the 95% confidence level for trend tests readily identifies significant trends and is more sensitive than the 99% confidence level without drastically increasing the false negative rate. Upgradient wells are included in the trend analyses for all parameters found to exceed their confidence intervals in downgradient wells. When similar patterns exist upgradient of the site, it is an indication of variability in groundwater which may be unrelated to practices at the site. Statistically significant trends were identified for the following well/constituent pairs:

Increasing:

- None

Decreasing:

- Arsenic: GSD-AP-MW-17 (upgradient) and GSD-AP-MW-2

Note that the decreasing trend for arsenic at GSD-AP-MW-17 is a result of non-detect values early in the record followed by lower detected concentrations.

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

For Groundwater Stats Consulting,



Andrew Collins
Project Manager

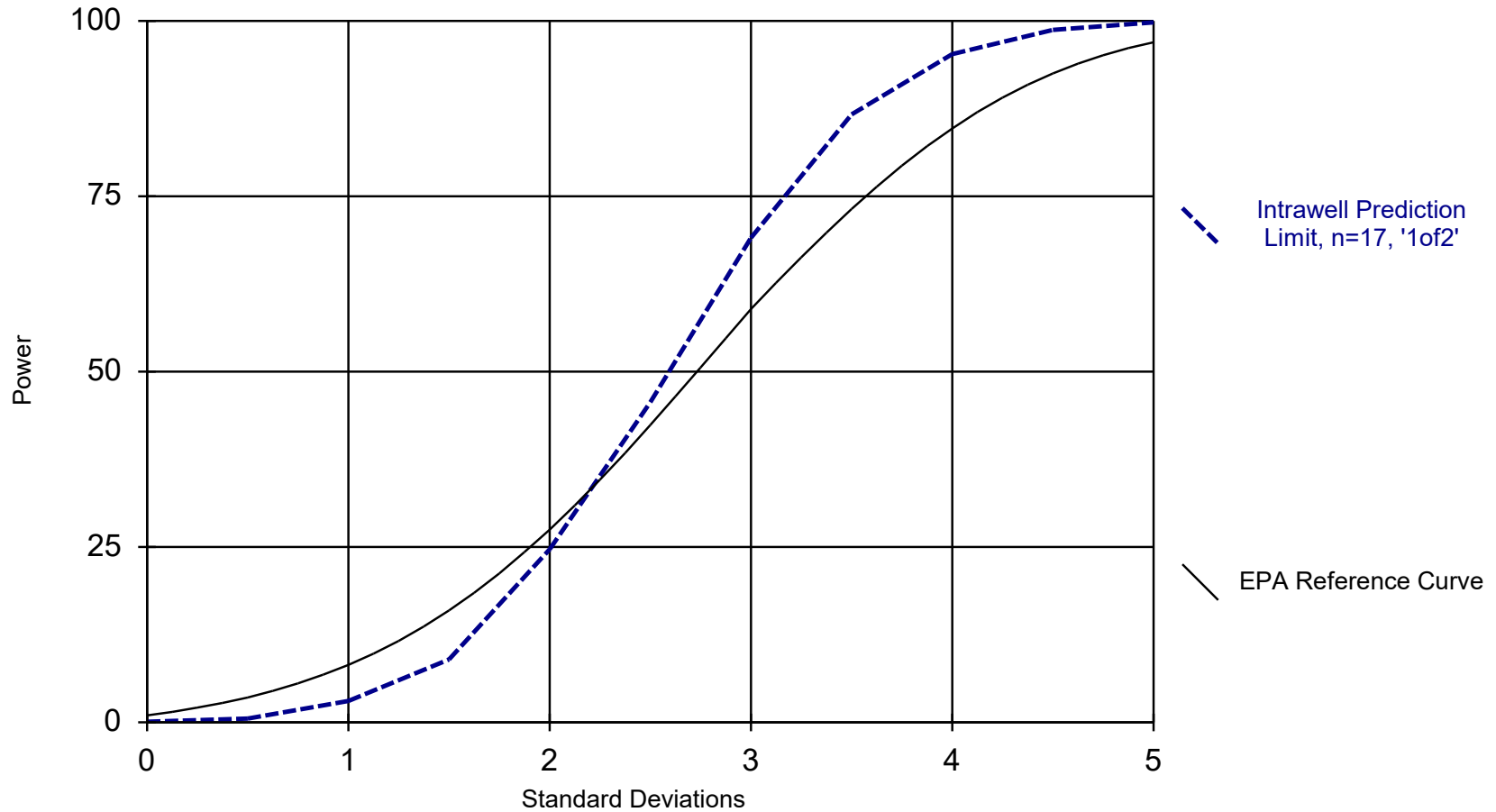


Kristina Rayner
Senior Statistician

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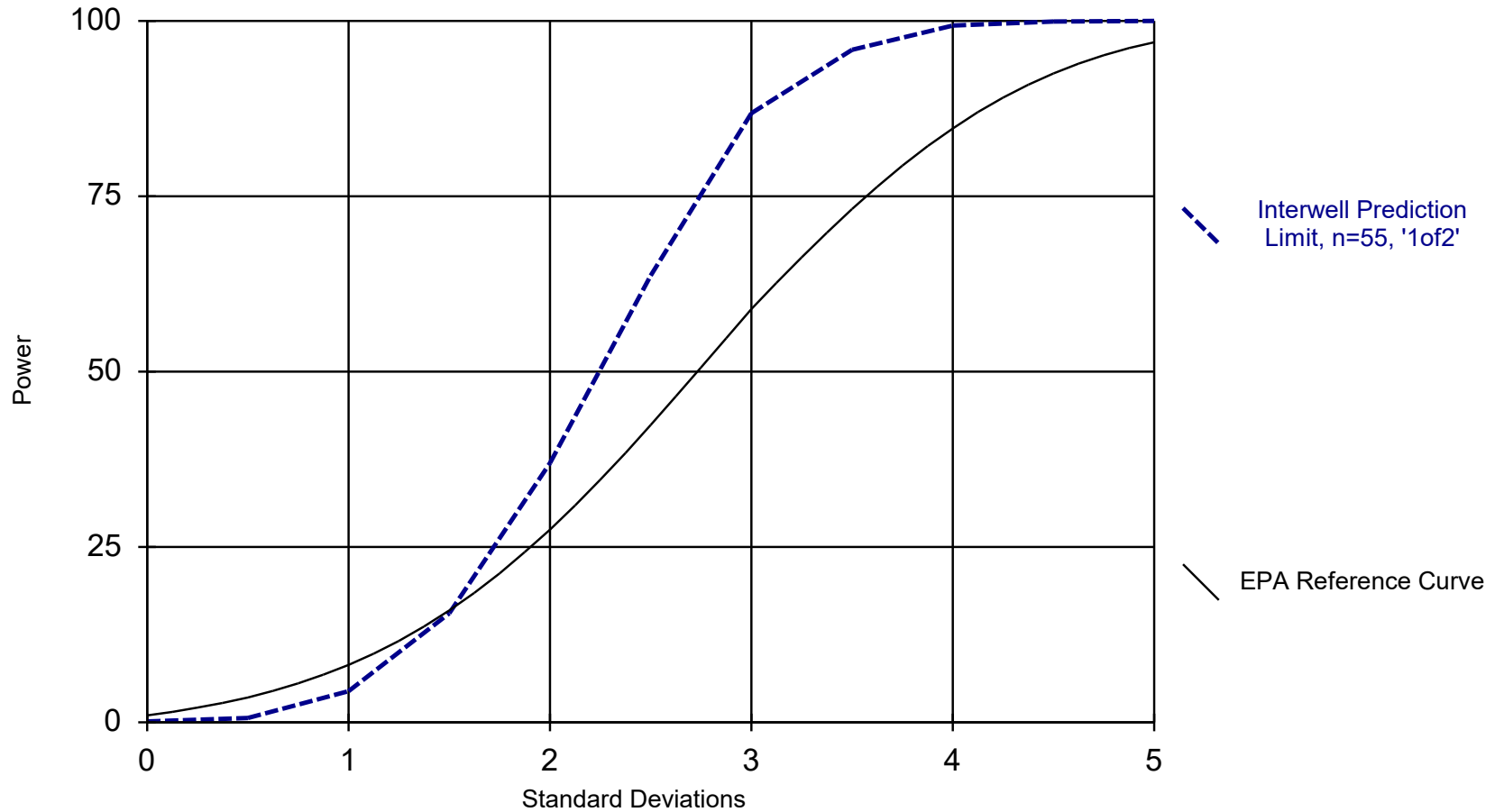
Intrawell Power Curve



Kappa = 2.524, based on 16 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/23/2024 2:02 PM
Plant Gadsden Data: Plant Gadsden CCR

Interwell Power Curve



Kappa = 2.143, based on 16 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 1/23/2024 2:01 PM
Plant Gadsden Data: Plant Gadsden CCR

100% Non-Detects: Appendix IV Downgradient

Analysis Run 1/2/2024 7:03 PM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Antimony (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

Beryllium (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

Cadmium (mg/L)

GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-6

Fluoride (mg/L)

GSD-AP-MW-6, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

Lead (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1

Lithium (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

Mercury (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5

Molybdenum (mg/L)

GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-6, GSD-AP-PZ-5, GSD-AP-PZ-6

Selenium (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

Thallium (mg/L)

GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

Welch's t-test/Mann-Whitney - All Results (No Significant)

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:43 PM

<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Alpha</u>	<u>Sig.</u>	<u>Method</u>
Fluoride (mg/L)	GSD-AP-MW-1	0.8397	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-10	0.7369	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-11	1.721	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-12	-0.9097	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-1.332	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	0.6652	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-1.363	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-2	0.7936	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-3	1.04	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-4	-0.7382	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-5	2.215	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-6	1.904	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-7	0.799	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-8	0.7369	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-9	0.1714	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-1	0.1147	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-5	1.55	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-6	1.57	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-1	-2.549	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-10	-1.135	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-11	-1.757	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-12	-0.6231	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-14 (bg)	-0.7985	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-16 (bg)	-1.416	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-17 (bg)	-2.493	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-2	0.4535	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-3	-1.303	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-4	-0.8513	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-5	0.9678	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-6	-2.209	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-7	-1.529	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-8	-0.6235	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-9	-0.2663	No	0.01	No	Mann-W
pH (pH)	GSD-AP-PZ-1	-1.874	No	0.01	No	Mann-W
pH (pH)	GSD-AP-PZ-5	-1.926	No	0.01	No	Mann-W
pH (pH)	GSD-AP-PZ-6	-1.589	No	0.01	No	Mann-W

Trend Tests - Upgradient Wells - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:57 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP

Trend Tests - Upgradient Wells - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:57 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	68	No	18	100	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0	68	74	No	19	68.42	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.0004234	-21	-68	No	18	5.556	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-0.6919	-36	-68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-1.068	-36	-74	No	19	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.017	38	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	-0.02759	-11	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-38	-74	No	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-5.287	-28	-68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	13.35	26	74	No	19	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-0.3395	-43	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-31	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	9.812	27	74	No	19	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.538	-47	-68	No	18	0	n/a	0.01	NP

Intrawell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:47 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform Alpha</u>	<u>Method</u>		
pH (pH)	GSD-AP-MW-10	6.87	6.37	11/7/2023	6.94	Yes	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-5	6.44	5.43	11/7/2023	6.6	Yes	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2

Intrawell Prediction Limits - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:47 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GSD-AP-MW-1	0.125	n/a	11/7/2023	0.0626J	No	17	n/a	n/a	47.06	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-10	0.201	n/a	11/7/2023	0.0804J	No	17	n/a	n/a	0	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-11	0.134	n/a	11/7/2023	0.0709J	No	17	n/a	n/a	23.53	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-12	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	88.24	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-14	0.23	n/a	11/8/2023	0.125ND	No	17	n/a	n/a	58.82	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-16	0.16	n/a	10/31/2023	0.125ND	No	18	n/a	n/a	61.11	n/a	n/a	0.005373	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-17	0.2411	n/a	10/31/2023	0.148	No	17	0.1775	0.02544	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-2	0.3439	n/a	11/1/2023	0.217	No	17	0.2407	0.0413	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-3	0.13	n/a	11/1/2023	0.125ND	No	18	n/a	n/a	38.89	n/a	n/a	0.005373	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-4	0.2955	n/a	11/7/2023	0.168	No	17	0.2294	0.02644	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-5	0.122	n/a	11/7/2023	0.0639J	No	17	n/a	n/a	5.882	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-6	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	52.94	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-7	0.1256	n/a	11/7/2023	0.0652J	No	17	0.2793	0.03004	23.53	Kaplan-Meier	sqrt(x)	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-8	0.1518	n/a	11/7/2023	0.0625ND	No	17	0.09499	0.02271	5.882	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-9	0.1582	n/a	11/7/2023	0.105J	No	17	0.001788	0.00086795	882	None	x^3	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-1	0.13	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	23.53	n/a	n/a	0.005914	NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-5	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	64.71	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-6	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	64.71	n/a	n/a	0.005914	NP Intra (NDs) 1 of 2
pH (pH)	GSD-AP-MW-1	6.771	5.386	11/7/2023	5.94	No	17	6.078	0.277	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-10	6.87	6.37	11/7/2023	6.94	Yes	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-11	6.997	6.135	11/7/2023	6.36	No	17	6.566	0.1724	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-12	5.63	4.78	11/7/2023	5.54	No	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-14	4.1	3.25	11/8/2023	4.03	No	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-16	5.532	3.349	10/31/2023	4.5	No	17	4.441	0.4368	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-17	10.14	6.722	10/31/2023	7.98	No	17	8.434	0.6846	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-2	6.66	6.16	11/1/2023	6.49	No	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-3	6.722	5.28	11/1/2023	5.98	No	17	6.001	0.2884	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-4	6.913	6.374	11/7/2023	6.72	No	17	13154	1053	0	None	x^5	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-5	6.44	5.43	11/7/2023	6.6	Yes	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-6	6.633	5.306	11/7/2023	6.22	No	17	5.969	0.2656	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-7	6.868	5.225	11/7/2023	6.47	No	17	1485	295.9	0	None	x^4	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-8	6.984	6.093	11/7/2023	6.75	No	17	6.539	0.1782	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-9	7.151	6.584	11/7/2023	6.98	No	18	6.867	0.1148	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-1	6.83	5.85	11/7/2023	6.83	No	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-PZ-5	6.157	4.709	11/7/2023	5.32	No	17	5.433	0.2895	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-6	5.6	5.15	11/7/2023	5.27	No	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2

Interwell Prediction Limits - Significant Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	0.1015	n/a	11/7/2023	0.934	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-11	0.1015	n/a	11/7/2023	0.238	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-12	0.1015	n/a	11/7/2023	0.183	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-2	0.1015	n/a	11/1/2023	0.453	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-3	0.1015	n/a	11/1/2023	0.792	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-4	0.1015	n/a	11/7/2023	0.466	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-5	0.1015	n/a	11/7/2023	0.227	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Calcium (mg/L)	GSD-AP-MW-1	32.13	n/a	11/7/2023	192	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-10	32.13	n/a	11/7/2023	38.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-11	32.13	n/a	11/7/2023	113	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-12	32.13	n/a	11/7/2023	85.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-2	32.13	n/a	11/1/2023	91	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-3	32.13	n/a	11/1/2023	63.1	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-4	32.13	n/a	11/7/2023	48.6	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-5	32.13	n/a	11/7/2023	44.7	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-8	32.13	n/a	11/7/2023	58	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-9	32.13	n/a	11/7/2023	35.4	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-1	4.019	n/a	11/7/2023	5.89	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-10	4.019	n/a	11/7/2023	5.68	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-11	4.019	n/a	11/7/2023	5.08	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-12	4.019	n/a	11/7/2023	4.92	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-3	4.019	n/a	11/1/2023	4.21	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-4	4.019	n/a	11/7/2023	7.87	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-5	4.019	n/a	11/7/2023	6.07	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-6	4.019	n/a	11/7/2023	9.61	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-7	4.019	n/a	11/7/2023	6.52	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-8	4.019	n/a	11/7/2023	5.39	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-9	4.019	n/a	11/7/2023	7.13	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-2	4.019	n/a	11/7/2023	5.27	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	GSD-AP-MW-1	207	n/a	11/7/2023	428	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-11	207	n/a	11/7/2023	230	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-12	207	n/a	11/7/2023	297	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	276.2	n/a	11/7/2023	732	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	276.2	n/a	11/7/2023	508	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	276.2	n/a	11/7/2023	496	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	276.2	n/a	11/1/2023	309	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	276.2	n/a	11/1/2023	313	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	276.2	n/a	11/7/2023	318	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2

Interwell Prediction Limits - All Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	0.1015	n/a	11/7/2023	0.934	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-10	0.1015	n/a	11/7/2023	0.089J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-11	0.1015	n/a	11/7/2023	0.238	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-12	0.1015	n/a	11/7/2023	0.183	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-2	0.1015	n/a	11/1/2023	0.453	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-3	0.1015	n/a	11/1/2023	0.792	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-4	0.1015	n/a	11/7/2023	0.466	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-5	0.1015	n/a	11/7/2023	0.227	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-6	0.1015	n/a	11/7/2023	0.0957J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-7	0.1015	n/a	11/7/2023	0.078J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-8	0.1015	n/a	11/7/2023	0.048J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-9	0.1015	n/a	11/7/2023	0.0693J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-1	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-2	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-5	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-6	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Calcium (mg/L)	GSD-AP-MW-1	32.13	n/a	11/7/2023	192	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-10	32.13	n/a	11/7/2023	38.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-11	32.13	n/a	11/7/2023	113	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-12	32.13	n/a	11/7/2023	85.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-2	32.13	n/a	11/1/2023	91	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-3	32.13	n/a	11/1/2023	63.1	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-4	32.13	n/a	11/7/2023	48.6	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-5	32.13	n/a	11/7/2023	44.7	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-6	32.13	n/a	11/7/2023	11.8	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-7	32.13	n/a	11/7/2023	17	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-8	32.13	n/a	11/7/2023	58	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-9	32.13	n/a	11/7/2023	35.4	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-1	32.13	n/a	11/7/2023	30.7	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-2	32.13	n/a	11/7/2023	24.9	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-5	32.13	n/a	11/7/2023	3.02	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-6	32.13	n/a	11/7/2023	3.32	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-1	4.019	n/a	11/7/2023	5.89	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-10	4.019	n/a	11/7/2023	5.68	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-11	4.019	n/a	11/7/2023	5.08	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-12	4.019	n/a	11/7/2023	4.92	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-2	4.019	n/a	11/1/2023	2.21	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-3	4.019	n/a	11/1/2023	4.21	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-4	4.019	n/a	11/7/2023	7.87	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-5	4.019	n/a	11/7/2023	6.07	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-6	4.019	n/a	11/7/2023	9.61	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-7	4.019	n/a	11/7/2023	6.52	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-8	4.019	n/a	11/7/2023	5.39	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-9	4.019	n/a	11/7/2023	7.13	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-1	4.019	n/a	11/7/2023	3.34	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-2	4.019	n/a	11/7/2023	5.27	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-5	4.019	n/a	11/7/2023	3.99	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-6	4.019	n/a	11/7/2023	3.54	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	GSD-AP-MW-1	207	n/a	11/7/2023	428	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-10	207	n/a	11/7/2023	1.75J	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-11	207	n/a	11/7/2023	230	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-12	207	n/a	11/7/2023	297	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-2	207	n/a	11/1/2023	89.5	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-3	207	n/a	11/1/2023	158	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-4	207	n/a	11/7/2023	91.6	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2

Interwell Prediction Limits - All Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Sulfate (mg/L)	GSD-AP-MW-5	207	n/a	11/7/2023	29.3	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-6	207	n/a	11/7/2023	12.5	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-7	207	n/a	11/7/2023	10.5	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-8	207	n/a	11/7/2023	8.1	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-9	207	n/a	11/7/2023	17.4	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-1	207	n/a	11/7/2023	3.69	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-2	207	n/a	11/7/2023	8.98	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-5	207	n/a	11/7/2023	1ND	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-6	207	n/a	11/7/2023	1.34J	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	276.2	n/a	11/7/2023	732	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-10	276.2	n/a	11/7/2023	195	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	276.2	n/a	11/7/2023	508	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	276.2	n/a	11/7/2023	496	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	276.2	n/a	11/1/2023	309	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	276.2	n/a	11/1/2023	313	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	276.2	n/a	11/7/2023	318	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-5	276.2	n/a	11/7/2023	191	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-6	276.2	n/a	11/7/2023	82.7	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-7	276.2	n/a	11/7/2023	106	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-8	276.2	n/a	11/7/2023	208	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-9	276.2	n/a	11/7/2023	171	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-1	276.2	n/a	11/7/2023	122	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-2	276.2	n/a	11/7/2023	109	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-5	276.2	n/a	11/7/2023	43.3	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-6	276.2	n/a	11/7/2023	44	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2

Appendix III Trend Tests - Significant Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 2:00 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	-0.06249	-119	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-11	0.01069	82	68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.05855	-112	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.03049	-82	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.05689	-125	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-18.72	-108	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.58	94	68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-8.732	-82	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-7.429	-125	-74	Yes	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.6584	-156	-74	Yes	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.2128	-79	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.491	-72	-68	Yes	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.203	-82	-68	Yes	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-11	21.37	98	68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-94.54	-126	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	20.7	91	68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-45.84	-108	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-36.45	-137	-74	Yes	19	0	n/a	0.01	NP

Appendix III Trend Tests - All Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 2:00 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	-0.06249	-119	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-11	0.01069	82	68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-12	0.00538	57	68	No	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	68	No	18	100	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0	68	74	No	19	68.42	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.0004234	-21	-68	No	18	5.556	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.05855	-112	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-3	0	1	74	No	19	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.03049	-82	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.05689	-125	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-18.72	-108	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-10	-0.2061	-8	-68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.58	94	68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-12	1.774	22	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-0.6919	-36	-68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-1.068	-36	-74	No	19	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.017	38	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-8.732	-82	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-7.429	-125	-74	Yes	19	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-4	0.5214	13	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-5	-5.5e-7	0	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-8	0.3069	13	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-9	-0.1872	-10	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-1	0.02659	22	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-10	-0.03314	-12	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-11	-0.05489	-16	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-12	-0.07235	-37	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	-0.02759	-11	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-38	-74	No	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.6584	-156	-74	Yes	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-4	-0.1794	-37	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.2128	-79	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-6	-0.03458	-12	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.491	-72	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-8	0.09319	32	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-9	0.1343	45	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-PZ-2	0.005915	0	21	No	8	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-10	0	-1	-68	No	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-14 (bg)	-0.01388	-32	-68	No	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.203	-82	-68	Yes	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-17 (bg)	-0.1778	-46	-68	No	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-5	0.01629	16	68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-1	-31.41	-60	-68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-11	21.37	98	68	Yes	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-12	2.245	11	68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-5.287	-28	-68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	13.35	26	74	No	19	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-0.3395	-43	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-94.54	-126	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	20.7	91	68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	-0.1811	-2	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-31	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	9.812	27	74	No	19	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.538	-47	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-45.84	-108	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-36.45	-137	-74	Yes	19	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	10.03	41	68	No	18	0	n/a	0.01	NP

Upper Tolerance Limits Summary Table

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 6:59 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</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)	0.001015	n/a	n/a	n/a	52	n/a	n/a	98.08	n/a	n/a	0.06944	NP Inter(NDs)
Arsenic (mg/L)	0.00614	n/a	n/a	n/a	52	n/a	n/a	32.69	n/a	n/a	0.06944	NP Inter(normality)
Barium (mg/L)	0.312	n/a	n/a	n/a	52	n/a	n/a	0	n/a	n/a	0.06944	NP Inter(normality)
Beryllium (mg/L)	0.00157	n/a	n/a	n/a	52	n/a	n/a	46.15	n/a	n/a	0.06944	NP Inter(normality)
Cadmium (mg/L)	0.00108	n/a	n/a	n/a	52	n/a	n/a	30.77	n/a	n/a	0.06944	NP Inter(normality)
Chromium (mg/L)	0.00325	n/a	n/a	n/a	52	n/a	n/a	63.46	n/a	n/a	0.06944	NP Inter(NDs)
Cobalt (mg/L)	0.0563	n/a	n/a	n/a	52	n/a	n/a	25	n/a	n/a	0.06944	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	1.533	n/a	n/a	n/a	45	0.7259	0.386	0	None	No	0.05	Inter
Fluoride (mg/L)	0.23	n/a	n/a	n/a	55	n/a	n/a	41.82	n/a	n/a	0.05954	NP Inter(normality)
Lead (mg/L)	0.00258	n/a	n/a	n/a	52	n/a	n/a	44.23	n/a	n/a	0.06944	NP Inter(normality)
Lithium (mg/L)	0.02	n/a	n/a	n/a	52	n/a	n/a	75	n/a	n/a	0.06944	NP Inter(NDs)
Mercury (mg/L)	0.000775	n/a	n/a	n/a	51	n/a	n/a	72.55	n/a	n/a	0.0731	NP Inter(NDs)
Molybdenum (mg/L)	0.01015	n/a	n/a	n/a	52	n/a	n/a	76.92	n/a	n/a	0.06944	NP Inter(NDs)
Selenium (mg/L)	0.0134	n/a	n/a	n/a	52	n/a	n/a	50	n/a	n/a	0.06944	NP Inter(normality)
Thallium (mg/L)	0.000203	n/a	n/a	n/a	52	n/a	n/a	98.08	n/a	n/a	0.06944	NP Inter(NDs)

GADSDEN ASH POND GWPS			
Analyte	Units	Background	GWPS
Antimony	mg/L	0.001015	0.006
Arsenic	mg/L	0.00614	0.01
Barium	mg/L	0.312	2
Beryllium	mg/L	0.00157	0.004
Cadmium	mg/L	0.00108	0.005
Chromium	mg/L	0.00325	0.1
Cobalt	mg/L	0.0563	0.0563
Combined Radium-226/228	pCi/L	1.533	5
Fluoride	mg/L	0.23	4
Lead	mg/L	0.00258	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.000775	0.002
Molybdenum	mg/L	0.01015	0.1
Selenium	mg/L	0.0134	0.05
Thallium	mg/L	0.000203	0.002

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during first semi-annual sampling event in 2023.

Confidence Intervals - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/3/2024, 9:12 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-2	0.6954	0.4714	0.01	Yes 8	0.5834	0.1057	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01478	0.01187	0.01	Yes 8	0.01333	0.001377	0	None	No	0.01	Param.

Confidence Intervals - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/3/2024, 9:12 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GSD-AP-MW-2	0.001015	0.000538	0.006	No 8	0.0009554	0.0001686	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-1	0.003706	0.001746	0.01	No 8	0.002726	0.0009245	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-10	0.00424	0.002738	0.01	No 8	0.003451	0.0009418	0	None	x^3	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-11	0.002882	0.002425	0.01	No 8	0.002655	0.0002399	0	None	x^3	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-12	0.000203	0.000102	0.01	No 8	0.0001796	0.00004347	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-2	0.6954	0.4714	0.01	Yes 8	0.5834	0.1057	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-3	0.0002392	0.0001434	0.01	No 8	0.0002043	0.00004934	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01478	0.01187	0.01	Yes 8	0.01333	0.001377	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-5	0.0001949	0.00007265	0.01	No 8	0.000166	0.0000622	37.5	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-6	0.000203	0.000151	0.01	No 8	0.0001965	0.00001838	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-7	0.000203	0.00007	0.01	No 8	0.0001741	0.00005428	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-8	0.0033	0.002855	0.01	No 8	0.003078	0.0002099	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-9	0.0025	0.00046	0.01	No 8	0.0008904	0.0006866	12.5	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-1	0.000203	0.000164	0.01	No 8	0.0001981	0.00001379	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-2	0.000203	0.0000826	0.01	No 8	0.0001591	0.0000569	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-5	0.000203	0.0000808	0.01	No 8	0.0001877	0.0000432	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-6	0.000203	0.00015	0.01	No 8	0.0001964	0.00001874	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	GSD-AP-MW-1	0.03383	0.02637	2	No 8	0.0301	0.003518	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-10	0.3586	0.2737	2	No 8	0.3161	0.04007	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-11	0.1843	0.1227	2	No 8	0.1535	0.0291	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-12	0.04522	0.03073	2	No 8	0.03798	0.00684	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-2	0.1172	0.06461	2	No 8	0.09093	0.02483	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-3	0.0358	0.02933	2	No 8	0.03256	0.00305	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-4	0.2525	0.1708	2	No 8	0.2116	0.03853	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-5	0.2434	0.2211	2	No 8	0.2323	0.0105	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-6	0.0793	0.06658	2	No 8	0.07294	0.005999	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-7	0.08131	0.05499	2	No 8	0.06815	0.01242	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-8	0.3132	0.2166	2	No 8	0.2649	0.04555	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-9	0.1846	0.1367	2	No 8	0.1606	0.0226	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-1	0.07784	0.05396	2	No 8	0.0659	0.01127	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-2	0.1352	0.06147	2	No 8	0.09834	0.03478	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-5	0.05486	0.04632	2	No 8	0.05059	0.00403	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-6	0.03095	0.02838	2	No 8	0.02966	0.001211	0	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-1	0.0002162	0.00009016	0.005	No 8	0.0001735	0.00006205	25	Kaplan-Meier	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-12	0.0004912	0.0003001	0.005	No 8	0.0003941	0.00009931	0	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-2	0.000203	0.0000688	0.005	No 8	0.0001862	0.00004745	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-3	0.0004051	0.0001446	0.005	No 8	0.0002748	0.0001229	12.5	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-7	0.000203	0.000097	0.005	No 8	0.000188	0.00003709	75	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-8	0.000203	0.00007	0.005	No 8	0.0001714	0.00005862	75	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-PZ-5	0.000203	0.00008	0.005	No 8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-1	0.001015	0.00023	0.1	No 8	0.0005616	0.0003781	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-10	0.001015	0.000207	0.1	No 8	0.0005663	0.0003742	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-11	0.0004714	0.0002936	0.1	No 8	0.000619	0.0003356	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	GSD-AP-MW-12	0.001015	0.000276	0.1	No 8	0.0006233	0.0003302	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-2	0.0004511	0.0002487	0.1	No 8	0.0005154	0.0003211	25	Kaplan-Meier	x^(1/3)	0.01	Param.
Chromium (mg/L)	GSD-AP-MW-3	0.001015	0.00023	0.1	No 8	0.0004835	0.0003369	25	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-4	0.001015	0.000206	0.1	No 8	0.0007293	0.0003958	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-5	0.001015	0.000266	0.1	No 8	0.0005988	0.0003554	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-6	0.001015	0.000222	0.1	No 8	0.0006403	0.000402	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-7	0.001015	0.000203	0.1	No 8	0.0005603	0.0003814	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-8	0.001015	0.00022	0.1	No 8	0.00073	0.0003939	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-9	0.001015	0.00021	0.1	No 8	0.000573	0.0003713	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-1	0.001015	0.00027	0.1	No 8	0.0006815	0.0003596	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-2	0.001015	0.00029	0.1	No 8	0.0007605	0.0003091	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-5	0.0004765	0.0002728	0.1	No 8	0.000534	0.0003105	25	Kaplan-Meier	x^(1/3)	0.01	Param.
Chromium (mg/L)	GSD-AP-PZ-6	0.0004496	0.0002442	0.1	No 8	0.0005968	0.0003575	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-1	0.01868	0.01274	0.056	No 8	0.01571	0.002802	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-10	0.00091	0.000203	0.056	No 8	0.0006573	0.0003344	25	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-11	0.005184	0.0001619	0.056	No 8	0.002565	0.00337	12.5	None	ln(x)	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-12	0.00698	0.003635	0.056	No 8	0.005308	0.001578	0	None	No	0.01	Param.

Confidence Intervals - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/3/2024, 9:12 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	GSD-AP-MW-2	0.03814	0.02363	0.056	No 8	0.03089	0.006844	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-3	0.01939	0.01201	0.056	No 8	0.0157	0.003479	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-4	0.03012	0.02413	0.056	No 8	0.02713	0.00283	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-5	0.001682	0.0004029	0.056	No 8	0.001042	0.0006034	12.5	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-6	0.001217	0.000722	0.056	No 8	0.0008958	0.0004334	25	Kaplan-Meier	x^3	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-7	0.00463	0.00016	0.056	No 8	0.0008705	0.001547	25	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-8	0.004074	0.002573	0.056	No 8	0.003324	0.0007082	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-9	0.001114	0.0005075	0.056	No 8	0.000789	0.0003806	25	Kaplan-Meier	x^2	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-1	0.00044	0.00014	0.056	No 8	0.0002248	0.00008972	75	Kaplan-Meier	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-2	0.006002	0.001893	0.056	No 8	0.003948	0.001939	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-5	0.0002501	0.00004842	0.056	No 8	0.000182	0.00009644	37.5	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-6	0.0001263	0.00007366	0.056	No 8	0.0001258	0.00005294	25	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-1	1.095	0.4578	5	No 8	0.7766	0.3008	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-10	2.479	0.2799	5	No 8	1.459	2.085	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-11	1.192	0.6482	5	No 8	0.9199	0.2564	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-12	1.195	0.4352	5	No 8	0.8028	0.3962	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-2	1.589	0.3287	5	No 8	0.9326	0.658	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-3	1.566	0.1448	5	No 8	0.8246	1.006	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-4	1.563	0.1932	5	No 8	0.8784	0.6464	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-5	1.277	0.5462	5	No 8	0.9114	0.3445	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-6	0.9509	0.1016	5	No 8	0.5263	0.4007	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-7	0.9876	0.4473	5	No 8	0.7103	0.2997	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-8	0.728	0.3678	5	No 8	0.5479	0.1699	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-9	0.8998	0.2314	5	No 8	0.5656	0.3153	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-1	1.368	-0.1106	5	No 8	0.6285	0.6973	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-2	0.8987	0.1948	5	No 8	0.5467	0.3321	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-5	1.058	0.3916	5	No 8	0.7246	0.3142	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-6	0.9926	0.08184	5	No 8	0.5093	0.4618	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-1	0.125	0.0601	4	No 8	0.1091	0.02947	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-10	0.201	0.0804	4	No 8	0.1074	0.03926	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-11	0.1114	0.06722	4	No 8	0.09983	0.02595	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-12	0.125	0.0795	4	No 8	0.1193	0.01609	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-2	0.2787	0.2012	4	No 8	0.2395	0.03648	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-3	0.125	0.0714	4	No 8	0.1183	0.01895	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-4	0.2631	0.1809	4	No 8	0.222	0.0388	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-5	0.122	0.0607	4	No 8	0.07445	0.02058	12.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-7	0.128	0.0627	4	No 8	0.1002	0.02881	37.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-8	0.1147	0.06331	4	No 8	0.089	0.02423	12.5	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-9	0.1403	0.1107	4	No 8	0.1255	0.01399	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-1	0.125	0.0725	4	No 8	0.109	0.02113	50	None	No	0.004	NP (normality)
Lead (mg/L)	GSD-AP-MW-2	0.000203	0.00009	0.015	No 8	0.0001889	0.00003995	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-2	0.0002533	0.0001183	0.015	No 8	0.0002038	0.00008326	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	GSD-AP-PZ-5	0.000203	0.000078	0.015	No 8	0.0001783	0.00004789	75	Kaplan-Meier	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-6	0.000203	0.0000835	0.015	No 8	0.0001673	0.00005053	62.5	Kaplan-Meier	No	0.004	NP (NDs)
Lithium (mg/L)	GSD-AP-MW-2	0.03795	0.02268	0.04	No 8	0.03031	0.007203	0	None	No	0.01	Param.
Mercury (mg/L)	GSD-AP-PZ-6	0.00286	0.0005	0.002	No 8	0.000795	0.0008344	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-1	0.01015	0.000198	0.1	No 8	0.008906	0.003519	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-10	0.01015	0.000204	0.1	No 8	0.00527	0.005217	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-11	0.01015	0.00012	0.1	No 8	0.006393	0.005185	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-2	0.0269	0.0164	0.1	No 8	0.02084	0.002931	0	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-4	0.01015	0.00106	0.1	No 8	0.005646	0.004815	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-5	0.01015	0.00011	0.1	No 8	0.006423	0.005145	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-7	0.01015	0.0001	0.1	No 8	0.007646	0.004636	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-8	0.01015	0.00032	0.1	No 8	0.005262	0.005225	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-9	0.01015	0.00018	0.1	No 8	0.005196	0.005296	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-PZ-1	0.01015	0.00007	0.1	No 8	0.007634	0.004659	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-2	0.01015	0.00022	0.1	No 8	0.007675	0.004583	75	None	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-1	0.000203	0.000101	0.002	No 8	0.0001698	0.00004655	62.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-2	0.0004049	0.0003096	0.002	No 8	0.0003573	0.00004492	0	None	No	0.01	Param.
Thallium (mg/L)	GSD-AP-MW-3	0.000203	0.000104	0.002	No 8	0.0001375	0.00004193	25	None	No	0.004	NP (normality)

Appendix IV Trend Tests - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 7:16 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-17 (bg)	-0.0002415	-69	-49	Yes	17	64.71	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-2	-0.05246	-63	-49	Yes	17	0	n/a	0.05	NP

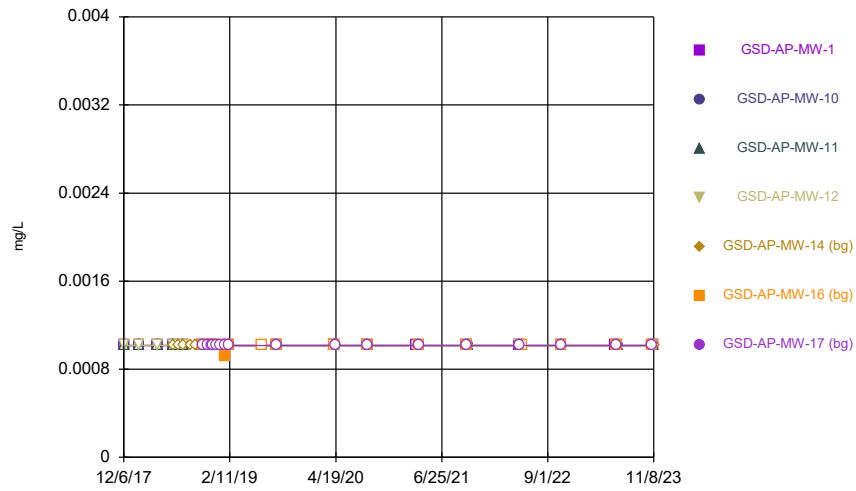
Appendix IV Trend Tests - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 7:16 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-14 (bg)	-0.000159	-42	-49	No	17	23.53	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-16 (bg)	0.0001667	13	53	No	18	11.11	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-17 (bg)	-0.0002415	-69	-49	Yes	17	64.71	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-2	-0.05246	-63	-49	Yes	17	0	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-4	0.0002444	39	49	No	17	0	n/a	0.05	NP

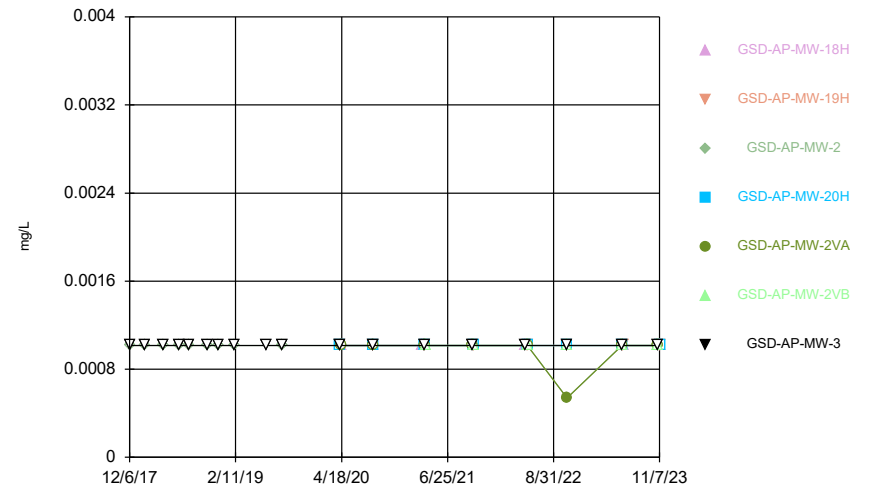
FIGURE A.

Time Series



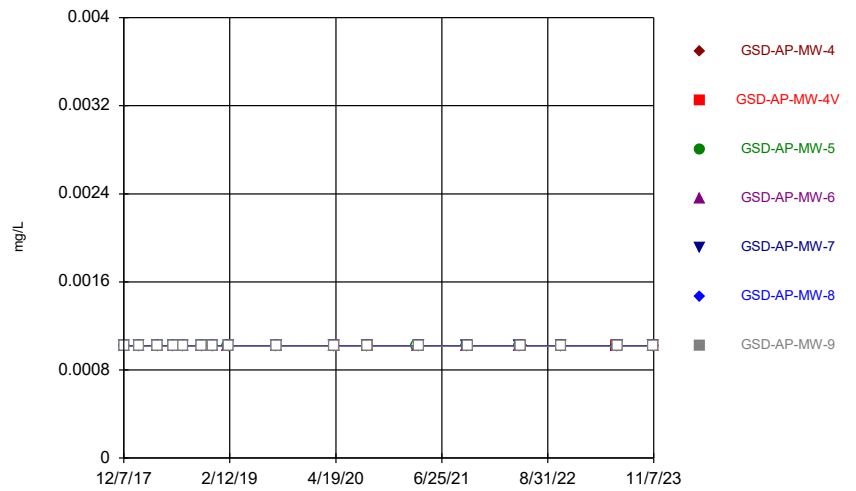
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



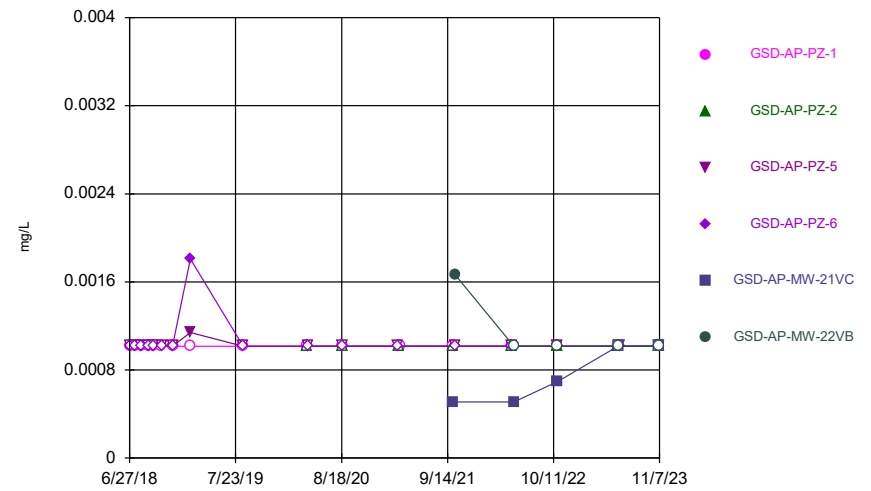
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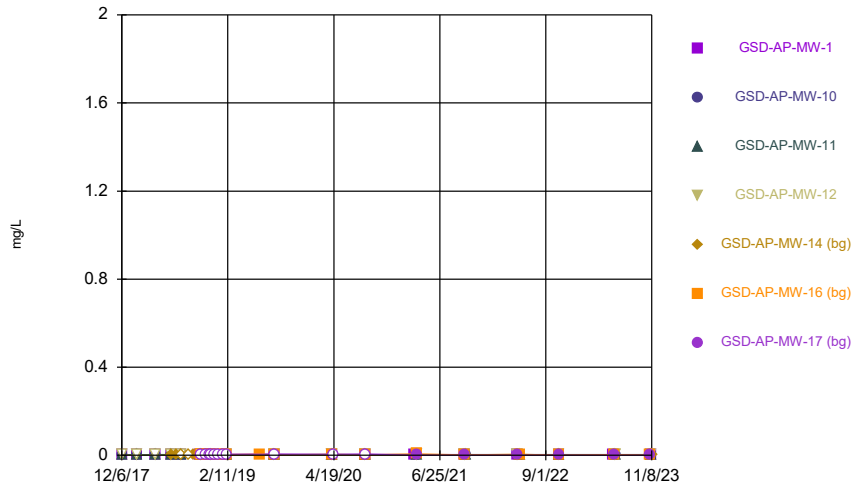
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Time Series



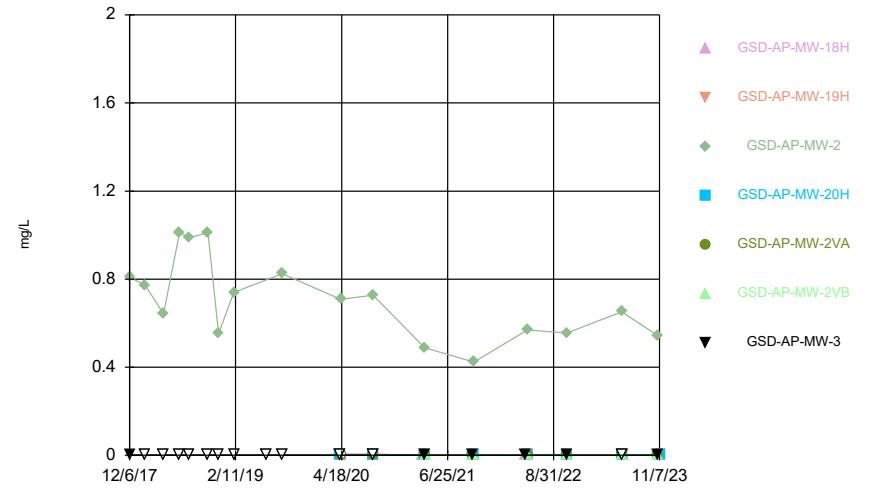
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Time Series



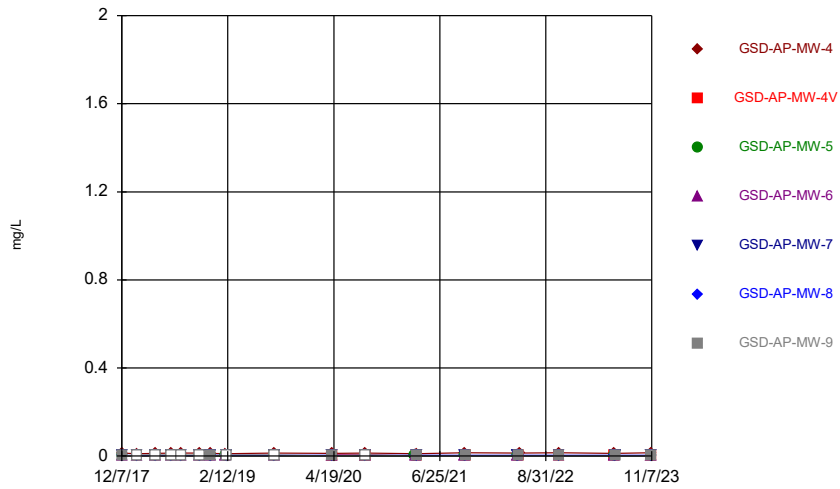
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Time Series



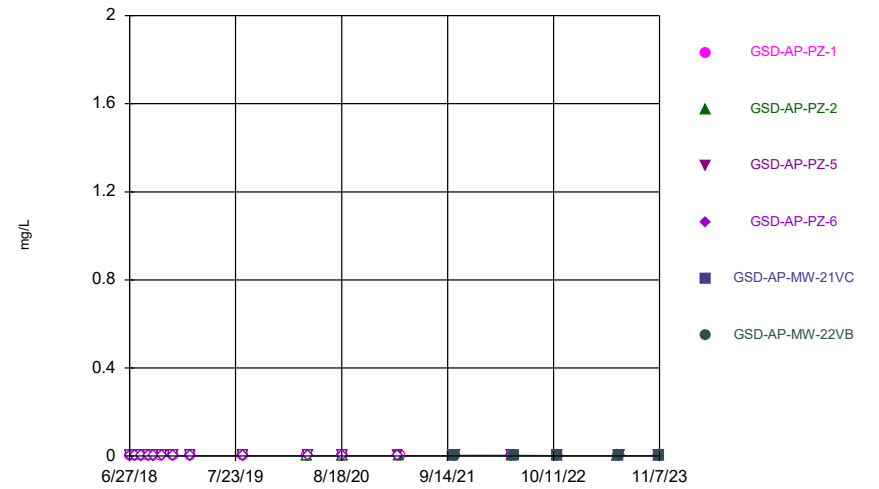
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Time Series



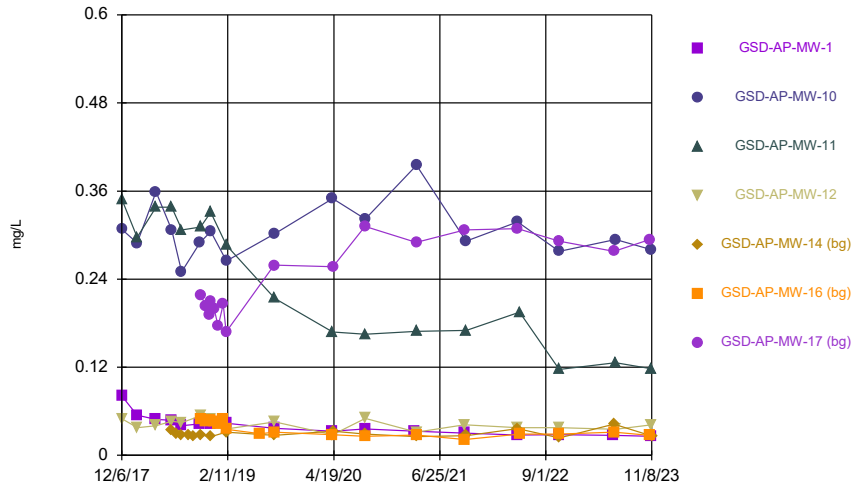
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Time Series



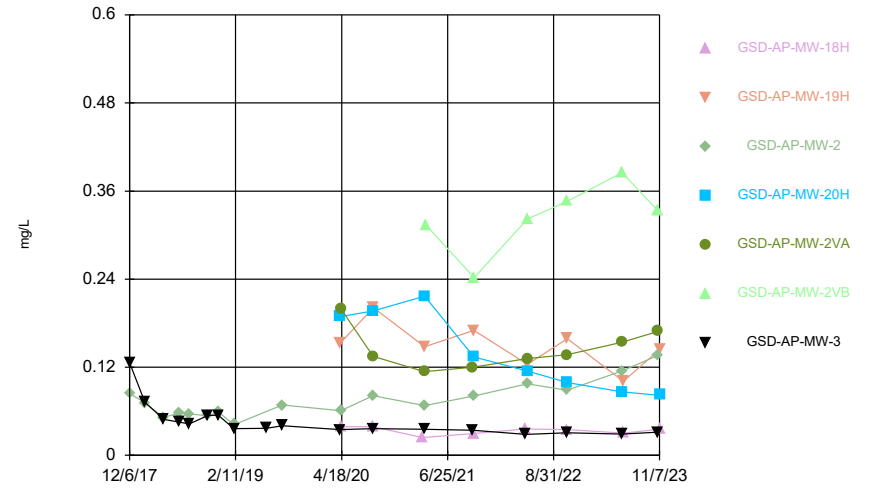
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Time Series



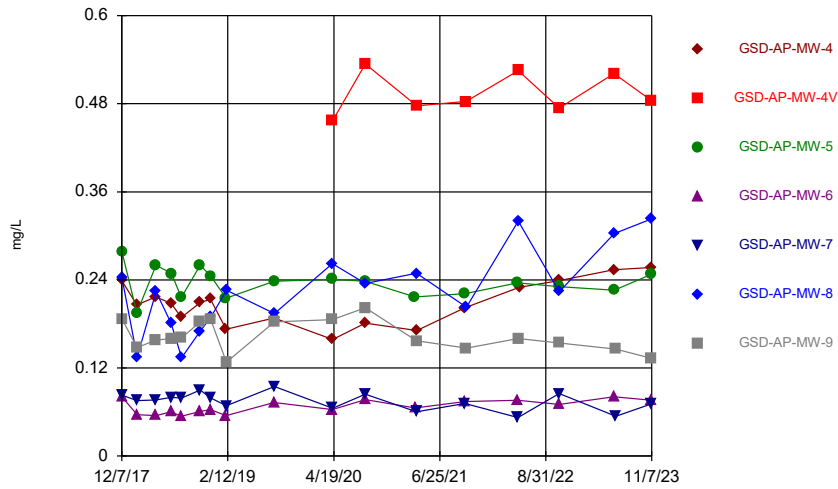
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



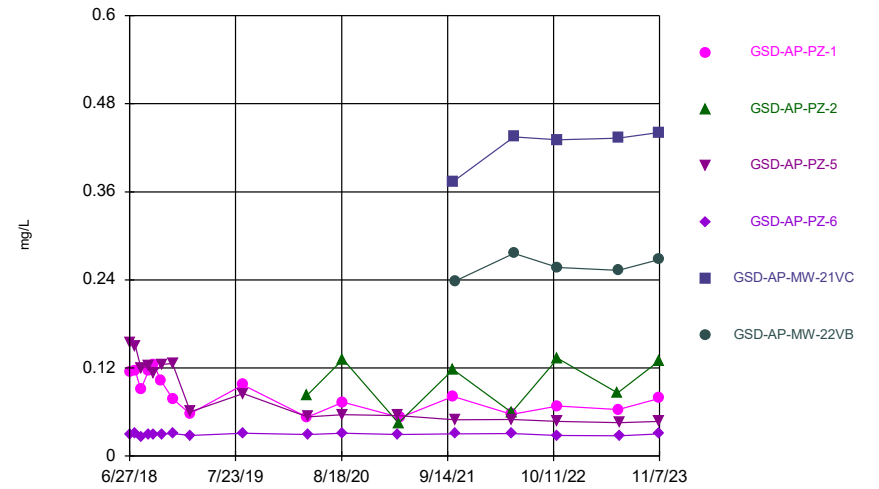
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Time Series



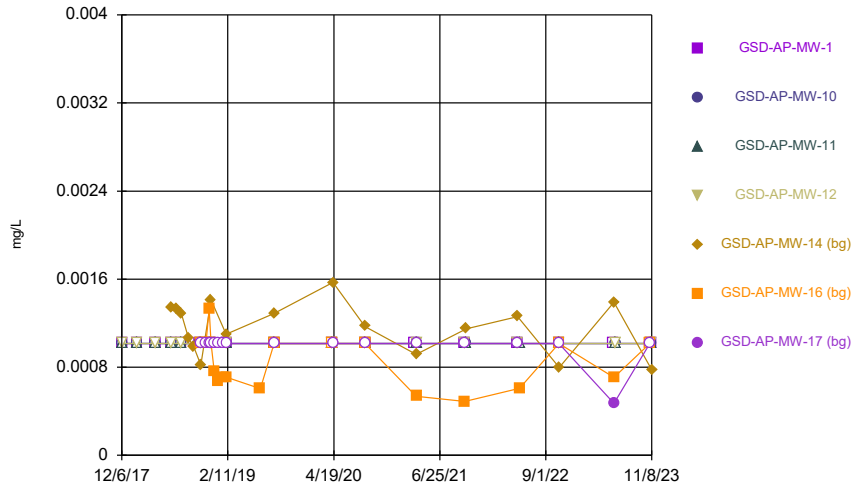
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Time Series



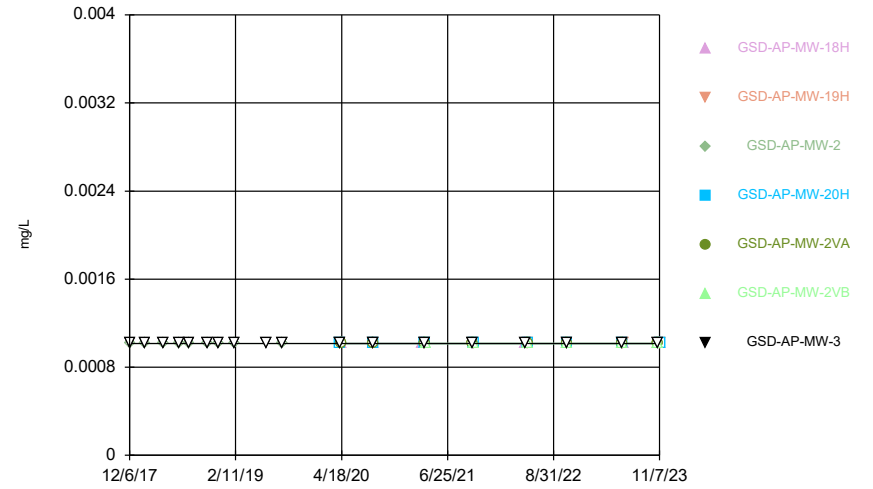
Constituent: Barium Analysis Run 1/2/2024 5:35 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



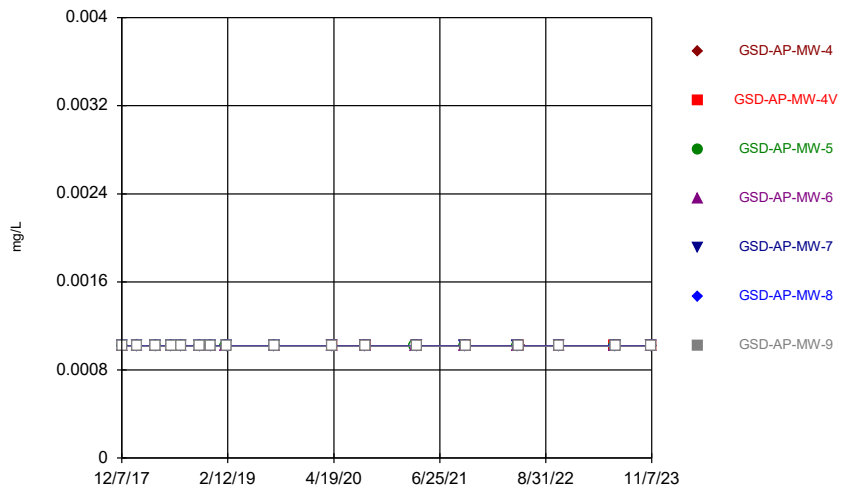
Constituent: Beryllium Analysis Run 1/2/2024 5:35 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



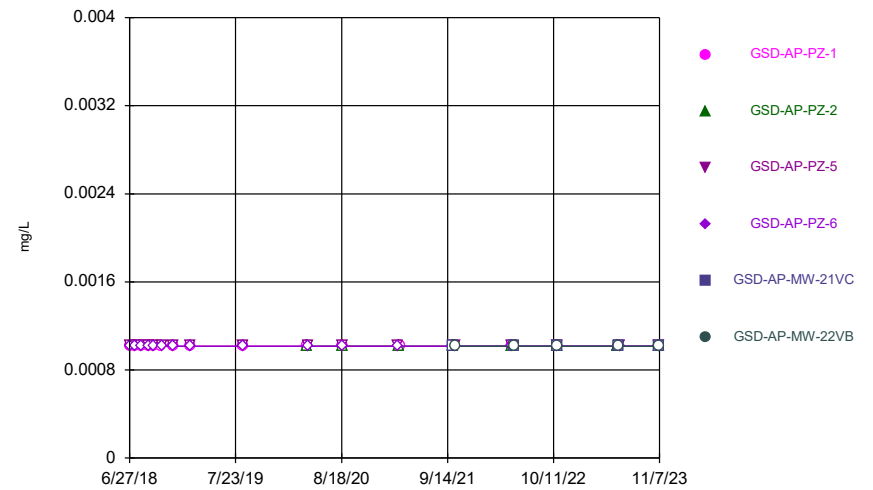
Constituent: Beryllium Analysis Run 1/2/2024 5:35 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



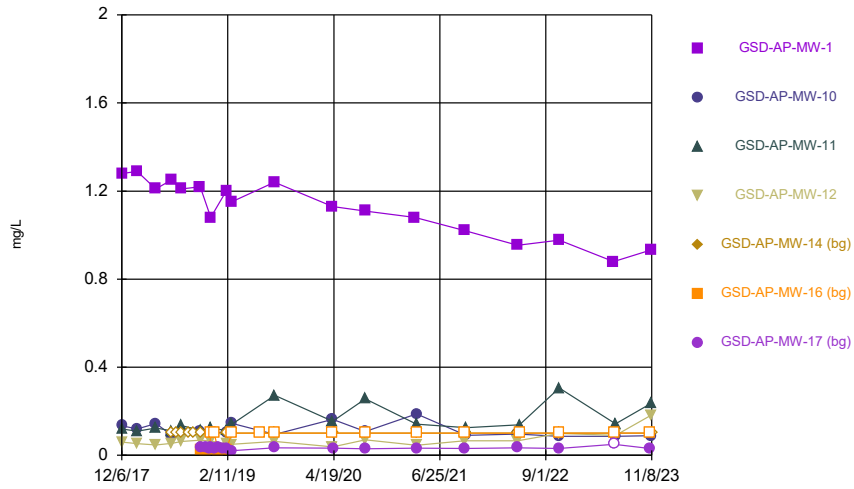
Constituent: Beryllium Analysis Run 1/2/2024 5:35 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



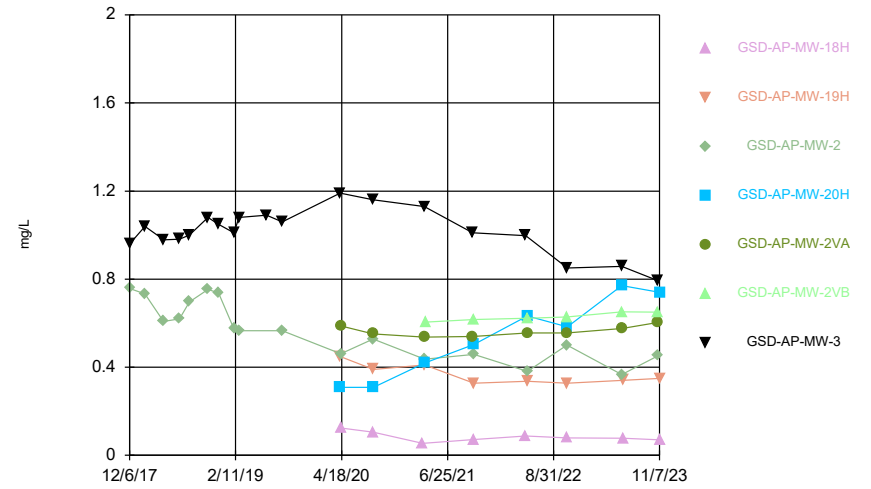
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



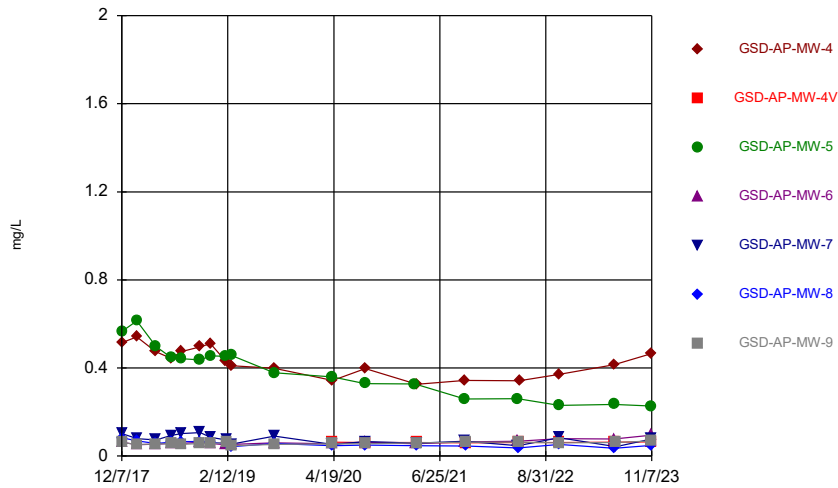
Constituent: Boron Analysis Run 1/2/2024 5:35 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



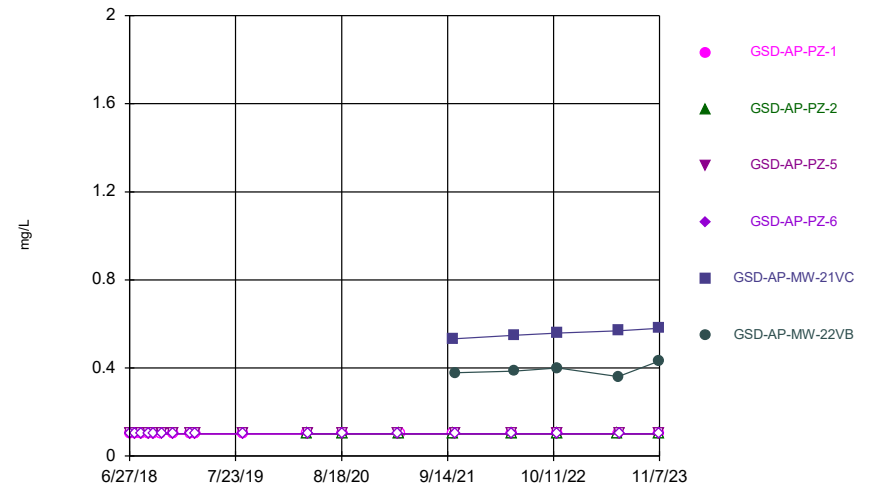
Constituent: Boron Analysis Run 1/2/2024 5:35 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



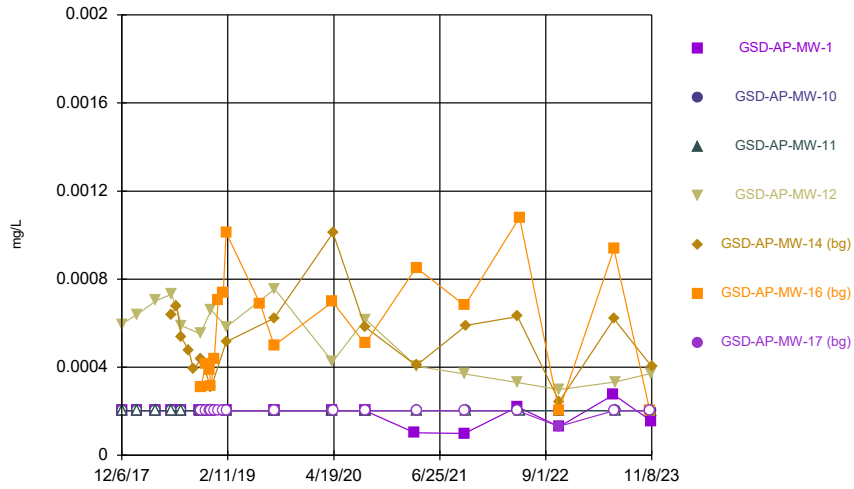
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



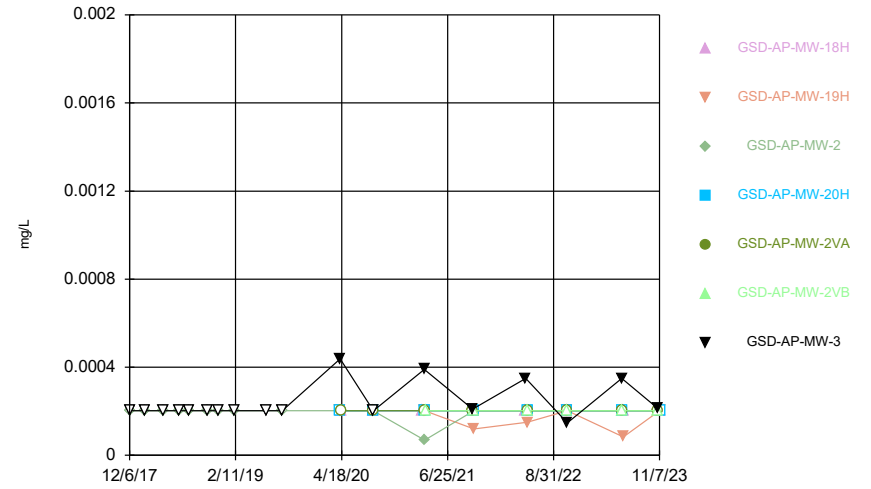
Constituent: Boron Analysis Run 1/2/2024 5:35 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



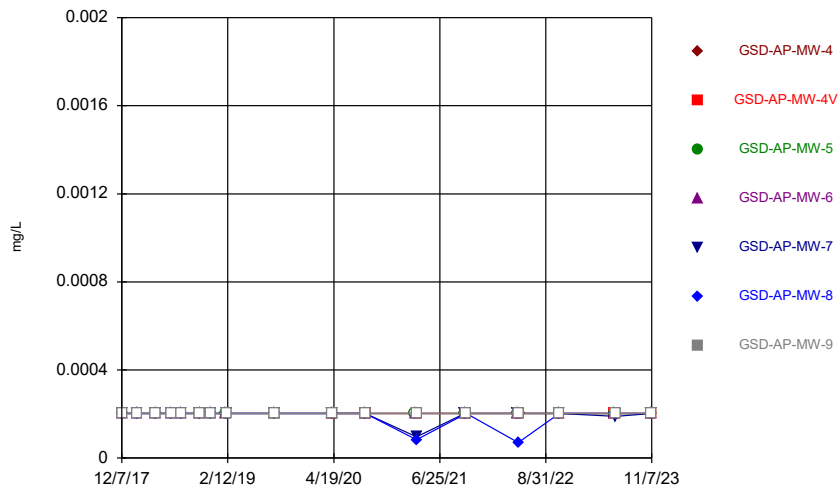
Constituent: Cadmium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



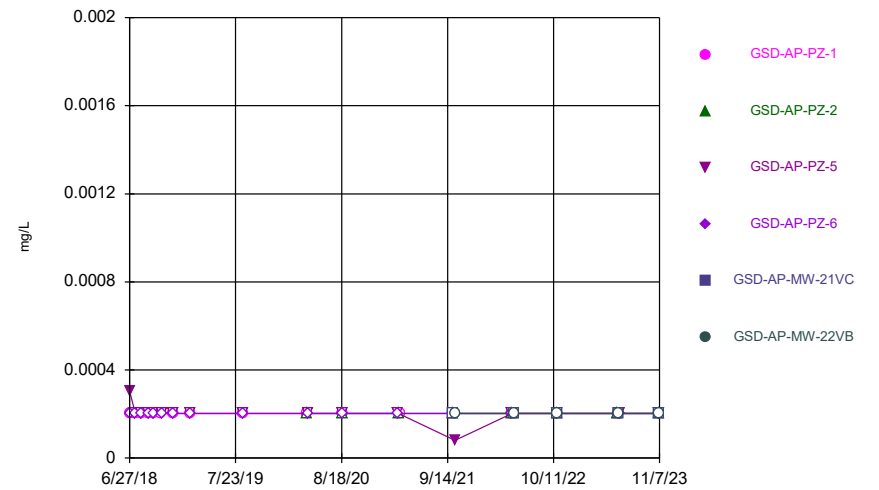
Constituent: Cadmium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



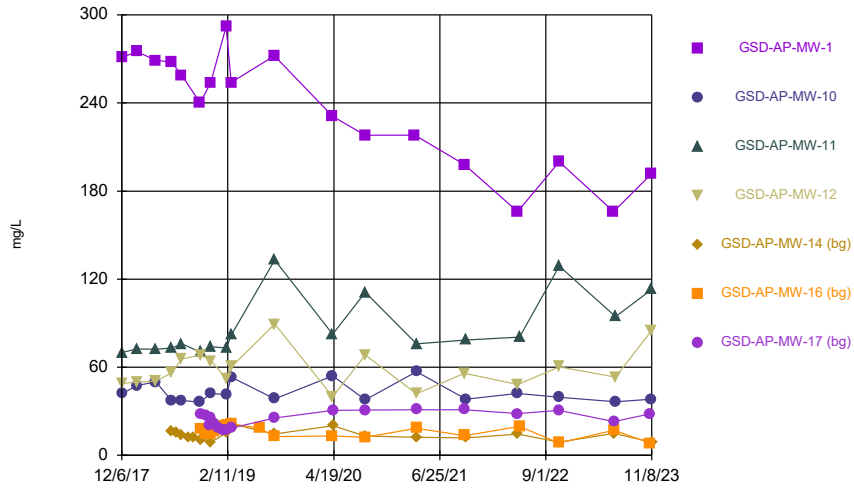
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



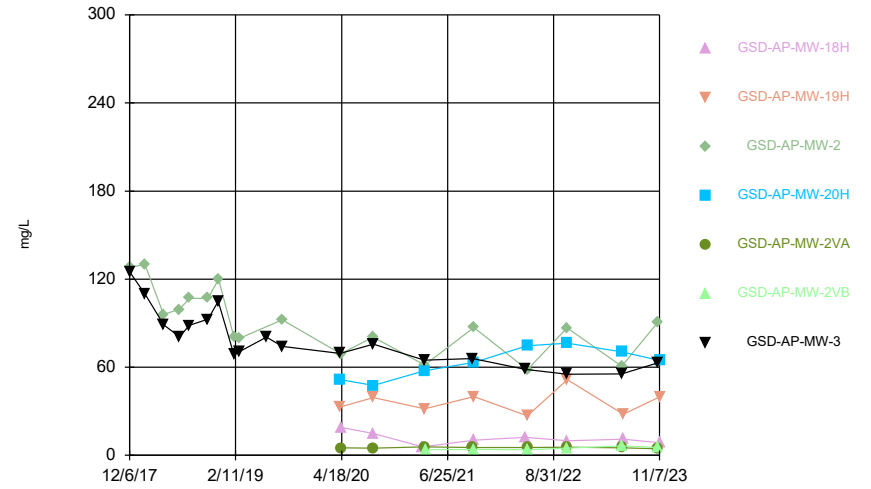
Constituent: Cadmium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



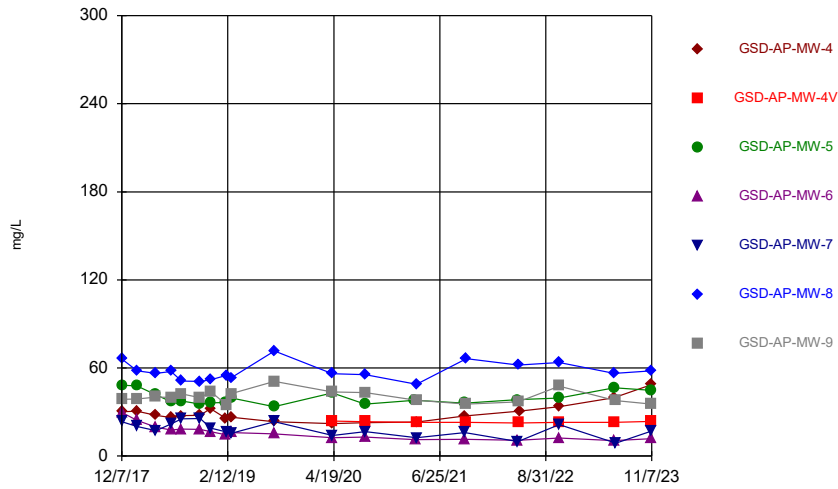
Constituent: Calcium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



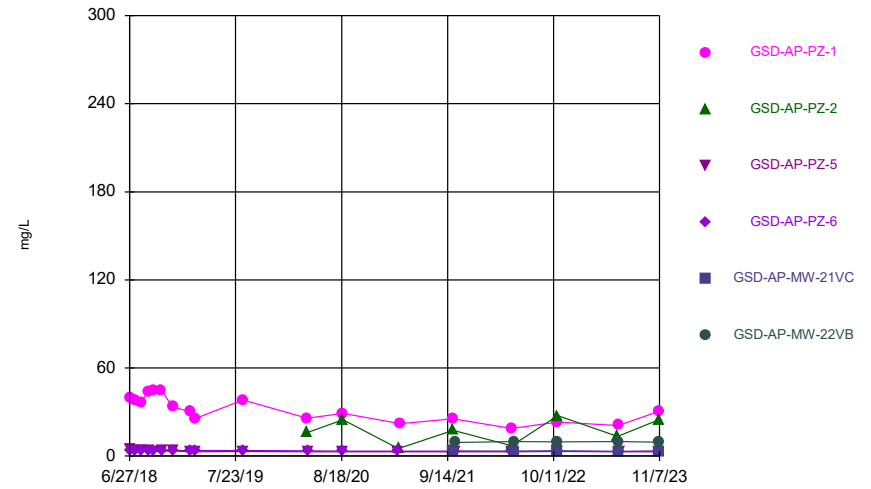
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



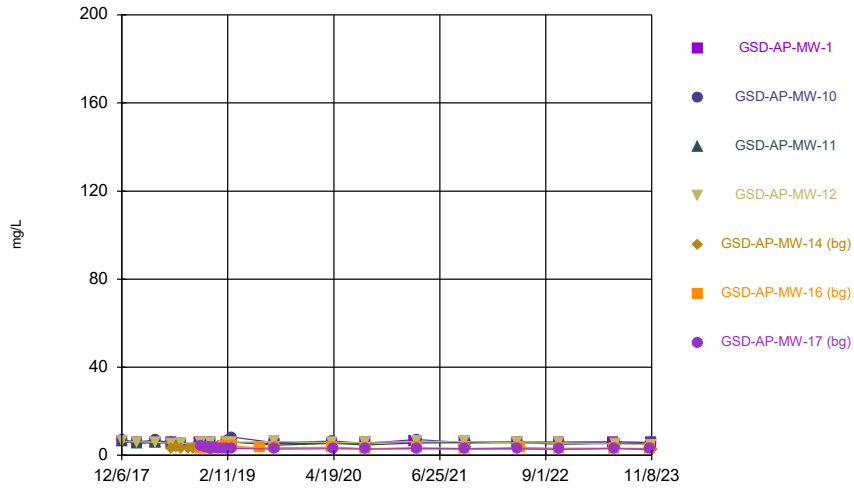
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



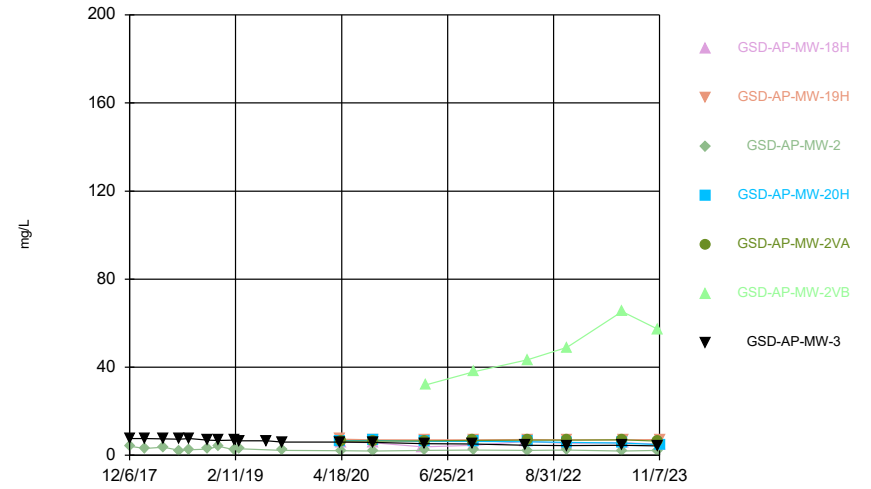
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



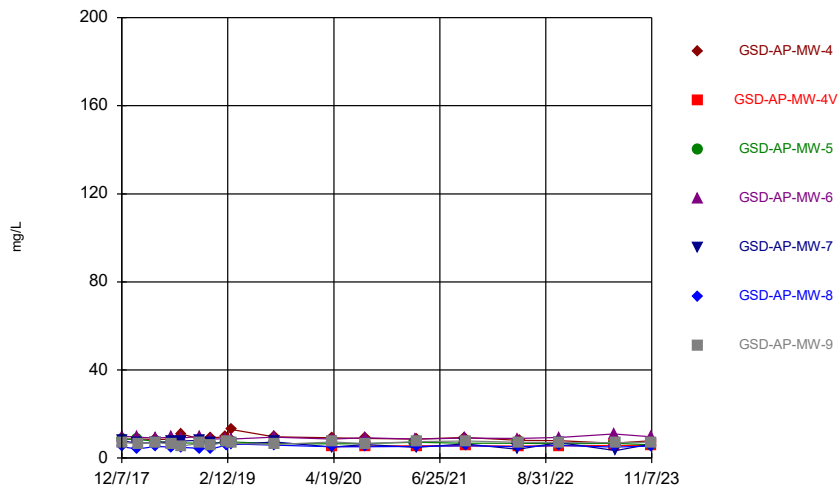
Constituent: Chloride Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



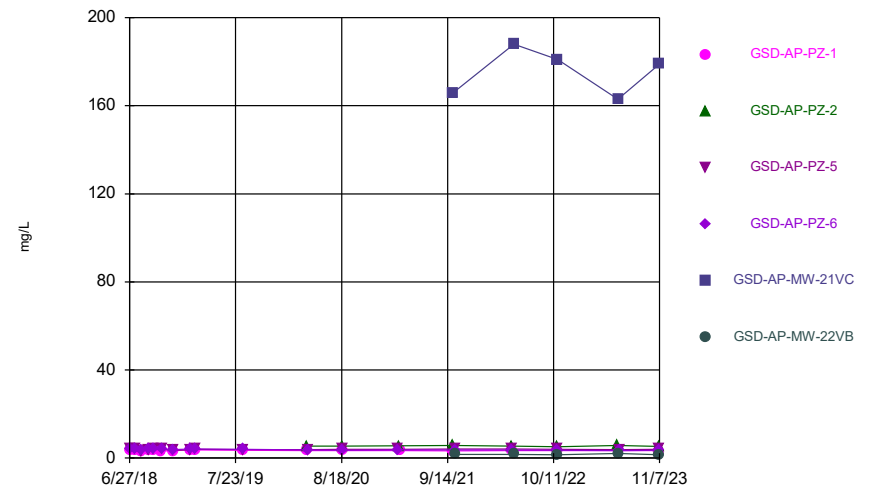
Constituent: Chloride Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



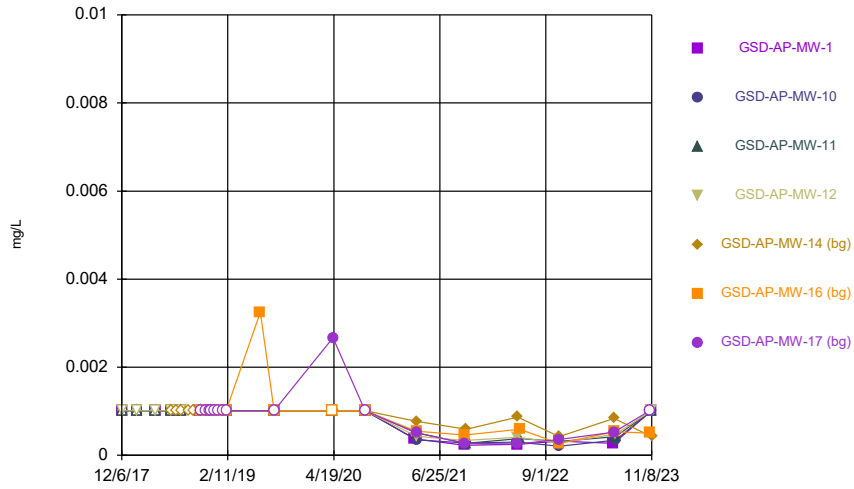
Constituent: Chloride Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



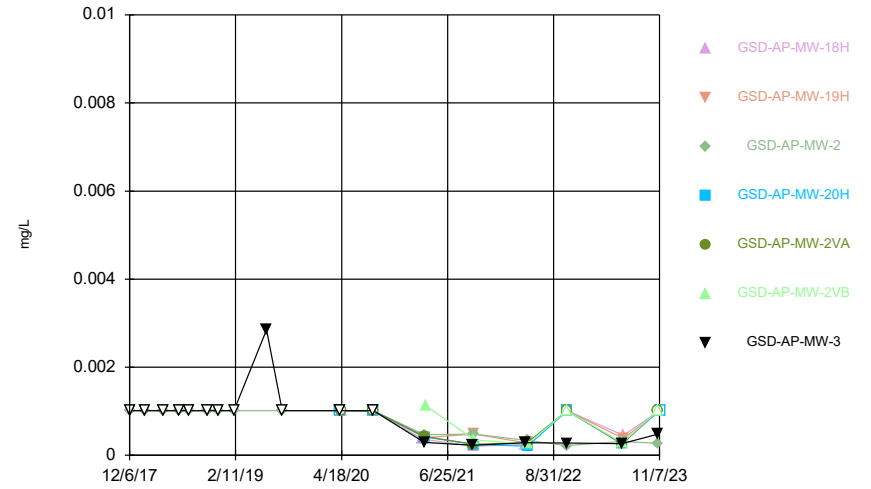
Constituent: Chloride Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



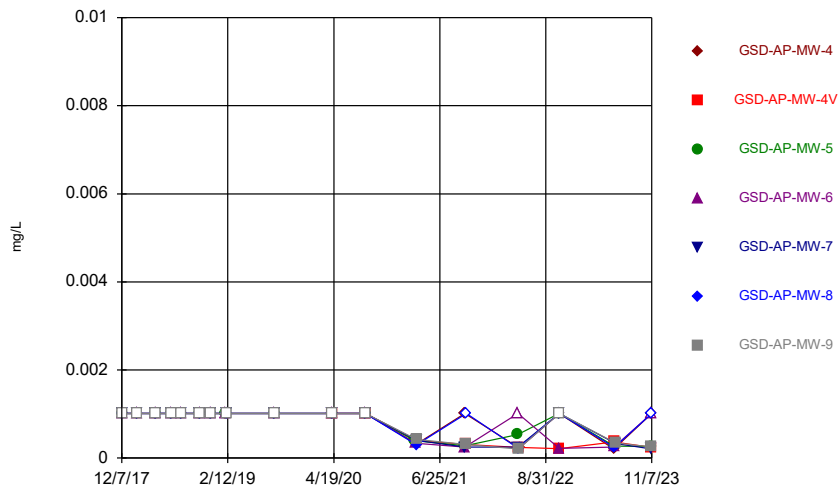
Constituent: Chromium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



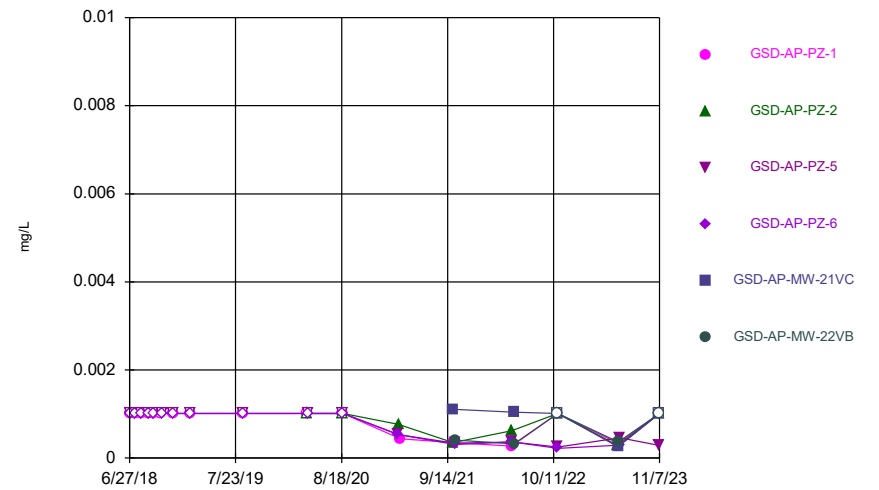
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



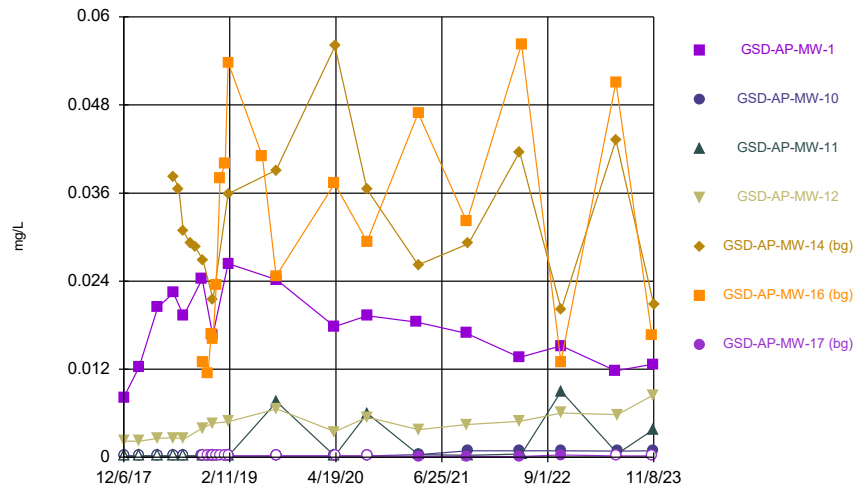
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



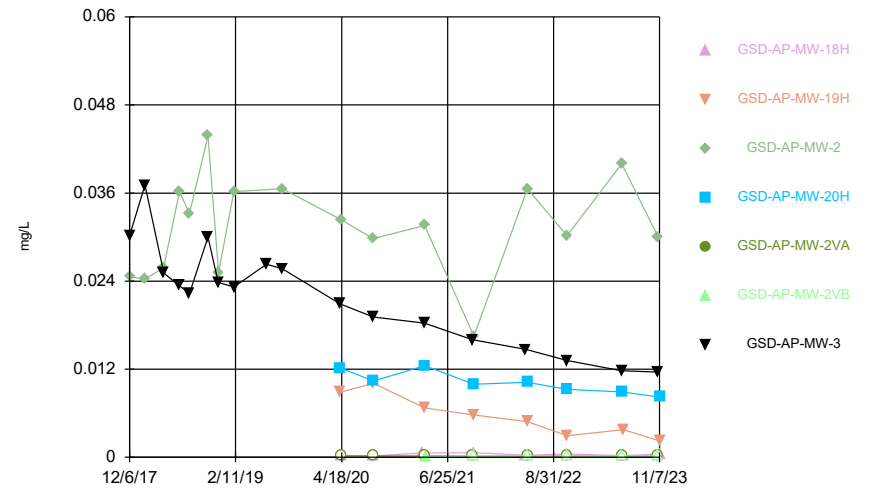
Constituent: Chromium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



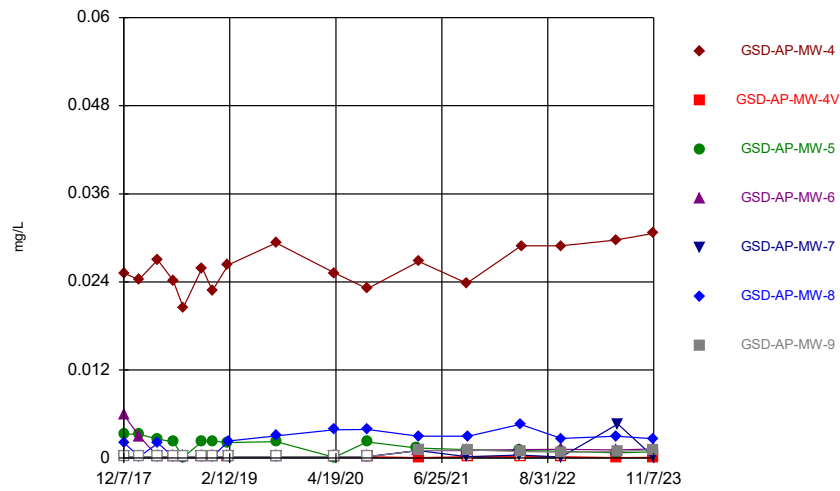
Constituent: Cobalt Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



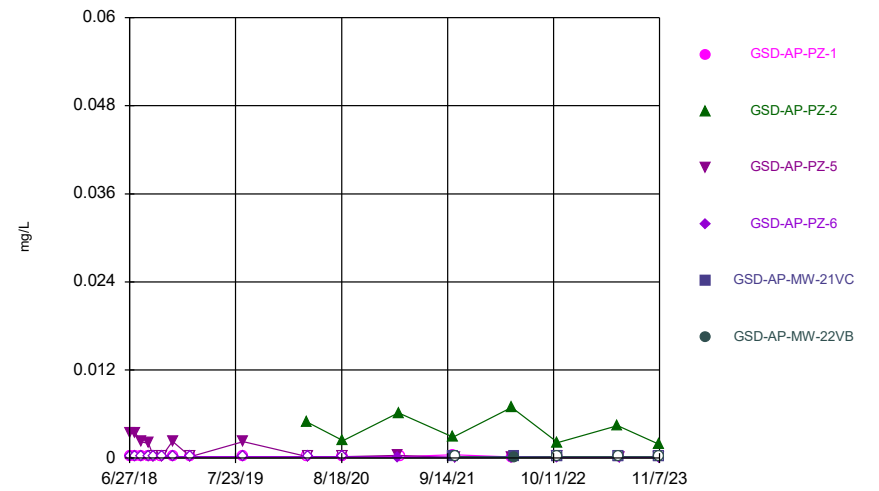
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



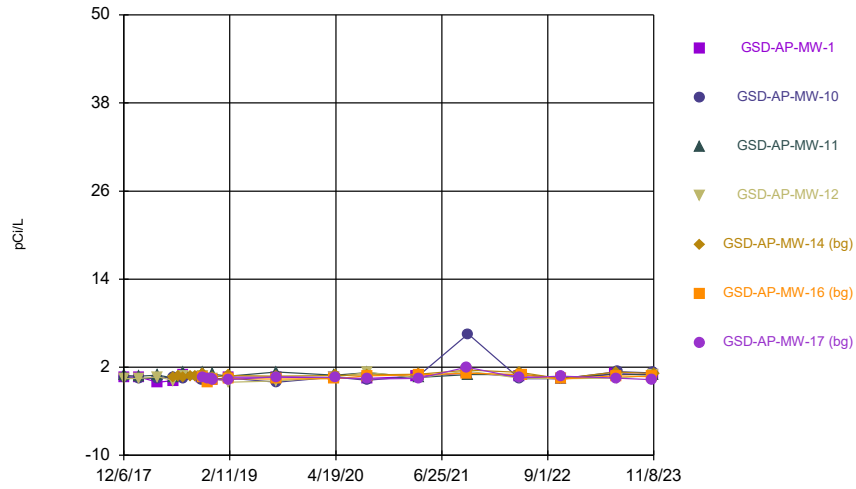
Constituent: Cobalt Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



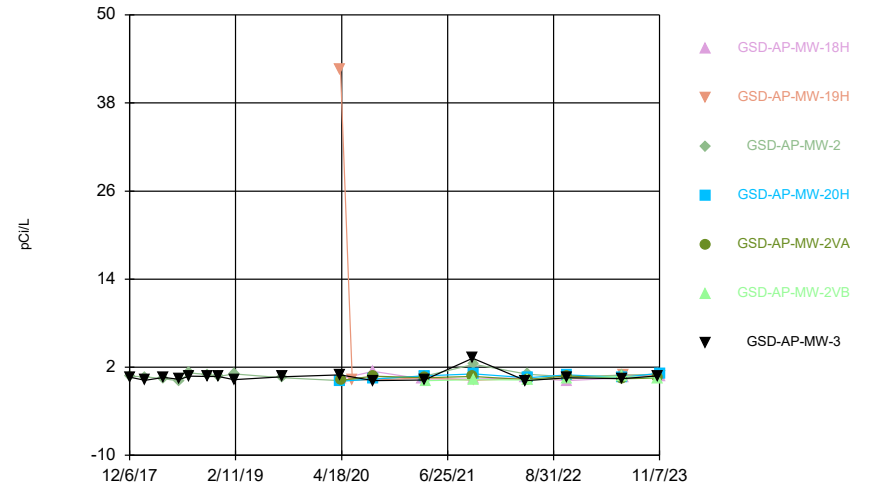
Constituent: Cobalt Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



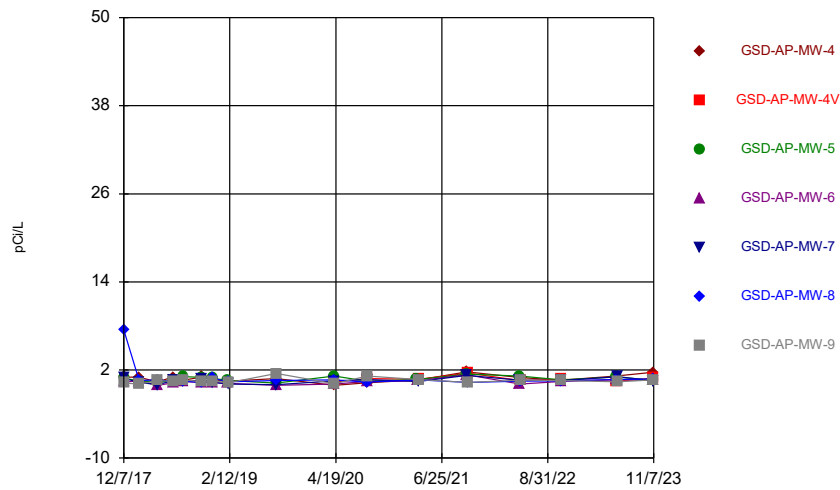
Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:36 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



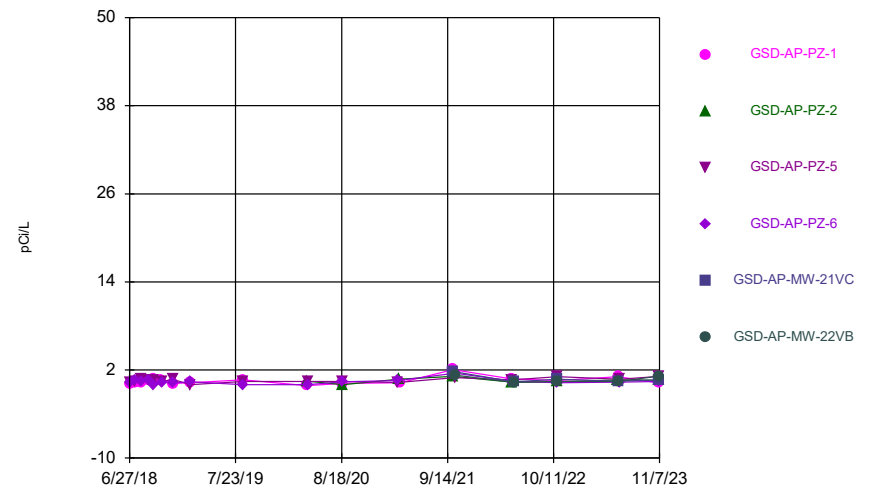
Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:36 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



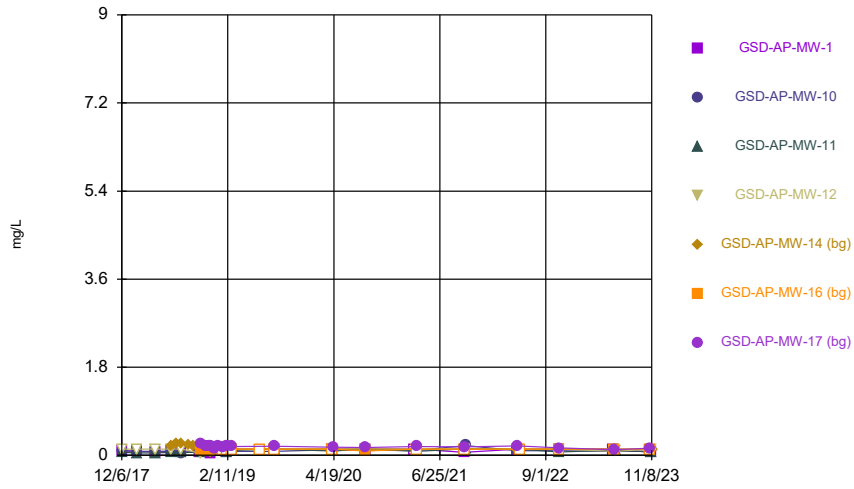
Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:36 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series

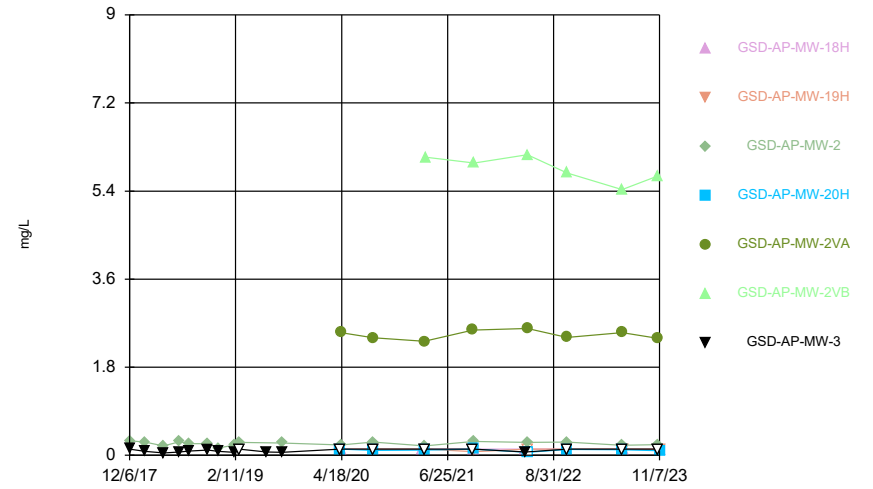


Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:36 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

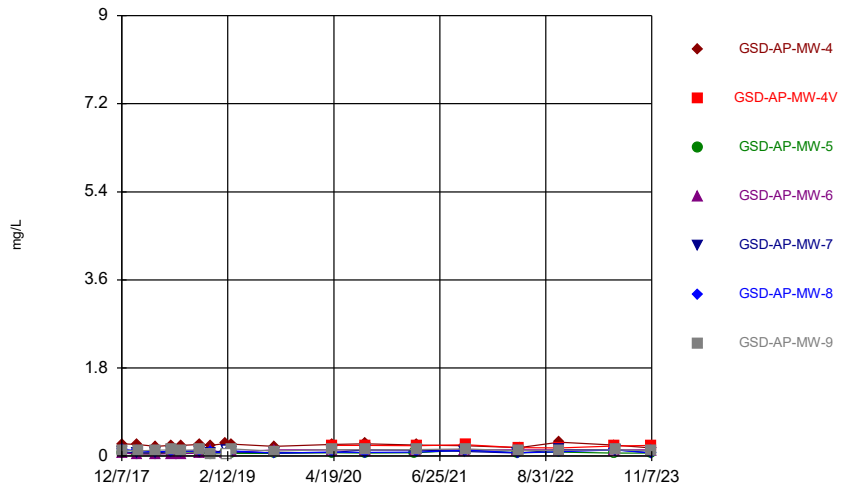
Time Series



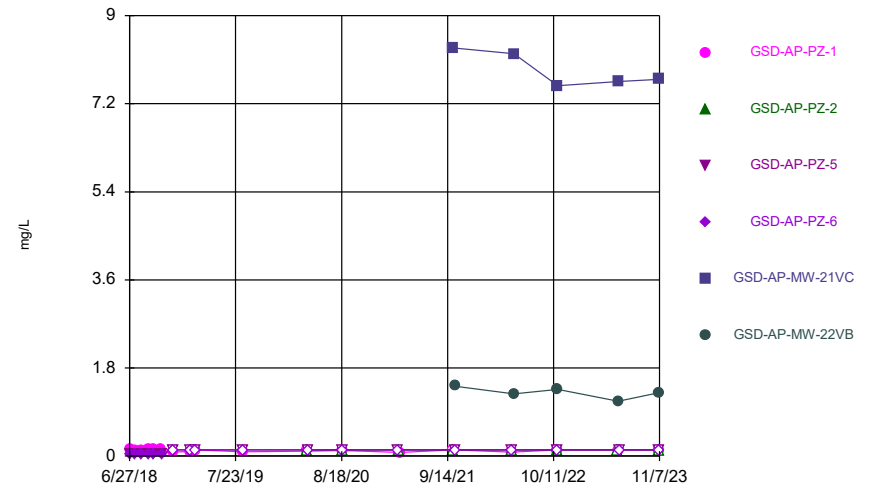
Time Series



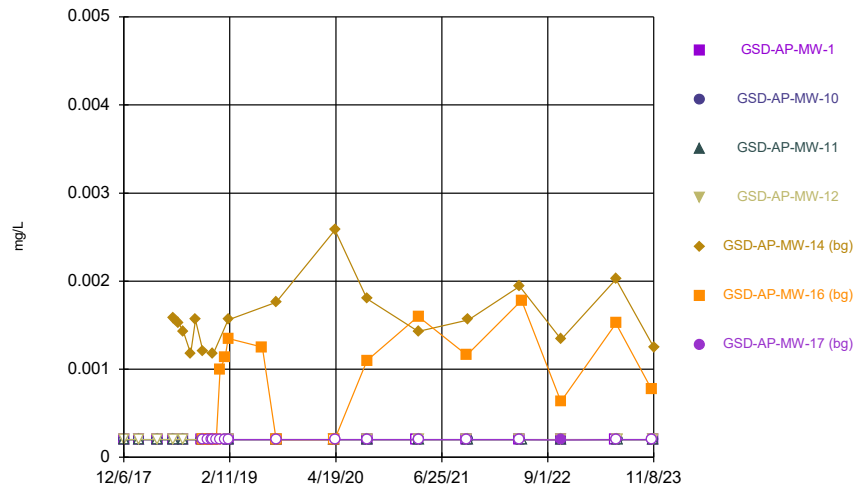
Time Series



Time Series

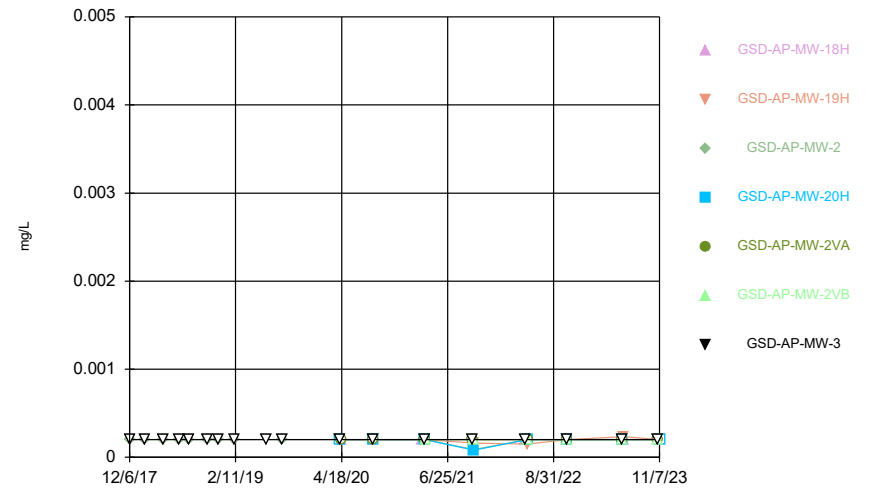


Time Series



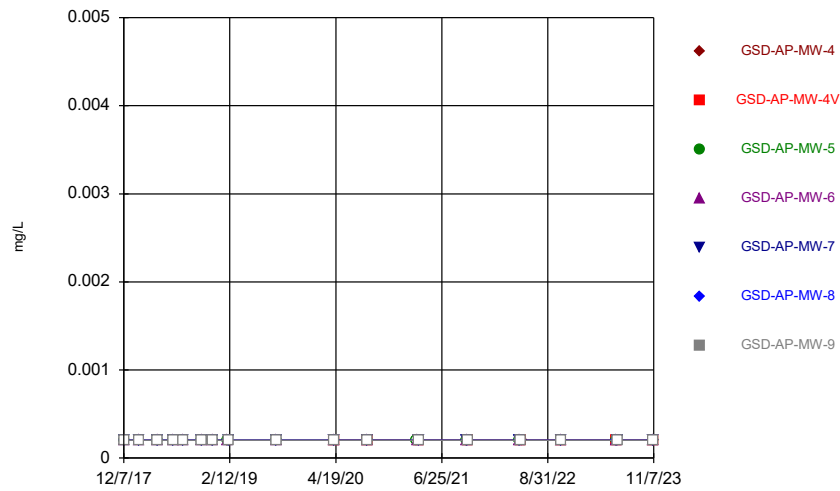
Constituent: Lead Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



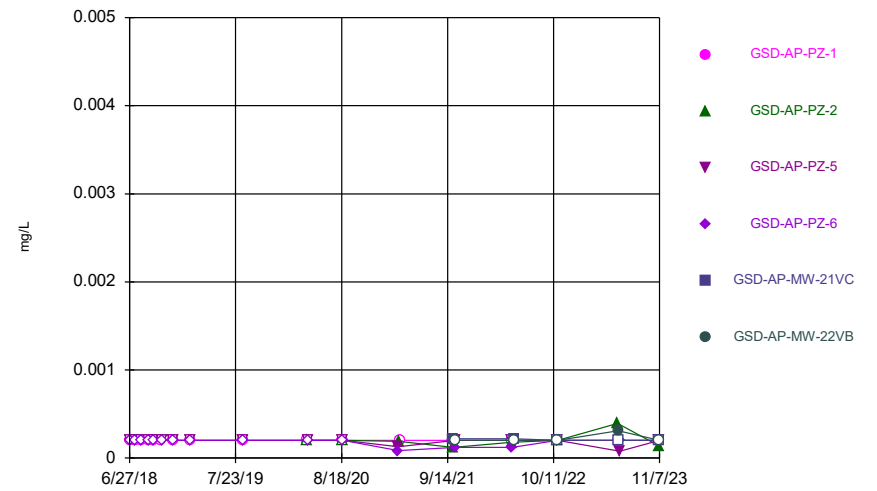
Constituent: Lead Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



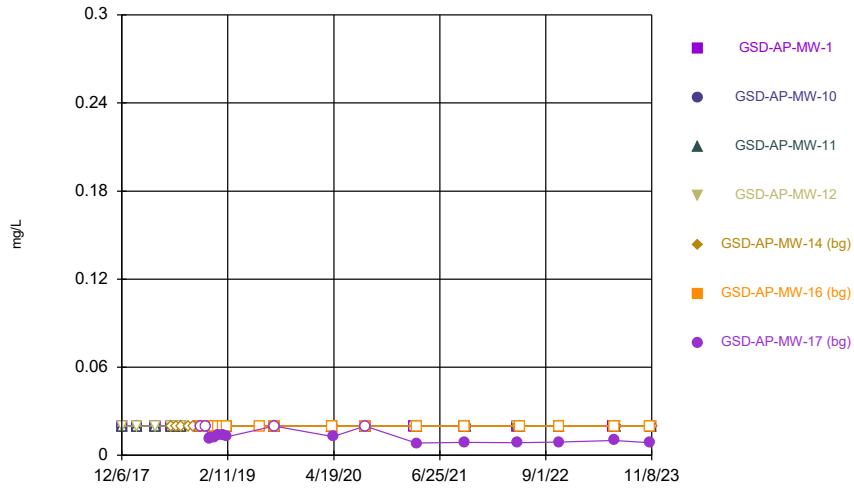
Constituent: Lead Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



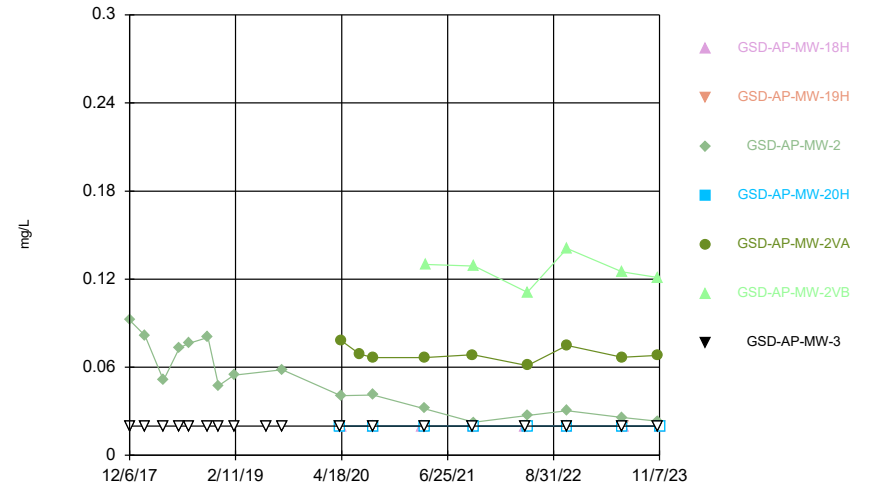
Constituent: Lead Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



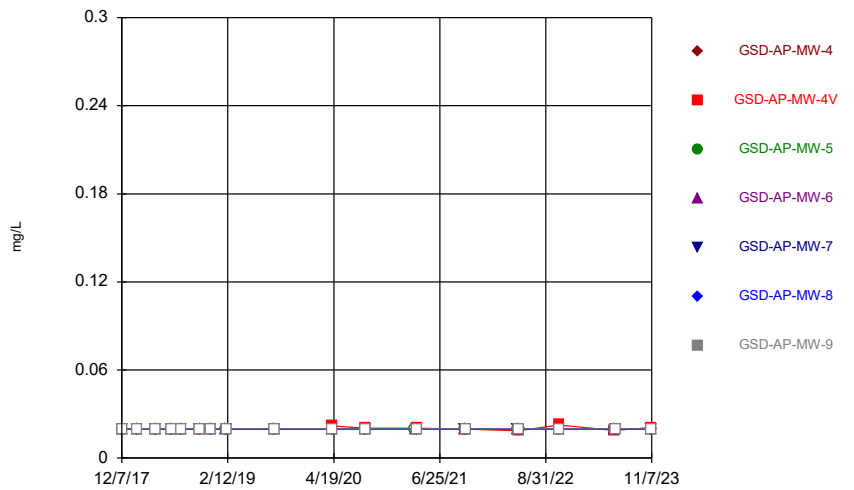
Constituent: Lithium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



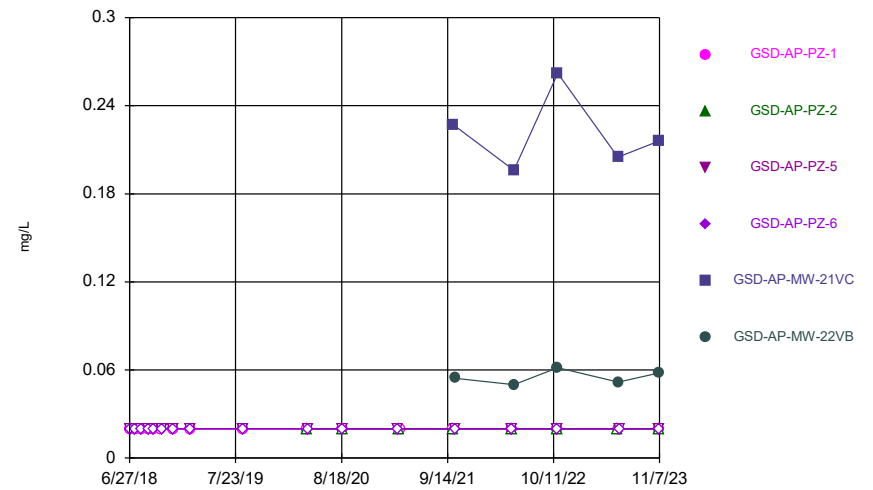
Constituent: Lithium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



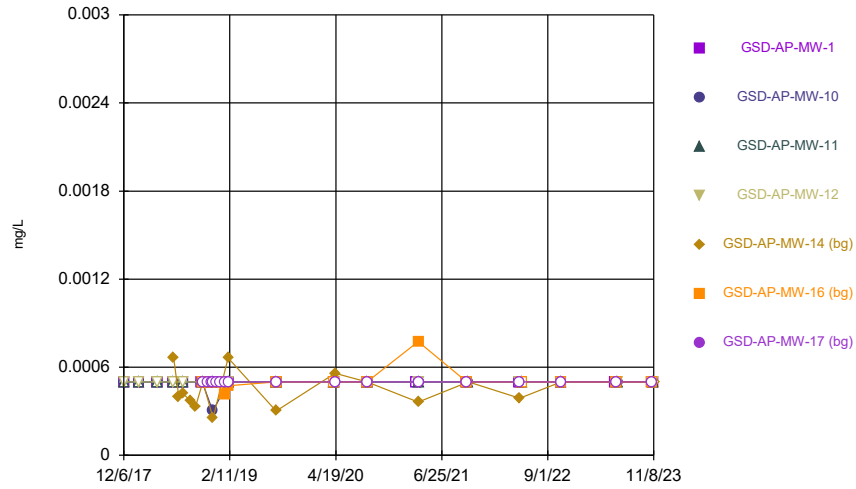
Constituent: Lithium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



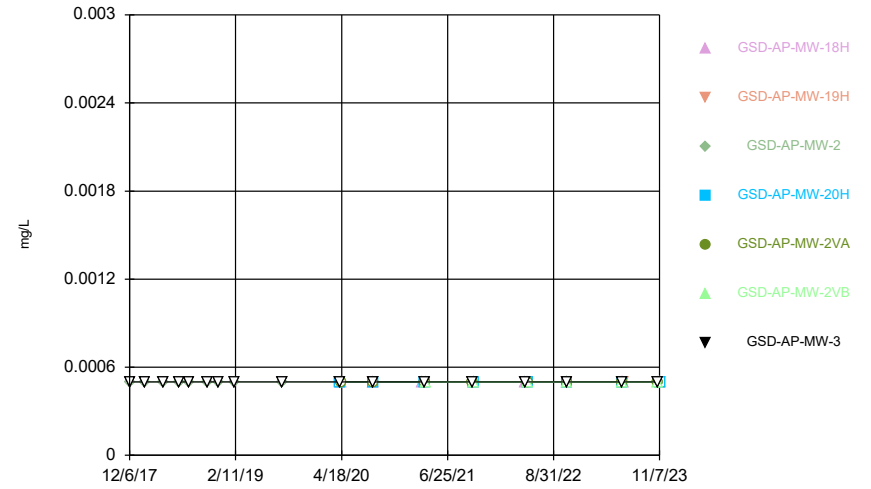
Constituent: Lithium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



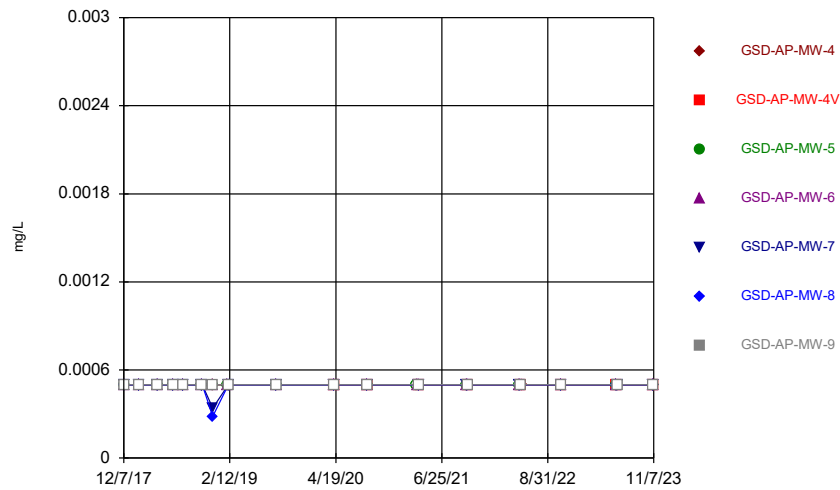
Constituent: Mercury Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



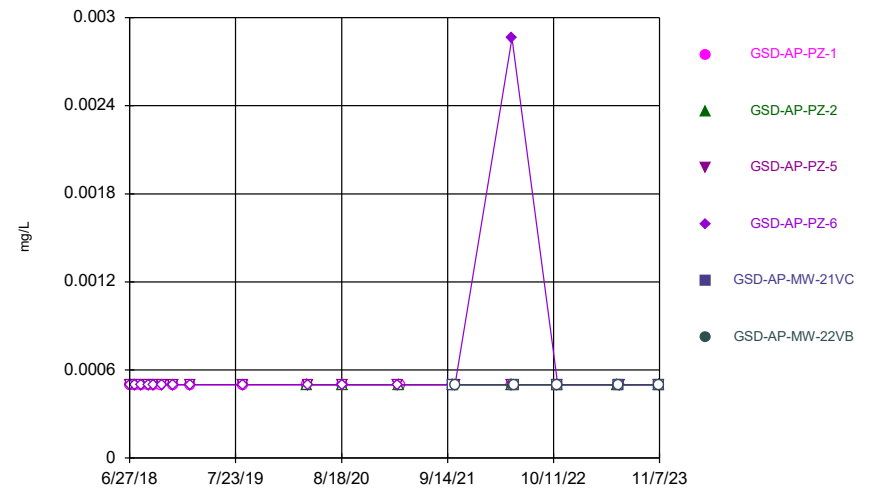
Constituent: Mercury Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



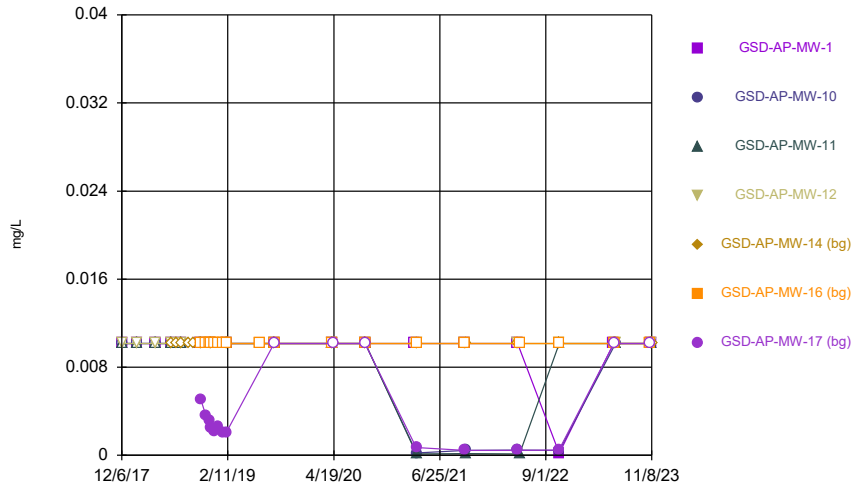
Constituent: Mercury Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



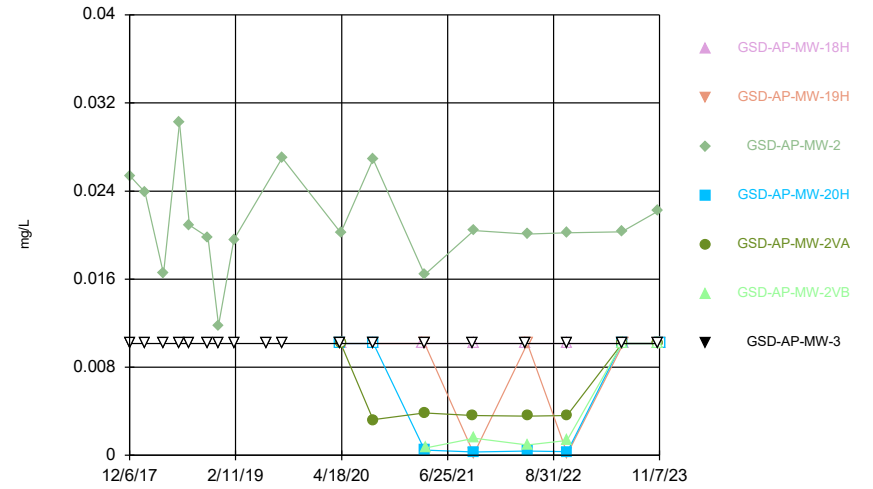
Constituent: Mercury Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



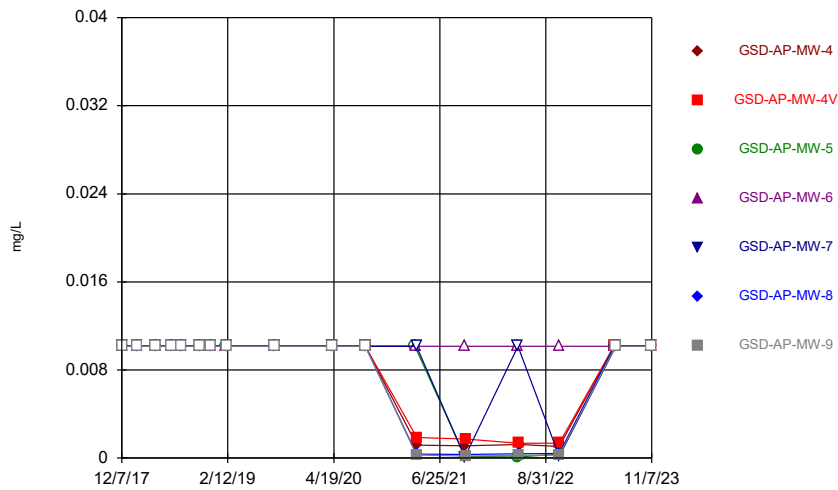
Constituent: Molybdenum Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



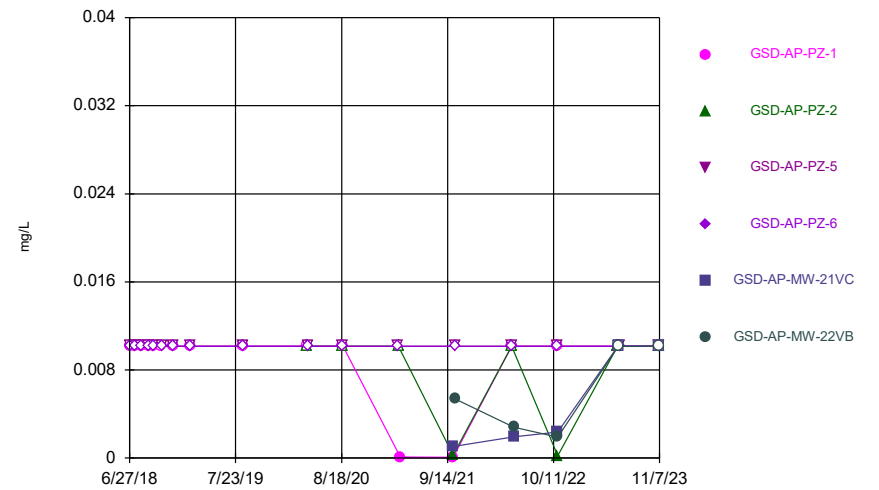
Constituent: Molybdenum Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



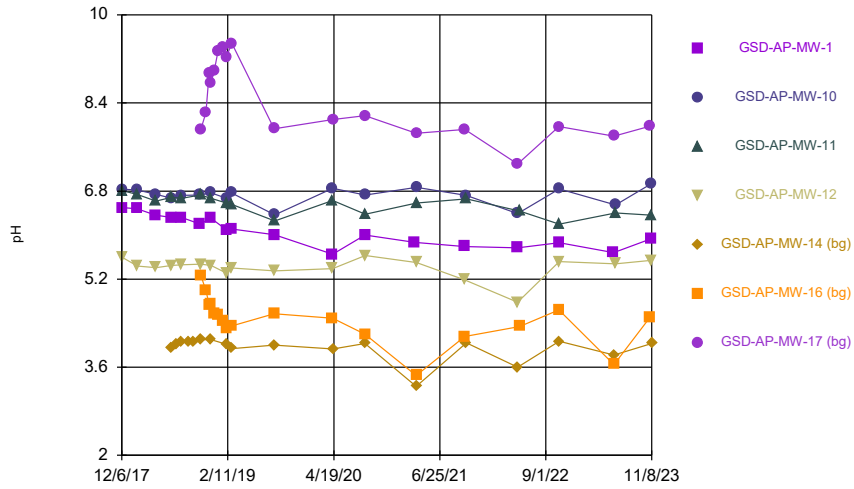
Constituent: Molybdenum Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



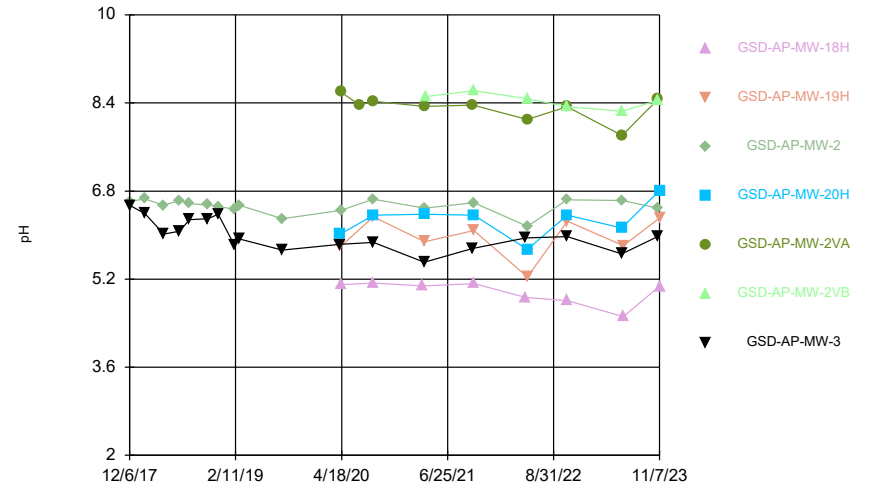
Constituent: Molybdenum Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



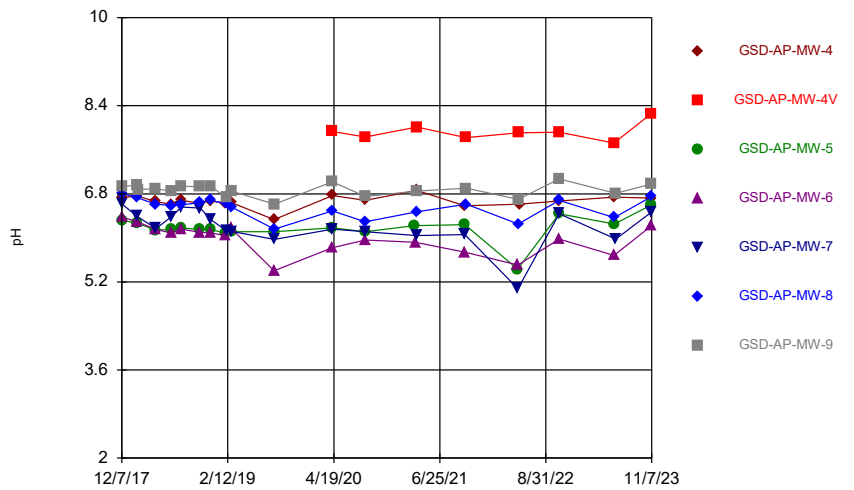
Constituent: pH Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



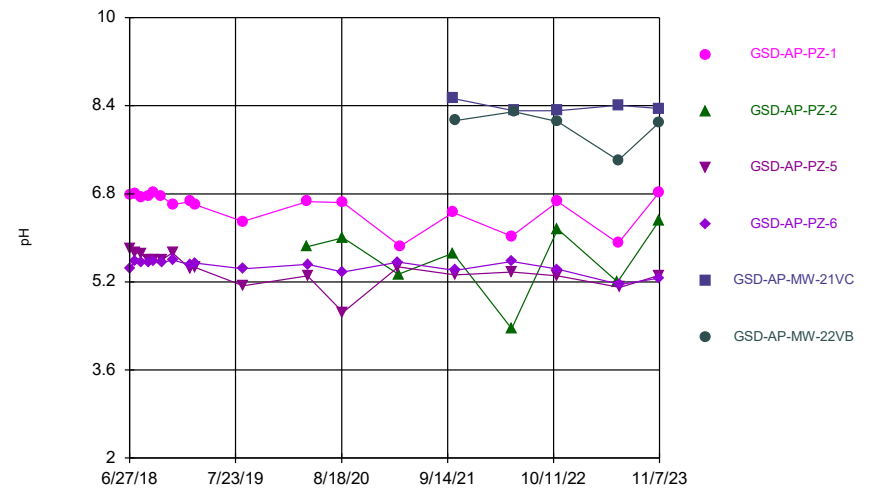
Constituent: pH Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



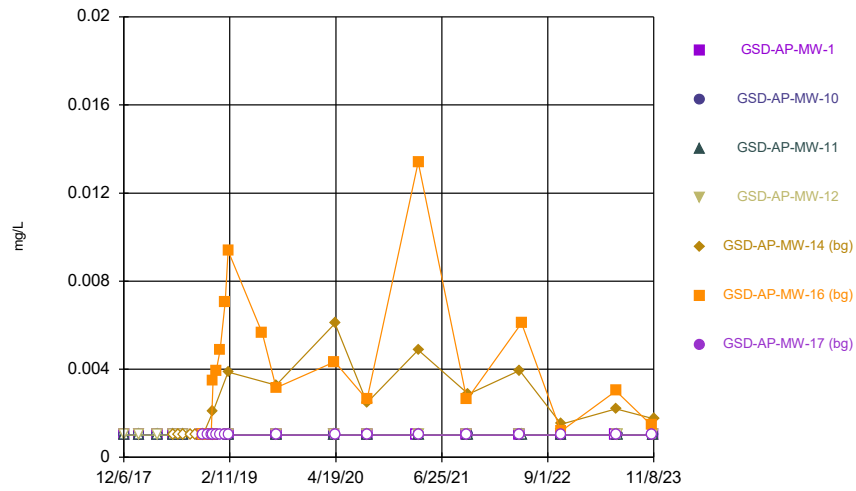
Constituent: pH Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



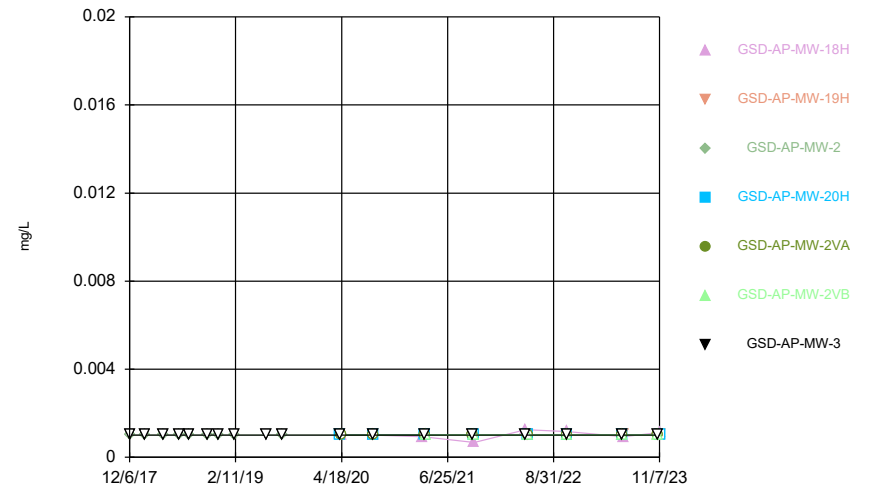
Constituent: pH Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



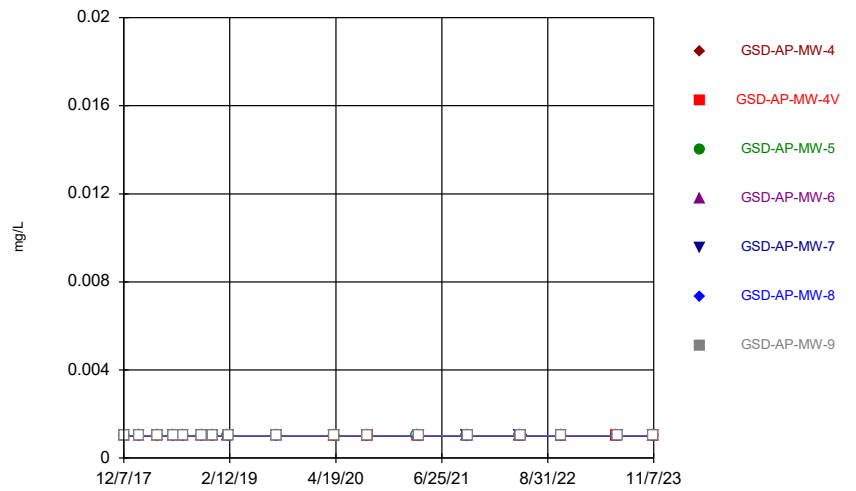
Constituent: Selenium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



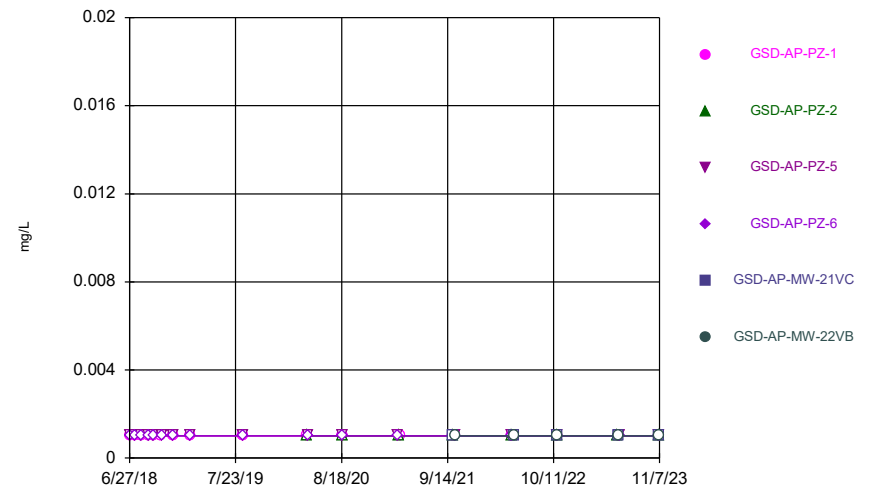
Constituent: Selenium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



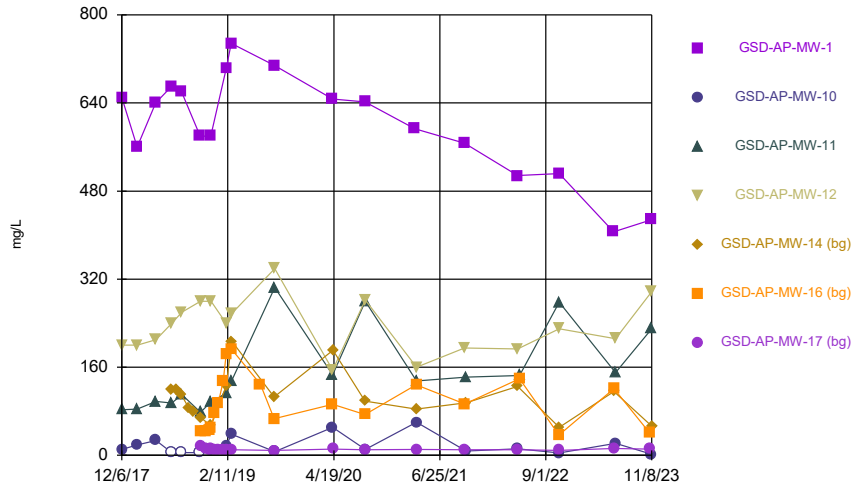
Constituent: Selenium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



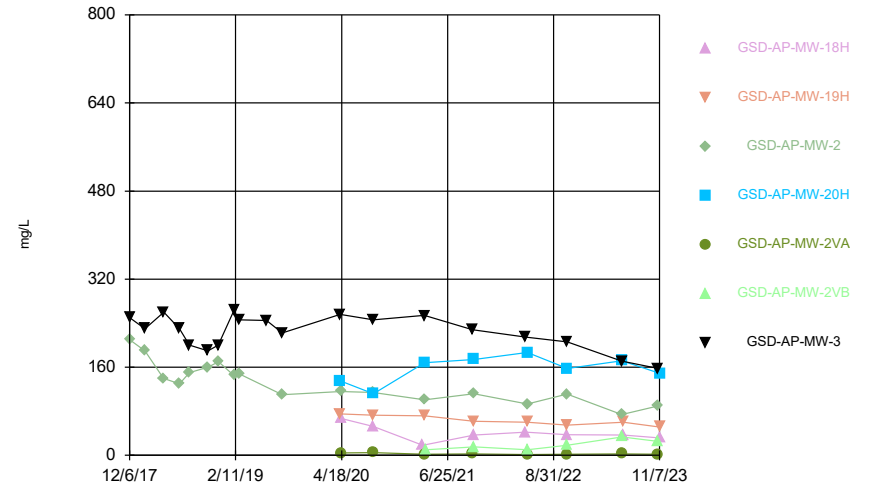
Constituent: Selenium Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



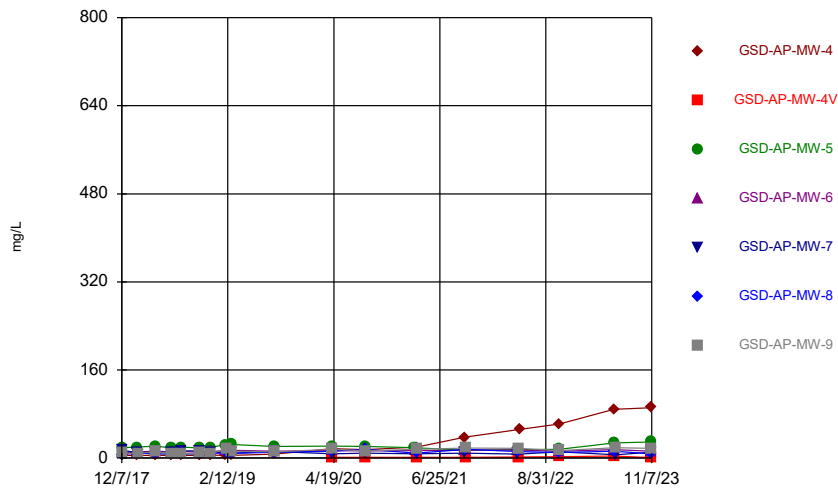
Constituent: Sulfate Analysis Run 1/2/2024 5:36 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



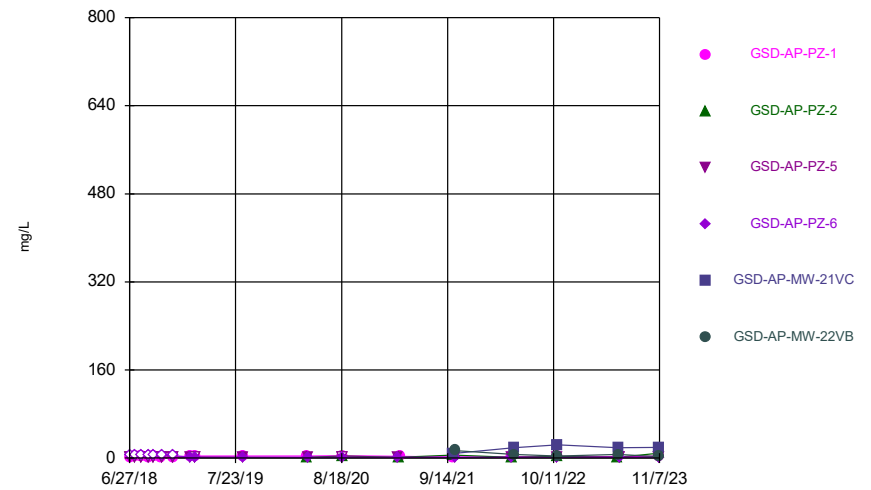
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



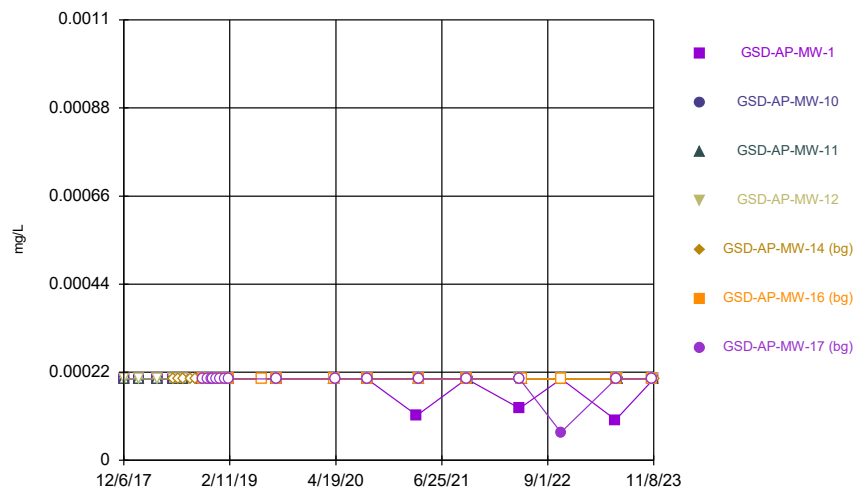
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



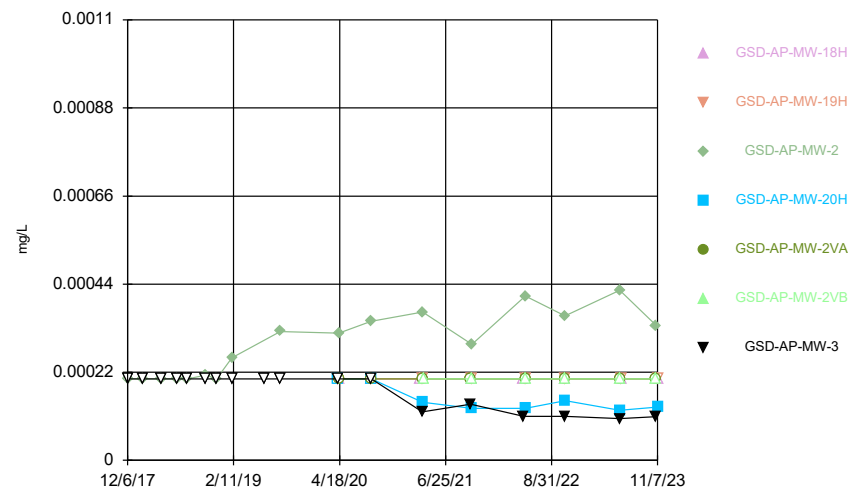
Constituent: Sulfate Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



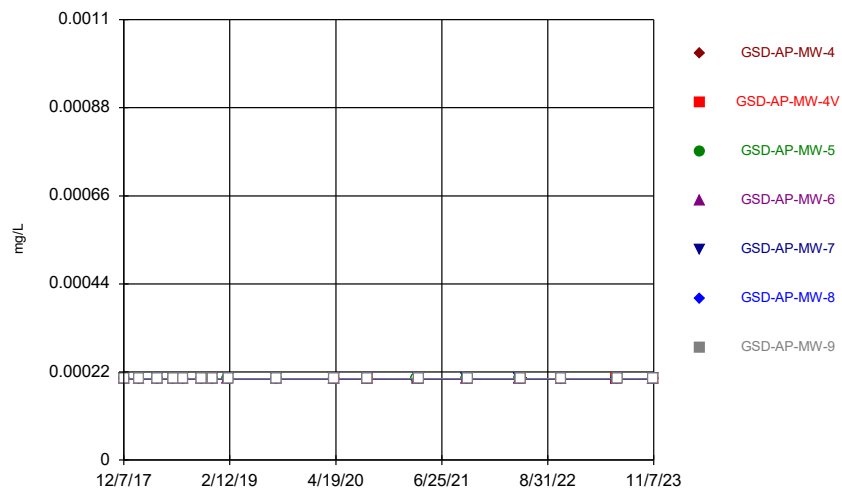
Constituent: Thallium Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



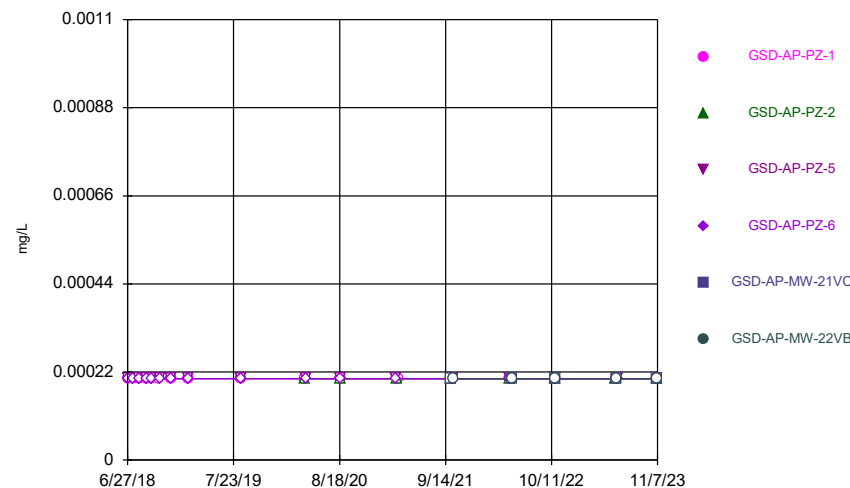
Constituent: Thallium Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



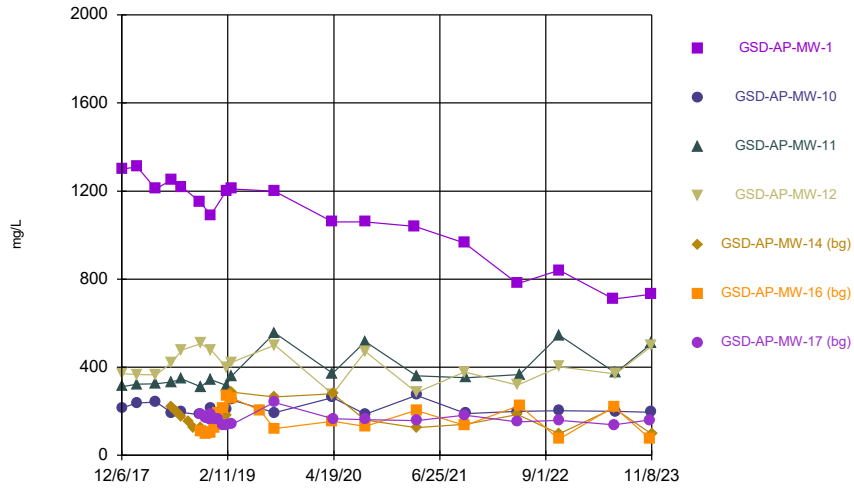
Constituent: Thallium Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series

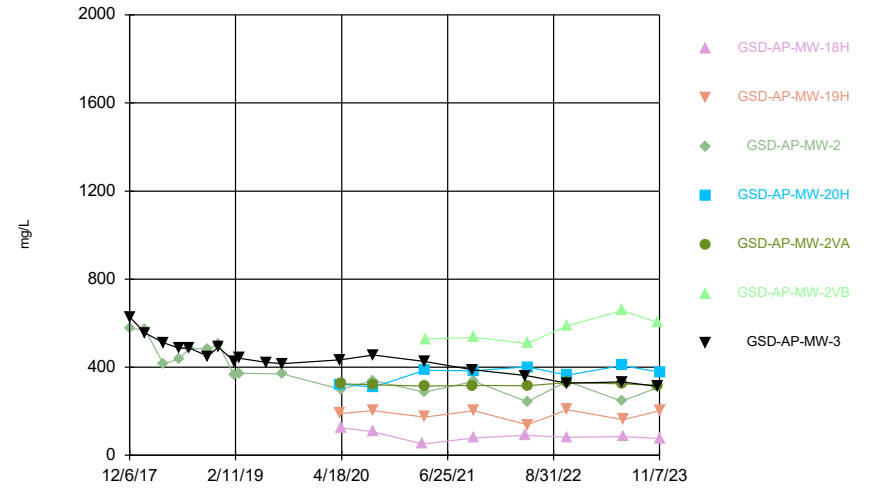


Constituent: Thallium Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

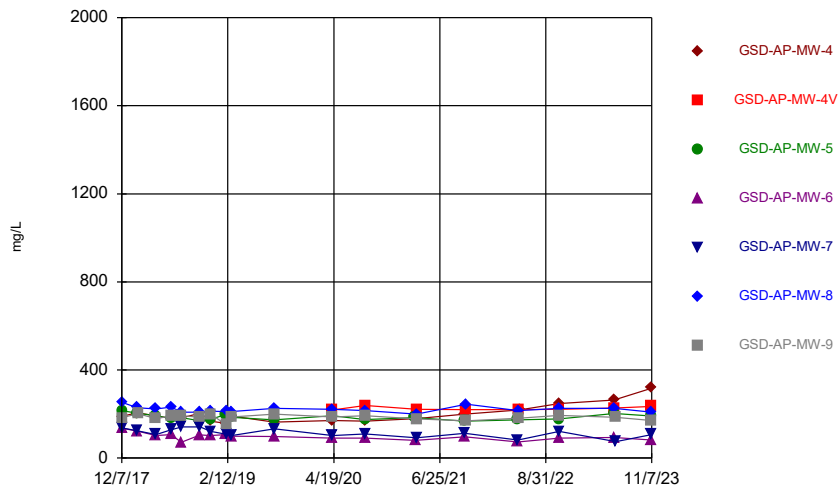
Time Series



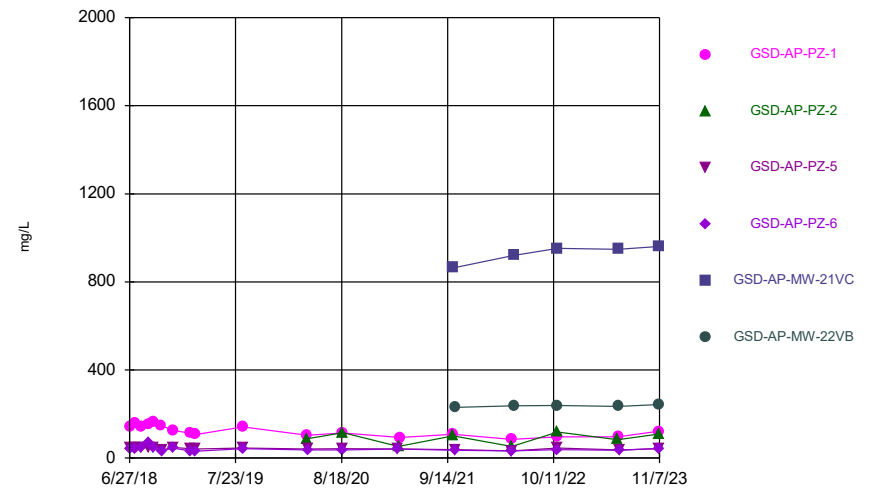
Time Series



Time Series



Time Series



Time Series

Constituent: Antimony (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001015	<0.001015	<0.001015	<0.001015			
2/6/2018	<0.001015						
2/7/2018		<0.001015	<0.001015				
2/8/2018				<0.001015			
4/23/2018	<0.001015						
4/24/2018		<0.001015	<0.001015	<0.001015			
6/26/2018	<0.001015						
6/27/2018		<0.001015	<0.001015	<0.001015	<0.001015		
7/18/2018					<0.001015		
8/6/2018					<0.001015		
8/7/2018	<0.001015	<0.001015					
8/8/2018			<0.001015	<0.001015			
9/5/2018					<0.001015		
9/24/2018					<0.001015		
10/22/2018	<0.001015	<0.001015					
10/23/2018			<0.001015	<0.001015			
10/24/2018					<0.001015	<0.001015	<0.001015
11/14/2018						<0.001015	<0.001015
11/28/2018						<0.001015	<0.001015
12/4/2018	<0.001015	<0.001015	<0.001015				
12/5/2018				<0.001015	<0.001015	<0.001015	<0.001015
12/18/2018						<0.001015	<0.001015
1/3/2019						<0.001015	<0.001015
1/24/2019						0.000922 (J)	<0.001015
2/5/2019	<0.001015				<0.001015	<0.001015	<0.001015
2/6/2019		<0.001015	<0.001015	<0.001015			
6/24/2019						<0.001015	
8/19/2019						<0.001015	<0.001015
8/20/2019					<0.001015		
8/21/2019	<0.001015						
8/22/2019		<0.001015	<0.001015	<0.001015			
4/14/2020			<0.001015	<0.001015			
4/15/2020	<0.001015	<0.001015				<0.001015	
4/16/2020					<0.001015		<0.001015
8/24/2020							<0.001015
8/25/2020	<0.001015				<0.001015	<0.001015	
8/26/2020		<0.001015	<0.001015	<0.001015			
3/16/2021	<0.001015						
3/22/2021					<0.001015	<0.001015	<0.001015
3/23/2021		<0.001015	<0.001015	<0.001015			
10/5/2021	<0.001015			<0.001015			
10/6/2021						<0.001015	<0.001015
10/11/2021		<0.001015					
10/12/2021			<0.001015		<0.001015		
5/9/2022					<0.001015		<0.001015
5/10/2022	<0.001015	<0.001015		<0.001015			
5/17/2022			<0.001015			<0.001015	
10/25/2022						<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015		
6/5/2023	<0.001015						
6/6/2023					<0.001015	<0.001015	<0.001015
6/13/2023		<0.001015	<0.001015	<0.001015			

Time Series

Constituent: Antimony (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						<0.001015	<0.001015
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015			
11/8/2023					<0.001015		

Time Series

Constituent: Antimony (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.001015				<0.001015
2/6/2018			<0.001015				<0.001015
4/23/2018			<0.001015				
4/24/2018							<0.001015
6/27/2018			<0.001015				<0.001015
8/7/2018			<0.001015				<0.001015
10/22/2018			<0.001015				<0.001015
12/3/2018							<0.001015
12/4/2018			<0.001015				
2/5/2019			<0.001015				<0.001015
6/18/2019							<0.001015
8/20/2019			<0.001015				<0.001015
4/13/2020							<0.001015
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.001015		<0.001015		<0.001015		
8/25/2020	<0.001015		<0.001015		<0.001015		
8/26/2020		<0.001015		<0.001015			<0.001015
3/16/2021	<0.001015						
3/22/2021					<0.001015		<0.001015
3/23/2021		<0.001015		<0.001015			
3/24/2021			<0.001015				
3/30/2021						<0.001015	
10/5/2021							<0.001015
10/6/2021					<0.001015		
10/11/2021		<0.001015	<0.001015	<0.001015			
10/12/2021	<0.001015					<0.001015	
5/10/2022	<0.001015						<0.001015
5/16/2022		<0.001015	<0.001015		<0.001015	<0.001015	
5/17/2022				<0.001015			
10/25/2022			0.000538 (J)		0.000539 (J)	<0.001015	
10/26/2022	<0.001015	<0.001015		<0.001015			<0.001015
6/5/2023				<0.001015			<0.001015
6/6/2023			<0.001015				
6/7/2023					<0.001015	<0.001015	
6/12/2023	<0.001015	<0.001015					
11/1/2023			<0.001015		<0.001015	<0.001015	<0.001015
11/7/2023	<0.001015	<0.001015		<0.001015			

Time Series

Constituent: Antimony (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.001015	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.001015	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.001015			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.001015			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.001015			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.001015			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.001015			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.001015			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
3/16/2021			<0.001015				
3/17/2021				<0.001015			
3/23/2021					<0.001015	<0.001015	<0.001015
3/24/2021	<0.001015	<0.001015					
10/5/2021	<0.001015		<0.001015	<0.001015	<0.001015		
10/11/2021		<0.001015					
10/12/2021						<0.001015	<0.001015
5/9/2022			<0.001015				
5/10/2022				<0.001015	<0.001015		
5/11/2022		<0.001015				<0.001015	<0.001015
5/16/2022	<0.001015						
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/5/2023		<0.001015		<0.001015			
6/6/2023	<0.001015						
6/7/2023			<0.001015			<0.001015	
6/12/2023							<0.001015
6/13/2023					<0.001015		
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

Time Series

Constituent: Antimony (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.001015	<0.001015		
7/18/2018	<0.001015		<0.001015	<0.001015		
8/7/2018	<0.001015					
8/8/2018			<0.001015	<0.001015		
9/5/2018	<0.001015		<0.001015	<0.001015		
9/24/2018	<0.001015		<0.001015	<0.001015		
10/22/2018	<0.001015					
10/23/2018			<0.001015	<0.001015		
12/3/2018	<0.001015		<0.001015	<0.001015		
2/5/2019	<0.001015					
2/7/2019			0.00114 (J)	0.00181 (J)		
8/20/2019	<0.001015					
8/21/2019			<0.001015	<0.001015		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.001015	<0.001015		
8/24/2020	<0.001015	<0.001015	<0.001015	<0.001015		
3/16/2021			<0.001015	<0.001015		
3/17/2021		<0.001015				
3/24/2021	<0.001015					
10/5/2021	<0.001015	<0.001015				
10/6/2021					0.00051 (J)	
10/11/2021						0.00167
10/12/2021			<0.001015	<0.001015		
5/9/2022	<0.001015	<0.001015				
5/10/2022			<0.001015	<0.001015		
5/17/2022					0.00051 (J)	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	0.000695 (J)	<0.001015
6/5/2023		<0.001015				
6/6/2023					<0.001015	
6/7/2023	<0.001015					<0.001015
6/13/2023			<0.001015	<0.001015		
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.00179 (J)	0.00247 (J)	0.00279 (J)	<0.000203			
2/6/2018	0.00191 (J)						
2/7/2018		0.00192 (J)	0.00252 (J)				
2/8/2018				<0.000203			
4/23/2018	0.0023 (J)						
4/24/2018		0.00218 (J)	0.00283 (J)	<0.000203			
6/26/2018	0.00306 (J)						
6/27/2018		0.00419 (J)	0.00289 (J)	<0.000203	0.00165 (J)		
7/18/2018					0.00117 (J)		
8/6/2018					<0.005		
8/7/2018	0.00336 (J)	0.00365 (J)					
8/8/2018			0.00265 (J)	<0.000203			
9/5/2018					<0.005		
9/24/2018					0.00148 (J)		
10/22/2018	0.00451 (J)	0.00404 (J)					
10/23/2018			0.00287 (J)	<0.000203			
10/24/2018					<0.005	<0.005	<0.005
11/14/2018						<0.005	<0.005
11/28/2018						0.00124 (J)	<0.005
12/4/2018	0.00471 (J)	0.00332 (J)	0.00271 (J)				
12/5/2018				<0.000203	<0.005	0.00113 (J)	<0.005
12/18/2018						0.00113 (J)	<0.005
1/3/2019						0.00175 (J)	<0.005
1/24/2019						0.00257 (J)	<0.005
2/5/2019	0.00365 (J)				0.00119 (J)	0.00355 (J)	<0.005
2/6/2019		0.00333 (J)	0.00272 (J)	<0.000203			
6/24/2019						0.00474 (J)	
8/19/2019						0.00228 (J)	<0.005
8/20/2019					0.00216 (J)		
8/21/2019	0.00444 (J)						
8/22/2019		0.00394 (J)	0.00229 (J)	<0.000203			
4/14/2020			0.00286 (J)	<0.000203			
4/15/2020	0.00309 (J)	0.00236 (J)				0.0034 (J)	
4/16/2020					0.00483 (J)		<0.005
8/24/2020							<0.005
8/25/2020	0.00435 (J)				0.002 (J)	0.00237 (J)	
8/26/2020		0.00422 (J)	0.00246 (J)	<0.000203			
3/16/2021	0.0029						
3/22/2021					0.00188	0.00614	0.00031
3/23/2021		0.00163	0.00275	<0.000203			
10/5/2021	0.00356			<0.000203			
10/6/2021						0.00207	0.00026
10/11/2021		0.0037					
10/12/2021			0.00272		0.00131		
5/9/2022					0.00274		0.00023
5/10/2022	0.00221	0.00361		<0.000203			
5/17/2022			0.00281			0.00457	
10/25/2022						0.00117	0.000572
10/26/2022	0.00223	0.00414	0.00215	0.000102 (J)	0.00107		
6/5/2023	0.00181						
6/6/2023					0.0016	0.00327	0.000296
6/13/2023		0.00397	0.00283	<0.000203			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						0.000919	0.000235
11/7/2023	0.00166	0.00398	0.00266	0.000117 (J)			
11/8/2023					0.000788		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.809				0.00101 (J)
2/6/2018			0.774				<0.000203
4/23/2018			0.643				
4/24/2018							<0.000203
6/27/2018			1.01				<0.000203
8/7/2018			0.988				<0.000203
10/22/2018			1.01				<0.000203
12/3/2018							<0.000203
12/4/2018			0.553				
2/5/2019			0.74				<0.000203
6/18/2019							<0.000203
8/20/2019			0.825				<0.000203
4/13/2020							<0.000203
4/14/2020		<0.005		0.00287 (J)			
4/15/2020	<0.005		0.709		<0.005		
8/25/2020	<0.005		0.727		0.00135 (J)		
8/26/2020		<0.005		0.00186 (J)			<0.000203
3/16/2021	0.000136 (J)						
3/22/2021					0.00145		0.0002 (J)
3/23/2021		0.000512		0.00226			
3/24/2021			0.489				
3/30/2021						0.000278	
10/5/2021							0.00021
10/6/2021					0.00139		
10/11/2021		0.00085	0.424	0.00191			
10/12/2021	0.00019 (J)					0.00043	
5/10/2022	0.00015 (J)						0.00016 (J)
5/16/2022		0.00018 (J)	0.569		0.00135	0.00039	
5/17/2022				0.002			
10/25/2022			0.555		0.00165	0.000907	
10/26/2022	0.000338	0.000583		0.00151			0.000311
6/5/2023				0.00144			<0.000203
6/6/2023			0.652				
6/7/2023					0.00165	0.0006	
6/12/2023	0.000133 (J)	0.000183 (J)					
11/1/2023			0.542		0.000904	0.000352	0.000144 (J)
11/7/2023	0.000212	0.000242		0.00178			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.0132		<0.000203	<0.000203	<0.000203	0.00313 (J)	0.00112 (J)
2/6/2018	0.0105		<0.000203				
2/8/2018				<0.000203	<0.000203	0.00247 (J)	<0.005
4/24/2018	0.0124						
4/25/2018			<0.000203	<0.000203	<0.000203	0.00291 (J)	<0.005
6/26/2018	0.0132			<0.000203	<0.000203	0.00265 (J)	<0.005
6/27/2018			<0.000203				
8/6/2018	0.013						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	0.00203 (J)	<0.005
10/22/2018	0.0144						
10/23/2018			<0.000203	<0.000203	<0.000203	0.00246 (J)	<0.005
12/3/2018	0.0119			<0.000203			
12/4/2018					<0.000203	0.00328 (J)	
12/5/2018			<0.000203				0.00111 (J)
2/5/2019	0.0107		<0.000203	<0.000203			
2/6/2019					<0.000203	0.00325 (J)	<0.005
8/20/2019	0.0141		<0.000203	<0.000203			
8/21/2019					<0.000203	0.00302 (J)	<0.005
4/13/2020			<0.000203	<0.000203			
4/14/2020						0.00295 (J)	0.00118 (J)
4/15/2020	0.0121	<0.005			<0.000203		
8/24/2020			<0.000203				
8/26/2020	0.0133	<0.005		<0.000203	<0.000203	0.00304 (J)	<0.005
3/16/2021			8.17E-05 (J)				
3/17/2021				<0.000203			
3/23/2021					<0.000203	0.00282	0.00063
3/24/2021	0.011	0.00034					
10/5/2021	0.0147		0.00013 (J)	<0.000203	7E-05 (J)		
10/11/2021		0.00037					
10/12/2021						0.00287	0.00064
5/9/2022			8E-05 (J)				
5/10/2022				<0.000203	<0.000203		
5/11/2022		0.00031				0.00323	0.00055
5/16/2022	0.0132						
10/26/2022	0.0145	0.000446	0.00025	0.000151 (J)	0.000105 (J)	0.0033	0.000618
6/5/2023		0.000411		<0.000203			
6/6/2023	0.0128						
6/7/2023			<0.000203			0.00301	
6/12/2023							0.000545
6/13/2023					<0.000203		
11/7/2023	0.015	0.000502	0.000177 (J)	<0.000203	<0.000203	0.0034	0.00046

Time Series

Constituent: Arsenic (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		<0.000203	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.000203				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.000203	<0.000203	<0.000203		
3/16/2021			8.08E-05 (J)	<0.000203		
3/17/2021		8.26E-05 (J)				
3/24/2021	<0.000203					
10/5/2021	<0.000203	9E-05 (J)				
10/6/2021					0.00162	
10/11/2021						0.00408
10/12/2021			<0.000203	<0.000203		
5/9/2022	<0.000203	0.0001 (J)				
5/10/2022			<0.000203	<0.000203		
5/17/2022					0.0014	0.00303
10/26/2022	0.000164 (J)	0.000188 (J)	<0.000203	0.00015 (J)	0.00122	0.00269
6/5/2023		<0.000203				
6/6/2023					0.000917	
6/7/2023	<0.000203					0.00215
6/13/2023			<0.000203	<0.000203		
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203	0.00081	0.0018

Time Series

Constituent: Barium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.0807	0.308	0.349	0.0501			
2/6/2018	0.0546						
2/7/2018		0.289	0.297				
2/8/2018				0.0375			
4/23/2018	0.0488						
4/24/2018		0.359	0.338	0.0405			
6/26/2018	0.0479						
6/27/2018		0.307	0.338	0.0466	0.0338		
7/18/2018					0.03		
8/6/2018					0.0274		
8/7/2018	0.0402	0.25					
8/8/2018			0.307	0.0448			
9/5/2018					0.0275		
9/24/2018					0.0264		
10/22/2018	0.0427	0.29					
10/23/2018			0.311	0.054			
10/24/2018					0.0276	0.0499	0.218
11/14/2018						0.0458	0.203
11/28/2018						0.0476	0.191
12/4/2018	0.0434	0.305	0.331				
12/5/2018				0.0493	0.0256	0.0475	0.209
12/18/2018						0.0461	0.199
1/3/2019						0.0426	0.176
1/24/2019						0.0485	0.206
2/5/2019	0.0439				0.0314	0.0354	0.168
2/6/2019		0.265	0.286	0.036			
6/24/2019						0.0294	
8/19/2019						0.0314	0.259
8/20/2019					0.0274		
8/21/2019	0.037						
8/22/2019		0.302	0.214	0.0455			
4/14/2020			0.168	0.0279			
4/15/2020	0.0329	0.35				0.028	
4/16/2020					0.0327		0.257
8/24/2020							0.312
8/25/2020	0.0358				0.0291	0.0261	
8/26/2020		0.322	0.165	0.0503			
3/16/2021	0.0331						
3/22/2021					0.0254	0.0278	0.29
3/23/2021		0.395	0.169	0.0315			
10/5/2021	0.0304			0.0417			
10/6/2021						0.0215	0.307
10/11/2021		0.292					
10/12/2021			0.17		0.0268		
5/9/2022					0.0365		0.309
5/10/2022	0.0275	0.318		0.0377			
5/17/2022			0.195			0.0288	
10/25/2022						0.029	0.292
10/26/2022	0.028	0.278	0.117	0.0376	0.0238		
6/5/2023	0.0272						
6/6/2023					0.0423	0.0315	0.278
6/13/2023		0.294	0.126	0.0356			

Time Series

Constituent: Barium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						0.0273	0.294
11/7/2023	0.0259	0.28	0.118	0.0415			
11/8/2023					0.0265		

Time Series

Constituent: Barium (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.0842				0.126
2/6/2018			0.0716				0.0721
4/23/2018			0.0518				
4/24/2018							0.0492
6/27/2018			0.0578				0.0453
8/7/2018			0.0566				0.0431
10/22/2018			0.0536				0.0541
12/3/2018							0.0545
12/4/2018			0.0589				
2/5/2019			0.0418				0.0363
6/18/2019							0.0369
8/20/2019			0.0685				0.0405
4/13/2020							0.0349
4/14/2020		0.153		0.189			
4/15/2020	0.0389		0.0607		0.2		
8/25/2020	0.0388		0.0812		0.135		
8/26/2020		0.201		0.197			0.0363
3/16/2021	0.0243						
3/22/2021					0.114		0.0354
3/23/2021		0.148		0.217			
3/24/2021			0.0676				
3/30/2021						0.313	
10/5/2021							0.0344
10/6/2021					0.12		
10/11/2021		0.17	0.0807	0.134			
10/12/2021	0.0298					0.242	
5/10/2022	0.0361						0.0287
5/16/2022		0.124	0.0974		0.132	0.322	
5/17/2022				0.115			
10/25/2022			0.0888		0.137	0.346	
10/26/2022	0.0349	0.159		0.0993			0.0306
6/5/2023				0.0865			0.0288
6/6/2023			0.115				
6/7/2023					0.154	0.385	
6/12/2023	0.0304	0.101					
11/1/2023			0.136		0.169	0.333	0.0314
11/7/2023	0.0355	0.144		0.0819			

Time Series

Constituent: Barium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.239		0.279	0.0809	0.083	0.244	0.187
2/6/2018	0.206		0.195				
2/8/2018				0.0566	0.0756	0.135	0.148
4/24/2018	0.217						
4/25/2018			0.26	0.0553	0.0764	0.224	0.158
6/26/2018	0.208			0.0604	0.0799	0.181	0.16
6/27/2018			0.249				
8/6/2018	0.189						
8/7/2018			0.216	0.0542			
8/8/2018					0.0791	0.134	0.161
10/22/2018	0.209						
10/23/2018			0.26	0.0608	0.0898	0.17	0.183
12/3/2018	0.214			0.0633			
12/4/2018					0.0789	0.189	
12/5/2018			0.245				0.186
2/5/2019	0.173		0.215	0.0551			
2/6/2019					0.0685	0.226	0.128
8/20/2019	0.188		0.238	0.0731			
8/21/2019					0.0946	0.194	0.183
4/13/2020			0.241	0.0635			
4/14/2020						0.262	0.186
4/15/2020	0.159	0.457			0.0653		
8/24/2020			0.238				
8/26/2020	0.181	0.534		0.0771	0.0845	0.235	0.202
3/16/2021			0.217				
3/17/2021				0.0656			
3/23/2021					0.0602	0.249	0.157
3/24/2021	0.171	0.477					
10/5/2021	0.202		0.221	0.0741	0.0716		
10/11/2021		0.483					
10/12/2021						0.203	0.147
5/9/2022			0.236				
5/10/2022				0.0762	0.0527		
5/11/2022		0.525				0.32	0.16
5/16/2022	0.23						
10/26/2022	0.239	0.474	0.231	0.0702	0.0852	0.224	0.154
6/5/2023		0.521		0.0809			
6/6/2023	0.254						
6/7/2023			0.226			0.303	
6/12/2023							0.146
6/13/2023					0.0544		
11/7/2023	0.257	0.484	0.248	0.0759	0.0713	0.323	0.133

Time Series

Constituent: Barium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	0.115		0.154	0.0298		
7/18/2018	0.116		0.15	0.0312		
8/7/2018	0.0906					
8/8/2018			0.119	0.0265		
9/5/2018	0.116		0.123	0.0291		
9/24/2018	0.125		0.112	0.029		
10/22/2018	0.102					
10/23/2018			0.125	0.0298		
12/3/2018	0.0784		0.126	0.0307		
2/5/2019	0.0578					
2/7/2019			0.0602	0.028		
8/20/2019	0.097					
8/21/2019			0.085	0.0312		
4/13/2020	0.0529	0.0832				
4/15/2020			0.0535	0.0296		
8/24/2020	0.0733	0.132	0.0565	0.031		
3/16/2021			0.0553	0.0293		
3/17/2021		0.045				
3/24/2021	0.0525					
10/5/2021	0.0811	0.118				
10/6/2021					0.374	
10/11/2021						0.238
10/12/2021			0.0494	0.0303		
5/9/2022	0.057	0.0593				
5/10/2022			0.0497	0.0309		
5/17/2022					0.435	0.276
10/26/2022	0.0682	0.133	0.0474	0.0282	0.431	0.257
6/5/2023		0.0862				
6/6/2023					0.433	
6/7/2023	0.0635					0.253
6/13/2023			0.0456	0.0277		
11/7/2023	0.0787	0.13	0.0473	0.0303	0.441	0.268

Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001015	<0.001015	<0.001015	<0.001015			
2/6/2018	<0.001015						
2/7/2018		<0.001015	<0.001015				
2/8/2018				<0.001015			
4/23/2018	<0.001015						
4/24/2018		<0.001015	<0.001015	<0.001015			
6/26/2018	<0.001015						
6/27/2018		<0.001015	<0.001015	<0.001015	0.00134 (J)		
7/18/2018					0.00133 (J)		
8/6/2018					0.00129 (J)		
8/7/2018	<0.001015	<0.001015					
8/8/2018			<0.001015	<0.001015			
9/5/2018					0.00106 (J)		
9/24/2018					0.000991 (J)		
10/22/2018	<0.001015	<0.001015					
10/23/2018			<0.001015	<0.001015			
10/24/2018					0.00082 (J)	<0.001015	<0.001015
11/14/2018						<0.001015	<0.001015
11/28/2018						0.00133 (J)	<0.001015
12/4/2018	<0.001015	<0.001015	<0.001015				
12/5/2018				<0.001015	0.00141 (J)	<0.001015	<0.001015
12/18/2018						0.000761 (J)	<0.001015
1/3/2019						0.000677 (J)	<0.001015
1/24/2019						0.000703 (J)	<0.001015
2/5/2019	<0.001015				0.0011 (J)	0.000711 (J)	<0.001015
2/6/2019		<0.001015	<0.001015	<0.001015			
6/24/2019						0.000605 (J)	
8/19/2019						<0.001015	<0.001015
8/20/2019					0.00129 (J)		
8/21/2019	<0.001015						
8/22/2019		<0.001015	<0.001015	<0.001015			
4/14/2020			<0.001015	<0.001015			
4/15/2020	<0.001015	<0.001015				<0.001015	
4/16/2020					0.00157 (J)		<0.001015
8/24/2020							<0.001015
8/25/2020	<0.001015				0.00117 (J)	<0.001015	
8/26/2020		<0.001015	<0.001015	<0.001015			
3/16/2021	<0.001015						
3/22/2021					0.000918 (J)	0.000537 (J)	<0.001015
3/23/2021		<0.001015	<0.001015	<0.001015			
10/5/2021	<0.001015			<0.001015			
10/6/2021						0.00049 (J)	<0.001015
10/11/2021		<0.001015					
10/12/2021			<0.001015		0.00115		
5/9/2022					0.00126		<0.001015
5/10/2022	<0.001015	<0.001015		<0.001015			
5/17/2022			<0.001015			0.00061 (J)	
10/25/2022						<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	0.000798 (J)		
6/5/2023	<0.001015						
6/6/2023					0.00139	0.000707 (J)	0.000473 (J)
6/13/2023		<0.001015	<0.001015	<0.001015			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						<0.001015	<0.001015
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015			
11/8/2023					0.000778 (J)		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.001015				<0.001015
2/6/2018			<0.001015				<0.001015
4/23/2018			<0.001015				
4/24/2018							<0.001015
6/27/2018			<0.001015				<0.001015
8/7/2018			<0.001015				<0.001015
10/22/2018			<0.001015				<0.001015
12/3/2018							<0.001015
12/4/2018			<0.001015				
2/5/2019			<0.001015				<0.001015
6/18/2019							<0.001015
8/20/2019			<0.001015				<0.001015
4/13/2020							<0.001015
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.001015		<0.001015		<0.001015		
8/25/2020	<0.001015		<0.001015		<0.001015		
8/26/2020		<0.001015		<0.001015			<0.001015
3/16/2021	<0.001015						
3/22/2021					<0.001015		<0.001015
3/23/2021		<0.001015		<0.001015			
3/24/2021			<0.001015				
3/30/2021						<0.001015	
10/5/2021							<0.001015
10/6/2021					<0.001015		
10/11/2021		<0.001015	<0.001015	<0.001015			
10/12/2021	<0.001015					<0.001015	
5/10/2022	<0.001015						<0.001015
5/16/2022		<0.001015	<0.001015		<0.001015	<0.001015	
5/17/2022				<0.001015			
10/25/2022			<0.001015		<0.001015	<0.001015	
10/26/2022	<0.001015	<0.001015		<0.001015			<0.001015
6/5/2023				<0.001015			<0.001015
6/6/2023			<0.001015				
6/7/2023				<0.001015	<0.001015		
6/12/2023	<0.001015	<0.001015					
11/1/2023			<0.001015		<0.001015	<0.001015	<0.001015
11/7/2023	<0.001015	<0.001015		<0.001015			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.001015	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.001015	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.001015			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.001015			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.001015			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.001015			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.001015			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.001015			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
3/16/2021			<0.001015				
3/17/2021				<0.001015			
3/23/2021					<0.001015	<0.001015	<0.001015
3/24/2021	<0.001015	<0.001015					
10/5/2021	<0.001015		<0.001015	<0.001015	<0.001015		
10/11/2021		<0.001015					
10/12/2021						<0.001015	<0.001015
5/9/2022			<0.001015				
5/10/2022				<0.001015	<0.001015		
5/11/2022		<0.001015				<0.001015	<0.001015
5/16/2022	<0.001015						
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/5/2023		<0.001015		<0.001015			
6/6/2023	<0.001015						
6/7/2023			<0.001015			<0.001015	
6/12/2023							<0.001015
6/13/2023					<0.001015		
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

Time Series

Constituent: Beryllium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.001015	<0.001015		
7/18/2018	<0.001015		<0.001015	<0.001015		
8/7/2018	<0.001015					
8/8/2018			<0.001015	<0.001015		
9/5/2018	<0.001015		<0.001015	<0.001015		
9/24/2018	<0.001015		<0.001015	<0.001015		
10/22/2018	<0.001015					
10/23/2018			<0.001015	<0.001015		
12/3/2018	<0.001015		<0.001015	<0.001015		
2/5/2019	<0.001015					
2/7/2019			<0.001015	<0.001015		
8/20/2019	<0.001015					
8/21/2019			<0.001015	<0.001015		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.001015	<0.001015		
8/24/2020	<0.001015	<0.001015	<0.001015	<0.001015		
3/16/2021			<0.001015	<0.001015		
3/17/2021		<0.001015				
3/24/2021	<0.001015					
10/5/2021	<0.001015	<0.001015				
10/6/2021					<0.001015	
10/11/2021						<0.001015
10/12/2021			<0.001015	<0.001015		
5/9/2022	<0.001015	<0.001015				
5/10/2022			<0.001015	<0.001015		
5/17/2022					<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/5/2023		<0.001015				
6/6/2023					<0.001015	
6/7/2023	<0.001015					<0.001015
6/13/2023			<0.001015	<0.001015		
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

Time Series

Constituent: Boron (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	1.28	0.135	0.12	0.0605 (J)			
2/6/2018	1.29						
2/7/2018		0.12	0.109				
2/8/2018				0.0527 (J)			
4/23/2018	1.21						
4/24/2018		0.144	0.124	0.0476 (J)			
6/26/2018	1.25						
6/27/2018		0.0903 (J)	0.111	0.0539 (J)	<0.1015		
7/18/2018					<0.1015		
8/6/2018					<0.1015		
8/7/2018	1.21	0.106					
8/8/2018			0.135	0.0637 (J)			
9/5/2018					<0.1015		
9/24/2018					<0.1015		
10/22/2018	1.22	0.107					
10/23/2018			0.114	0.0696 (J)			
10/24/2018					<0.1015	0.0261 (J)	0.0357 (J)
11/14/2018						0.0209 (J)	0.0348 (J)
11/28/2018						0.0239 (J)	0.0313 (J)
12/4/2018	1.08	0.103	0.124				
12/5/2018				0.0652 (J)	<0.1015	<0.1015	0.0363 (J)
12/18/2018						<0.1015	0.033 (J)
1/3/2019						0.0209 (J)	0.036 (J)
1/24/2019						0.0271 (J)	0.0307 (J)
2/5/2019	1.2				<0.1015	0.0245 (J)	0.0306 (J)
2/6/2019		0.105	0.112	0.0511 (J)			
2/26/2019	1.15	0.146					
2/27/2019			0.14	0.0494 (J)			
2/28/2019					<0.1015	<0.1015	0.0206 (J)
6/24/2019						<0.1015	
8/19/2019						<0.1015	0.0341 (J)
8/20/2019					<0.1015		
8/21/2019	1.24						
8/22/2019		0.0951 (J)	0.272	0.0625 (J)			
4/14/2020			0.154	0.0377 (J)			
4/15/2020	1.13	0.164				<0.1015	
4/16/2020					<0.1015		0.0331 (J)
8/24/2020							0.0303 (J)
8/25/2020	1.11				<0.1015	<0.1015	
8/26/2020		0.108	0.257	0.0698 (J)			
3/16/2021	1.08						
3/22/2021					<0.1015	<0.1015	0.0333 (J)
3/23/2021		0.188	0.142	0.0452 (J)			
10/5/2021	1.02			0.0661 (J)			
10/6/2021						<0.1015	0.0305 (J)
10/11/2021		0.09 (J)					
10/12/2021			0.125		<0.1015		
5/9/2022					<0.1015		0.0347 (J)
5/10/2022	0.954	0.097 (J)		0.066 (J)			
5/17/2022			0.139			<0.1015	
10/25/2022						<0.1015	0.0308 (J)
10/26/2022	0.977	0.0868 (J)	0.306	0.0995 (J)	<0.1015		

Time Series

Constituent: Boron (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
6/5/2023	0.88						
6/6/2023					<0.1015	<0.1015	<0.1015
6/13/2023		0.0864 (J)	0.143	0.0902 (J)			
10/31/2023						<0.1015	0.0316 (J)
11/7/2023	0.934	0.089 (J)	0.238	0.183			
11/8/2023					<0.1015		

Time Series

Constituent: Boron (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.758				0.959
2/6/2018			0.733				1.04
4/23/2018			0.608				
4/24/2018							0.979
6/27/2018			0.619				0.982
8/7/2018			0.697				1
10/22/2018			0.754				1.08
12/3/2018							1.05
12/4/2018			0.737				
2/5/2019			0.575				1.01
2/25/2019							1.08
2/26/2019			0.566				
6/18/2019							1.09
8/20/2019			0.566				1.06
4/13/2020							1.19
4/14/2020		0.448		0.308			
4/15/2020	0.124		0.461		0.587		
8/25/2020	0.105		0.528		0.552		
8/26/2020		0.39		0.308			1.16
3/16/2021	0.0545 (J)						
3/22/2021					0.537		1.13
3/23/2021		0.41		0.419			
3/24/2021			0.437				
3/30/2021						0.605	
10/5/2021							1.01
10/6/2021					0.54		
10/11/2021		0.328	0.459	0.504			
10/12/2021	0.0717 (J)					0.617	
5/10/2022	0.0883 (J)						0.998
5/16/2022		0.336	0.381		0.556	0.622	
5/17/2022				0.632			
10/25/2022			0.5		0.555	0.628	
10/26/2022	0.0784 (J)	0.327		0.584			0.85
6/5/2023				0.771			0.858
6/6/2023			0.367				
6/7/2023					0.576	0.651	
6/12/2023	0.0772 (J)	0.34					
11/1/2023			0.453		0.603	0.65	0.792
11/7/2023	0.0703 (J)	0.35		0.74			

Time Series

Constituent: Boron (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.515		0.566	0.063 (J)	0.102	0.0828 (J)	0.0614 (J)
2/6/2018	0.541		0.614				
2/8/2018				0.0508 (J)	0.0787 (J)	0.0691 (J)	0.0531 (J)
4/24/2018	0.475						
4/25/2018			0.498	0.0548 (J)	0.0734 (J)	0.0571 (J)	0.0551 (J)
6/26/2018	0.444			0.0571 (J)	0.094 (J)	0.0634 (J)	0.0568 (J)
6/27/2018			0.446				
8/6/2018	0.474						
8/7/2018			0.442	0.0571 (J)			
8/8/2018					0.103	0.0659 (J)	0.0524 (J)
10/22/2018	0.496						
10/23/2018			0.436	0.0636 (J)	0.106	0.0666 (J)	0.0576 (J)
12/3/2018	0.51			0.0568 (J)			
12/4/2018					0.085 (J)	0.0617 (J)	
12/5/2018			0.456				0.0561 (J)
2/5/2019	0.43		0.453	0.0509 (J)			
2/6/2019					0.0733 (J)	0.0586 (J)	0.0627 (J)
2/26/2019	0.411			0.0527 (J)			
2/27/2019			0.457		0.0548 (J)	0.0428 (J)	0.0474 (J)
8/20/2019	0.399		0.378	0.0608 (J)			
8/21/2019					0.091 (J)	0.0569 (J)	0.0524 (J)
4/13/2020			0.359	0.0561 (J)			
4/14/2020						0.0474 (J)	0.0562 (J)
4/15/2020	0.344	0.0634 (J)			0.0534 (J)		
8/24/2020			0.329				
8/26/2020	0.398	0.0611 (J)		0.0633 (J)	0.0665 (J)	0.0501 (J)	0.0565 (J)
3/16/2021			0.328				
3/17/2021				0.0563 (J)			
3/23/2021					0.0587 (J)	0.0476 (J)	0.0609 (J)
3/24/2021	0.326	0.0618 (J)					
10/5/2021	0.344		0.26	0.0649 (J)	0.0673 (J)		
10/11/2021		0.0596 (J)					
10/12/2021						0.0462 (J)	0.0632 (J)
5/9/2022			0.261				
5/10/2022				0.0681 (J)	0.0465 (J)		
5/11/2022		0.062 (J)				0.037 (J)	0.0636 (J)
5/16/2022	0.342						
10/26/2022	0.371	0.0618 (J)	0.23	0.0788 (J)	0.0839 (J)	0.0526 (J)	0.0595 (J)
6/5/2023		0.0624 (J)		0.0776 (J)			
6/6/2023	0.415						
6/7/2023			0.234			0.0355 (J)	
6/12/2023							0.062 (J)
6/13/2023					0.0428 (J)		
11/7/2023	0.466	0.0642 (J)	0.227	0.0957 (J)	0.078 (J)	0.048 (J)	0.0693 (J)

Time Series

Constituent: Boron (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21V	GSD-AP-MW-22VB
6/27/2018	<0.1015		<0.1015	<0.1015		
7/18/2018	<0.1015		<0.1015	<0.1015		
8/7/2018	<0.1015					
8/8/2018			<0.1015	<0.1015		
9/5/2018	<0.1015		<0.1015	<0.1015		
9/24/2018	<0.1015		<0.1015	<0.1015		
10/22/2018	<0.1015					
10/23/2018			<0.1015	<0.1015		
12/3/2018	<0.1015		<0.1015	<0.1015		
2/5/2019	<0.1015					
2/7/2019			<0.1015	<0.1015		
2/25/2019	<0.1015		<0.1015	<0.1015		
8/20/2019	<0.1015					
8/21/2019			<0.1015	<0.1015		
4/13/2020	<0.1015	<0.1015				
4/15/2020			<0.1015	<0.1015		
8/24/2020	<0.1015	<0.1015	<0.1015	<0.1015		
3/16/2021			<0.1015	<0.1015		
3/17/2021		<0.1015				
3/24/2021	<0.1015					
10/5/2021	<0.1015	<0.1015				
10/6/2021					0.532	
10/11/2021						0.378
10/12/2021			<0.1015	<0.1015		
5/9/2022	<0.1015	<0.1015				
5/10/2022			<0.1015	<0.1015		
5/17/2022					0.548	0.385
10/26/2022	<0.1015	<0.1015	<0.1015	<0.1015	0.559	0.4
6/5/2023		<0.1015				
6/6/2023					0.569	
6/7/2023	<0.1015					0.361
6/13/2023			<0.1015	<0.1015		
11/7/2023	<0.1015	<0.1015	<0.1015	<0.1015	0.58	0.432

Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.000203	<0.000203	<0.000203	0.000596 (J)			
2/6/2018	<0.000203						
2/7/2018		<0.000203	<0.000203				
2/8/2018				0.00064 (J)			
4/23/2018	<0.000203						
4/24/2018		<0.000203	<0.000203	0.000702 (J)			
6/26/2018	<0.000203						
6/27/2018		<0.000203	<0.000203	0.000732 (J)	0.00064 (J)		
7/18/2018					0.000679 (J)		
8/6/2018					0.000536 (J)		
8/7/2018	<0.000203	<0.000203					
8/8/2018			<0.000203	0.000587 (J)			
9/5/2018					0.000479 (J)		
9/24/2018					0.00039 (J)		
10/22/2018	<0.000203	<0.000203					
10/23/2018			<0.000203	0.000552 (J)			
10/24/2018					0.000436 (J)	0.000307 (J)	<0.000203
11/14/2018						0.000417 (J)	<0.000203
11/28/2018						0.000387 (J)	<0.000203
12/4/2018	<0.000203	<0.000203	<0.000203				
12/5/2018				0.000661 (J)	0.000307 (J)	0.000317 (J)	<0.000203
12/18/2018						0.000438 (J)	<0.000203
1/3/2019						0.000703 (J)	<0.000203
1/24/2019						0.000736 (J)	<0.000203
2/5/2019	<0.000203				0.000515 (J)	0.00101	<0.000203
2/6/2019		<0.000203	<0.000203	0.000583 (J)			
6/24/2019						0.000686 (J)	
8/19/2019						0.000499 (J)	<0.000203
8/20/2019					0.000622 (J)		
8/21/2019	<0.000203						
8/22/2019		<0.000203	<0.000203	0.000755 (J)			
4/14/2020			<0.000203	0.000425 (J)			
4/15/2020	<0.000203	<0.000203				0.000697 (J)	
4/16/2020					0.00101		<0.000203
8/24/2020							<0.000203
8/25/2020	<0.000203				0.000584 (J)	0.000507 (J)	
8/26/2020		<0.000203	<0.000203	0.000618 (J)			
3/16/2021	0.000102 (J)						
3/22/2021					0.000407	0.000852	<0.000203
3/23/2021		<0.000203	<0.000203	0.000405			
10/5/2021	0.0001 (J)			0.00037			
10/6/2021						0.00068	<0.000203
10/11/2021		<0.000203					
10/12/2021			<0.000203		0.00059		
5/9/2022					0.00063		<0.000203
5/10/2022	0.00022	<0.000203		0.00033			
5/17/2022			<0.000203			0.00108	
10/25/2022						0.000203 (J)	0.000132 (J)
10/26/2022	0.00013 (J)	<0.000203	<0.000203	0.000299	0.000245		
6/5/2023	0.000275						
6/6/2023					0.00062	0.000937	<0.000203
6/13/2023		<0.000203	<0.000203	0.000334			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						0.000203	<0.000203
11/7/2023	0.000155 (J)	<0.000203	<0.000203	0.000372			
11/8/2023					0.000403		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.000203				<0.000203
2/6/2018			<0.000203				<0.000203
4/23/2018			<0.000203				
4/24/2018							<0.000203
6/27/2018			<0.000203				<0.000203
8/7/2018			<0.000203				<0.000203
10/22/2018			<0.000203				<0.000203
12/3/2018							<0.000203
12/4/2018			<0.000203				
2/5/2019			<0.000203				<0.000203
6/18/2019							<0.000203
8/20/2019			<0.000203				<0.000203
4/13/2020							0.000438 (J)
4/14/2020		<0.000203		<0.000203			
4/15/2020	<0.000203		<0.000203		<0.000203		
8/25/2020	<0.000203		<0.000203		<0.000203		
8/26/2020		<0.000203		<0.000203			<0.000203
3/16/2021	<0.000203						
3/22/2021					<0.000203		0.00039
3/23/2021		<0.000203		<0.000203			
3/24/2021			6.88E-05 (J)				
3/30/2021						<0.000203	
10/5/2021							0.00021
10/6/2021					<0.000203		
10/11/2021		0.00012 (J)	<0.000203	<0.000203			
10/12/2021	<0.000203					<0.000203	
5/10/2022	<0.000203						0.00035
5/16/2022		0.00015 (J)	<0.000203		<0.000203	<0.000203	
5/17/2022				<0.000203			
10/25/2022			<0.000203		<0.000203	<0.000203	
10/26/2022	<0.000203	<0.000203		<0.000203			0.000147 (J)
6/5/2023				<0.000203			0.00035
6/6/2023			<0.000203				
6/7/2023					<0.000203	<0.000203	
6/12/2023	<0.000203	8.4E-05 (J)					
11/1/2023			<0.000203		<0.000203	<0.000203	0.000212
11/7/2023	<0.000203	<0.000203		<0.000203			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
2/6/2018	<0.000203		<0.000203				
2/8/2018				<0.000203	<0.000203	<0.000203	<0.000203
4/24/2018	<0.000203						
4/25/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/26/2018	<0.000203			<0.000203	<0.000203	<0.000203	<0.000203
6/27/2018			<0.000203				
8/6/2018	<0.000203						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	<0.000203	<0.000203
10/22/2018	<0.000203						
10/23/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018	<0.000203			<0.000203			
12/4/2018					<0.000203	<0.000203	
12/5/2018			<0.000203				<0.000203
2/5/2019	<0.000203		<0.000203	<0.000203			
2/6/2019					<0.000203	<0.000203	<0.000203
8/20/2019	<0.000203		<0.000203	<0.000203			
8/21/2019					<0.000203	<0.000203	<0.000203
4/13/2020			<0.000203	<0.000203			
4/14/2020						<0.000203	<0.000203
4/15/2020	<0.000203	<0.000203			<0.000203		
8/24/2020			<0.000203				
8/26/2020	<0.000203	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
3/16/2021			<0.000203				
3/17/2021				<0.000203			
3/23/2021					9.7E-05 (J)	8.32E-05 (J)	<0.000203
3/24/2021	<0.000203	<0.000203					
10/5/2021	<0.000203		<0.000203	<0.000203	<0.000203		
10/11/2021		<0.000203					
10/12/2021						<0.000203	<0.000203
5/9/2022			<0.000203				
5/10/2022				<0.000203	<0.000203		
5/11/2022		<0.000203				7E-05 (J)	<0.000203
5/16/2022	<0.000203						
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/5/2023		<0.000203		<0.000203			
6/6/2023	<0.000203						
6/7/2023			<0.000203			<0.000203	
6/12/2023							<0.000203
6/13/2023					0.000189 (J)		
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

Time Series

Constituent: Cadmium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21V	GSD-AP-MW-22VB
6/27/2018	<0.000203		0.000304 (J)	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.000203				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.000203	<0.000203	<0.000203		
3/16/2021			<0.000203	<0.000203		
3/17/2021		<0.000203				
3/24/2021	<0.000203					
10/5/2021	<0.000203	<0.000203				
10/6/2021					<0.000203	
10/11/2021						<0.000203
10/12/2021			8E-05 (J)	<0.000203		
5/9/2022	<0.000203	<0.000203				
5/10/2022			<0.000203	<0.000203		
5/17/2022					<0.000203	<0.000203
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/5/2023		<0.000203				
6/6/2023					<0.000203	
6/7/2023	<0.000203					<0.000203
6/13/2023			<0.000203	<0.000203		
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

Time Series

Constituent: Calcium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	271	42	70	49			
2/6/2018	275						
2/7/2018		47.6	72.4				
2/8/2018				50			
4/23/2018	269						
4/24/2018		50.1	72.3	50.5			
6/26/2018	268						
6/27/2018		37.1	73.1	56.3	16.6		
7/18/2018					15.3		
8/6/2018					13.8		
8/7/2018	259	37.4					
8/8/2018			76	65.7			
9/5/2018					12.1		
9/24/2018					11.8		
10/22/2018	240	36.3					
10/23/2018			70.2	68.3			
10/24/2018					10.2	18	28.3
11/14/2018						14.9	27.5
11/28/2018						14.8	20.7
12/4/2018	254	42.1	74				
12/5/2018				64.3	9.14	14.8	25.3
12/18/2018						16.4	20.9
1/3/2019						19.7	18.5
1/24/2019						19.6	17
2/5/2019	292				15.1	20.8	17.1
2/6/2019		41.3	73.1	52.2			
2/26/2019	254	53.3					
2/27/2019			82.2	60.2			
2/28/2019					21.4	21.5	18.6
6/24/2019						18.4	
8/19/2019						12.8	25.3
8/20/2019					14.4		
8/21/2019	272						
8/22/2019		38.5	133	89.4			
4/14/2020			82.4	40			
4/15/2020	231	54.1				13.1	
4/16/2020					20.1		30.7
8/24/2020							30.8
8/25/2020	218				13.1	12.2	
8/26/2020		37.8	111	68.4			
3/16/2021	218						
3/22/2021					12.2	18.4	31
3/23/2021		57	75.9	42			
10/5/2021	198			55.8			
10/6/2021						13.4	31
10/11/2021		38.2					
10/12/2021			78.6		11.8		
5/9/2022					14.5		28.4
5/10/2022	166	42.2		48.2			
5/17/2022			80.6			19.7	
10/25/2022						8.46	30.700001
10/26/2022	200	39.5	129	60.200001	8.97		

Time Series

Constituent: Calcium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
6/5/2023	166						
6/6/2023					14.9	17.200001	23
6/13/2023		36.400002	94.5	53.200001			
10/31/2023						8.31	28.200001
11/7/2023	192	38.200001	113	85.199997			
11/8/2023					9.1		

Time Series

Constituent: Calcium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			128				125
2/6/2018			130				110
4/23/2018			95.9				
4/24/2018							88.8
6/27/2018			99.4				80.8
8/7/2018			107				88.5
10/22/2018			107				92.7
12/3/2018							105
12/4/2018			120				
2/5/2019			80.6				68.6
2/25/2019							70.6
2/26/2019			79.6				
6/18/2019							80.5
8/20/2019			92.3				74.1
4/13/2020							69.5
4/14/2020		32.9		51.5			
4/15/2020	19.1		69.2		5		
8/25/2020	14.9		80.5		4.97		
8/26/2020		39.3		47.6			75.7
3/16/2021	5.77						
3/22/2021					5.71		64.9
3/23/2021		31.7		57.6			
3/24/2021			61.5				
3/30/2021						3.71	
10/5/2021							65.9
10/6/2021					5.38		
10/11/2021		40	87.1	63.4			
10/12/2021	10.3					3.96	
5/10/2022	12.4						58.5
5/16/2022		26.9	58.2		5.22	3.81	
5/17/2022				74.7			
10/25/2022			86.900002		5.52	4.99	
10/26/2022	10	51.599998		76.300003			55.299999
6/5/2023				70.5			55.400002
6/6/2023			60.700001				
6/7/2023					5.05	6.41	
6/12/2023	10.9	28					
11/1/2023			91		4.52	5.32	63.099998
11/7/2023	8.62	39.700001		64.699997			

Time Series

Constituent: Calcium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	30.1		48.2	29.8	23.4	66.1	38.7
2/6/2018	30.6		47.8				
2/8/2018				24.3	20.1	58	38.8
4/24/2018	27.8						
4/25/2018			41.8	19.8	17.4	56.3	40.3
6/26/2018	26.2			17.8	21.8	57.7	39.9
6/27/2018			36.9				
8/6/2018	27.5						
8/7/2018			37.6	18.3			
8/8/2018					25.4	51.2	42.3
10/22/2018	27.7						
10/23/2018			35.3	18.1	25.6	50.9	39.8
12/3/2018	32.3			16.6			
12/4/2018					19	51.9	
12/5/2018			36.3				43.8
2/5/2019	25.5		36.6	14.5			
2/6/2019					16.4	55	34.9
2/26/2019	26.4			16			
2/27/2019			39.6		15.6	53.4	42.5
8/20/2019	23.5		33.7	15.1			
8/21/2019					23.5	71.5	50.9
4/13/2020			43	12.5			
4/14/2020						56.2	43.6
4/15/2020	22	23.9			14		
8/24/2020			35.5				
8/26/2020	22.8	23.5		12.9	16.7	55.5	43.2
3/16/2021			38.1				
3/17/2021				11.3			
3/23/2021					12.5	48.9	38.1
3/24/2021	23.1	22.9					
10/5/2021	27.4		36	11.4	15.9		
10/11/2021		23					
10/12/2021						66.3	35.4
5/9/2022			38.4				
5/10/2022				10.8	9.95		
5/11/2022		22.6				61.9	36.9
5/16/2022	30.7						
10/26/2022	33.599998	23	39.599998	12.2	21.4	63.700001	47.700001
6/5/2023		23		10.6			
6/6/2023	39.799999						
6/7/2023			46.5			56.299999	
6/12/2023							37.799999
6/13/2023					8.71		
11/7/2023	48.599998	23.6	44.700001	11.8	17	58	35.400002

Time Series

Constituent: Calcium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	39.4		4.56	3.89		
7/18/2018	38.4		3.92	3.8		
8/7/2018	36.7					
8/8/2018			3.74	3.89		
9/5/2018	43.6		3.38	3.78		
9/24/2018	44.5		3.25	3.73		
10/22/2018	45					
10/23/2018			3.37	3.79		
12/3/2018	33.7		3.67	3.79		
2/5/2019	30.1					
2/7/2019			2.89	3.75		
2/25/2019	25.6		2.95	3.81		
8/20/2019	38.3					
8/21/2019			3.04	3.71		
4/13/2020	25.9	16.1				
4/15/2020			2.93	3.56		
8/24/2020	29	24.8	2.94	3.45		
3/16/2021			2.9	3.44		
3/17/2021		5.21				
3/24/2021	22.2					
10/5/2021	25.4	17.6				
10/6/2021					3.46	
10/11/2021						9.35
10/12/2021			2.94	3.29		
5/9/2022	18.9	7.02				
5/10/2022			2.87	3.24		
5/17/2022					3.3	9.99
10/26/2022	23.1	27.5	3.09	3.42	3.6	9.75
6/5/2023		13.4				
6/6/2023					3.22	
6/7/2023	20.9					10
6/13/2023			2.82	3.14		
11/7/2023	30.700001	24.9	3.02	3.32	3.31	9.48

Time Series

Constituent: Chloride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	6.2	6.9	6.3	6.2			
2/6/2018	5.9						
2/7/2018		6.1	5.4				
2/8/2018				6.1			
4/23/2018	5.9						
4/24/2018		6.9	5.7	5.9			
6/26/2018	5.7						
6/27/2018		5.6	5.4	5.5	3.1		
7/18/2018					3.4		
8/6/2018					2.8		
8/7/2018	5.3	5.1					
8/8/2018			5.2	5.3			
9/5/2018					2.8		
9/24/2018					3.1		
10/22/2018	5.6	5.5					
10/23/2018			5.4	5.8			
10/24/2018					2.8	3.3	4
11/14/2018						3.6	3.6
11/28/2018						3.5	3.5
12/4/2018	5.8	5.6	5.3				
12/5/2018				6	2.2	3.3	3.2
12/18/2018						3.6	3.4
1/3/2019						3.4	3.2
1/24/2019						3.91	3.15
2/5/2019	5.8				3.12	3.94	2.98
2/6/2019		6.24	5.89	5.95			
2/26/2019	5.92	8.28					
2/27/2019			6.2	5.88			
2/28/2019					3.45	4.15	3.05
6/24/2019						3.36 (D)	
8/19/2019						3.42	2.8
8/20/2019					3.27		
8/21/2019	5.26						
8/22/2019		5.66	4.64	6.31			
4/14/2020			5.46	5.74			
4/15/2020	5.5	6.49				3.39	
4/16/2020					3.74		2.93
8/24/2020							2.82
8/25/2020	5.59				3.03	2.94	
8/26/2020		5.39	4.74	5.91			
3/16/2021	6.2						
3/22/2021					3.15	3.61	2.94
3/23/2021		7.14	5.54	6.3			
10/5/2021	6.1			6.26			
10/6/2021						3.17	2.98
10/11/2021		5.72					
10/12/2021			5.8		2.87		
5/9/2022					3		3.01
5/10/2022	5.97	5.72		5.64			
5/17/2022			5.92			3.58	
10/25/2022						3.24	2.88
10/26/2022	6.02	5.87	4.98	5.76	2.56		

Time Series

Constituent: Chloride (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
6/5/2023	6.12						
6/6/2023					3.2	3.31	2.93
6/13/2023		5.45	5.51	5.18			
10/31/2023						3.17	2.82
11/7/2023	5.89	5.68	5.08	4.92			
11/8/2023					2.44		

Time Series

Constituent: Chloride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			4.1				7.6
2/6/2018			3.1				7.6
4/23/2018			3.7				
4/24/2018							7.5
6/27/2018			2.2				7.3
8/7/2018			2.6				7.6
10/22/2018			2.8				6.9
12/3/2018							6.8
12/4/2018			4.1				
2/5/2019			2.56				6.95
2/25/2019							6.55
2/26/2019			3.03				
6/18/2019							6.62
8/20/2019			2.24				6.07
4/13/2020							5.95
4/14/2020		7.35		6.64			
4/15/2020	6		2.16		6.47		
8/25/2020	5.79		2		6.4		
8/26/2020		7.03		6.73			5.89
3/16/2021	3.85						
3/22/2021					6.65		5.26
3/23/2021		7.11		6.33			
3/24/2021			2.29				
3/30/2021						32	
10/5/2021							5.09
10/6/2021					6.82		
10/11/2021		7.04	2.43	6.37			
10/12/2021	4.59					38	
5/10/2022	6.38						4.59
5/16/2022		7.23	2.18		6.86	43.4	
5/17/2022				6.22			
10/25/2022			2.45		6.86	49	
10/26/2022	5.44	7.04		5.91			4.38
6/5/2023				5.58			4.57
6/6/2023			2.02				
6/7/2023					6.98	65.300003	
6/12/2023	5.72	6.98					
11/1/2023			2.21		6.43	57.200001	4.21
11/7/2023	5.01	7.16		4.93			

Time Series

Constituent: Chloride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	8.5		8.7	10	7.9	5.2	7
2/6/2018	8.8		8.5				
2/8/2018				9.5	6.7	4.1	
2/12/2018							6.6
4/24/2018	8.4						
4/25/2018			7.6	9.1	7	5.3	7.1
6/26/2018	8.7			9.5	7.4	5	6.4
6/27/2018			7.1				
8/6/2018	11						
8/7/2018			6.9	9			
8/8/2018					7.7	4.8	5.5
10/22/2018	8.6						
10/23/2018			6.7	9.9	8	4.4	6.7
12/3/2018	9.1			8.7			
12/4/2018					6.7	4.2	
12/5/2018			6.7				5.9
2/5/2019	9.81		7.24	8.73			
2/6/2019					6.84	5.84	7.26
2/26/2019	13			8.66			
2/27/2019			7.38		6.21	6.52	6.77
8/20/2019	9.62		6.53	9.55			
8/21/2019					7.35	5.89	6.16
4/13/2020			6.48	8.6			
4/14/2020						5.21	7.27
4/15/2020	9.27	5.16			4.99		
8/24/2020			6.64				
8/26/2020	8.96	5.37		9.21	6.19	5.16	6.57
3/16/2021			7.14				
3/17/2021				8.59			
3/23/2021					4.87	5.3	7.42
3/24/2021	8.61	5.55					
10/5/2021	9.3		6.78	9.09	6.43		
10/11/2021		5.65					
10/12/2021						5.6	7.78
5/9/2022			6.81				
5/10/2022				8.87	3.96		
5/11/2022		5.48				5.13	7.2
5/16/2022	8.07						
10/26/2022	7.88	5.53	6.4	9.4	7.09	5.72	6.99
6/5/2023		5.72		10.9			
6/6/2023	6.68						
6/7/2023			6.81			5.02	
6/12/2023							7.07
6/13/2023					3.43		
11/7/2023	7.87	5.69	6.07	9.61	6.52	5.39	7.13

Time Series

Constituent: Chloride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	3.6		4.2	4.1		
7/18/2018	3.8		4.1	4.3		
8/7/2018	3.3					
8/8/2018			3.3	3.8		
9/5/2018	3.4		3.7	3.9		
9/24/2018	3.8		3.9	4.2		
10/22/2018	3.3					
10/23/2018			4	4.1		
12/3/2018	3.2		3.6	3.8		
2/5/2019	3.78					
2/7/2019			3.72	4.15		
2/25/2019	3.66		3.95	4.2		
8/20/2019	3.52					
8/21/2019			3.85	4		
4/13/2020	3.36	5.42				
4/15/2020			3.83	3.71		
8/24/2020	3.35	5.46	3.96	3.59		
3/16/2021			3.98	3.66		
3/17/2021		5.53				
3/24/2021	3.45					
10/5/2021	3.23	5.79				
10/6/2021					166	
10/11/2021						1.72
10/12/2021			4.07	3.68		
5/9/2022	3.46	5.51				
5/10/2022			4.12	3.68		
5/17/2022					188	1.69
10/26/2022	3.39	5.09	4.03	3.5	181	1.56
6/5/2023		5.7				
6/6/2023					163	
6/7/2023	3.37					2.05
6/13/2023			3.88	3.38		
11/7/2023	3.34	5.27	3.99	3.54	179	1.48

Time Series

Constituent: Chromium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001015	<0.001015	<0.001015	<0.001015			
2/6/2018	<0.001015						
2/7/2018		<0.001015	<0.001015				
2/8/2018				<0.001015			
4/23/2018	<0.001015						
4/24/2018		<0.001015	<0.001015	<0.001015			
6/26/2018	<0.001015						
6/27/2018		<0.001015	<0.001015	<0.001015	<0.001015		
7/18/2018					<0.001015		
8/6/2018					<0.001015		
8/7/2018	<0.001015	<0.001015					
8/8/2018			<0.001015	<0.001015			
9/5/2018					<0.001015		
9/24/2018					<0.001015		
10/22/2018	<0.001015	<0.001015					
10/23/2018			<0.001015	<0.001015			
10/24/2018					<0.001015	<0.001015	<0.001015
11/14/2018						<0.001015	<0.001015
11/28/2018						<0.001015	<0.001015
12/4/2018	<0.001015	<0.001015	<0.001015				
12/5/2018				<0.001015	<0.001015	<0.001015	<0.001015
12/18/2018						<0.001015	<0.001015
1/3/2019						<0.001015	<0.001015
1/24/2019						<0.001015	<0.001015
2/5/2019	<0.001015				<0.001015	<0.001015	<0.001015
2/6/2019		<0.001015	<0.001015	<0.001015			
6/24/2019						0.00325 (J)	
8/19/2019						<0.001015	<0.001015
8/20/2019					<0.001015		
8/21/2019	<0.001015						
8/22/2019		<0.001015	<0.001015	<0.001015			
4/14/2020			<0.001015	<0.001015			
4/15/2020	<0.001015	<0.001015				<0.001015	
4/16/2020					<0.001015		0.00267 (J)
8/24/2020							<0.001015
8/25/2020	<0.001015				<0.001015	<0.001015	
8/26/2020		<0.001015	<0.001015	<0.001015			
3/16/2021	0.000376 (J)						
3/22/2021					0.000771 (J)	0.000546 (J)	0.000509 (J)
3/23/2021		0.00035 (J)	0.000513 (J)	0.000431 (J)			
10/5/2021	0.00023 (J)			0.00034 (J)			
10/6/2021						0.00046 (J)	0.00027 (J)
10/11/2021		0.00028 (J)					
10/12/2021			0.00027 (J)		0.00059 (J)		
5/9/2022					0.00087 (J)		0.00026 (J)
5/10/2022	0.00025 (J)	0.0003 (J)		0.00041 (J)			
5/17/2022			0.00038 (J)			0.00059 (J)	
10/25/2022						0.000275 (J)	0.000357 (J)
10/26/2022	0.000321 (J)	0.000207 (J)	0.000318 (J)	0.000276 (J)	0.000428 (J)		
6/5/2023	0.000271 (J)						
6/6/2023					0.000838 (J)	0.00053 (J)	0.000529 (J)
6/13/2023		0.000348 (J)	0.000426 (J)	0.000484 (J)			

Time Series

Constituent: Chromium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						0.000505 (J)	<0.001015
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015			
11/8/2023					0.000422 (J)		

Time Series

Constituent: Chromium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.001015				<0.001015
2/6/2018			<0.001015				<0.001015
4/23/2018			<0.001015				
4/24/2018							<0.001015
6/27/2018			<0.001015				<0.001015
8/7/2018			<0.001015				<0.001015
10/22/2018			<0.001015				<0.001015
12/3/2018							<0.001015
12/4/2018			<0.001015				
2/5/2019			<0.001015				<0.001015
6/18/2019							0.00285 (J)
8/20/2019			<0.001015				<0.001015
4/13/2020							<0.001015
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.001015		<0.001015		<0.001015		
8/25/2020	<0.001015		<0.001015		<0.001015		
8/26/2020		<0.001015		<0.001015			<0.001015
3/16/2021	0.000363 (J)						
3/22/2021					0.000433 (J)		0.000293 (J)
3/23/2021		0.000404 (J)		0.000417 (J)			
3/24/2021			0.00047 (J)				
3/30/2021						0.00112	
10/5/2021							0.00023 (J)
10/6/2021					0.00025 (J)		
10/11/2021		0.00048 (J)	0.00048 (J)	0.00025 (J)			
10/12/2021	0.00021 (J)					0.00035 (J)	
5/10/2022	0.00025 (J)						0.00029 (J)
5/16/2022		0.00028 (J)	0.00034 (J)		0.00029 (J)	0.00026 (J)	
5/17/2022				0.00021 (J)			
10/25/2022			0.00022 (J)		<0.001015	<0.001015	
10/26/2022	<0.001015	<0.001015		<0.001015			0.000276 (J)
6/5/2023				0.000265 (J)			0.000263 (J)
6/6/2023			0.000313 (J)				
6/7/2023					0.000262 (J)	0.000284 (J)	
6/12/2023	0.000457 (J)	0.000381 (J)					
11/1/2023			0.00027 (J)		<0.001015	<0.001015	0.000486 (J)
11/7/2023	<0.001015	<0.001015		<0.001015			

Time Series

Constituent: Chromium (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.001015	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.001015	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.001015			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.001015			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.001015			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.001015			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.001015			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.001015			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
3/16/2021			0.000397 (J)				
3/17/2021				0.000338 (J)			
3/23/2021					0.000406 (J)	0.0003 (J)	0.000422 (J)
3/24/2021	0.000323 (J)	0.000402 (J)					
10/5/2021	<0.001015		0.00028 (J)	0.00025 (J)	0.00025 (J)		
10/11/2021		0.00031 (J)					
10/12/2021						<0.001015	0.00031 (J)
5/9/2022			0.00053 (J)				
5/10/2022				<0.001015	0.00025 (J)		
5/11/2022		0.00024 (J)				0.00022 (J)	0.00021 (J)
5/16/2022	0.00023 (J)						
10/26/2022	<0.001015	0.000214 (J)	<0.001015	0.000222 (J)	<0.001015	<0.001015	<0.001015
6/5/2023		0.000367 (J)		0.000252 (J)			
6/6/2023	0.000206 (J)						
6/7/2023			0.000272 (J)			0.000245 (J)	
6/12/2023							0.000345 (J)
6/13/2023					0.000328 (J)		
11/7/2023	<0.001015	0.000243 (J)	0.000266 (J)	<0.001015	0.000203 (J)	<0.001015	0.000252 (J)

Time Series

Constituent: Chromium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.001015	<0.001015		
7/18/2018	<0.001015		<0.001015	<0.001015		
8/7/2018	<0.001015					
8/8/2018			<0.001015	<0.001015		
9/5/2018	<0.001015		<0.001015	<0.001015		
9/24/2018	<0.001015		<0.001015	<0.001015		
10/22/2018	<0.001015					
10/23/2018			<0.001015	<0.001015		
12/3/2018	<0.001015		<0.001015	<0.001015		
2/5/2019	<0.001015					
2/7/2019			<0.001015	<0.001015		
8/20/2019	<0.001015					
8/21/2019			<0.001015	<0.001015		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.001015	<0.001015		
8/24/2020	<0.001015	<0.001015	<0.001015	<0.001015		
3/16/2021			0.000534 (J)	0.000534 (J)		
3/17/2021		0.000764 (J)				
3/24/2021	0.000442 (J)					
10/5/2021	0.00035 (J)	0.00035 (J)				
10/6/2021					0.00111	
10/11/2021						0.00041 (J)
10/12/2021			0.00034 (J)	0.00031 (J)		
5/9/2022	0.00027 (J)	0.00062 (J)				
5/10/2022			0.00037 (J)	0.00037 (J)		
5/17/2022					0.00104	0.00032 (J)
10/26/2022	<0.001015	<0.001015	0.000251 (J)	0.000224 (J)	<0.001015	<0.001015
6/5/2023		0.00029 (J)				
6/6/2023					0.000256 (J)	
6/7/2023	0.00033 (J)					0.000364 (J)
6/13/2023			0.000463 (J)	0.000291 (J)		
11/7/2023	<0.001015	<0.001015	0.000284 (J)	<0.001015	<0.001015	<0.001015

Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.00818 (J)	<0.000203	<0.000203	0.00221 (J)			
2/6/2018	0.0123						
2/7/2018		<0.000203	<0.000203				
2/8/2018				0.00221 (J)			
4/23/2018	0.0204						
4/24/2018		<0.000203	<0.000203	0.00257 (J)			
6/26/2018	0.0224						
6/27/2018		<0.000203	<0.000203	0.00266 (J)	0.0382		
7/18/2018					0.0366		
8/6/2018					0.0308		
8/7/2018	0.0193	<0.000203					
8/8/2018			<0.000203	0.00251 (J)			
9/5/2018					0.0291		
9/24/2018					0.0286		
10/22/2018	0.0243	<0.000203					
10/23/2018			<0.000203	0.00399 (J)			
10/24/2018					0.0269	0.0129	<0.000203
11/14/2018						0.0114	<0.000203
11/28/2018						0.0168	<0.000203
12/4/2018	0.0166	<0.000203	<0.000203				
12/5/2018				0.00466 (J)	0.0215	0.0161	<0.000203
12/18/2018						0.0234	<0.000203
1/3/2019						0.038	<0.000203
1/24/2019						0.04	<0.000203
2/5/2019	0.0264				0.0359	0.0538	<0.000203
2/6/2019		<0.000203	<0.000203	0.00485 (J)			
6/24/2019						0.041	
8/19/2019						0.0247	<0.000203
8/20/2019					0.0391		
8/21/2019	0.0242						
8/22/2019		<0.000203	0.00756	0.00658			
4/14/2020			<0.000203	0.0035 (J)			
4/15/2020	0.0178	<0.000203				0.0373	
4/16/2020					0.056		<0.000203
8/24/2020							<0.000203
8/25/2020	0.0193				0.0365	0.0294	
8/26/2020		<0.000203	0.00599	0.00547			
3/16/2021	0.0184						
3/22/2021					0.0262	0.0469	0.000133 (J)
3/23/2021		0.00037	0.000388	0.00378			
10/5/2021	0.0169			0.00448			
10/6/2021						0.0321	0.00013 (J)
10/11/2021		0.00089					
10/12/2021			0.00027		0.0291		
5/9/2022					0.0416		0.00011 (J)
5/10/2022	0.0136	0.00091		0.0049			
5/17/2022			0.00044			0.0563	
10/25/2022						0.013	0.000311
10/26/2022	0.0152	0.000907	0.009	0.00603	0.0201		
6/5/2023	0.0118						
6/6/2023					0.0432	0.0511	<0.000203
6/13/2023		0.000866	0.000517	0.0058			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						0.0167	<0.000203
11/7/2023	0.0127	0.000909	0.00381	0.0085			
11/8/2023					0.0208		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.0246				0.0302
2/6/2018			0.0243				0.0371
4/23/2018			0.0258				
4/24/2018							0.0251
6/27/2018			0.0362				0.0234
8/7/2018			0.0332				0.0223
10/22/2018			0.0438				0.03
12/3/2018							0.0238
12/4/2018			0.0252				
2/5/2019			0.0362				0.0232
6/18/2019							0.0263
8/20/2019			0.0366				0.0257
4/13/2020							0.0209
4/14/2020		0.00886		0.0122			
4/15/2020	<0.000203		0.0324		<0.000203		
8/25/2020	<0.000203		0.0298		<0.000203		
8/26/2020		0.0101		0.0104			0.0191
3/16/2021	0.000577						
3/22/2021					<0.000203		0.0183
3/23/2021		0.00674		0.0125			
3/24/2021			0.0316				
3/30/2021						0.000116 (J)	
10/5/2021							0.016
10/6/2021					<0.000203		
10/11/2021		0.00579	0.0165	0.00995			
10/12/2021	0.00062					<0.000203	
5/10/2022	0.0003						0.0147
5/16/2022		0.00485	0.0366		<0.000203	<0.000203	
5/17/2022				0.0102			
10/25/2022			0.0302		<0.000203	<0.000203	
10/26/2022	0.000452	0.00294		0.00924			0.0132
6/5/2023				0.0089			0.0118
6/6/2023			0.04				
6/7/2023					<0.000203	<0.000203	
6/12/2023	0.000225	0.00377					
11/1/2023			0.03		<0.000203	<0.000203	0.0116
11/7/2023	0.000469	0.00224		0.00823			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.0252		0.00331 (J)	0.00592 (J)	<0.000203	0.00212 (J)	<0.000203
2/6/2018	0.0243		0.00323 (J)				
2/8/2018				0.00297 (J)	<0.000203	<0.000203	<0.000203
4/24/2018	0.027						
4/25/2018			0.00258 (J)	<0.000203	<0.000203	0.00204 (J)	<0.000203
6/26/2018	0.0242			<0.000203	<0.000203	<0.000203	<0.000203
6/27/2018			0.00218 (J)				
8/6/2018	0.0205						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	<0.000203	<0.000203
10/22/2018	0.0259						
10/23/2018			0.0023 (J)	<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018	0.0228			<0.000203			
12/4/2018					<0.000203	<0.000203	
12/5/2018			0.00233 (J)				<0.000203
2/5/2019	0.0263		0.0021 (J)	<0.000203			
2/6/2019					<0.000203	0.00232 (J)	<0.000203
8/20/2019	0.0293		0.00223 (J)	<0.000203			
8/21/2019					<0.000203	0.00303 (J)	<0.000203
4/13/2020			<0.000203	<0.000203			
4/14/2020						0.00385 (J)	<0.000203
4/15/2020	0.0252	<0.000203			<0.000203		
8/24/2020			0.00222 (J)				
8/26/2020	0.0231	<0.000203		<0.000203	<0.000203	0.00388 (J)	<0.000203
3/16/2021			0.00136				
3/17/2021				0.00102			
3/23/2021					0.00102	0.003	0.00103
3/24/2021	0.0268	8.16E-05 (J)					
10/5/2021	0.0238		0.00116	0.00104	0.00018 (J)		
10/11/2021		<0.000203					
10/12/2021						0.00298	0.00113
5/9/2022			0.00101				
5/10/2022				0.00114	0.0004		
5/11/2022		<0.000203				0.00461	0.00091
5/16/2022	0.0289						
10/26/2022	0.0289	<0.000203	0.000936	0.0012	0.00016 (J)	0.00266	0.000812
6/5/2023		7E-05 (J)		0.00113			
6/6/2023	0.0297						
6/7/2023			0.000715			0.00299	
6/12/2023							0.000874
6/13/2023					0.00463		
11/7/2023	0.0306	9.6E-05 (J)	0.000837	0.00123	0.000168 (J)	0.00262	0.00115

Time Series

Constituent: Cobalt (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		0.00341 (J)	<0.000203		
7/18/2018	<0.000203		0.00341 (J)	<0.000203		
8/7/2018	<0.000203					
8/8/2018			0.00221 (J)	<0.000203		
9/5/2018	<0.000203		0.00202 (J)	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		0.00227 (J)	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			0.00225 (J)	<0.000203		
4/13/2020	<0.000203	0.00489 (J)				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	0.00237 (J)	<0.000203	<0.000203		
3/16/2021			0.000384	0.000108 (J)		
3/17/2021		0.00616				
3/24/2021	<0.000203					
10/5/2021	0.00044	0.00287				
10/6/2021				0.00021		
10/11/2021						<0.000203
10/12/2021			8E-05 (J)	0.00014 (J)		
5/9/2022	0.00014 (J)	0.00691				
5/10/2022			0.00015 (J)	0.00012 (J)		
5/17/2022					0.00019 (J)	8E-05 (J)
10/26/2022	<0.000203	0.0021	<0.000203	7.8E-05 (J)	<0.000203	<0.000203
6/5/2023		0.00444				
6/6/2023					<0.000203	
6/7/2023	<0.000203					<0.000203
6/13/2023			0.000155 (J)	8.4E-05 (J)		
11/7/2023	<0.000203	0.00184	7.8E-05 (J)	7E-05 (J)	<0.000203	<0.000203

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.694	0.585	0.891	0.435 (U)			
2/6/2018	0.641						
2/7/2018		0.474	0.786				
2/8/2018				0.477			
4/23/2018	-0.0527 (U)						
4/24/2018		0.463 (U)	0.935	0.695			
6/26/2018	0.162 (U)						
6/27/2018		0.678	0.537	0.183 (U)	0.616		
7/18/2018					0.859		
8/6/2018					0.654		
8/7/2018	0.87	0.495 (U)					
8/8/2018			1.28	0.817			
9/5/2018					0.855		
9/24/2018					0.787		
10/22/2018	0.691	0.36 (U)					
10/23/2018			1.3	0.796			
10/24/2018					1.14	0.564	0.694
11/14/2018						-0.0027 (U)	0.398 (U)
11/28/2018						0.222 (U)	0.428 (U)
12/4/2018	0.213 (U)	0.407 (U)	1.05				
12/5/2018				0.498 (U)	0.64	0.288 (U)	0.302 (U)
2/5/2019	0.637				0.873	0.431 (U)	0.307 (U)
2/6/2019		0.537	0.779	-0.0241 (U)			
8/19/2019						0.377 (U)	0.683
8/20/2019					0.774		
8/21/2019	0.643 (U)						
8/22/2019		-0.021 (U)	1.34 (U)	0.145 (U)			
4/14/2020			0.922 (U)	0.643 (U)			
4/15/2020	0.538 (U)	0.64 (U)				0.449 (U)	
4/16/2020					0.865		0.603
8/24/2020							0.404 (U)
8/25/2020	0.502 (U)				0.976	0.851	
8/26/2020		0.221 (U)	1.28	1.31			
3/16/2021	0.722 (U)						
3/22/2021					1.04	0.942 (U)	0.497 (U)
3/23/2021		0.83 (U)	0.592 (U)	0.565 (U)			
10/5/2021	1.21			1.48			
10/6/2021						1.16 (U)	2.01
10/11/2021		6.52					
10/12/2021			1.02 (U)		1.61		
5/9/2022					1.31		0.56 (U)
5/10/2022	0.761 (U)	0.421 (U)		0.531 (U)			
5/17/2022			1.01 (U)			1.01	
10/25/2022						0.406 (U)	0.776 (U)
10/26/2022	0.38 (U)	0.42 (U)	0.505 (U)	0.446 (U)	0.457 (U)		
6/5/2023	1.09 (U)						
6/6/2023					1.35	0.85 (U)	0.524 (U)
6/13/2023		1.38	1.1 (U)	0.515 (U)			
10/31/2023						0.72 (U)	0.285 (U)
11/7/2023	1.01 (U)	1.24	0.93 (U)	0.932 (U)			
11/8/2023					1.12 (U)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.772				0.643
2/6/2018			0.679				0.209 (U)
4/23/2018			0.447 (U)				
4/24/2018							0.596
6/27/2018			0.117 (U)				0.363 (U)
8/7/2018			1.22				0.788
10/22/2018			0.996				0.749
12/3/2018							0.749
12/4/2018			0.739				
2/5/2019			1.09				0.299 (U)
8/20/2019			0.553 (U)				0.709 (U)
4/13/2020							0.942 (U)
4/14/2020		42.6		0.0962 (U)			
4/15/2020	0.419 (U)		0.182 (U)		0.231 (U)		
6/1/2020		0.215 (U)					
8/25/2020	1.45		0.43 (U)		0.807		
8/26/2020		0.265 (U)		0.413 (U)			0.177 (U)
3/16/2021	0.405 (U)						
3/22/2021					0.58 (U)		0.263 (U)
3/23/2021		0.562 (U)		0.847 (U)			
3/24/2021			0.769 (U)				
3/30/2021						0.185 (U)	
10/5/2021							3.21
10/6/2021					0.746 (U)		
10/11/2021		0.202 (U)	2.38	1.09 (U)			
10/12/2021	0.383 (U)					0.323 (U)	
5/10/2022	0.576 (U)						0.189 (U)
5/16/2022		0.471 (U)	1.06		0.285 (U)	0.253 (U)	
5/17/2022				0.551 (U)			
10/25/2022			0.683 (U)		0.849	0.529 (U)	
10/26/2022	0.165 (U)	0.401 (U)		0.958 (U)			0.551 (U)
6/5/2023				0.624 (U)			0.422 (U)
6/6/2023			0.907 (U)				
6/7/2023					0.449 (U)	0.758 (U)	
6/12/2023	0.564 (U)	0.973 (U)					
11/1/2023			1.05 (U)		0.538 (U)	0.508 (U)	0.843 (U)
11/7/2023	0.793 (U)	0.778 (U)		1.18			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	1.04		0.885	0.394 (U)	0.895	7.45	0.226 (U)
2/6/2018	0.989		0.524				
2/8/2018				0.489	0.322 (U)	0.549	0.071 (U)
4/24/2018	0.405 (U)						
4/25/2018			0.341 (U)	-0.0902 (U)	0.0097 (U)	0.65	0.569
6/26/2018	1.03			0.245 (U)	0.587	0.436 (U)	0.43 (U)
6/27/2018			0.546				
8/6/2018	0.622						
8/7/2018			1.09	0.439 (U)			
8/8/2018					0.364 (U)	0.486 (U)	0.656
10/22/2018	1.06						
10/23/2018			1.01	0.243 (U)	0.703	0.319 (U)	0.395 (U)
12/3/2018	0.697			0.304 (U)			
12/4/2018					0.325 (U)	0.875	
12/5/2018			0.876				0.52 (U)
2/5/2019	0.467 (U)		0.551 (U)	0.196 (U)			
2/6/2019					0.0774 (U)	0.378 (U)	0.244 (U)
8/20/2019	0.814		0.206 (U)	-0.086 (U)			
8/21/2019					-0.0134 (U)	0.552 (U)	1.53 (U)
4/13/2020			1.19	0.0901 (U)			
4/14/2020						0.641 (U)	0.119 (U)
4/15/2020	-0.0841 (U)	0.329 (U)			0.526 (U)		
8/24/2020			0.482 (U)				
8/26/2020	0.26 (U)	0.839		0.416 (U)	0.691 (U)	0.339 (U)	1.18
3/16/2021			0.709 (U)				
3/17/2021				0.539 (U)			
3/23/2021					0.45 (U)	0.662 (U)	0.694 (U)
3/24/2021	0.664 (U)	0.725 (U)					
10/5/2021	1.75		1.44	1.36	1.27		
10/11/2021		1.58					
10/12/2021						0.291 (U)	0.311 (U)
5/9/2022			1.16				
5/10/2022				0.0979 (U)	0.599 (U)		
5/11/2022		0.576 (U)				0.475 (U)	0.605 (U)
5/16/2022	0.978						
10/26/2022	0.609 (U)	0.725 (U)	0.643 (U)	0.432 (U)	0.559 (U)	0.528 (U)	0.572 (U)
6/5/2023		0.433 (U)		0.704 (U)			
6/6/2023	1.17 (U)						
6/7/2023			1.06 (U)			0.682 (U)	
6/12/2023							0.395 (U)
6/13/2023					1.08		
11/7/2023	1.68	0.932 (U)	0.607 (U)	0.571 (U)	0.507 (U)	0.765 (U)	0.649 (U)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	0.188 (U)		0.259 (U)	0.231 (U)		
7/18/2018	0.314 (U)		0.434	0.676		
8/7/2018	0.279 (U)					
8/8/2018			0.763	0.496		
9/5/2018	0.589		0.631	0.62		
9/24/2018	0.772		0.588	-0.12 (U)		
10/22/2018	0.621					
10/23/2018			0.383 (U)	0.352 (U)		
12/3/2018	0.188 (U)		0.736	0.238 (U)		
2/5/2019	0.274 (U)					
2/7/2019			0.0202 (U)	0.395 (U)		
8/20/2019	0.663					
8/21/2019			0.442 (U)	-0.00256 (U)		
4/13/2020	-0.129 (U)	0.472 (U)				
4/15/2020			0.432 (U)	0.000738 (U)		
8/24/2020	0.177 (U)	-0.00312 (U)	0.454 (U)	0.404 (U)		
3/16/2021			0.32 (U)	0.589 (U)		
3/17/2021		0.756 (U)				
3/24/2021	0.245 (U)					
10/5/2021	2.07	1.13				
10/6/2021					1.78	
10/11/2021						1.29
10/12/2021			0.963 (U)	1.57		
5/9/2022	0.784 (U)	0.352 (U)				
5/10/2022			0.659 (U)	0.468 (U)		
5/17/2022					0.4 (U)	0.306 (U)
10/26/2022	0.561 (U)	0.391 (U)	1.08	0.283 (U)	0.755 (U)	0.426 (U)
6/5/2023		0.662 (U)				
6/6/2023					0.476 (U)	
6/7/2023	1.09 (U)					0.444 (U)
6/13/2023			0.739 (U)	0.33 (U)		
11/7/2023	0.23 (U)	0.614 (U)	1.15 (U)	0.43 (U)	0.638 (U)	1.17 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.1			<0.125			
2/6/2018	0.08 (J)						
2/7/2018		0.08 (J)	0.05 (J)				
2/8/2018				<0.125			
4/23/2018	0.07 (J)						
4/24/2018		0.08 (J)	0.05 (J)	<0.125			
6/26/2018	0.08 (J)						
6/27/2018		0.09 (J)	0.06 (J)	<0.125	0.18		
7/18/2018					0.23		
8/6/2018					0.23		
8/7/2018	0.07 (J)	0.04 (J)					
8/8/2018			0.06 (J)	<0.125			
9/5/2018					0.22		
9/24/2018					0.2		
10/22/2018	0.07 (J)	0.1					
10/23/2018			0.06 (J)	0.04 (J)			
10/24/2018					0.14	0.11	0.23
11/14/2018						0.1	0.2
11/28/2018						0.1	0.19
12/4/2018	0.04 (J)	0.07 (J)	<0.125				
12/5/2018				<0.125	0.07 (J)	0.11	0.19
12/18/2018						0.14	0.15
1/3/2019						0.16	0.19
1/24/2019						<0.125	0.168
2/5/2019	0.0525 (J)				<0.125	<0.125	0.192
2/6/2019		0.107	0.0678 (J)	<0.125			
2/26/2019	<0.125	0.0813 (J)					
2/27/2019			0.0985 (J)	<0.125			
2/28/2019					<0.125	<0.125	0.182
6/24/2019						<0.125 (D)	
8/19/2019						<0.125	0.187
8/20/2019					<0.125		
8/21/2019	<0.125						
8/22/2019		0.084 (J)	<0.125	<0.125			
4/14/2020			0.0878 (J)	<0.125			
4/15/2020	<0.125	0.112				<0.125	
4/16/2020					<0.125		0.166
8/24/2020							0.163
8/25/2020	<0.125				<0.125	0.0863 (J)	
8/26/2020		0.0997 (J)	<0.125	<0.125			
3/16/2021	<0.125						
3/22/2021					<0.125	<0.125	0.18
3/23/2021		0.101	0.0819 (J)	<0.125			
10/5/2021	0.0601 (J)			<0.125			
10/6/2021						<0.125	0.175
10/11/2021		0.201					
10/12/2021			0.134	<0.125			
5/9/2022				<0.125			0.191
5/10/2022	<0.125	0.0918 (J)		<0.125			
5/17/2022			<0.125			<0.125	
10/25/2022						<0.125	0.15
10/26/2022	<0.125	0.0929 (J)	0.069 (J)	<0.125	<0.125		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
6/5/2023	<0.125						
6/6/2023					<0.125	<0.125	0.113 (J)
6/13/2023		0.0805 (J)	0.105 (J)	0.0795 (J)			
10/31/2023						<0.125	0.148
11/7/2023	0.0626 (J)	0.0804 (J)	0.0709 (J)	<0.125			
11/8/2023					<0.125		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.3				0.13
2/6/2018			0.27				0.08 (J)
4/23/2018			0.19				
4/24/2018							0.05 (J)
6/27/2018			0.28				0.07 (J)
8/7/2018			0.24				0.09 (J)
10/22/2018			0.24				0.11
12/3/2018							0.08 (J)
12/4/2018			0.15				
2/5/2019			0.207				0.064 (J)
2/25/2019							<0.125
2/26/2019			0.264				
6/18/2019							0.0664 (J)
8/20/2019			0.252				0.0592 (J)
4/13/2020							<0.125
4/14/2020		<0.125		0.125			
4/15/2020	<0.125		0.21		2.51		
8/25/2020	<0.125		0.273		2.4		
8/26/2020		<0.125		0.103			<0.125
3/16/2021	<0.125						
3/22/2021					2.33		<0.125
3/23/2021		<0.125		0.108			
3/24/2021			0.194				
3/30/2021						6.09	
10/5/2021							<0.125
10/6/2021					2.56		
10/11/2021		0.0779 (J)	0.283	0.127			
10/12/2021	<0.125					5.97	
5/10/2022	<0.125						0.0714 (J)
5/16/2022		<0.125	0.264		2.59	6.14	
5/17/2022				<0.125			
10/25/2022			0.271		2.41	5.77	
10/26/2022	<0.125	<0.125		0.121 (J)			<0.125
6/5/2023				0.112 (J)			<0.125
6/6/2023			0.204				
6/7/2023					2.51	5.43	
6/12/2023	<0.125	<0.125					
11/1/2023			0.217		2.39	5.71	<0.125
11/7/2023	<0.125	<0.125		0.0912 (J)			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.25		0.06 (J)	0.06 (J)	0.09 (J)	0.14	0.12
2/6/2018	0.24		0.05 (J)				
2/8/2018				0.04 (J)	0.07 (J)	0.11	
2/12/2018							0.11
4/24/2018	0.2						
4/25/2018			0.05 (J)	0.04 (J)	0.07 (J)	0.09 (J)	0.12
6/26/2018	0.22			0.05 (J)	0.09 (J)	0.1	0.13
6/27/2018			0.06 (J)				
8/6/2018	0.22						
8/7/2018			0.06 (J)	0.05 (J)			
8/8/2018					0.1	0.1	0.12
10/22/2018	0.24						
10/23/2018			0.07 (J)	0.06 (J)	0.1	0.11	0.13
12/3/2018	0.22			<0.125			
12/4/2018					0.06 (J)	0.08 (J)	
12/5/2018			0.04 (J)				0.04 (J)
2/5/2019	0.259		0.0651 (J)	0.0581 (J)			
2/6/2019					<0.125	<0.125	<0.1
2/26/2019	0.246			0.0816 (J)			
2/27/2019			0.0578 (J)		0.0824 (J)	0.108	0.147
8/20/2019	0.197		0.0567 (J)	<0.125			
8/21/2019					0.068 (J)	0.0648 (J)	0.0984 (J)
4/13/2020			0.0688 (J)	<0.125			
4/14/2020						0.0845 (J)	0.133
4/15/2020	0.238	0.218			0.0775 (J)		
8/24/2020			0.0607 (J)				
8/26/2020	0.251	0.217		<0.125	<0.125	0.0732 (J)	0.13
3/16/2021			0.065 (J)				
3/17/2021				<0.125			
3/23/2021					<0.125	0.0802 (J)	0.132
3/24/2021	0.227	0.212					
10/5/2021	0.214		0.122	<0.125	0.0933 (J)		
10/11/2021		0.23					
10/12/2021						0.123	0.147
5/9/2022			0.0682 (J)				
5/10/2022				<0.125	0.0627 (J)		
5/11/2022		0.175				0.0695 (J)	0.108 (J)
5/16/2022	0.17						
10/26/2022	0.283	0.164	0.0845 (J)	<0.125	0.128	0.0911 (J)	0.119 (J)
6/5/2023		0.206		<0.125			
6/6/2023	0.225						
6/7/2023			<0.125			0.128	
6/12/2023							0.13
6/13/2023					<0.125		
11/7/2023	0.168	0.218	0.0639 (J)	<0.125	0.0652 (J)	<0.125	0.105 (J)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	0.13		0.05 (J)	0.04 (J)		
7/18/2018	0.11		0.04 (J)	0.04 (J)		
8/7/2018	0.11					
8/8/2018			0.04 (J)	0.04 (J)		
9/5/2018	0.13		0.04 (J)	0.04 (J)		
9/24/2018	0.13		0.04 (J)	0.04 (J)		
10/22/2018	0.13					
10/23/2018			0.04 (J)	0.04 (J)		
12/3/2018	0.08 (J)		<0.125	<0.125		
2/5/2019	0.0934 (J)					
2/7/2019			<0.125	<0.125		
2/25/2019	<0.125		<0.125	<0.125		
8/20/2019	0.0889 (J)					
8/21/2019			<0.125	<0.125		
4/13/2020	0.103	<0.125				
4/15/2020			<0.125	<0.125		
8/24/2020	0.114	<0.125	<0.125	<0.125		
3/16/2021			<0.125	<0.125		
3/17/2021		<0.125				
3/24/2021	0.0725 (J)					
10/5/2021	<0.125	<0.125				
10/6/2021					8.34	
10/11/2021						1.43
10/12/2021			<0.125	<0.125		
5/9/2022	0.0824 (J)	<0.125				
5/10/2022			<0.125	<0.125		
5/17/2022					8.22	1.27
10/26/2022	<0.125	<0.125	<0.125	<0.125	7.57	1.36
6/5/2023		<0.125				
6/6/2023					7.65	
6/7/2023	<0.125					1.12
6/13/2023			<0.125	<0.125		
11/7/2023	<0.125	<0.125	<0.125	<0.125	7.7	1.3

Time Series

Constituent: Lead (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.000203	<0.000203	<0.000203	<0.000203			
2/6/2018	<0.000203						
2/7/2018		<0.000203	<0.000203				
2/8/2018				<0.000203			
4/23/2018	<0.000203						
4/24/2018		<0.000203	<0.000203	<0.000203			
6/26/2018	<0.000203						
6/27/2018		<0.000203	<0.000203	<0.000203	0.00158 (J)		
7/18/2018					0.00152 (J)		
8/6/2018					0.00143 (J)		
8/7/2018	<0.000203	<0.000203					
8/8/2018			<0.000203	<0.000203			
9/5/2018					0.00118 (J)		
9/24/2018					0.00156 (J)		
10/22/2018	<0.000203	<0.000203					
10/23/2018			<0.000203	<0.000203			
10/24/2018					0.00121 (J)	<0.000203	<0.000203
11/14/2018						<0.000203	<0.000203
11/28/2018						<0.000203	<0.000203
12/4/2018	<0.000203	<0.000203	<0.000203				
12/5/2018				<0.000203	0.00117 (J)	<0.000203	<0.000203
12/18/2018						<0.000203	<0.000203
1/3/2019						0.001 (J)	<0.000203
1/24/2019						0.00114 (J)	<0.000203
2/5/2019	<0.000203				0.00156 (J)	0.00135 (J)	<0.000203
2/6/2019		<0.000203	<0.000203	<0.000203			
6/24/2019						0.00125 (J)	
8/19/2019						<0.000203	<0.000203
8/20/2019					0.00176 (J)		
8/21/2019	<0.000203						
8/22/2019		<0.000203	<0.000203	<0.000203			
4/14/2020			<0.000203	<0.000203			
4/15/2020	<0.000203	<0.000203				<0.000203	
4/16/2020					0.00258 (J)		<0.000203
8/24/2020							<0.000203
8/25/2020	<0.000203				0.0018 (J)	0.0011 (J)	
8/26/2020		<0.000203	<0.000203	<0.000203			
3/16/2021	<0.000203						
3/22/2021					0.00143	0.0016	<0.000203
3/23/2021		<0.000203	<0.000203	<0.000203			
10/5/2021	<0.000203			<0.000203			
10/6/2021						0.00116	<0.000203
10/11/2021		<0.000203					
10/12/2021			<0.000203		0.00156		
5/9/2022					0.00194		<0.000203
5/10/2022	<0.000203	<0.000203		<0.000203			
5/17/2022			<0.000203			0.00178	
10/25/2022						0.000634	0.000196 (J)
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	0.00134		
6/5/2023	<0.000203						
6/6/2023					0.00202	0.00152	<0.000203
6/13/2023		<0.000203	<0.000203	<0.000203			

Time Series

Constituent: Lead (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						0.000767	<0.000203
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203			
11/8/2023					0.00125		

Time Series

Constituent: Lead (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.000203				<0.000203
2/6/2018			<0.000203				<0.000203
4/23/2018			<0.000203				
4/24/2018							<0.000203
6/27/2018			<0.000203				<0.000203
8/7/2018			<0.000203				<0.000203
10/22/2018			<0.000203				<0.000203
12/3/2018							<0.000203
12/4/2018			<0.000203				
2/5/2019			<0.000203				<0.000203
6/18/2019							<0.000203
8/20/2019			<0.000203				<0.000203
4/13/2020							<0.000203
4/14/2020		<0.000203		<0.000203			
4/15/2020	<0.000203		<0.000203		<0.000203		
8/25/2020	<0.000203		<0.000203		<0.000203		
8/26/2020		<0.000203		<0.000203			<0.000203
3/16/2021	<0.000203						
3/22/2021					<0.000203		<0.000203
3/23/2021		0.000201 (J)		<0.000203			
3/24/2021			<0.000203				
3/30/2021						<0.000203	
10/5/2021							<0.000203
10/6/2021					<0.000203		
10/11/2021		0.00016 (J)	9E-05 (J)	8E-05 (J)			
10/12/2021	<0.000203					<0.000203	
5/10/2022	<0.000203						<0.000203
5/16/2022		0.00015 (J)	<0.000203		<0.000203	<0.000203	
5/17/2022				<0.000203			
10/25/2022			<0.000203		<0.000203	<0.000203	
10/26/2022	<0.000203	<0.000203		<0.000203			<0.000203
6/5/2023				<0.000203			<0.000203
6/6/2023			<0.000203				
6/7/2023				<0.000203	<0.000203		
6/12/2023	<0.000203	0.000234					
11/1/2023	<0.000203		<0.000203		<0.000203	<0.000203	<0.000203
11/7/2023	<0.000203	<0.000203		<0.000203			

Time Series

Constituent: Lead (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
2/6/2018	<0.000203		<0.000203				
2/8/2018				<0.000203	<0.000203	<0.000203	<0.000203
4/24/2018	<0.000203						
4/25/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/26/2018	<0.000203			<0.000203	<0.000203	<0.000203	<0.000203
6/27/2018			<0.000203				
8/6/2018	<0.000203						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	<0.000203	<0.000203
10/22/2018	<0.000203						
10/23/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018	<0.000203			<0.000203			
12/4/2018					<0.000203	<0.000203	
12/5/2018			<0.000203				<0.000203
2/5/2019	<0.000203		<0.000203	<0.000203			
2/6/2019					<0.000203	<0.000203	<0.000203
8/20/2019	<0.000203		<0.000203	<0.000203			
8/21/2019					<0.000203	<0.000203	<0.000203
4/13/2020			<0.000203	<0.000203			
4/14/2020						<0.000203	<0.000203
4/15/2020	<0.000203	<0.000203			<0.000203		
8/24/2020			<0.000203				
8/26/2020	<0.000203	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
3/16/2021			<0.000203				
3/17/2021				<0.000203			
3/23/2021					<0.000203	<0.000203	<0.000203
3/24/2021	<0.000203	<0.000203					
10/5/2021	<0.000203		<0.000203	<0.000203	<0.000203		
10/11/2021		<0.000203					
10/12/2021						<0.000203	<0.000203
5/9/2022			<0.000203				
5/10/2022				<0.000203	<0.000203		
5/11/2022		<0.000203				<0.000203	<0.000203
5/16/2022	<0.000203						
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/5/2023		<0.000203		<0.000203			
6/6/2023	<0.000203						
6/7/2023			<0.000203			<0.000203	
6/12/2023							<0.000203
6/13/2023					<0.000203		
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

Time Series

Constituent: Lead (mg/L) Analysis Run 1/2/2024 5:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		<0.000203	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.000203				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.000203	<0.000203	<0.000203		
3/16/2021			0.00013 (J)	8.35E-05 (J)		
3/17/2021		0.000191 (J)				
3/24/2021	<0.000203					
10/5/2021	<0.000203	0.00012 (J)				
10/6/2021				0.00022		
10/11/2021						<0.000203
10/12/2021			<0.000203	0.00012 (J)		
5/9/2022	<0.000203	0.00018 (J)				
5/10/2022			<0.000203	0.00012 (J)		
5/17/2022					0.00022	<0.000203
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/5/2023		0.000394				
6/6/2023					<0.000203	
6/7/2023	<0.000203					0.000312
6/13/2023			7.8E-05 (J)	<0.000203		
11/7/2023	<0.000203	0.000136 (J)	<0.000203	<0.000203	<0.000203	<0.000203

Time Series

Constituent: Lithium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.02	<0.02	<0.02	<0.02			
2/6/2018	<0.02						
2/7/2018		<0.02	<0.02				
2/8/2018				<0.02			
4/23/2018	<0.02						
4/24/2018		<0.02	<0.02	<0.02			
6/26/2018	<0.02						
6/27/2018		<0.02	<0.02	<0.02	<0.02		
7/18/2018					<0.02		
8/6/2018					<0.02		
8/7/2018	<0.02	<0.02					
8/8/2018			<0.02	<0.02			
9/5/2018					<0.02		
9/24/2018					<0.02		
10/22/2018	<0.02	<0.02					
10/23/2018			<0.02	<0.02			
10/24/2018					<0.02	<0.02	<0.02
11/14/2018						<0.02	<0.02
11/28/2018						<0.02	0.0111 (J)
12/4/2018	<0.02	<0.02	<0.02				
12/5/2018				<0.02	<0.02	<0.02	0.0124 (J)
12/18/2018						<0.02	0.0121 (J)
1/3/2019						<0.02	0.0137 (J)
1/24/2019						<0.02	0.0134 (J)
2/5/2019	<0.02				<0.02	<0.02	0.0126 (J)
2/6/2019		<0.02	<0.02	<0.02			
6/24/2019						<0.02	
8/19/2019						<0.02	<0.02
8/20/2019					<0.02		
8/21/2019	<0.02						
8/22/2019		<0.02	<0.02	<0.02			
4/14/2020			<0.02	<0.02			
4/15/2020	<0.02	<0.02				<0.02	
4/16/2020					<0.02		0.0127 (J)
8/24/2020							<0.02
8/25/2020	<0.02				<0.02	<0.02	
8/26/2020		<0.02	<0.02	<0.02			
3/16/2021	<0.02						
3/22/2021					<0.02	<0.02	0.0083 (J)
3/23/2021		<0.02	<0.02	<0.02			
10/5/2021	<0.02			<0.02			
10/6/2021						<0.02	0.00881 (J)
10/11/2021		<0.02					
10/12/2021			<0.02		<0.02		
5/9/2022					<0.02		0.00859 (J)
5/10/2022	<0.02	<0.02		<0.02			
5/17/2022			<0.02			<0.02	
10/25/2022						<0.02	0.00897 (J)
10/26/2022	<0.02	<0.02	<0.02	<0.02	<0.02		
6/5/2023	<0.02						
6/6/2023					<0.02	<0.02	0.0101 (J)
6/13/2023		<0.02	<0.02	<0.02			

Time Series

Constituent: Lithium (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						<0.02	0.00864 (J)
11/7/2023	<0.02	<0.02	<0.02	<0.02			
11/8/2023					<0.02		

Time Series

Constituent: Lithium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.092				<0.02
2/6/2018			0.0817				<0.02
4/23/2018			0.051				
4/24/2018							<0.02
6/27/2018			0.0734				<0.02
8/7/2018			0.0764				<0.02
10/22/2018			0.0804				<0.02
12/3/2018							<0.02
12/4/2018			0.0474				
2/5/2019			0.0545				<0.02
6/18/2019							<0.02
8/20/2019			0.0583				<0.02
4/13/2020							<0.02
4/14/2020		<0.02		<0.02			
4/15/2020	<0.02		0.0406		0.0783		
7/1/2020					0.069		
8/25/2020	<0.02		0.041		0.0666		
8/26/2020		<0.02		<0.02			<0.02
3/16/2021	<0.02						
3/22/2021					0.0666		<0.02
3/23/2021		<0.02		<0.02			
3/24/2021			0.0318				
3/30/2021						0.13	
10/5/2021							<0.02
10/6/2021					0.0685		
10/11/2021		<0.02	0.0225	<0.02			
10/12/2021	<0.02					0.129	
5/10/2022	<0.02						<0.02
5/16/2022		<0.02	0.0271		0.0612	0.111	
5/17/2022				<0.02			
10/25/2022			0.0304		0.0748	0.141	
10/26/2022	<0.02	<0.02		<0.02			<0.02
6/5/2023				<0.02			<0.02
6/6/2023			0.0258				
6/7/2023					0.0668	0.125	
6/12/2023	<0.02	<0.02					
11/1/2023			0.0233		0.0682	0.121	<0.02
11/7/2023	<0.02	<0.02		<0.02			

Time Series

Constituent: Lithium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
2/6/2018	<0.02		<0.02				
2/8/2018				<0.02	<0.02	<0.02	<0.02
4/24/2018	<0.02						
4/25/2018			<0.02	<0.02	<0.02	<0.02	<0.02
6/26/2018	<0.02			<0.02	<0.02	<0.02	<0.02
6/27/2018			<0.02				
8/6/2018	<0.02						
8/7/2018			<0.02	<0.02			
8/8/2018					<0.02	<0.02	<0.02
10/22/2018	<0.02						
10/23/2018			<0.02	<0.02	<0.02	<0.02	<0.02
12/3/2018	<0.02			<0.02			
12/4/2018					<0.02	<0.02	
12/5/2018			<0.02				<0.02
2/5/2019	<0.02		<0.02	<0.02			
2/6/2019					<0.02	<0.02	<0.02
8/20/2019	<0.02		<0.02	<0.02			
8/21/2019					<0.02	<0.02	<0.02
4/13/2020			<0.02	<0.02			
4/14/2020						<0.02	<0.02
4/15/2020	<0.02	0.0219			<0.02		
8/24/2020			<0.02				
8/26/2020	<0.02	0.0203		<0.02	<0.02	<0.02	<0.02
3/16/2021			<0.02				
3/17/2021				<0.02			
3/23/2021					<0.02	<0.02	<0.02
3/24/2021	<0.02	0.0203					
10/5/2021	<0.02		<0.02	<0.02	<0.02		
10/11/2021		0.0198 (J)					
10/12/2021						<0.02	<0.02
5/9/2022			<0.02				
5/10/2022				<0.02	<0.02		
5/11/2022		0.0187 (J)				<0.02	<0.02
5/16/2022	<0.02						
10/26/2022	<0.02	0.0226	<0.02	<0.02	<0.02	<0.02	<0.02
6/5/2023		0.0189 (J)		<0.02			
6/6/2023	<0.02						
6/7/2023			<0.02			<0.02	
6/12/2023							<0.02
6/13/2023					<0.02		
11/7/2023	<0.02	0.0207	<0.02	<0.02	<0.02	<0.02	<0.02

Time Series

Constituent: Lithium (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.02		<0.02	<0.02		
7/18/2018	<0.02		<0.02	<0.02		
8/7/2018	<0.02					
8/8/2018			<0.02	<0.02		
9/5/2018	<0.02		<0.02	<0.02		
9/24/2018	<0.02		<0.02	<0.02		
10/22/2018	<0.02					
10/23/2018			<0.02	<0.02		
12/3/2018	<0.02		<0.02	<0.02		
2/5/2019	<0.02					
2/7/2019			<0.02	<0.02		
8/20/2019	<0.02					
8/21/2019			<0.02	<0.02		
4/13/2020	<0.02	<0.02				
4/15/2020			<0.02	<0.02		
8/24/2020	<0.02	<0.02	<0.02	<0.02		
3/16/2021			<0.02	<0.02		
3/17/2021		<0.02				
3/24/2021	<0.02					
10/5/2021	<0.02	<0.02				
10/6/2021					0.227	
10/11/2021						0.0544
10/12/2021			<0.02	<0.02		
5/9/2022	<0.02	<0.02				
5/10/2022			<0.02	<0.02		
5/17/2022					0.196	0.0499
10/26/2022	<0.02	<0.02	<0.02	<0.02	0.262	0.0616
6/5/2023		<0.02				
6/6/2023					0.205	
6/7/2023	<0.02					0.0517
6/13/2023			<0.02	<0.02		
11/7/2023	<0.02	<0.02	<0.02	<0.02	0.216	0.058

Time Series

Constituent: Mercury (mg/L) Analysis Run 1/2/2024 5:37 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.0005	<0.0005	<0.0005	<0.0005			
2/6/2018	<0.0005						
2/7/2018		<0.0005	<0.0005				
2/8/2018				<0.0005			
4/23/2018	<0.0005						
4/24/2018		<0.0005	<0.0005	<0.0005			
6/26/2018	<0.0005						
6/27/2018		<0.0005	<0.0005	<0.0005	0.000661		
7/18/2018					0.000398 (J)		
8/6/2018					0.00042 (J)		
8/7/2018	<0.0005	<0.0005					
8/8/2018			<0.0005	<0.0005			
9/5/2018					0.00037 (J)		
9/24/2018					0.000329 (J)		
10/22/2018	<0.0005	<0.0005					
10/23/2018			<0.0005	<0.0005			
10/24/2018					<0.0005	<0.0005	<0.0005
11/14/2018						<0.0005	<0.0005
11/28/2018						<0.0005	<0.0005
12/4/2018	<0.0005	0.000302 (J)	<0.0005				
12/5/2018				<0.0005	0.000253 (J)	<0.0005	<0.0005
12/18/2018						<0.0005	<0.0005
1/3/2019						<0.0005	<0.0005
1/24/2019						0.000411 (J)	<0.0005
2/5/2019	<0.0005				0.000664	0.000473 (J)	<0.0005
2/6/2019		<0.0005	<0.0005	<0.0005			
8/19/2019						<0.0005	<0.0005
8/20/2019					0.000301 (J)		
8/21/2019	<0.0005						
8/22/2019		<0.0005	<0.0005	<0.0005			
4/14/2020			<0.0005	<0.0005			
4/15/2020	<0.0005	<0.0005				<0.0005	
4/16/2020					0.000558		<0.0005
8/24/2020							<0.0005
8/25/2020	<0.0005				<0.0005	<0.0005	
8/26/2020		<0.0005	<0.0005	<0.0005			
3/16/2021	<0.0005						
3/22/2021					0.000363 (J)	0.000775	<0.0005
3/23/2021		<0.0005	<0.0005	<0.0005			
10/5/2021	<0.0005			<0.0005			
10/6/2021						<0.0005	<0.0005
10/11/2021		<0.0005					
10/12/2021			<0.0005		<0.0005		
5/9/2022					0.00039 (J)		<0.0005
5/10/2022	<0.0005	<0.0005		<0.0005			
5/17/2022			<0.0005			<0.0005	
10/25/2022						<0.0005	<0.0005
10/26/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
6/5/2023	<0.0005						
6/6/2023					<0.0005	<0.0005	<0.0005
6/13/2023		<0.0005	<0.0005	<0.0005			
10/31/2023						<0.0005	<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
11/7/2023	<0.0005	<0.0005	<0.0005	<0.0005			
11/8/2023					<0.0005		

Time Series

Constituent: Mercury (mg/L) Analysis Run 1/2/2024 5:37 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.0005				<0.0005
2/6/2018			<0.0005				<0.0005
4/23/2018			<0.0005				
4/24/2018							<0.0005
6/27/2018			<0.0005				<0.0005
8/7/2018			<0.0005				<0.0005
10/22/2018			<0.0005				<0.0005
12/3/2018							<0.0005
12/4/2018			<0.0005				
2/5/2019			<0.0005				<0.0005
8/20/2019			<0.0005				<0.0005
4/13/2020							<0.0005
4/14/2020		<0.0005		<0.0005			
4/15/2020	<0.0005		<0.0005		<0.0005		
8/25/2020	<0.0005		<0.0005		<0.0005		
8/26/2020		<0.0005		<0.0005			<0.0005
3/16/2021	<0.0005						
3/22/2021					<0.0005		<0.0005
3/23/2021		<0.0005		<0.0005			
3/24/2021			<0.0005				
3/30/2021						<0.0005	
10/5/2021							<0.0005
10/6/2021					<0.0005		
10/11/2021		<0.0005	<0.0005	<0.0005			
10/12/2021	<0.0005					<0.0005	
5/10/2022	<0.0005						<0.0005
5/16/2022		<0.0005	<0.0005		<0.0005	<0.0005	
5/17/2022				<0.0005			
10/25/2022			<0.0005		<0.0005	<0.0005	
10/26/2022	<0.0005	<0.0005		<0.0005			<0.0005
6/5/2023				<0.0005			<0.0005
6/6/2023			<0.0005				
6/7/2023					<0.0005	<0.0005	
6/12/2023	<0.0005	<0.0005					
11/1/2023			<0.0005		<0.0005	<0.0005	<0.0005
11/7/2023	<0.0005	<0.0005		<0.0005			

Time Series

Constituent: Mercury (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/6/2018	<0.0005		<0.0005				
2/8/2018				<0.0005	<0.0005	<0.0005	<0.0005
4/24/2018	<0.0005						
4/25/2018			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/26/2018	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005
6/27/2018			<0.0005				
8/6/2018	<0.0005						
8/7/2018			<0.0005	<0.0005			
8/8/2018					<0.0005	<0.0005	<0.0005
10/22/2018	<0.0005						
10/23/2018			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
12/3/2018	<0.0005			<0.0005			
12/4/2018					0.00034 (J)	0.000284 (J)	
12/5/2018			<0.0005				<0.0005
2/5/2019	<0.0005		<0.0005	<0.0005			
2/6/2019					<0.0005	<0.0005	<0.0005
8/20/2019	<0.0005		<0.0005	<0.0005			
8/21/2019					<0.0005	<0.0005	<0.0005
4/13/2020			<0.0005	<0.0005			
4/14/2020						<0.0005	<0.0005
4/15/2020	<0.0005	<0.0005			<0.0005		
8/24/2020			<0.0005				
8/26/2020	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
3/16/2021			<0.0005				
3/17/2021				<0.0005			
3/23/2021					<0.0005	<0.0005	<0.0005
3/24/2021	<0.0005	<0.0005					
10/5/2021	<0.0005		<0.0005	<0.0005	<0.0005		
10/11/2021		<0.0005					
10/12/2021						<0.0005	<0.0005
5/9/2022			<0.0005				
5/10/2022				<0.0005	<0.0005		
5/11/2022		<0.0005				<0.0005	<0.0005
5/16/2022	<0.0005						
10/26/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/5/2023		<0.0005		<0.0005			
6/6/2023	<0.0005						
6/7/2023			<0.0005			<0.0005	
6/12/2023							<0.0005
6/13/2023					<0.0005		
11/7/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.0005		<0.0005	<0.0005		
7/18/2018	<0.0005		<0.0005	<0.0005		
8/7/2018	<0.0005					
8/8/2018			<0.0005	<0.0005		
9/5/2018	<0.0005		<0.0005	<0.0005		
9/24/2018	<0.0005		<0.0005	<0.0005		
10/22/2018	<0.0005					
10/23/2018			<0.0005	<0.0005		
12/3/2018	<0.0005		<0.0005	<0.0005		
2/5/2019	<0.0005					
2/7/2019			<0.0005	<0.0005		
8/20/2019	<0.0005					
8/21/2019			<0.0005	<0.0005		
4/13/2020	<0.0005	<0.0005				
4/15/2020			<0.0005	<0.0005		
8/24/2020	<0.0005	<0.0005	<0.0005	<0.0005		
3/16/2021			<0.0005	<0.0005		
3/17/2021		<0.0005				
3/24/2021	<0.0005					
10/5/2021	<0.0005	<0.0005				
10/6/2021					<0.0005	
10/11/2021						<0.0005
10/12/2021			<0.0005	<0.0005		
5/9/2022	<0.0005	<0.0005				
5/10/2022			<0.0005	0.00286		
5/17/2022					<0.0005	<0.0005
10/26/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/5/2023		<0.0005				
6/6/2023					<0.0005	
6/7/2023	<0.0005					<0.0005
6/13/2023			<0.0005	<0.0005		
11/7/2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.01015	<0.01015	<0.01015	<0.01015			
2/6/2018	<0.01015						
2/7/2018		<0.01015	<0.01015				
2/8/2018				<0.01015			
4/23/2018	<0.01015						
4/24/2018		<0.01015	<0.01015	<0.01015			
6/26/2018	<0.01015						
6/27/2018		<0.01015	<0.01015	<0.01015	<0.01015		
7/18/2018					<0.01015		
8/6/2018					<0.01015		
8/7/2018	<0.01015	<0.01015					
8/8/2018			<0.01015	<0.01015			
9/5/2018					<0.01015		
9/24/2018					<0.01015		
10/22/2018	<0.01015	<0.01015					
10/23/2018			<0.01015	<0.01015			
10/24/2018					<0.01015	<0.01015	0.00507 (J)
11/14/2018						<0.01015	0.00358 (J)
11/28/2018						<0.01015	0.00322 (J)
12/4/2018	<0.01015	<0.01015	<0.01015				
12/5/2018				<0.01015	<0.01015	<0.01015	0.00256 (J)
12/18/2018						<0.01015	0.00215 (J)
1/3/2019						<0.01015	0.00257 (J)
1/24/2019						<0.01015	0.00211 (J)
2/5/2019	<0.01015				<0.01015	<0.01015	0.00205 (J)
2/6/2019		<0.01015	<0.01015	<0.01015			
6/24/2019						<0.01015	
8/19/2019						<0.01015	<0.01015
8/20/2019					<0.01015		
8/21/2019	<0.01015						
8/22/2019		<0.01015	<0.01015	<0.01015			
4/14/2020			<0.01015	<0.01015			
4/15/2020	<0.01015	<0.01015				<0.01015	
4/16/2020					<0.01015		<0.01015
8/24/2020							<0.01015
8/25/2020	<0.01015				<0.01015	<0.01015	
8/26/2020		<0.01015	<0.01015	<0.01015			
3/16/2021	<0.01015						
3/22/2021					<0.01015	<0.01015	0.000723
3/23/2021		0.000204	0.000124 (J)	<0.01015			
10/5/2021	<0.01015			<0.01015			
10/6/2021						<0.01015	0.00045
10/11/2021		0.00045					
10/12/2021			0.00015 (J)		<0.01015		
5/9/2022					<0.01015		0.00046
5/10/2022	<0.01015	0.00047		<0.01015			
5/17/2022			0.00012 (J)			<0.01015	
10/25/2022						<0.01015	0.000466
10/26/2022	0.000198 (J)	0.000438	<0.01015	<0.01015	<0.01015		
6/5/2023	<0.01015						
6/6/2023					<0.01015	<0.01015	<0.01015
6/13/2023		<0.01015	<0.01015	<0.01015			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						<0.01015	<0.01015
11/7/2023	<0.01015	<0.01015	<0.01015	<0.01015			
11/8/2023					<0.01015		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.0254				<0.01015
2/6/2018			0.0239				<0.01015
4/23/2018			0.0165				
4/24/2018							<0.01015
6/27/2018			0.0302				<0.01015
8/7/2018			0.0209				<0.01015
10/22/2018			0.0198				<0.01015
12/3/2018							<0.01015
12/4/2018			0.0118				
2/5/2019			0.0196				<0.01015
6/18/2019							<0.01015
8/20/2019			0.027				<0.01015
4/13/2020							<0.01015
4/14/2020		<0.01015		<0.01015			
4/15/2020	<0.01015		0.0202		<0.01015		
8/25/2020	<0.01015		0.0269		0.00323 (J)		
8/26/2020		<0.01015		<0.01015			<0.01015
3/16/2021	<0.01015						
3/22/2021					0.00386		<0.01015
3/23/2021		<0.01015		0.000481			
3/24/2021			0.0164				
3/30/2021						0.000673	
10/5/2021							<0.01015
10/6/2021					0.00363		
10/11/2021		0.00012 (J)	0.0204	0.00031			
10/12/2021	<0.01015					0.00156	
5/10/2022	<0.01015						<0.01015
5/16/2022		<0.01015	0.0201		0.00357	0.00095	
5/17/2022				0.0004			
10/25/2022			0.0202		0.00361	0.00135	
10/26/2022	<0.01015	0.000136 (J)		0.00033			<0.01015
6/5/2023				<0.01015			<0.01015
6/6/2023			0.0203				
6/7/2023					<0.01015	<0.01015	
6/12/2023	<0.01015	<0.01015					
11/1/2023			0.0222		<0.01015	<0.01015	<0.01015
11/7/2023	<0.01015	<0.01015		<0.01015			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.01015		<0.01015	<0.01015	<0.01015	<0.01015	<0.01015
2/6/2018	<0.01015		<0.01015				
2/8/2018				<0.01015	<0.01015	<0.01015	<0.01015
4/24/2018	<0.01015						
4/25/2018			<0.01015	<0.01015	<0.01015	<0.01015	<0.01015
6/26/2018	<0.01015			<0.01015	<0.01015	<0.01015	<0.01015
6/27/2018			<0.01015				
8/6/2018	<0.01015						
8/7/2018			<0.01015	<0.01015			
8/8/2018					<0.01015	<0.01015	<0.01015
10/22/2018	<0.01015						
10/23/2018			<0.01015	<0.01015	<0.01015	<0.01015	<0.01015
12/3/2018	<0.01015			<0.01015			
12/4/2018					<0.01015	<0.01015	
12/5/2018			<0.01015				<0.01015
2/5/2019	<0.01015		<0.01015	<0.01015			
2/6/2019					<0.01015	<0.01015	<0.01015
8/20/2019	<0.01015		<0.01015	<0.01015			
8/21/2019					<0.01015	<0.01015	<0.01015
4/13/2020			<0.01015	<0.01015			
4/14/2020						<0.01015	<0.01015
4/15/2020	<0.01015	<0.01015			<0.01015		
8/24/2020			<0.01015				
8/26/2020	<0.01015	<0.01015		<0.01015	<0.01015	<0.01015	<0.01015
3/16/2021			<0.01015				
3/17/2021				<0.01015			
3/23/2021					<0.01015	0.000357	0.00027
3/24/2021	0.00118	0.00188					
10/5/2021	0.00111		0.00015 (J)	<0.01015	0.0001 (J)		
10/11/2021		0.00173					
10/12/2021						0.00032	0.00018 (J)
5/9/2022			0.00011 (J)				
5/10/2022				<0.01015	<0.01015		
5/11/2022		0.00135				0.0004	0.00024
5/16/2022	0.00122						
10/26/2022	0.00106	0.00135	0.000371	<0.01015	0.000169 (J)	0.000422	0.000276
6/5/2023		<0.01015		<0.01015			
6/6/2023	<0.01015						
6/7/2023			<0.01015			<0.01015	
6/12/2023							<0.01015
6/13/2023					<0.01015		
11/7/2023	<0.01015	<0.01015	<0.01015	<0.01015	<0.01015	<0.01015	<0.01015

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.01015		<0.01015	<0.01015		
7/18/2018	<0.01015		<0.01015	<0.01015		
8/7/2018	<0.01015					
8/8/2018			<0.01015	<0.01015		
9/5/2018	<0.01015		<0.01015	<0.01015		
9/24/2018	<0.01015		<0.01015	<0.01015		
10/22/2018	<0.01015					
10/23/2018			<0.01015	<0.01015		
12/3/2018	<0.01015		<0.01015	<0.01015		
2/5/2019	<0.01015					
2/7/2019			<0.01015	<0.01015		
8/20/2019	<0.01015					
8/21/2019			<0.01015	<0.01015		
4/13/2020	<0.01015	<0.01015				
4/15/2020			<0.01015	<0.01015		
8/24/2020	<0.01015	<0.01015	<0.01015	<0.01015		
3/16/2021			<0.01015	<0.01015		
3/17/2021		<0.01015				
3/24/2021	9.88E-05 (J)					
10/5/2021	7E-05 (J)	0.00028				
10/6/2021					0.00107	
10/11/2021						0.00538
10/12/2021			<0.01015	<0.01015		
5/9/2022	<0.01015	<0.01015				
5/10/2022			<0.01015	<0.01015		
5/17/2022					0.00194	0.0028
10/26/2022	<0.01015	0.00022	<0.01015	<0.01015	0.00238	0.0019
6/5/2023		<0.01015				
6/6/2023					<0.01015	
6/7/2023	<0.01015					<0.01015
6/13/2023			<0.01015	<0.01015		
11/7/2023	<0.01015	<0.01015	<0.01015	<0.01015	<0.01015	<0.01015

Time Series

Constituent: pH (pH) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	6.5	6.83	6.81	5.6			
2/6/2018	6.48						
2/7/2018		6.82	6.74				
2/8/2018				5.44			
4/23/2018	6.36						
4/24/2018		6.74	6.62	5.41			
6/26/2018	6.32						
6/27/2018		6.67	6.69	5.45	3.95		
7/18/2018					4.02		
8/6/2018					4.07		
8/7/2018	6.32	6.72					
8/8/2018			6.67	5.46			
9/5/2018					4.07		
9/24/2018					4.07		
10/22/2018	6.2	6.73					
10/23/2018			6.73	5.47			
10/24/2018					4.1	5.27	7.92
11/14/2018						4.99	8.23
11/28/2018						4.74	8.95
12/4/2018	6.31	6.77	6.67				
12/5/2018				5.45	4.1	4.76	8.77
12/18/2018						4.57	8.99
1/3/2019						4.56	9.35
1/24/2019						4.45	9.42
2/5/2019	6.1				4.02	4.3	9.23
2/6/2019		6.67	6.58	5.31			
2/26/2019	6.11	6.77					
2/27/2019			6.56	5.4			
2/28/2019					3.94 (E)	4.35	9.48
8/19/2019						4.57	7.93
8/20/2019					4		
8/21/2019	6.01						
8/22/2019		6.37	6.26	5.35			
4/14/2020			6.63	5.39			
4/15/2020	5.65	6.85				4.49	
4/16/2020					3.93		8.1
8/24/2020							8.17
8/25/2020	6				4.03	4.2	
8/26/2020		6.73	6.38	5.63			
3/16/2021	5.87						
3/22/2021					3.25	3.45	7.85
3/23/2021		6.87	6.58	5.5			
10/5/2021	5.79			5.19			
10/6/2021						4.16	7.92
10/11/2021		6.72					
10/12/2021			6.66		4.04		
5/9/2022					3.6		7.29
5/10/2022	5.77	6.39		4.78			
5/17/2022			6.44			4.34	
10/25/2022						4.64	7.97
10/26/2022	5.86	6.84	6.2	5.52	4.07		
6/5/2023	5.68						

Time Series

Constituent: pH (pH) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
6/6/2023					3.82	3.65	7.8
6/13/2023		6.55	6.4	5.48			
10/31/2023						4.5	7.98
11/7/2023	5.94	6.94	6.36	5.54			
11/8/2023					4.03		

Time Series

Constituent: pH (pH) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			6.61				6.54
2/6/2018			6.66				6.39
4/23/2018			6.54				
4/24/2018							6.02
6/27/2018			6.63				6.07
8/7/2018			6.57				6.28
10/22/2018			6.55				6.3
12/3/2018							6.38
12/4/2018			6.52				
2/5/2019			6.47				5.83
2/25/2019							5.93
2/26/2019			6.54				
8/20/2019			6.3				5.73
4/13/2020							5.83
4/14/2020		5.79		6.02			
4/15/2020	5.1		6.45		8.6		
7/1/2020					8.36		
8/25/2020	5.13		6.65		8.43		
8/26/2020		6.33		6.36			5.87
3/16/2021	5.08						
3/22/2021					8.34		5.51
3/23/2021		5.88		6.38			
3/24/2021			6.49				
3/30/2021						8.52	
10/5/2021							5.76
10/6/2021					8.36		
10/11/2021		6.08	6.59	6.36			
10/12/2021	5.12					8.62	
5/10/2022	4.87						5.95
5/16/2022		5.24	6.16		8.1	8.48	
5/17/2022				5.74			
10/25/2022			6.64		8.33	8.33	
10/26/2022	4.81	6.25		6.36			5.97
6/5/2023				6.13			5.66
6/6/2023			6.63				
6/7/2023					7.81	8.25	
6/12/2023	4.52	5.81					
11/1/2023			6.49		8.47	8.45	5.98
11/7/2023	5.07	6.31		6.81			

Time Series

Constituent: pH (pH) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	6.73		6.32	6.38	6.62	6.81	6.93
2/6/2018	6.76		6.27				
2/8/2018				6.29	6.39	6.73	6.96
2/12/2018							6.88
4/24/2018	6.66						
4/25/2018			6.14	6.15	6.17	6.61	6.89
6/26/2018	6.61			6.09	6.38	6.59	6.85
6/27/2018			6.15				
8/6/2018	6.68						
8/7/2018			6.18	6.16			
8/8/2018					6.56	6.6	6.94
10/22/2018	6.63						
10/23/2018			6.15	6.1	6.54	6.64	6.93
12/3/2018	6.67			6.09			
12/4/2018					6.33	6.68	
12/5/2018			6.15				6.94
2/5/2019	6.63		6.08	6.04			
2/6/2019					6.13	6.62	6.73
2/26/2019	6.64			6.17			
2/27/2019			6.11		6.12	6.56	6.85
8/20/2019	6.33		6.11	5.4			
8/21/2019					5.97	6.16	6.61
4/13/2020			6.18	5.82			
4/14/2020						6.49	7.02
4/15/2020	6.77	7.93			6.16		
8/24/2020			6.11				
8/26/2020	6.68	7.83		5.96	6.11	6.29	6.75
3/16/2021			6.22				
3/17/2021				5.92			
3/23/2021					6.04	6.47	6.85
3/24/2021	6.86	8.01					
10/5/2021	6.58		6.24	5.74	6.06		
10/11/2021		7.82					
10/12/2021						6.61	6.9
5/9/2022			5.43				
5/10/2022				5.51	5.08		
5/11/2022		7.91				6.25	6.7
5/16/2022	6.61						
10/26/2022	6.67	7.92	6.44	5.98	6.44	6.68	7.07
6/5/2023		7.72		5.68			
6/6/2023	6.74						
6/7/2023			6.25			6.37	
6/12/2023							6.81
6/13/2023					5.98		
11/7/2023	6.72	8.26	6.6	6.22	6.47	6.75	6.98

Time Series

Constituent: pH (pH) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21V	GSD-AP-MW-22VB
6/27/2018	6.79		5.81	5.44		
7/18/2018	6.8		5.74	5.58		
8/7/2018	6.73					
8/8/2018			5.7	5.55		
9/5/2018	6.75		5.61	5.56		
9/24/2018	6.83		5.59	5.57		
10/22/2018	6.76					
10/23/2018			5.6	5.55		
12/3/2018	6.6		5.73	5.6		
2/5/2019	6.66					
2/7/2019			5.44	5.51		
2/25/2019	6.6		5.46	5.54		
8/20/2019	6.3					
8/21/2019			5.13	5.44		
4/13/2020	6.66	5.84				
4/15/2020			5.31	5.52		
8/24/2020	6.64	6	4.65	5.38		
3/16/2021			5.47	5.56		
3/17/2021		5.34				
3/24/2021	5.85					
10/5/2021	6.46	5.72				
10/6/2021					8.53	
10/11/2021						8.13
10/12/2021			5.33	5.41		
5/9/2022	6.03	4.35				
5/10/2022			5.38	5.57		
5/17/2022					8.31	8.29
10/26/2022	6.66	6.16	5.31	5.43	8.31	8.11
6/5/2023		5.2				
6/6/2023					8.41	
6/7/2023	5.9					7.41
6/13/2023			5.1	5.15		
11/7/2023	6.83	6.32	5.32	5.27	8.35	8.1

Time Series

Constituent: Selenium (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001015	<0.001015	<0.001015	<0.001015			
2/6/2018	<0.001015						
2/7/2018		<0.001015	<0.001015				
2/8/2018				<0.001015			
4/23/2018	<0.001015						
4/24/2018		<0.001015	<0.001015	<0.001015			
6/26/2018	<0.001015						
6/27/2018		<0.001015	<0.001015	<0.001015	<0.001015		
7/18/2018					<0.001015		
8/6/2018					<0.001015		
8/7/2018	<0.001015	<0.001015					
8/8/2018			<0.001015	<0.001015			
9/5/2018					<0.001015		
9/24/2018					<0.001015		
10/22/2018	<0.001015	<0.001015					
10/23/2018			<0.001015	<0.001015			
10/24/2018					<0.001015	<0.001015	<0.001015
11/14/2018						<0.001015	<0.001015
11/28/2018						<0.001015	<0.001015
12/4/2018	<0.001015	<0.001015	<0.001015				
12/5/2018				<0.001015	0.00208 (J)	0.00349 (J)	<0.001015
12/18/2018						0.00395 (J)	<0.001015
1/3/2019						0.00488 (J)	<0.001015
1/24/2019						0.00707 (J)	<0.001015
2/5/2019	<0.001015				0.00387 (J)	0.00938 (J)	<0.001015
2/6/2019		<0.001015	<0.001015	<0.001015			
6/24/2019						0.00563 (J)	
8/19/2019						0.00316 (J)	<0.001015
8/20/2019					0.00328 (J)		
8/21/2019	<0.001015						
8/22/2019		<0.001015	<0.001015	<0.001015			
4/14/2020			<0.001015	<0.001015			
4/15/2020	<0.001015	<0.001015				0.00434 (J)	
4/16/2020					0.00608 (J)		<0.001015
8/24/2020							<0.001015
8/25/2020	<0.001015				0.00247 (J)	0.00262 (J)	
8/26/2020		<0.001015	<0.001015	<0.001015			
3/16/2021	<0.001015						
3/22/2021					0.00488	0.0134	<0.001015
3/23/2021		<0.001015	<0.001015	<0.001015			
10/5/2021	<0.001015			<0.001015			
10/6/2021						0.00262	<0.001015
10/11/2021		<0.001015					
10/12/2021			<0.001015		0.00287		
5/9/2022					0.00394		<0.001015
5/10/2022	<0.001015	<0.001015		<0.001015			
5/17/2022			<0.001015			0.00609	
10/25/2022						0.00118	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	0.00151		
6/5/2023	<0.001015						
6/6/2023					0.0022	0.00301	<0.001015
6/13/2023		<0.001015	<0.001015	<0.001015			

Time Series

Constituent: Selenium (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						0.00145	<0.001015
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015			
11/8/2023					0.00175		

Time Series

Constituent: Selenium (mg/L) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.001015				<0.001015
2/6/2018			<0.001015				<0.001015
4/23/2018			<0.001015				
4/24/2018							<0.001015
6/27/2018			<0.001015				<0.001015
8/7/2018			<0.001015				<0.001015
10/22/2018			<0.001015				<0.001015
12/3/2018							<0.001015
12/4/2018			<0.001015				
2/5/2019			<0.001015				<0.001015
6/18/2019							<0.001015
8/20/2019			<0.001015				<0.001015
4/13/2020							<0.001015
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.001015		<0.001015		<0.001015		
8/25/2020	<0.001015		<0.001015		<0.001015		
8/26/2020		<0.001015		<0.001015			<0.001015
3/16/2021	0.000935 (J)						
3/22/2021					<0.001015		<0.001015
3/23/2021		<0.001015		<0.001015			
3/24/2021			<0.001015				
3/30/2021						<0.001015	
10/5/2021							<0.001015
10/6/2021					<0.001015		
10/11/2021		<0.001015	<0.001015	<0.001015			
10/12/2021	0.00068 (J)					<0.001015	
5/10/2022	0.00125						<0.001015
5/16/2022		<0.001015	<0.001015		<0.001015	<0.001015	
5/17/2022				<0.001015			
10/25/2022			<0.001015		<0.001015	<0.001015	
10/26/2022	0.00117	<0.001015		<0.001015			<0.001015
6/5/2023				<0.001015			<0.001015
6/6/2023			<0.001015				
6/7/2023					<0.001015	<0.001015	
6/12/2023	0.000931 (J)	<0.001015					
11/1/2023			<0.001015		<0.001015	<0.001015	<0.001015
11/7/2023	0.00113	<0.001015		<0.001015			

Time Series

Constituent: Selenium (mg/L) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.001015	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.001015	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.001015			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.001015			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.001015			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.001015			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.001015			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.001015			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
3/16/2021			<0.001015				
3/17/2021				<0.001015			
3/23/2021					<0.001015	<0.001015	<0.001015
3/24/2021	<0.001015	<0.001015					
10/5/2021	<0.001015		<0.001015	<0.001015	<0.001015		
10/11/2021		<0.001015					
10/12/2021						<0.001015	<0.001015
5/9/2022			<0.001015				
5/10/2022				<0.001015	<0.001015		
5/11/2022		<0.001015				<0.001015	<0.001015
5/16/2022	<0.001015						
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/5/2023		<0.001015		<0.001015			
6/6/2023	<0.001015						
6/7/2023			<0.001015			<0.001015	
6/12/2023							<0.001015
6/13/2023					<0.001015		
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

Time Series

Constituent: Selenium (mg/L) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.001015	<0.001015		
7/18/2018	<0.001015		<0.001015	<0.001015		
8/7/2018	<0.001015					
8/8/2018			<0.001015	<0.001015		
9/5/2018	<0.001015		<0.001015	<0.001015		
9/24/2018	<0.001015		<0.001015	<0.001015		
10/22/2018	<0.001015					
10/23/2018			<0.001015	<0.001015		
12/3/2018	<0.001015		<0.001015	<0.001015		
2/5/2019	<0.001015					
2/7/2019			<0.001015	<0.001015		
8/20/2019	<0.001015					
8/21/2019			<0.001015	<0.001015		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.001015	<0.001015		
8/24/2020	<0.001015	<0.001015	<0.001015	<0.001015		
3/16/2021			<0.001015	<0.001015		
3/17/2021		<0.001015				
3/24/2021	<0.001015					
10/5/2021	<0.001015	<0.001015				
10/6/2021					<0.001015	
10/11/2021						<0.001015
10/12/2021			<0.001015	<0.001015		
5/9/2022	<0.001015	<0.001015				
5/10/2022			<0.001015	<0.001015		
5/17/2022					<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/5/2023		<0.001015				
6/6/2023					<0.001015	
6/7/2023	<0.001015					<0.001015
6/13/2023			<0.001015	<0.001015		
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	650	11	83	200			
2/6/2018	560						
2/7/2018		19	84				
2/8/2018				200			
4/23/2018	640						
4/24/2018		27	98	210			
6/26/2018	670						
6/27/2018		<5	95	240	120		
7/18/2018					120		
8/6/2018					110		
8/7/2018	660	<5					
8/8/2018			110	260			
9/5/2018					86		
9/24/2018					80		
10/22/2018	580	<5					
10/23/2018			78	280			
10/24/2018					68	44	16
11/14/2018						44	13
11/28/2018						46	11
12/4/2018	580	11	97				
12/5/2018				280	54	51	12
12/18/2018						76	11
1/3/2019						94	10
1/24/2019						135	10.2
2/5/2019	702				126	183	10.4
2/6/2019		16.8	113	239			
2/26/2019	748	38.4					
2/27/2019			135	257			
2/28/2019					207	192	9.86
6/24/2019						129 (D)	
8/19/2019						66.6	8.74
8/20/2019					106		
8/21/2019	708						
8/22/2019		6.74	305	339			
4/14/2020			146	155			
4/15/2020	647	50.7				92.8	
4/16/2020					191		11.5
8/24/2020							10
8/25/2020	642				98.4	74.1	
8/26/2020		10.5	280	282			
3/16/2021	593						
3/22/2021					83.8	128	10.6
3/23/2021		60.1	135	160			
10/5/2021	567			195			
10/6/2021						93.5	10.2
10/11/2021		7.75					
10/12/2021			142	95.7			
5/9/2022				125			10
5/10/2022	508	11.6		193			
5/17/2022			145			139	
10/25/2022						37.099998	9.25
10/26/2022	512	4.42	278	230	50.700001		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
6/5/2023	406						
6/6/2023					116	121	12.4
6/13/2023		21.9	150	212			
10/31/2023						40.200001	11.5
11/7/2023	428	1.75 (J)	230	297			
11/8/2023					52.900002		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			210				250
2/6/2018			190				230
4/23/2018			140				
4/24/2018							260
6/27/2018			130				230
8/7/2018			150				200
10/22/2018			160				190
12/3/2018							200
12/4/2018			170				
2/5/2019			145				263
2/25/2019							246
2/26/2019			148				
6/18/2019							245
8/20/2019			110				222
4/13/2020							256
4/14/2020		75.3		135			
4/15/2020	67.1		116		4.18		
8/25/2020	52.6		114		4.83		
8/26/2020		72.9		112			246
3/16/2021	18.5						
3/22/2021					2.04		254
3/23/2021		71.8		168			
3/24/2021			101				
3/30/2021						10.3	
10/5/2021							228
10/6/2021					2.44		
10/11/2021		61.7	112	174			
10/12/2021	36.7					15.2	
5/10/2022	42.1						215
5/16/2022		60.2	93.1		1.15 (J)	10	
5/17/2022				187			
10/25/2022			111		2.13	18	
10/26/2022	37.299999	55.099998		158			206
6/5/2023				172			171
6/6/2023			73.900002				
6/7/2023					2.39	33.599998	
6/12/2023	36.900002	60.400002					
11/1/2023			89.5		2.1	25	158
11/7/2023	31.700001	51.599998		149			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<5		19	10	14	6.5	9
2/6/2018	<5		20				
2/8/2018				11	10	8.9	
2/12/2018							8.3
4/24/2018	<5						
4/25/2018			22	13	11	7.9	12
6/26/2018	<5			11	11	7.5	8.5
6/27/2018			18				
8/6/2018	<5						
8/7/2018			20	12			
8/8/2018					13	7.3	6.7
10/22/2018	<5						
10/23/2018			18	11	13	7.8	9.4
12/3/2018	<5			12			
12/4/2018					9.8	8.2	
12/5/2018			20				7.8
2/5/2019	5.38		24.3	13.9			
2/6/2019					10.8	9.53	17
2/26/2019	5.1			14.1			
2/27/2019			24.7		8.98	8.25	12.4
8/20/2019	7.34		21.3	12.3			
8/21/2019					11.8	10.8	11.3
4/13/2020			21.9	13.9			
4/14/2020						12.5	15.9
4/15/2020	17.2	1.25			7.95		
8/24/2020			21.2				
8/26/2020	15.5	1.21		13.1	9.19	16.1	12.9
3/16/2021			18.8				
3/17/2021				13.7			
3/23/2021					8.08	9.21	15.7
3/24/2021	19.9	1.39					
10/5/2021	37.8		14.4	14.2	9.19		
10/11/2021		1.7					
10/12/2021						16	18
5/9/2022			15.5				
5/10/2022				14.8	7.13		
5/11/2022		1.73 (J)				11.8	17.7
5/16/2022	51.8						
10/26/2022	61.799999	2.36	16.1	12.2	11.4	10.1	13.8
6/5/2023		3.68		15.1			
6/6/2023	88.699997						
6/7/2023			27.5			12.5	
6/12/2023							18.9
6/13/2023					6.16		
11/7/2023	91.599998	1 (J)	29.299999	12.5	10.5	8.1	17.4

Time Series

Constituent: Sulfate (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21V	GSD-AP-MW-22VB
6/27/2018	2.2 (J)		<2	<5		
7/18/2018	2.5 (J)		<2	<5		
8/7/2018	<5					
8/8/2018			<2	<5		
9/5/2018	1.4 (J)		<2	<5		
9/24/2018	<5		<2	<5		
10/22/2018	1.7 (J)					
10/23/2018			<2	<5		
12/3/2018	2.1 (J)		<2	<5		
2/5/2019	3.99					
2/7/2019			0.639 (J)	1.69		
2/25/2019	4.01		<2	1.53		
8/20/2019	3.73					
8/21/2019			1.21	1.62		
4/13/2020	3.83	1.48				
4/15/2020			0.554 (J)	1.68		
8/24/2020	4.16	3.88	<2	1.31		
3/16/2021			1.02	1.7		
3/17/2021		1.64				
3/24/2021	2.88					
10/5/2021	2.17	5.29				
10/6/2021					8.35	
10/11/2021						13.8
10/12/2021			0.895 (J)	1.34		
5/9/2022	2.51	1.15 (J)				
5/10/2022			1.02 (J)	1.28 (J)		
5/17/2022					19.1	6.55
10/26/2022	3.43	3.32	0.992 (J)	1.7 (J)	23.9	3.55
6/5/2023		1.31 (J)				
6/6/2023					18.700001	
6/7/2023	2.38					6.49
6/13/2023			<2	1.14 (J)		
11/7/2023	3.69	8.98	<2	1.34 (J)	19.4	2.63

Time Series

Constituent: Thallium (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.000203	<0.000203	<0.000203	<0.000203			
2/6/2018	<0.000203						
2/7/2018		<0.000203	<0.000203				
2/8/2018				<0.000203			
4/23/2018	<0.000203						
4/24/2018		<0.000203	<0.000203	<0.000203			
6/26/2018	<0.000203						
6/27/2018		<0.000203	<0.000203	<0.000203	<0.000203		
7/18/2018					<0.000203		
8/6/2018					<0.000203		
8/7/2018	<0.000203	<0.000203					
8/8/2018			<0.000203	<0.000203			
9/5/2018					<0.000203		
9/24/2018					<0.000203		
10/22/2018	<0.000203	<0.000203					
10/23/2018			<0.000203	<0.000203			
10/24/2018					<0.000203	<0.000203	<0.000203
11/14/2018						<0.000203	<0.000203
11/28/2018						<0.000203	<0.000203
12/4/2018	<0.000203	<0.000203	<0.000203				
12/5/2018				<0.000203	<0.000203	<0.000203	<0.000203
12/18/2018						<0.000203	<0.000203
1/3/2019						<0.000203	<0.000203
1/24/2019						<0.000203	<0.000203
2/5/2019	<0.000203				<0.000203	<0.000203	<0.000203
2/6/2019		<0.000203	<0.000203	<0.000203			
6/24/2019						<0.000203	
8/19/2019						<0.000203	<0.000203
8/20/2019					<0.000203		
8/21/2019	<0.000203						
8/22/2019		<0.000203	<0.000203	<0.000203			
4/14/2020			<0.000203	<0.000203			
4/15/2020	<0.000203	<0.000203				<0.000203	
4/16/2020					<0.000203		<0.000203
8/24/2020							<0.000203
8/25/2020	<0.000203				<0.000203	<0.000203	
8/26/2020		<0.000203	<0.000203	<0.000203			
3/16/2021	0.000112 (J)						
3/22/2021					<0.000203	<0.000203	<0.000203
3/23/2021		<0.000203	<0.000203	<0.000203			
10/5/2021	<0.000203			<0.000203			
10/6/2021						<0.000203	<0.000203
10/11/2021		<0.000203					
10/12/2021			<0.000203		<0.000203		
5/9/2022					<0.000203		<0.000203
5/10/2022	0.00013 (J)	<0.000203		<0.000203			
5/17/2022			<0.000203			<0.000203	
10/25/2022						<0.000203	7E-05 (J)
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203		
6/5/2023	0.000101 (J)						
6/6/2023					<0.000203	<0.000203	<0.000203
6/13/2023		<0.000203	<0.000203	<0.000203			

Time Series

Constituent: Thallium (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
10/31/2023						<0.000203	<0.000203
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203			
11/8/2023					<0.000203		

Time Series

Constituent: Thallium (mg/L) Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.000203				<0.000203
2/6/2018			<0.000203				<0.000203
4/23/2018			<0.000203				
4/24/2018							<0.000203
6/27/2018			<0.000203				<0.000203
8/7/2018			<0.000203				<0.000203
10/22/2018			0.000213 (J)				<0.000203
12/3/2018							<0.000203
12/4/2018			<0.000203				
2/5/2019			0.000256 (J)				<0.000203
6/18/2019							<0.000203
8/20/2019			0.000322 (J)				<0.000203
4/13/2020							<0.000203
4/14/2020		<0.000203		<0.000203			
4/15/2020	<0.000203		0.000318 (J)		<0.000203		
8/25/2020	<0.000203		0.000347 (J)		<0.000203		
8/26/2020		<0.000203		<0.000203			<0.000203
3/16/2021	<0.000203						
3/22/2021					<0.000203		0.000121 (J)
3/23/2021		<0.000203		0.000145 (J)			
3/24/2021			0.00037				
3/30/2021						<0.000203	
10/5/2021							0.00014 (J)
10/6/2021					<0.000203		
10/11/2021		<0.000203	0.00029	0.00013 (J)			
10/12/2021	<0.000203					<0.000203	
5/10/2022	<0.000203						0.00011 (J)
5/16/2022		<0.000203	0.00041		<0.000203	<0.000203	
5/17/2022				0.00013 (J)			
10/25/2022			0.000361		<0.000203	<0.000203	
10/26/2022	<0.000203	<0.000203		0.000149 (J)			0.00011 (J)
6/5/2023				0.000125 (J)			0.000104 (J)
6/6/2023			0.000425				
6/7/2023					<0.000203	<0.000203	
6/12/2023	<0.000203	<0.000203					
11/1/2023			0.000337		<0.000203	<0.000203	0.000109 (J)
11/7/2023	<0.000203	<0.000203		0.000133 (J)			

Time Series

Constituent: Thallium (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
2/6/2018	<0.000203		<0.000203				
2/8/2018				<0.000203	<0.000203	<0.000203	<0.000203
4/24/2018	<0.000203						
4/25/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/26/2018	<0.000203			<0.000203	<0.000203	<0.000203	<0.000203
6/27/2018			<0.000203				
8/6/2018	<0.000203						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	<0.000203	<0.000203
10/22/2018	<0.000203						
10/23/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018	<0.000203			<0.000203			
12/4/2018					<0.000203	<0.000203	
12/5/2018			<0.000203				<0.000203
2/5/2019	<0.000203		<0.000203	<0.000203			
2/6/2019					<0.000203	<0.000203	<0.000203
8/20/2019	<0.000203		<0.000203	<0.000203			
8/21/2019					<0.000203	<0.000203	<0.000203
4/13/2020			<0.000203	<0.000203			
4/14/2020						<0.000203	<0.000203
4/15/2020	<0.000203	<0.000203			<0.000203		
8/24/2020			<0.000203				
8/26/2020	<0.000203	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
3/16/2021			<0.000203				
3/17/2021				<0.000203			
3/23/2021					<0.000203	<0.000203	<0.000203
3/24/2021	<0.000203	<0.000203					
10/5/2021	<0.000203		<0.000203	<0.000203	<0.000203		
10/11/2021		<0.000203					
10/12/2021						<0.000203	<0.000203
5/9/2022			<0.000203				
5/10/2022				<0.000203	<0.000203		
5/11/2022		<0.000203				<0.000203	<0.000203
5/16/2022	<0.000203						
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/5/2023		<0.000203		<0.000203			
6/6/2023	<0.000203						
6/7/2023			<0.000203			<0.000203	
6/12/2023							<0.000203
6/13/2023					<0.000203		
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

Time Series

Constituent: Thallium (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		<0.000203	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.000203				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.000203	<0.000203	<0.000203		
3/16/2021			<0.000203	<0.000203		
3/17/2021		<0.000203				
3/24/2021	<0.000203					
10/5/2021	<0.000203	<0.000203				
10/6/2021					<0.000203	
10/11/2021						<0.000203
10/12/2021			<0.000203	<0.000203		
5/9/2022	<0.000203	<0.000203				
5/10/2022			<0.000203	<0.000203		
5/17/2022					<0.000203	<0.000203
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/5/2023		<0.000203				
6/6/2023					<0.000203	
6/7/2023	<0.000203					<0.000203
6/13/2023			<0.000203	<0.000203		
11/7/2023	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	1300	215	312	371			
2/6/2018	1310						
2/7/2018		237	323				
2/8/2018				367			
4/23/2018	1210						
4/24/2018		242	324	365			
6/26/2018	1250						
6/27/2018		194	333	421	219		
7/18/2018					195		
8/6/2018					175		
8/7/2018	1220	195					
8/8/2018			346	479			
9/5/2018					153		
9/24/2018					127		
10/22/2018	1150	184					
10/23/2018			311	507			
10/24/2018					125	107	184
11/14/2018						96.7	170
11/28/2018						102	167
12/4/2018	1090	215	343				
12/5/2018				479	101	103	185
12/18/2018						126	164
1/3/2019						191	167
1/24/2019						212	137
2/5/2019	1200				180	269	138
2/6/2019		208	317	399			
2/26/2019	1210	252					
2/27/2019			360	422			
2/28/2019					287	261	140
6/24/2019						203.5 (D)	
8/19/2019						121	240
8/20/2019					265		
8/21/2019	1200						
8/22/2019		194	555	501			
4/14/2020			372	278			
4/15/2020	1060	262				155	
4/16/2020					280		166
8/24/2020							162
8/25/2020	1060				160	131	
8/26/2020		186	517	472			
3/16/2021	1040						
3/22/2021					126	204	157
3/23/2021		273	361	286			
10/5/2021	964			378			
10/6/2021						136	182
10/11/2021		190					
10/12/2021			352		142		
5/9/2022					185		152
5/10/2022	780	199		319			
5/17/2022			367			226	
10/25/2022						72.699997	159
10/26/2022	840	202	545	402	98		

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
6/5/2023	710						
6/6/2023					214	220	138
6/13/2023		199	374	370			
10/31/2023						76.699997	160
11/7/2023	732	195	508	496			
11/8/2023					96.699997		

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			574				628
2/6/2018			572				556
4/23/2018			414				
4/24/2018							510
6/27/2018			440				486
8/7/2018			485				487
10/22/2018			484				450
12/3/2018							492
12/4/2018			504				
2/5/2019			366				428
2/25/2019							441
2/26/2019			372				
6/18/2019							422
8/20/2019			369				416
4/13/2020							433
4/14/2020		190		323			
4/15/2020	126		300		324		
8/25/2020	107		339		321		
8/26/2020		202		310			455
3/16/2021	52						
3/22/2021					314		427
3/23/2021		174		385			
3/24/2021			287				
3/30/2021						528	
10/5/2021							389
10/6/2021					317		
10/11/2021		202	337	384			
10/12/2021	78.7					536	
5/10/2022	90						362
5/16/2022		138	244		316	508	
5/17/2022				401			
10/25/2022			337		330	588	
10/26/2022	82.699997	207		364			328
6/5/2023				408			334
6/6/2023			246				
6/7/2023					324	658	
6/12/2023	84.699997	162					
11/1/2023			309		317	602	313
11/7/2023	76	202		378			

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	189		215	136	137	253	183
2/6/2018	206		204				
2/8/2018				122	124	229	
2/12/2018							201
4/24/2018	193						
4/25/2018			192	102	106	223	180
6/26/2018	180			106	129	232	191
6/27/2018			180				
8/6/2018	182						
8/7/2018			183	71.3			
8/8/2018					142	208	192
10/22/2018	204						
10/23/2018			169	105	142	209	185
12/3/2018	168			102			
12/4/2018					121	213	
12/5/2018			177				200
2/5/2019	158		198	107			
2/6/2019					108	212	151
2/26/2019	191			99.3			
2/27/2019			185		103	211	186
8/20/2019	164		174	98.7			
8/21/2019					133	226	200
4/13/2020			192	90.7			
4/14/2020						222	187
4/15/2020	170	218			102		
8/24/2020			175				
8/26/2020	168	239		91.3	109	215	192
3/16/2021			184				
3/17/2021				80			
3/23/2021					92.7	200	178
3/24/2021	180	222					
10/5/2021	200		168	96.7	113		
10/11/2021		220					
10/12/2021						245	169
5/9/2022			174				
5/10/2022				73.3	82.7		
5/11/2022		220				216	181
5/16/2022	218						
10/26/2022	247	221	178	91.300003	121	226	194
6/5/2023		227		94			
6/6/2023	263						
6/7/2023			202			226	
6/12/2023							185
6/13/2023					74.699997		
11/7/2023	318	235	191	82.699997	106	208	171

Time Series

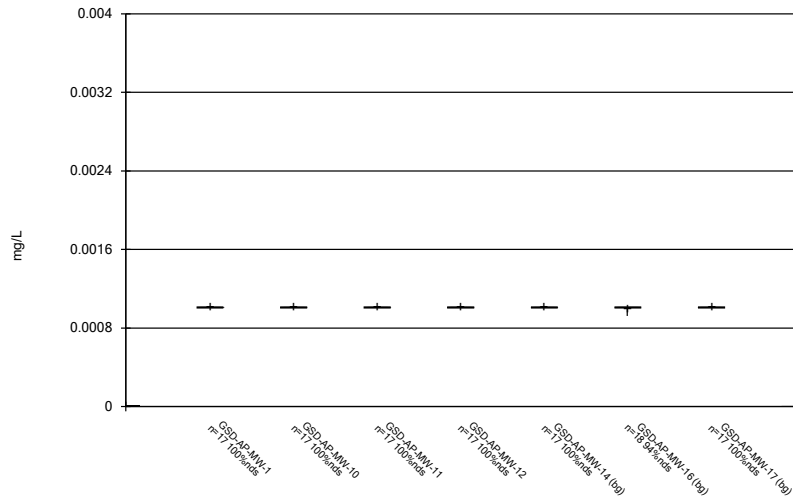
Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/2/2024 5:38 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21V	GSD-AP-MW-22VB
6/27/2018	144		48.7	44		
7/18/2018	156		46	42.7		
8/7/2018	140					
8/8/2018			48	46		
9/5/2018	154		47.3	67.3		
9/24/2018	165		44.7	49.3		
10/22/2018	148					
10/23/2018			35.3	31.3		
12/3/2018	127		48.7	46		
2/5/2019	113					
2/7/2019			42.7	32.7		
2/25/2019	106		40.7	31.3		
8/20/2019	141					
8/21/2019			46	42.7		
4/13/2020	104	88				
4/15/2020			41.3	37.3		
8/24/2020	114	115	42.7	37.3		
3/16/2021			42	41.3		
3/17/2021		53.3				
3/24/2021	94					
10/5/2021	108	101				
10/6/2021					864	
10/11/2021						230
10/12/2021			38.7	35.3		
5/9/2022	85.3	53.3				
5/10/2022			33.3	33.3		
5/17/2022					921	238
10/26/2022	96	119	45.299999	38	952	239
6/5/2023		84				
6/6/2023					948	
6/7/2023	96.699997					235
6/13/2023			36.700001	36		
11/7/2023	122	109	43.299999	44	961	244

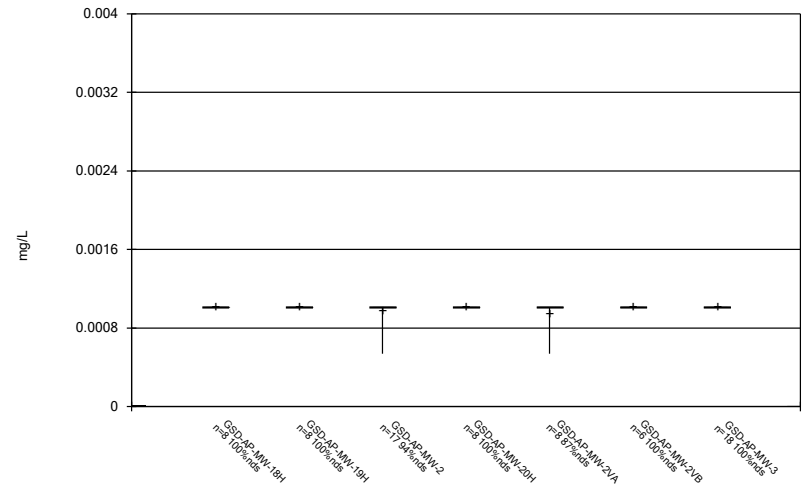
FIGURE B.

Box & Whiskers Plot



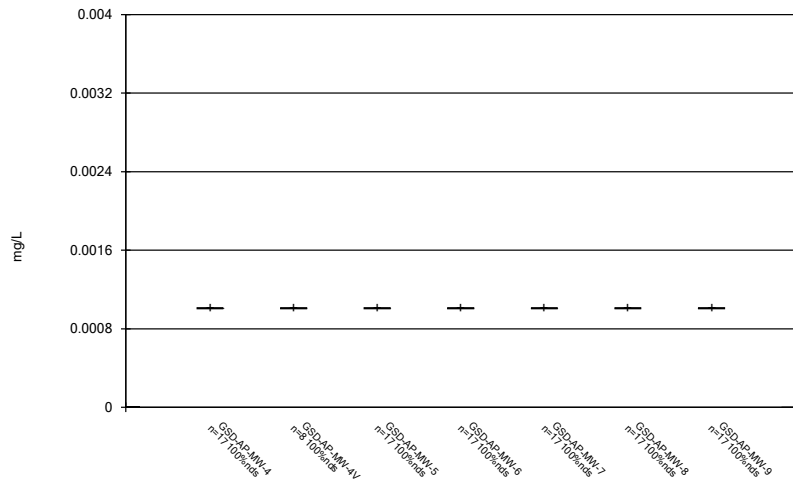
Constituent: Antimony Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



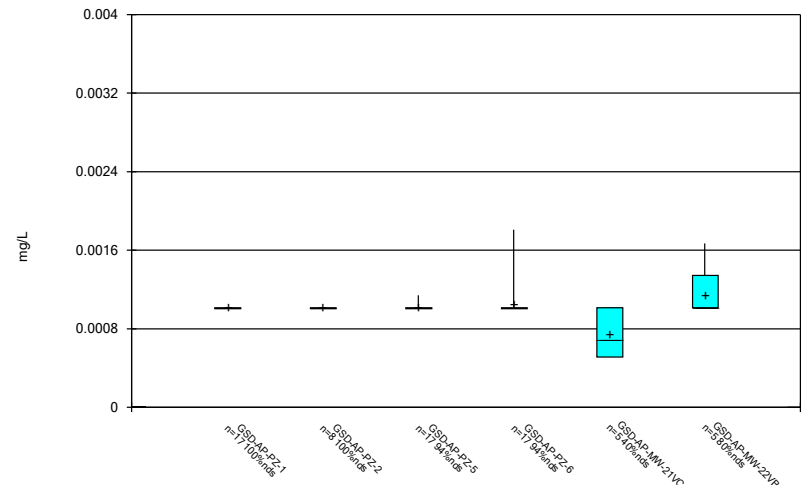
Constituent: Antimony Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



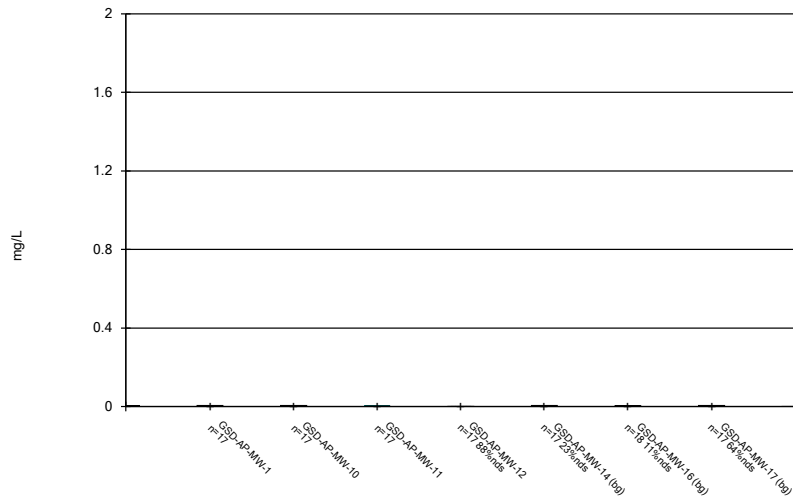
Constituent: Antimony Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



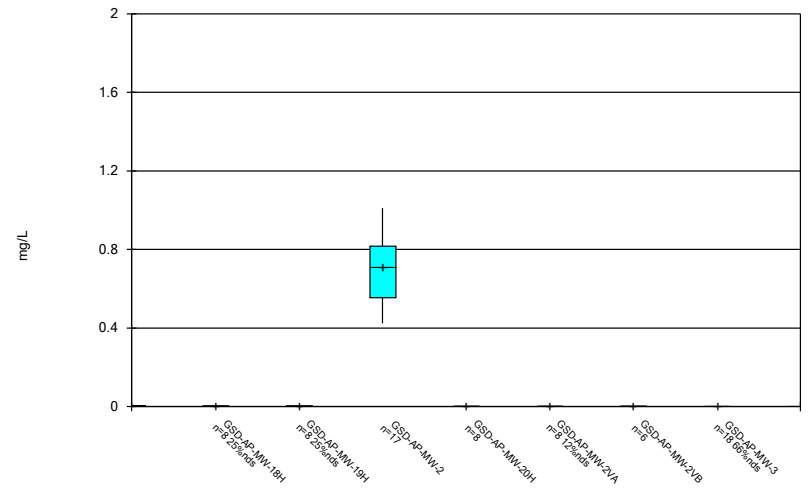
Constituent: Antimony Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



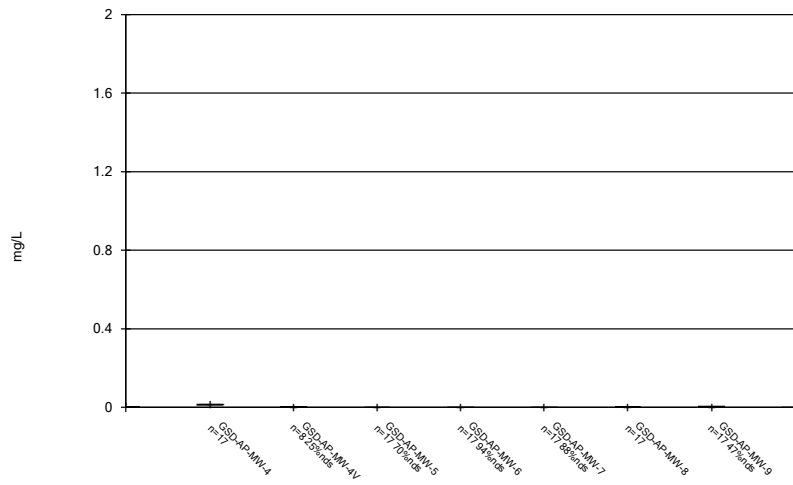
Constituent: Arsenic Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



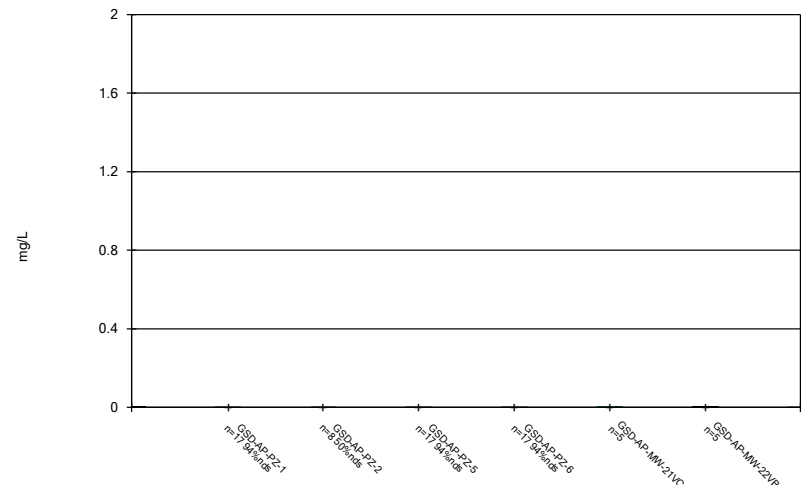
Constituent: Arsenic Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



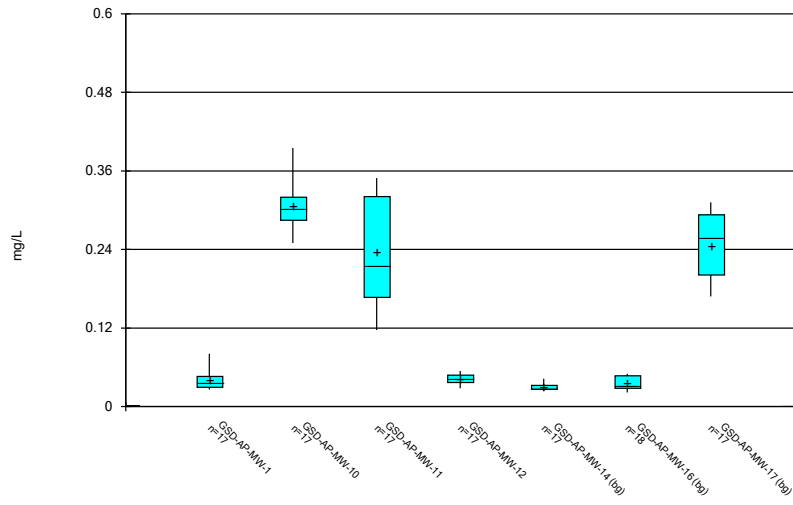
Constituent: Arsenic Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



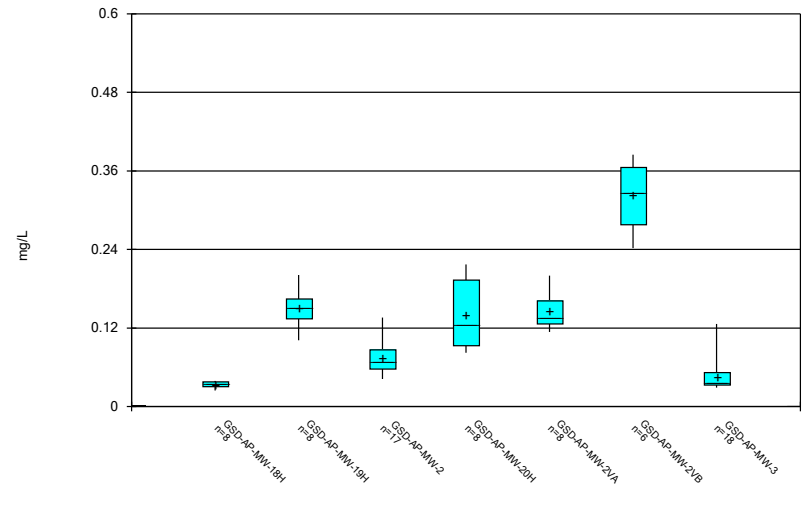
Constituent: Arsenic Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



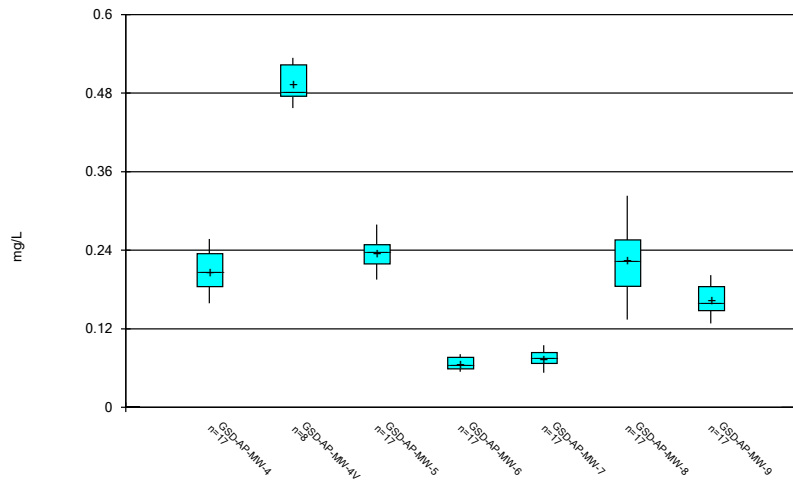
Constituent: Barium Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



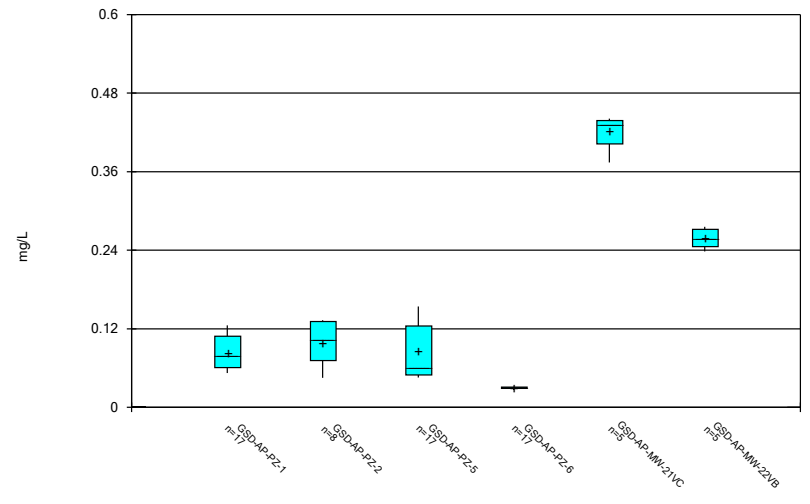
Constituent: Barium Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



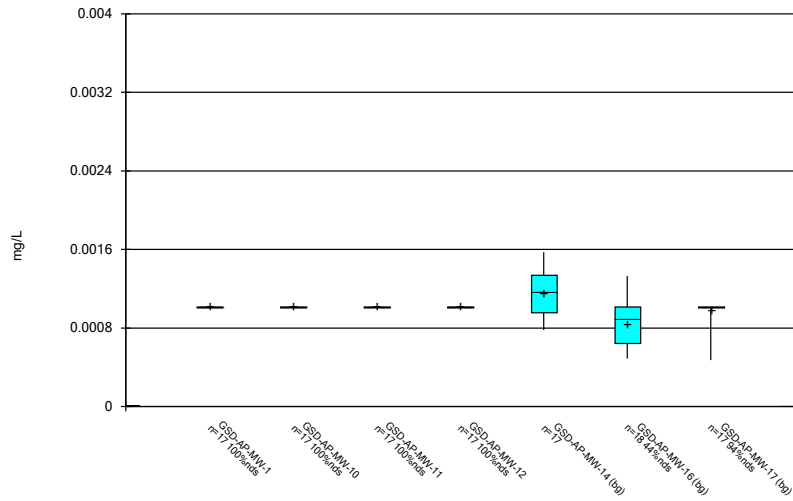
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



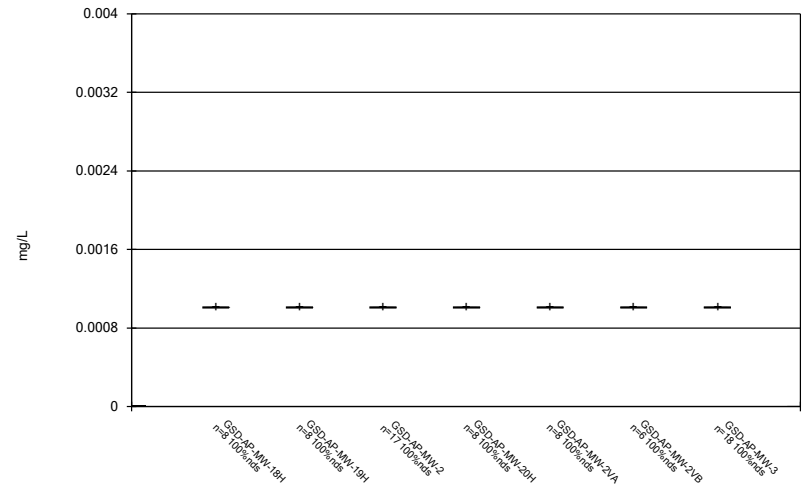
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



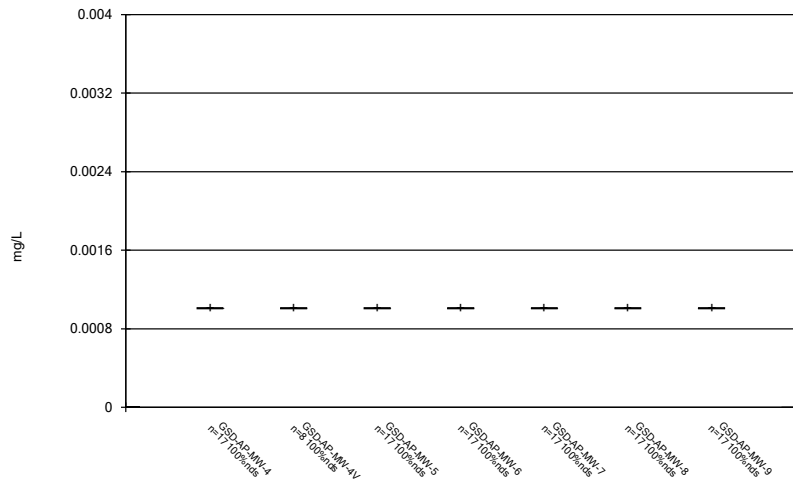
Constituent: Beryllium Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



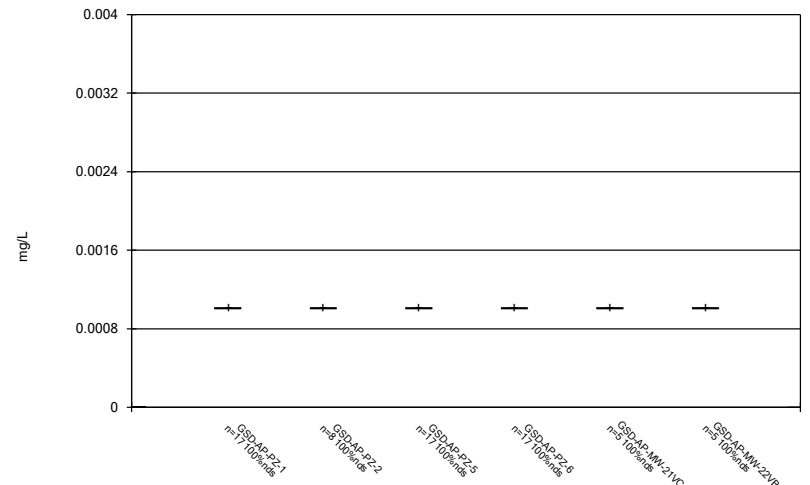
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



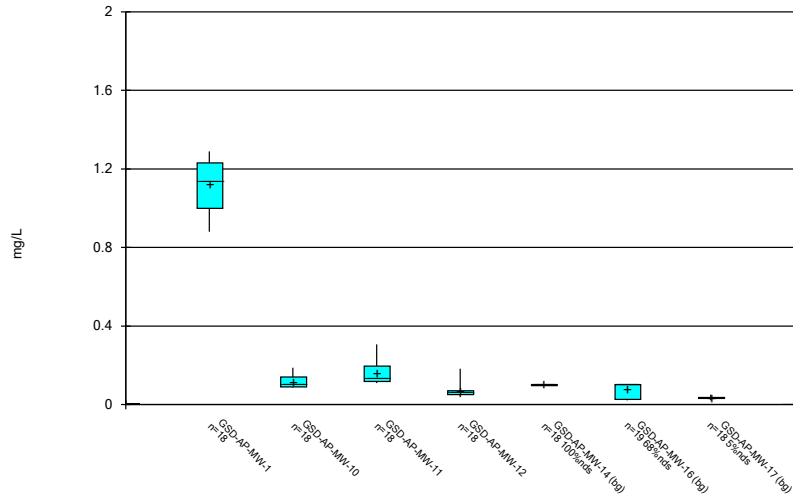
Constituent: Beryllium Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



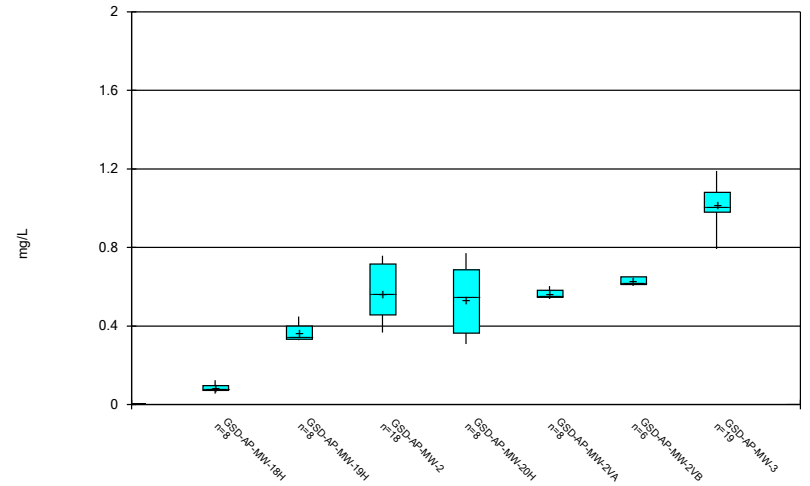
Constituent: Beryllium Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



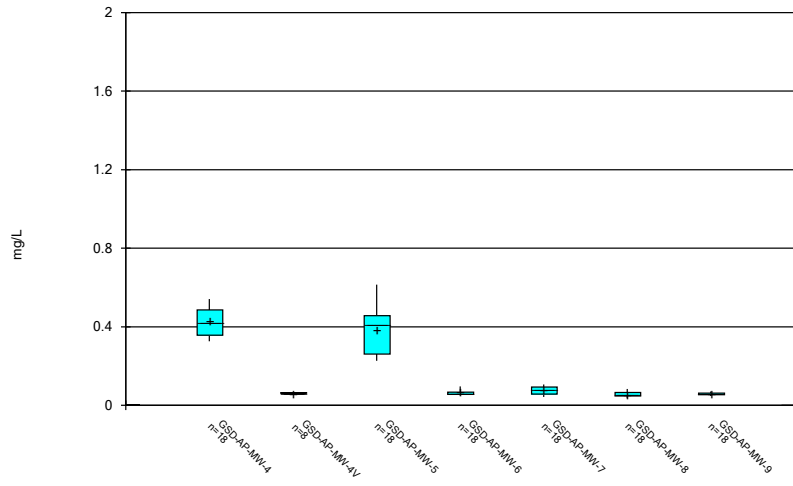
Constituent: Boron Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



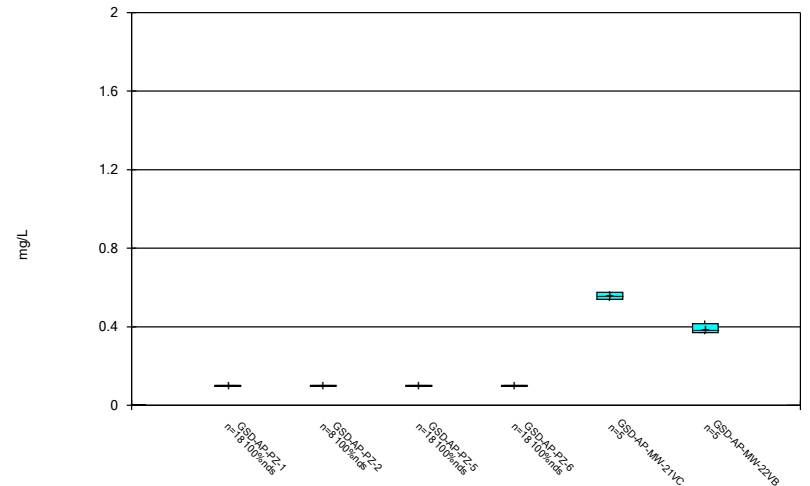
Constituent: Boron Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



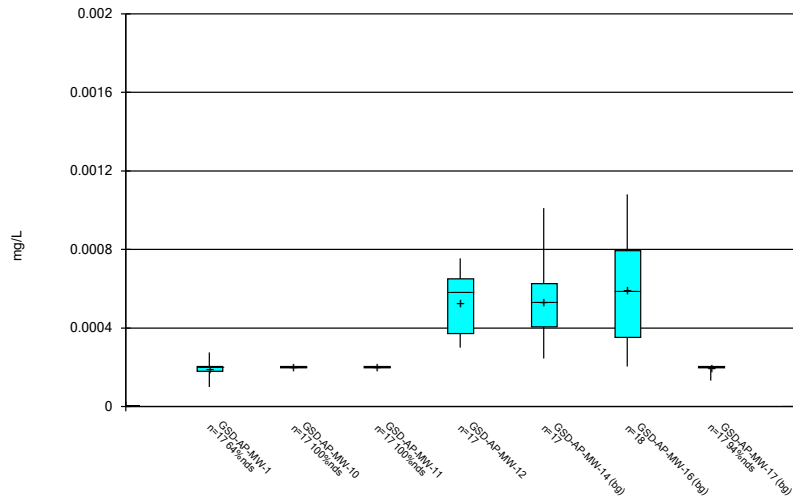
Constituent: Boron Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



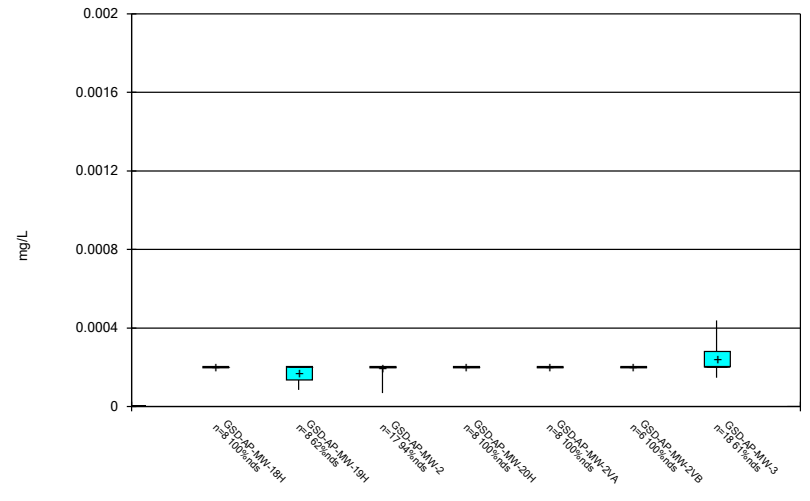
Constituent: Boron Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



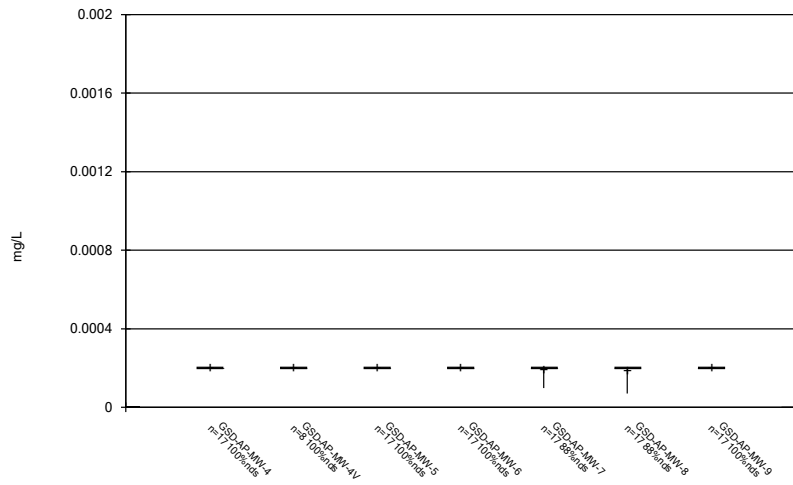
Constituent: Cadmium Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



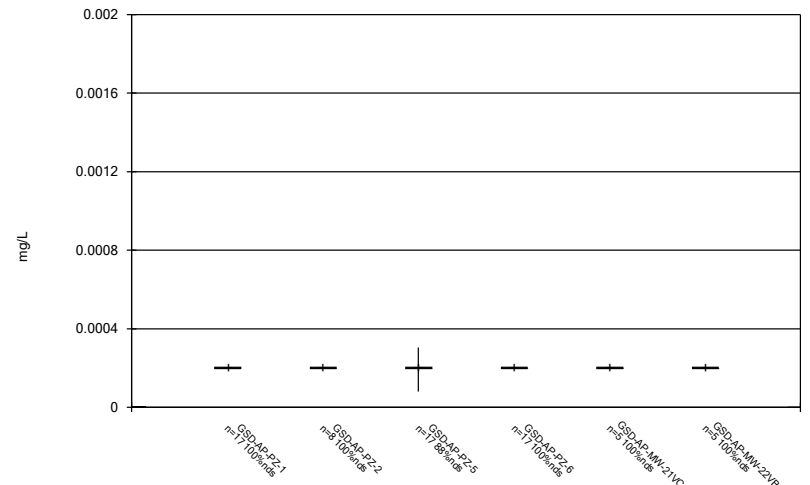
Constituent: Cadmium Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



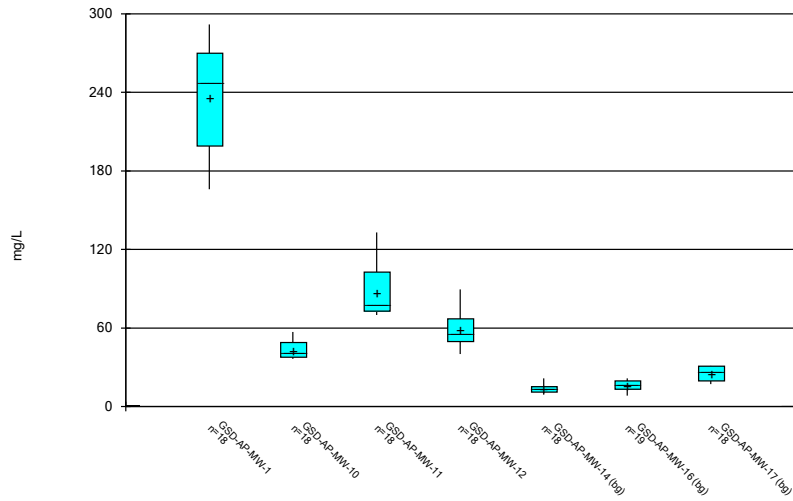
Constituent: Cadmium Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



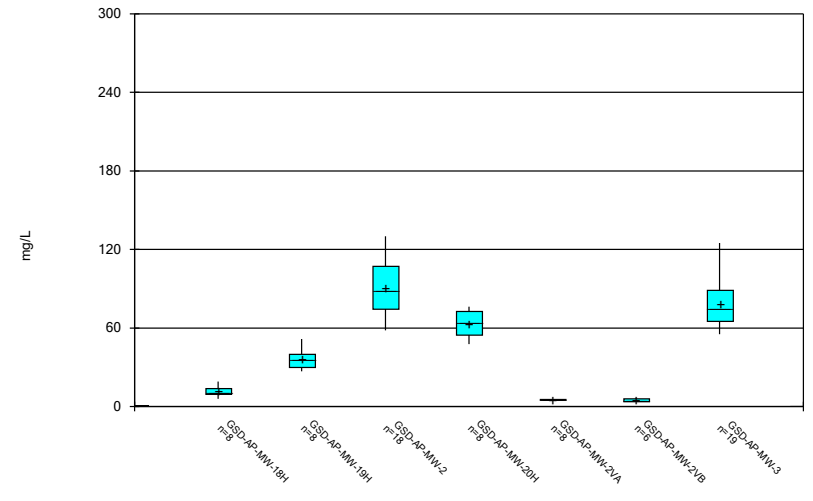
Constituent: Cadmium Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



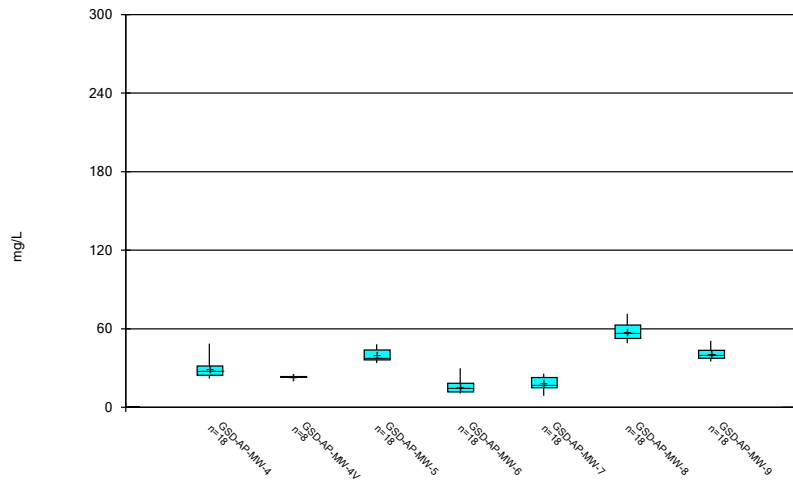
Constituent: Calcium Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



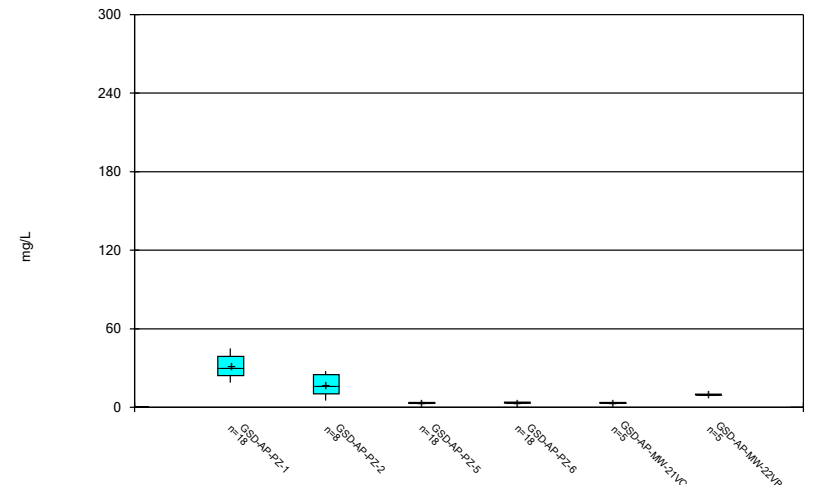
Constituent: Calcium Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



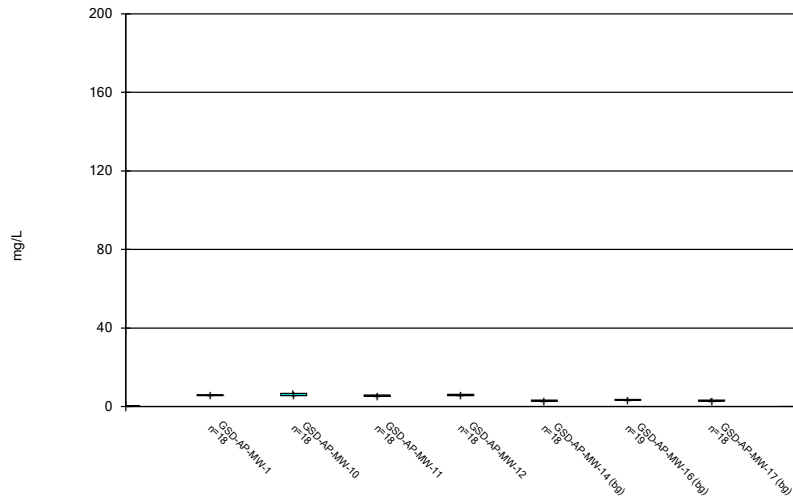
Constituent: Calcium Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



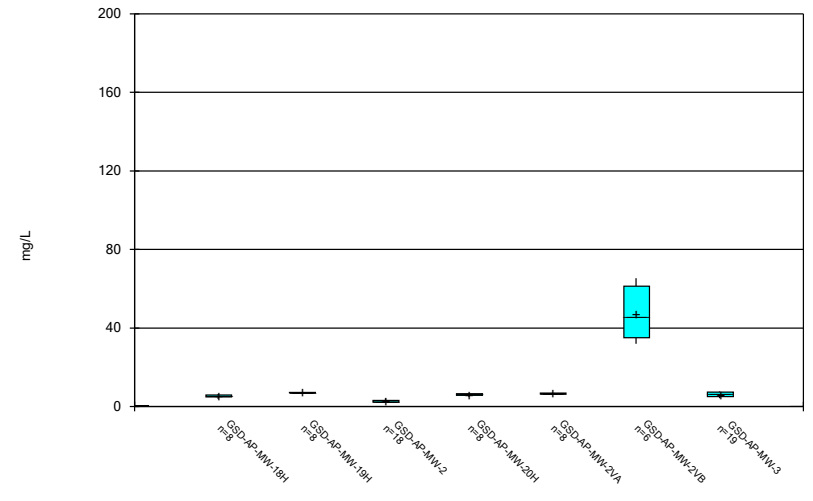
Constituent: Calcium Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



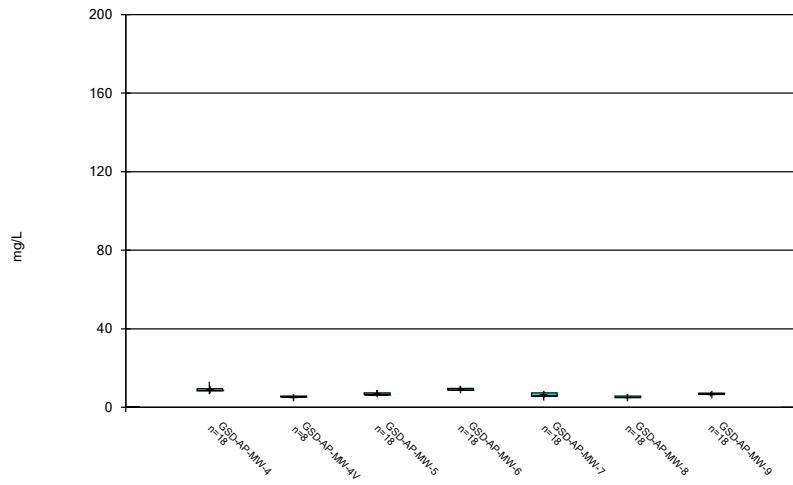
Constituent: Chloride Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



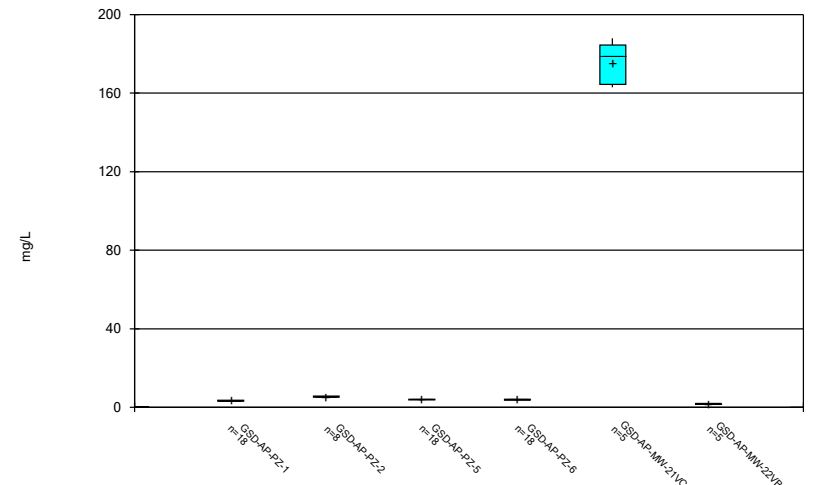
Constituent: Chloride Analysis Run 1/2/2024 5:38 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



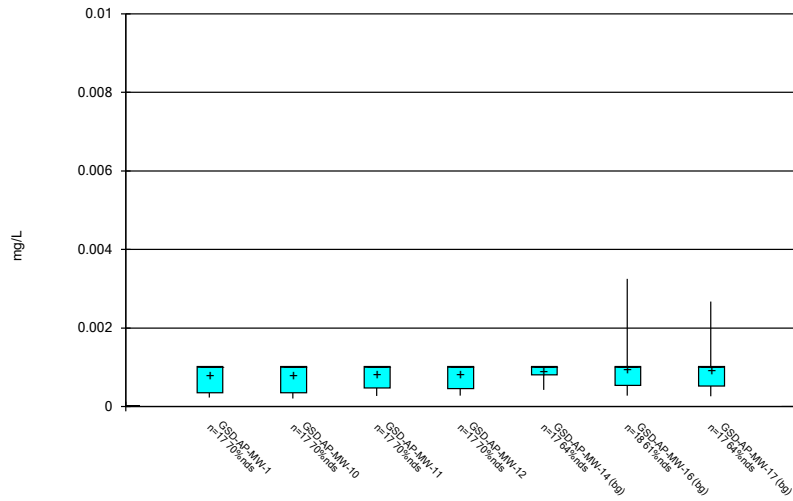
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



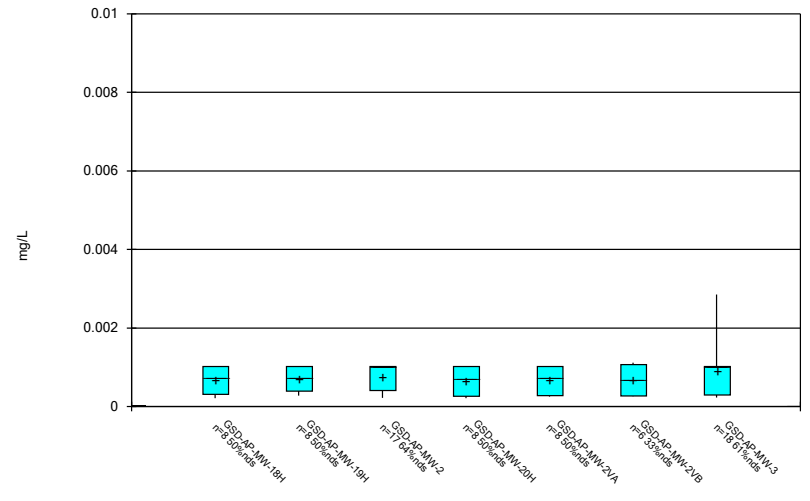
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



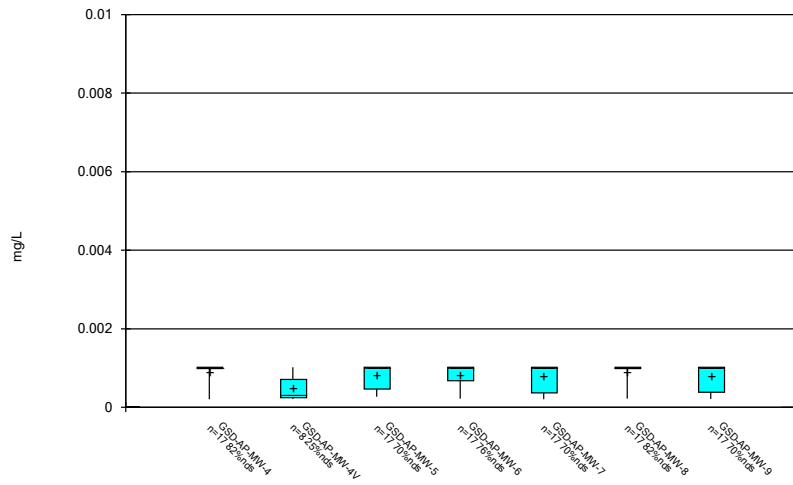
Constituent: Chromium Analysis Run 1/2/2024 5:38 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



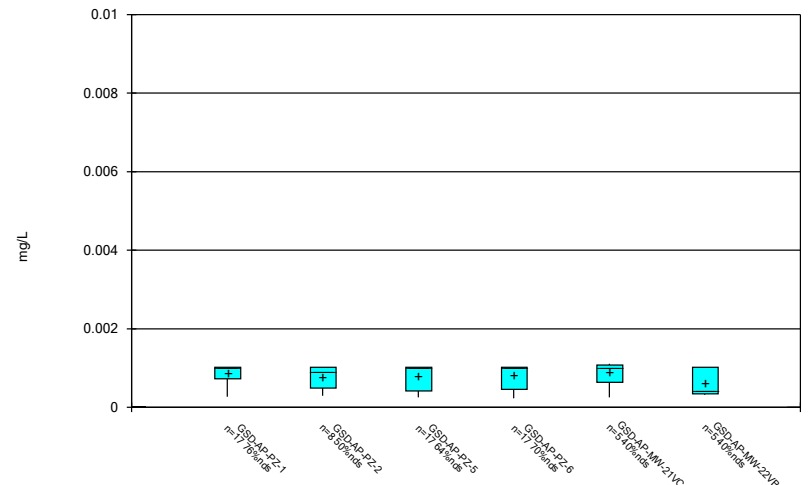
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



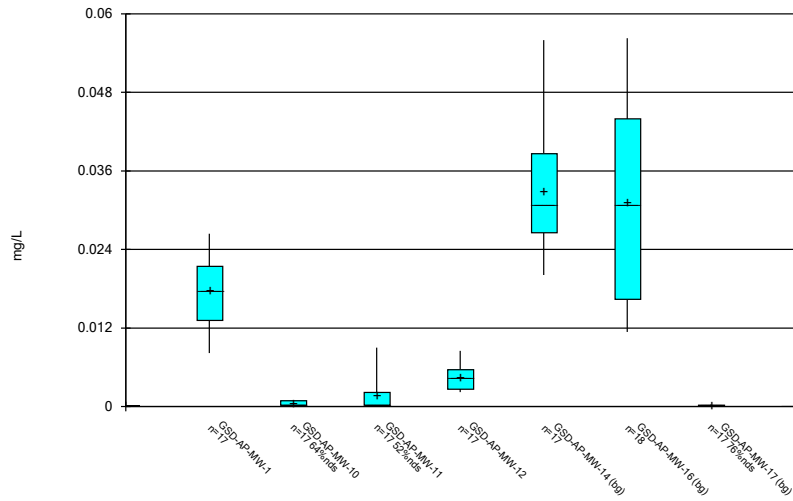
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



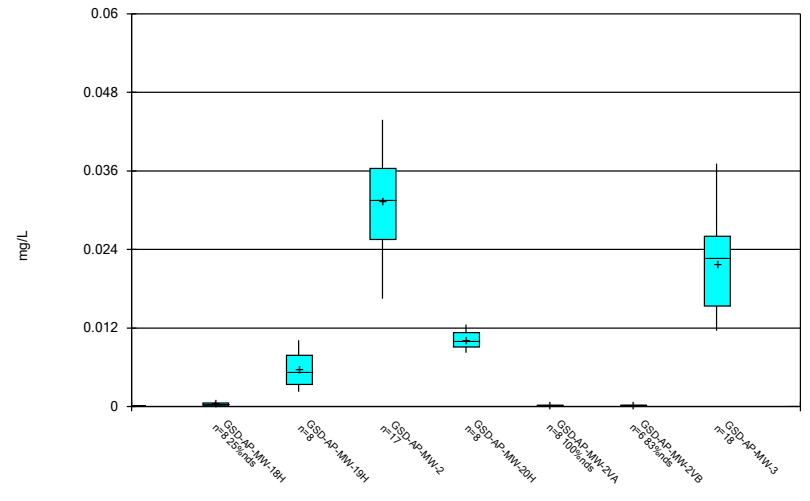
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



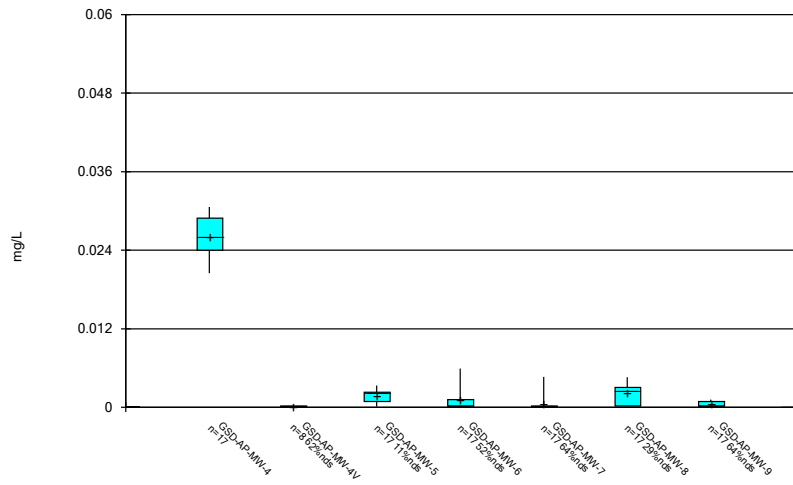
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



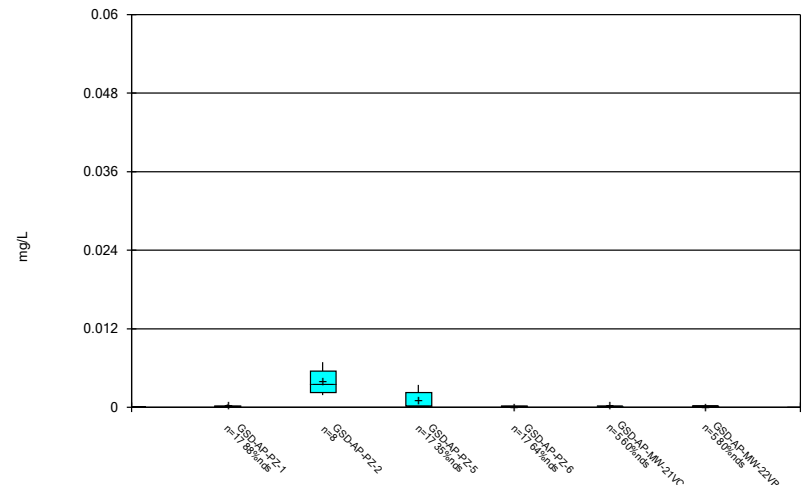
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



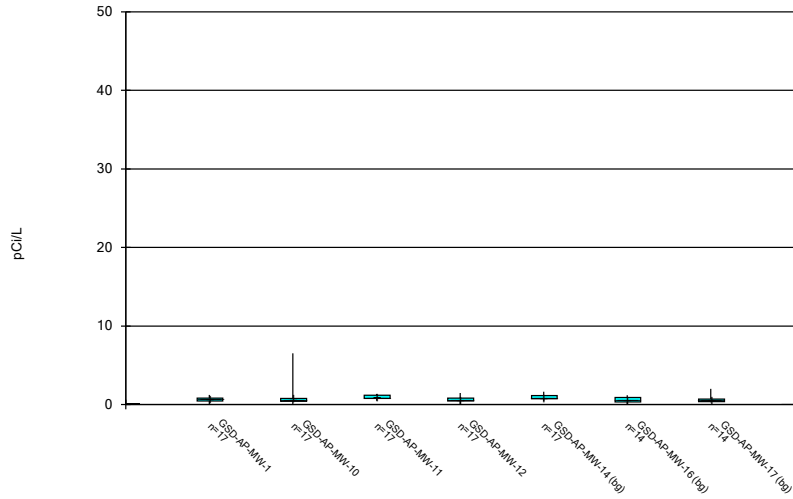
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



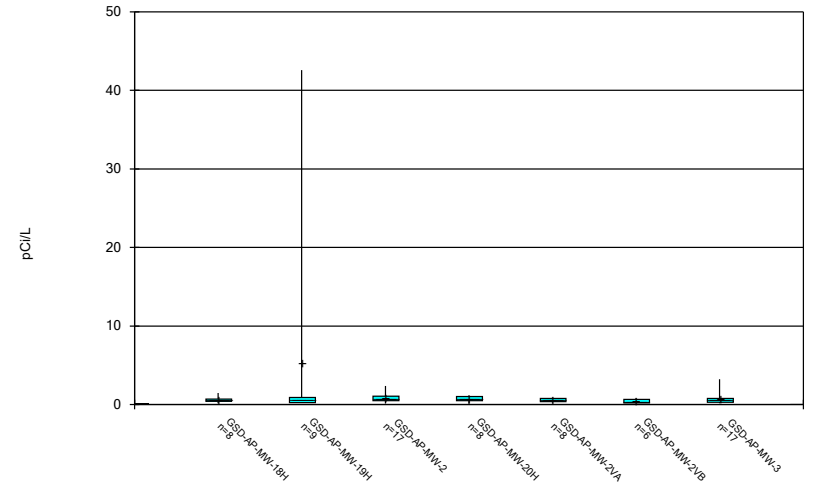
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



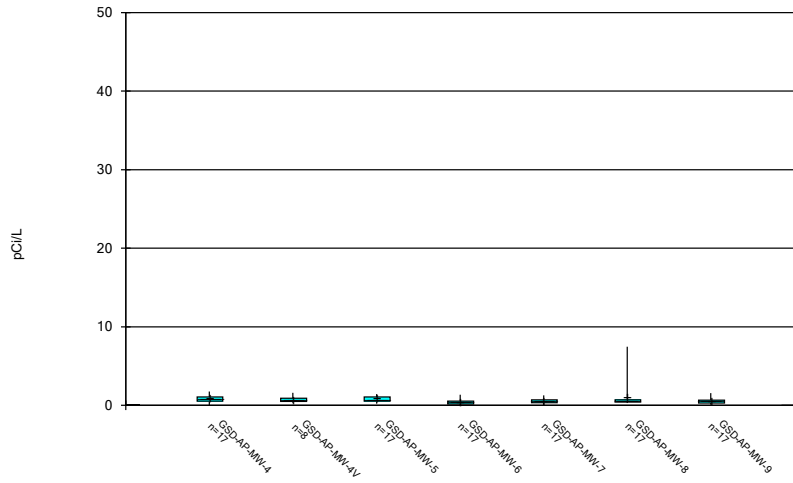
Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



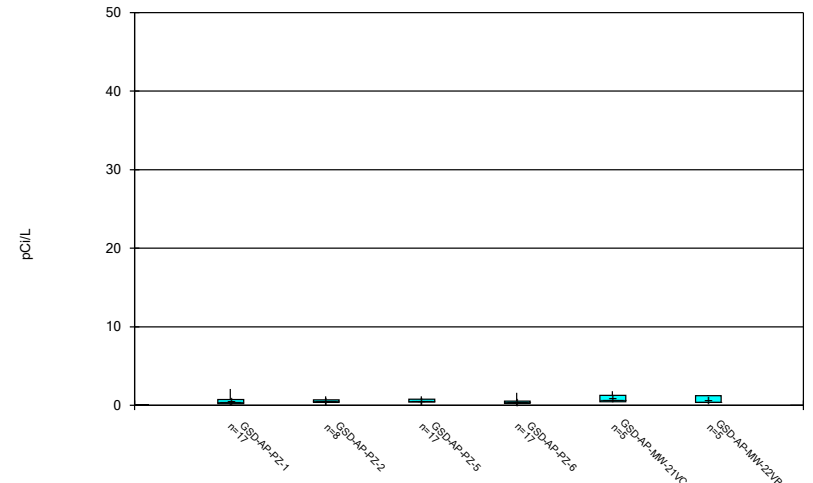
Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



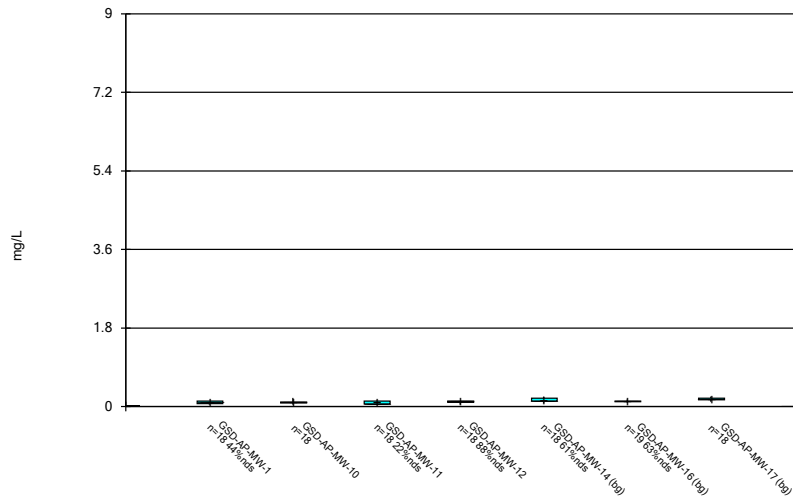
Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



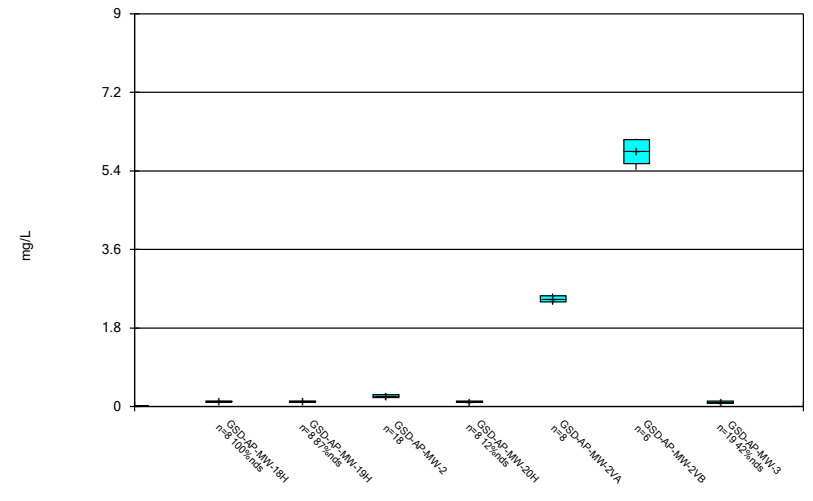
Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



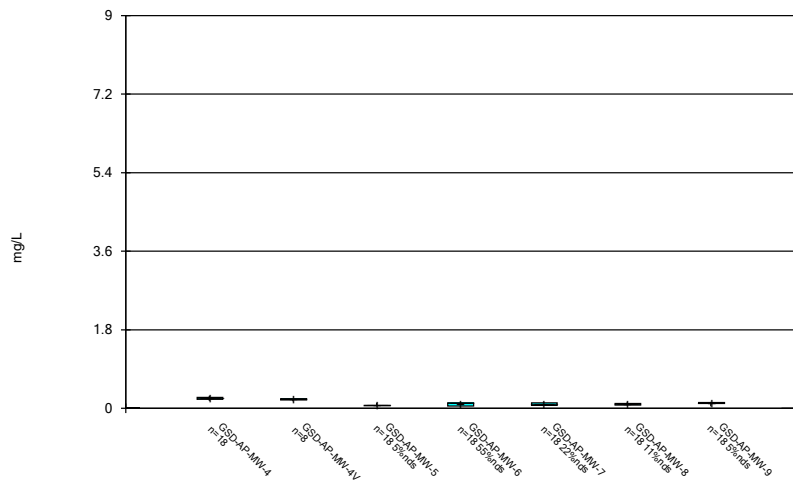
Constituent: Fluoride Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



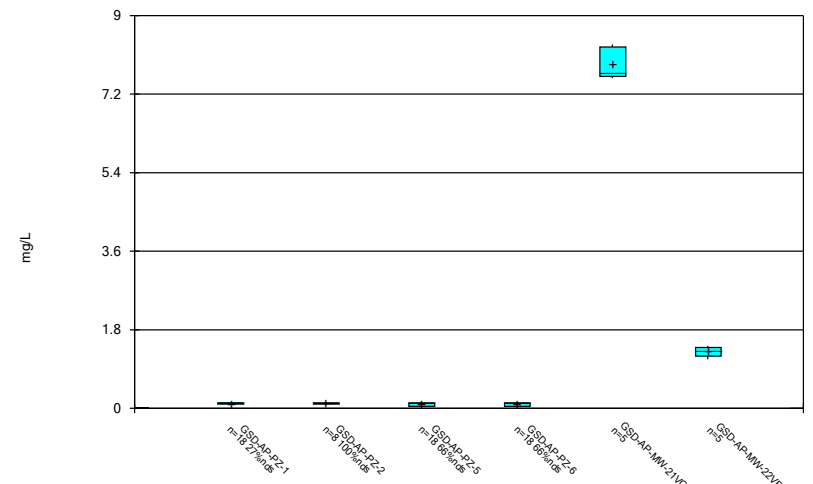
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



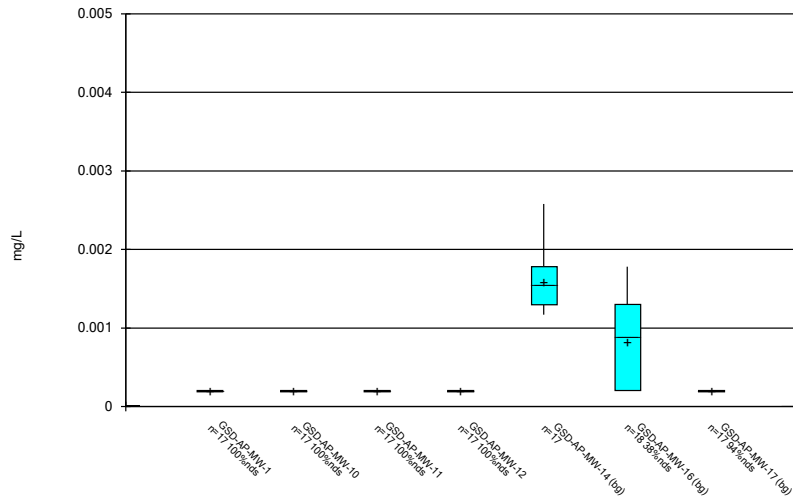
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



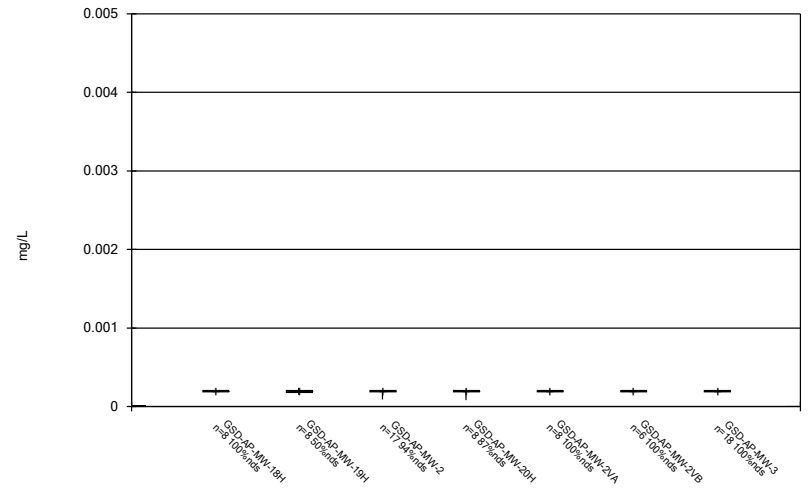
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



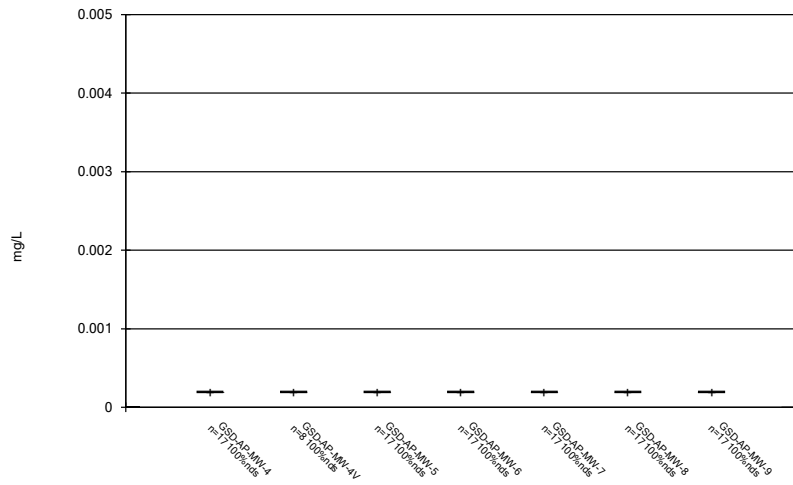
Constituent: Lead Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



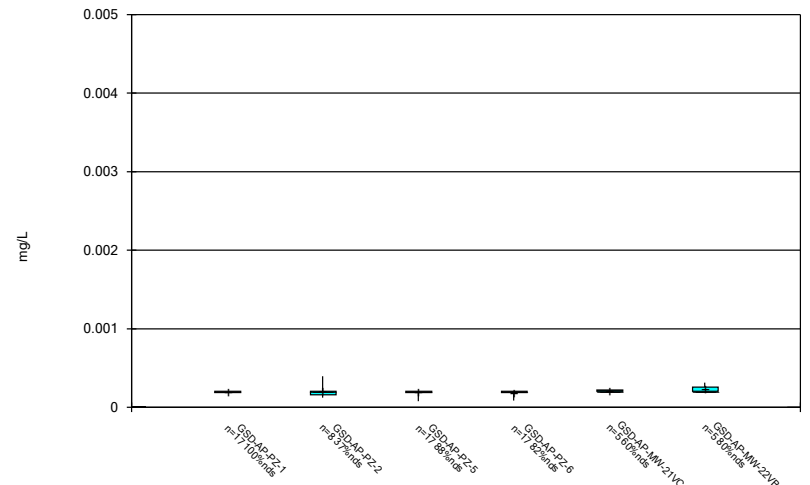
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



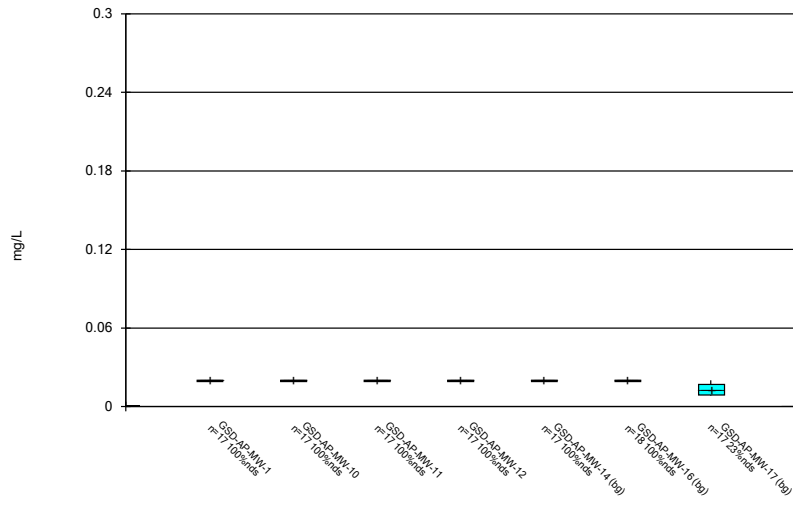
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



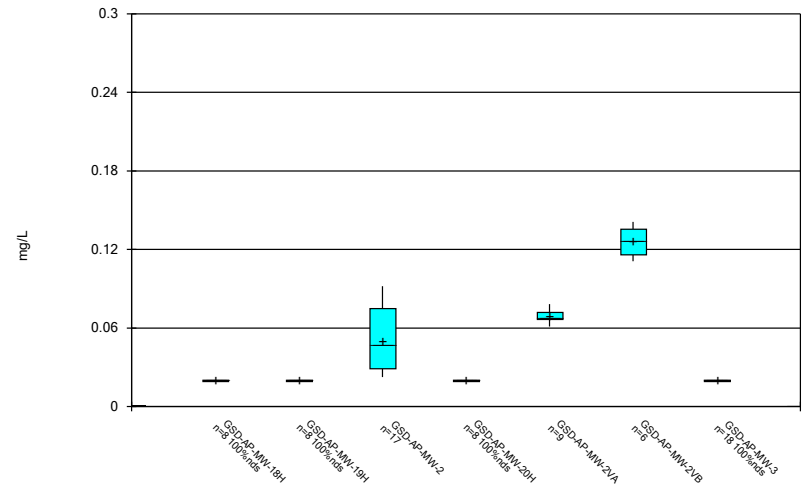
Constituent: Lead Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



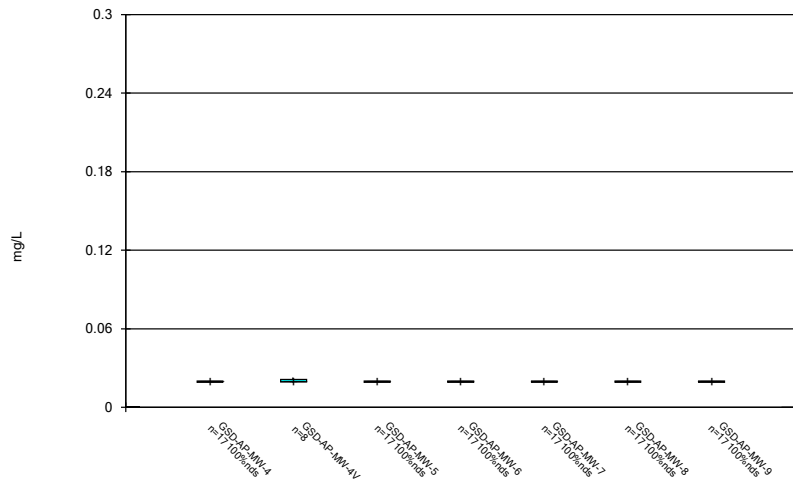
Constituent: Lithium Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



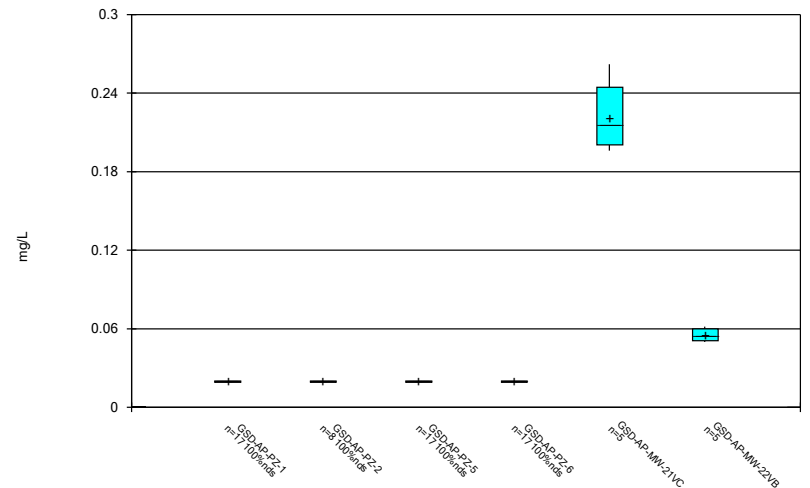
Constituent: Lithium Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



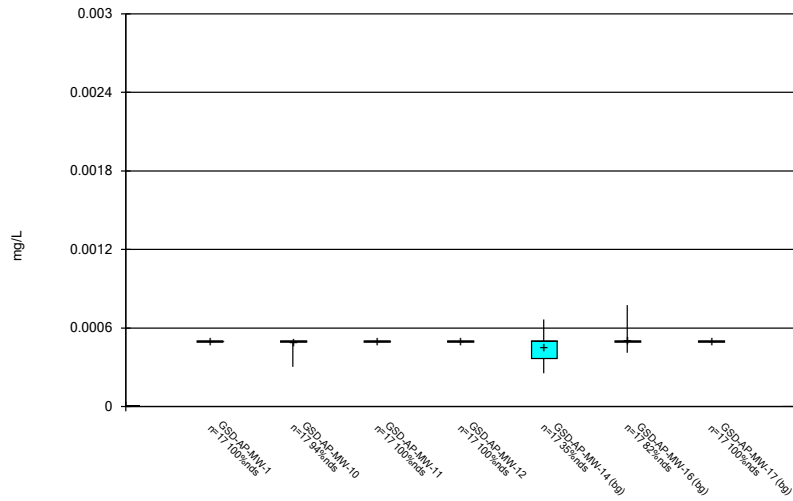
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



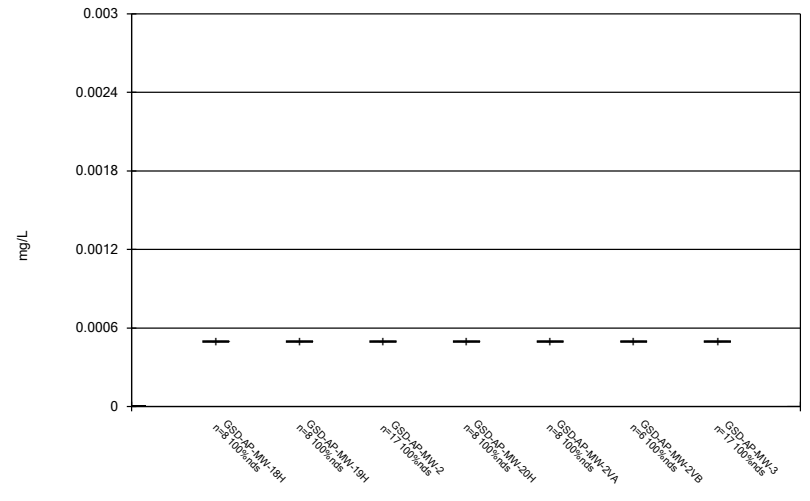
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



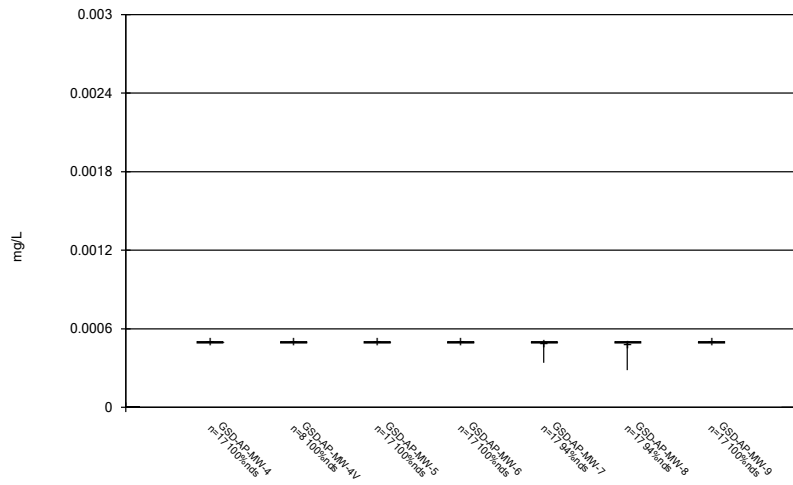
Constituent: Mercury Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



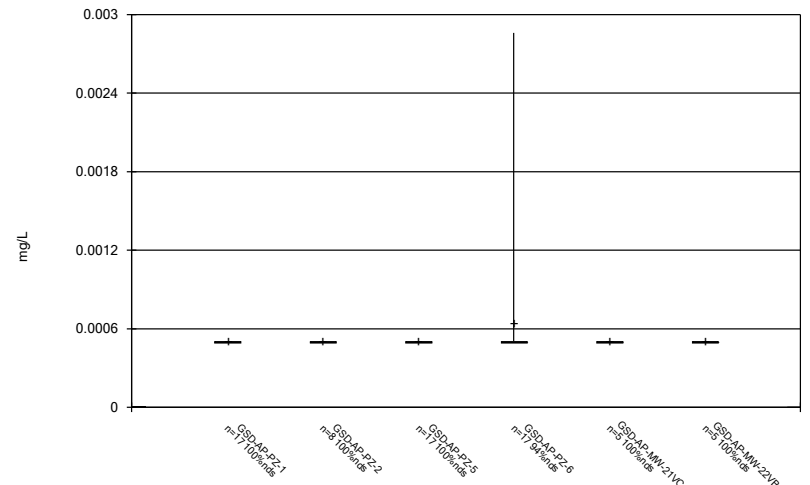
Constituent: Mercury Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



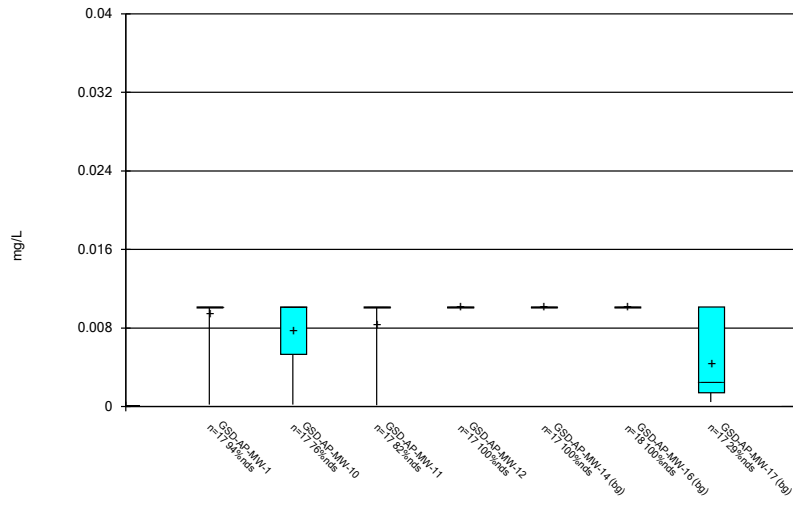
Constituent: Mercury Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



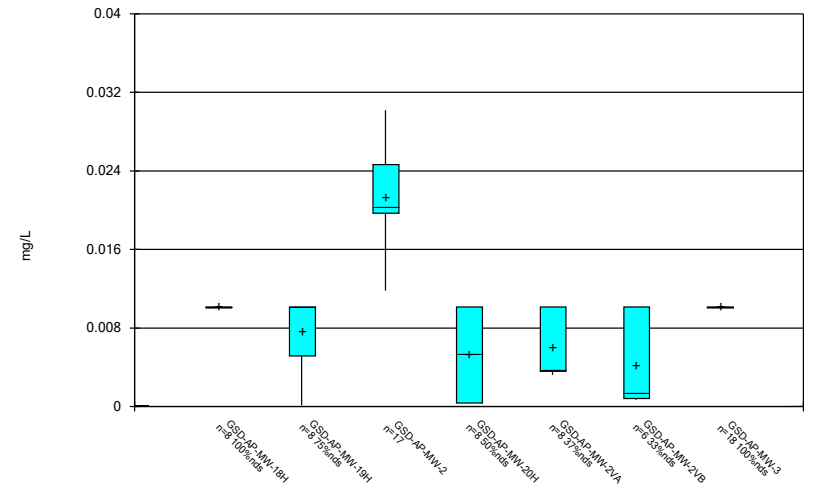
Constituent: Mercury Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



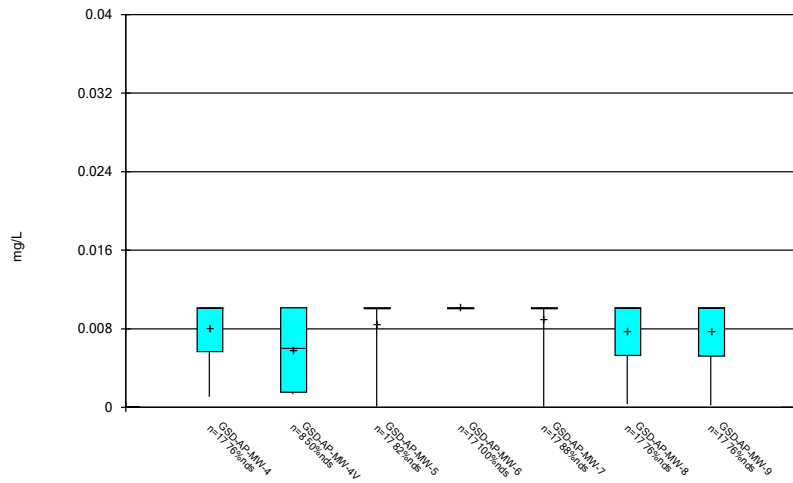
Constituent: Molybdenum Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



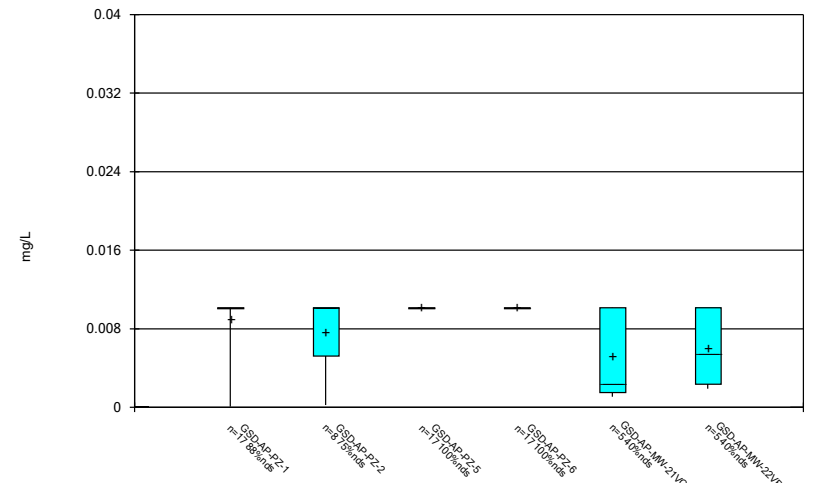
Constituent: Molybdenum Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



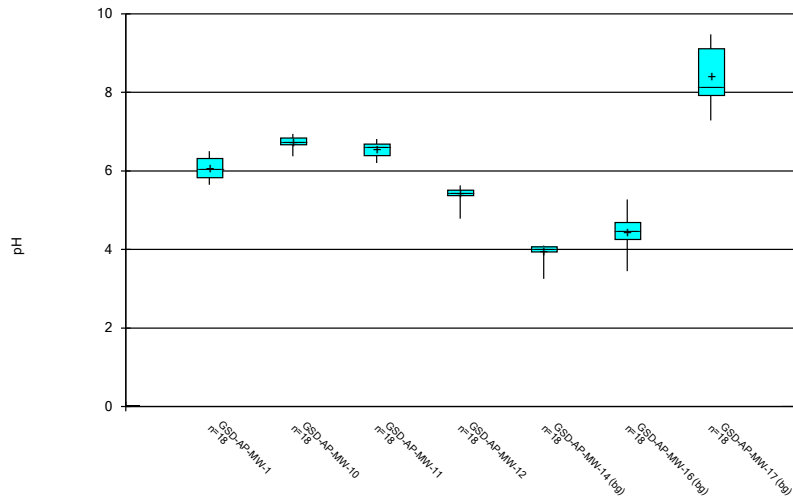
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



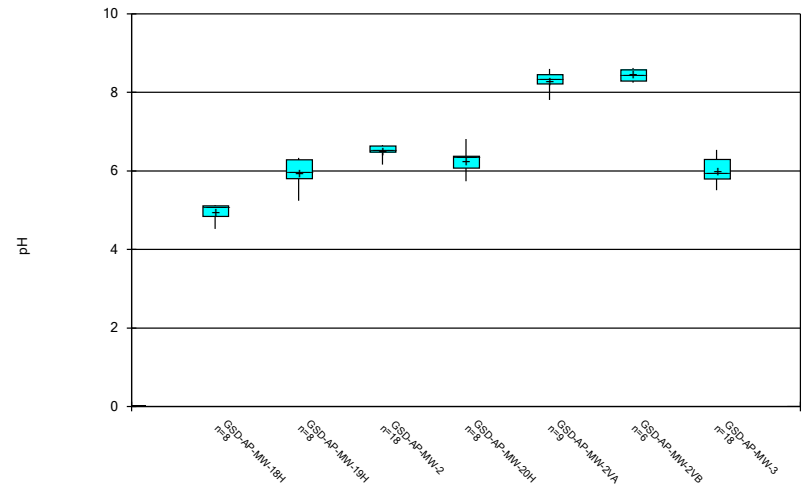
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



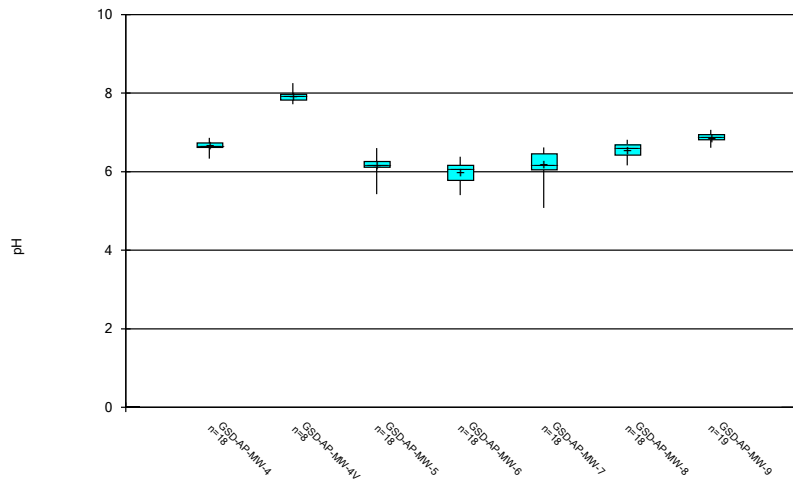
Constituent: pH Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



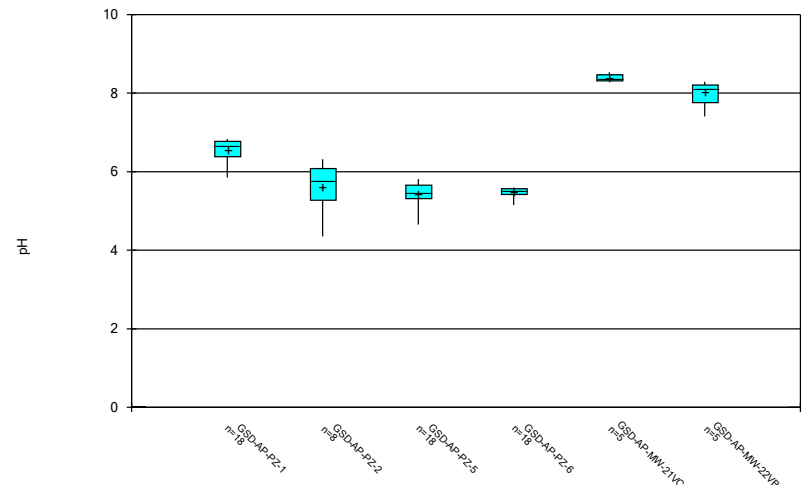
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



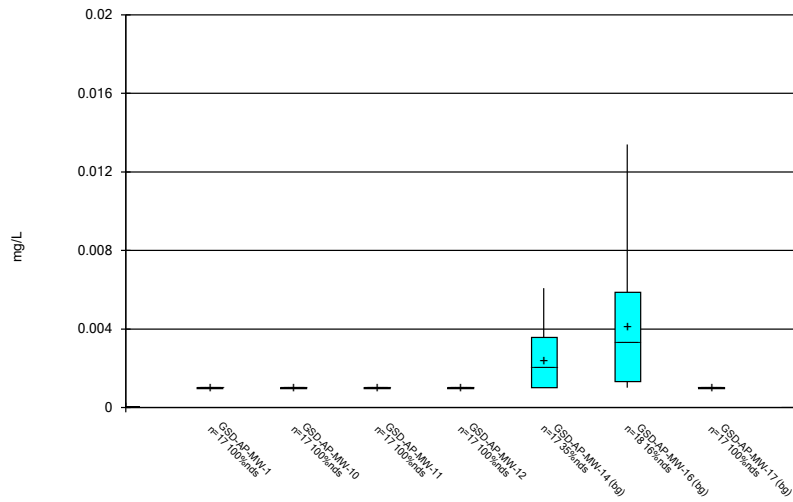
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



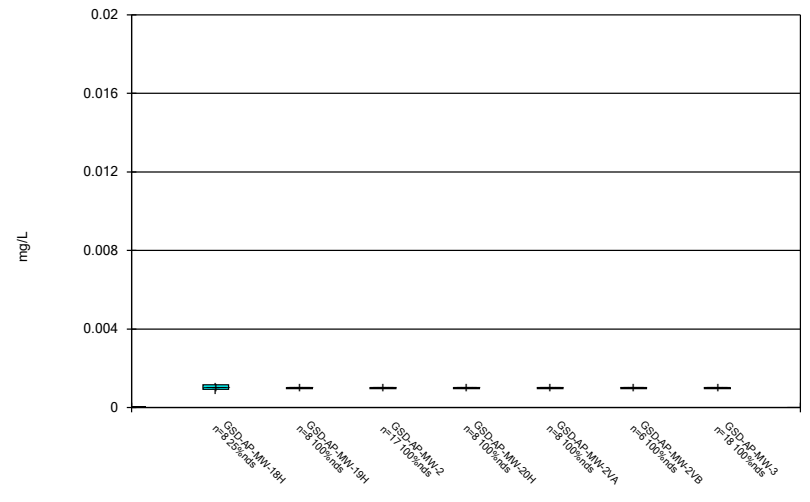
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



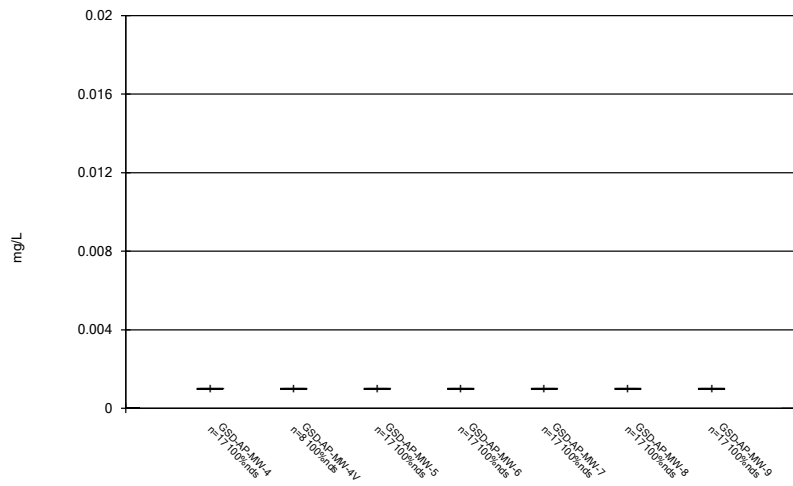
Constituent: Selenium Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



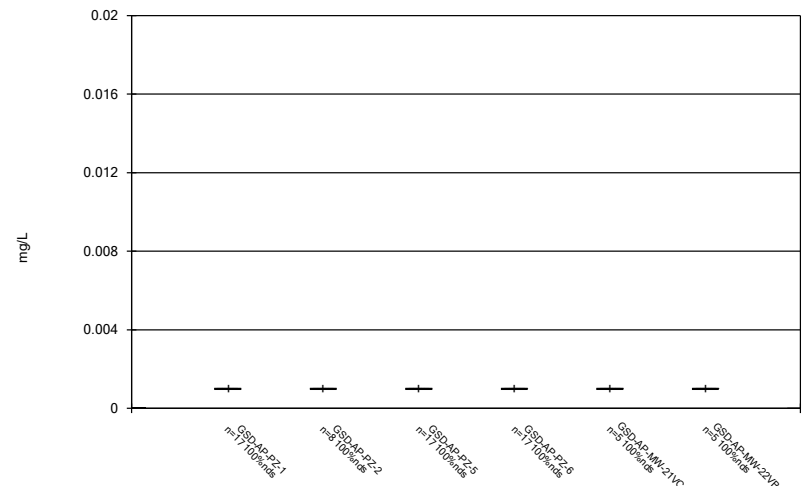
Constituent: Selenium Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



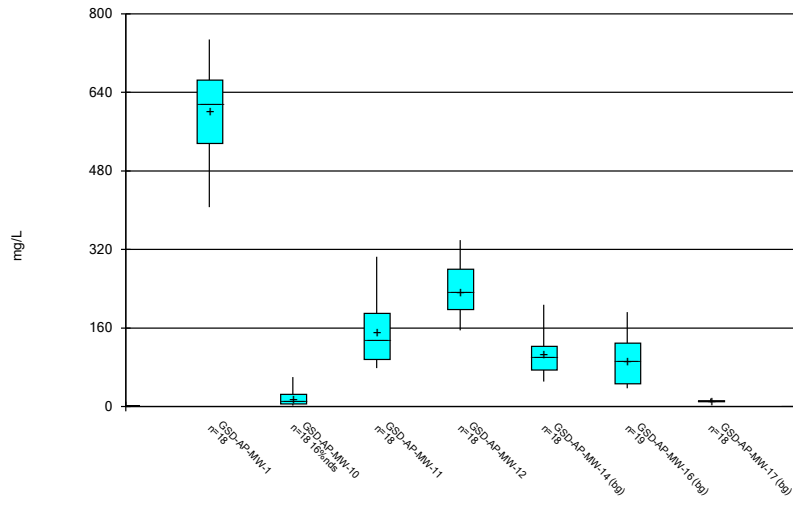
Constituent: Selenium Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



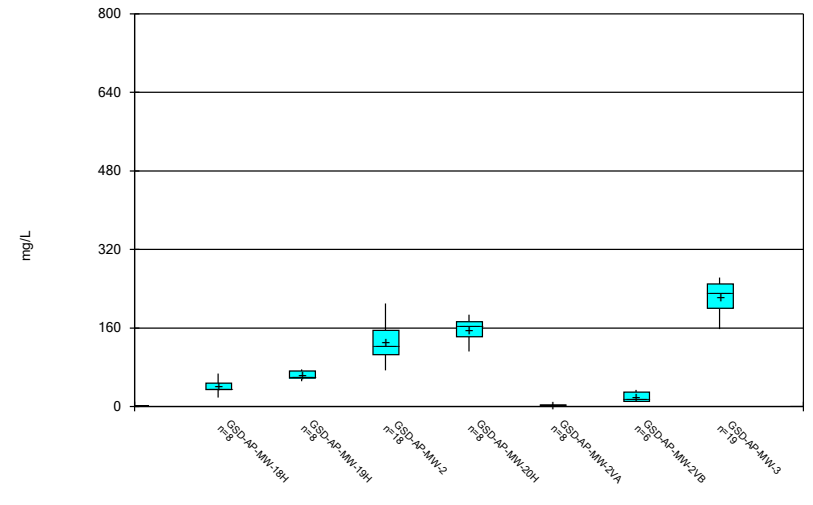
Constituent: Selenium Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



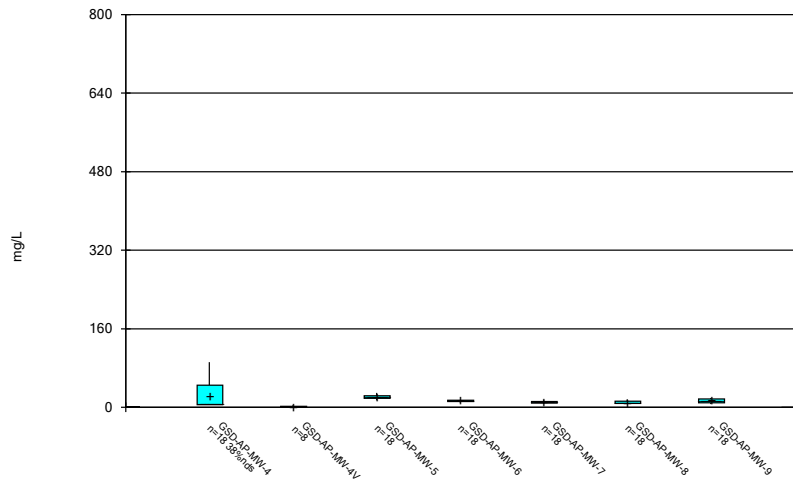
Constituent: Sulfate Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



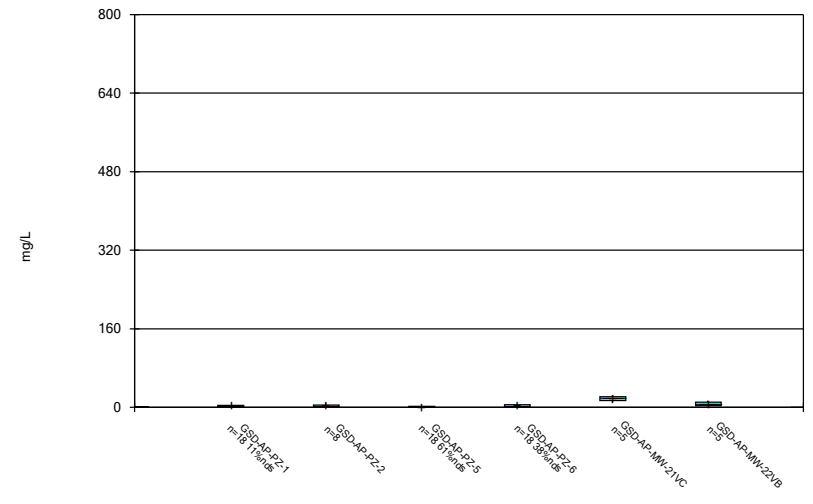
Constituent: Sulfate Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



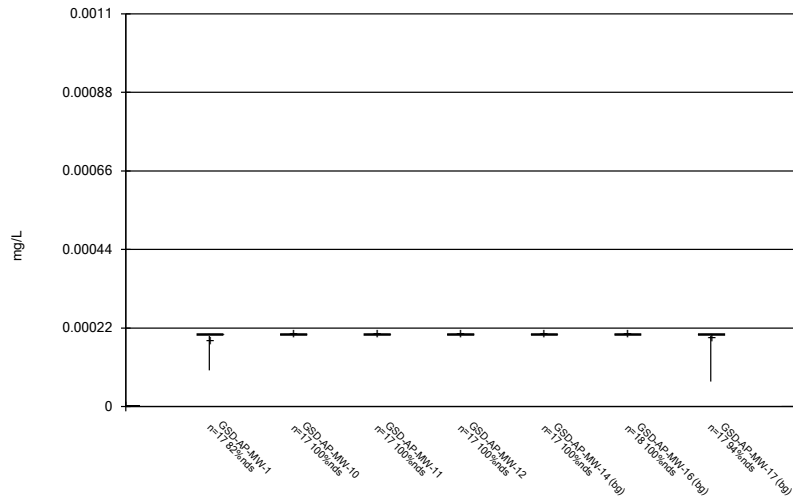
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



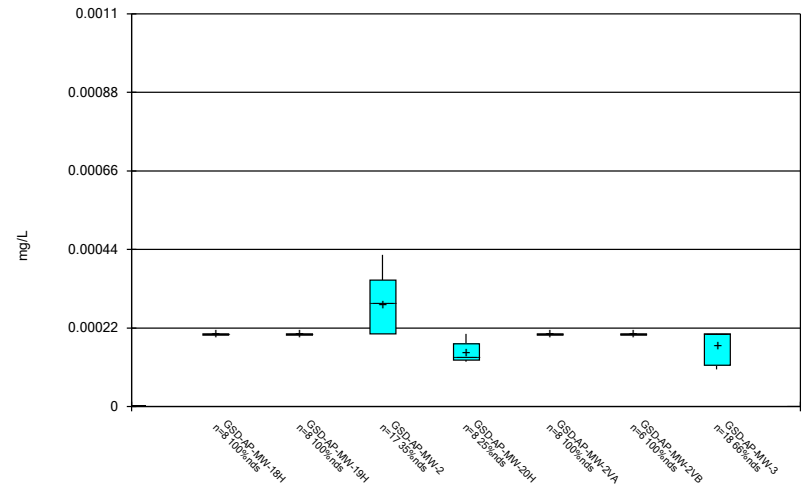
Constituent: Sulfate Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



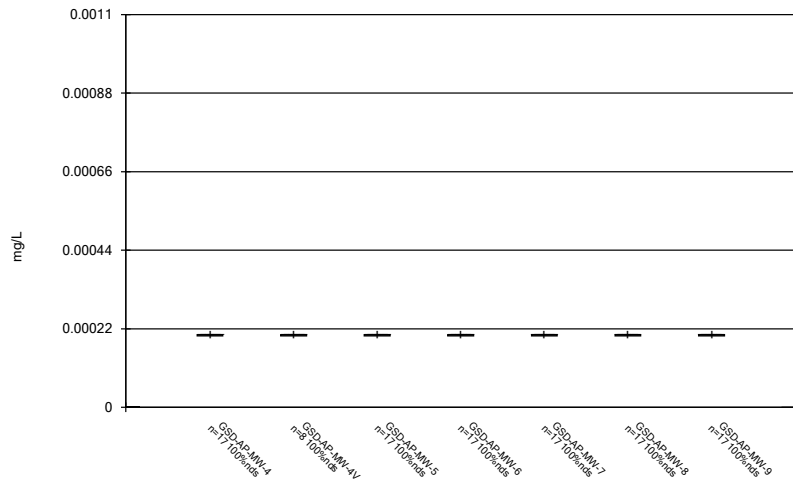
Constituent: Thallium Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



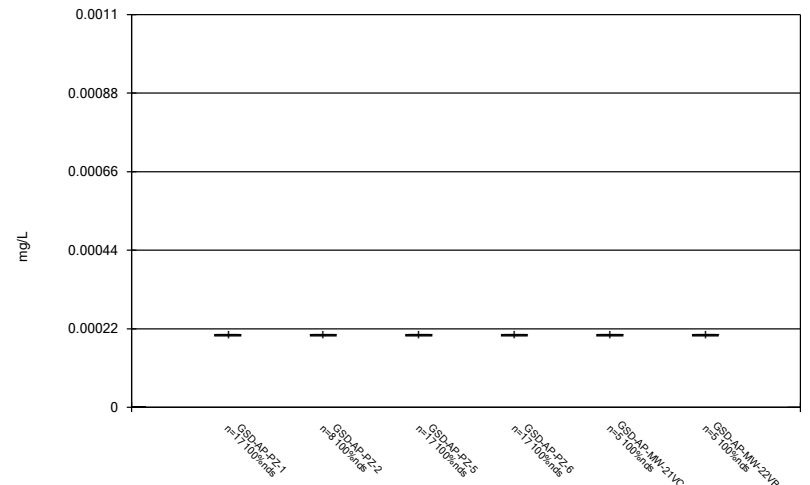
Constituent: Thallium Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



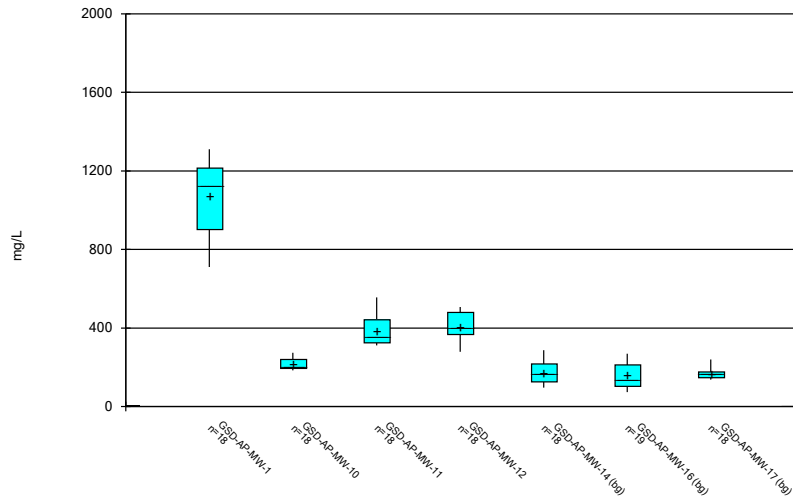
Constituent: Thallium Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



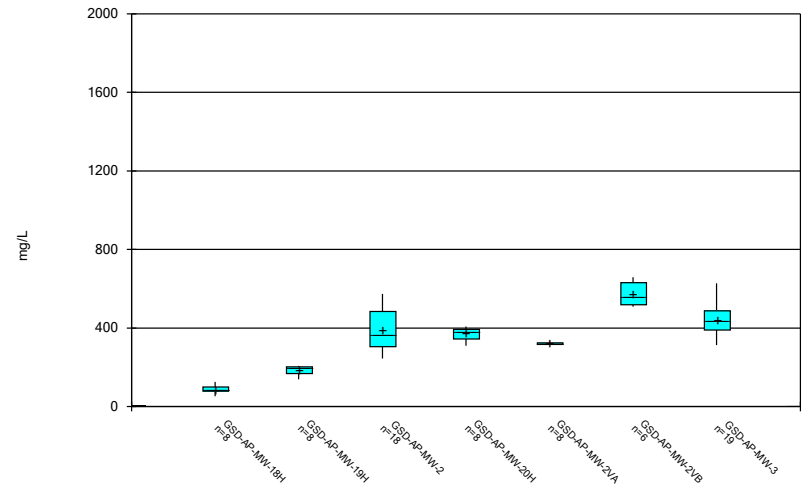
Constituent: Thallium Analysis Run 1/2/2024 5:39 PM
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



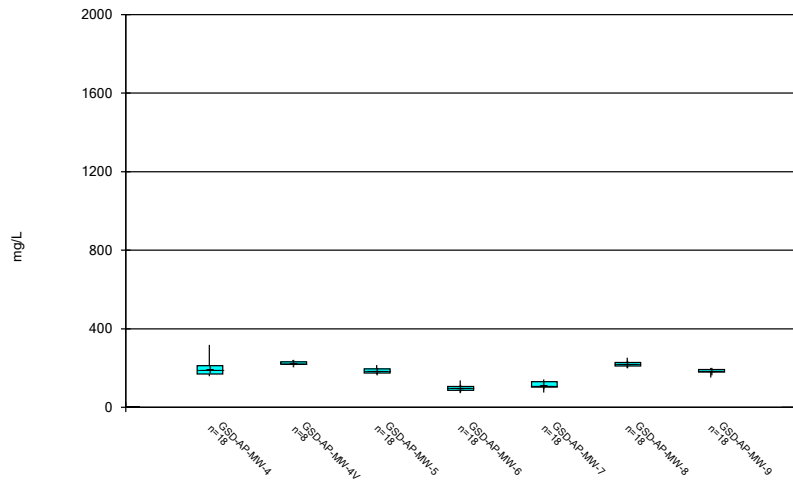
Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



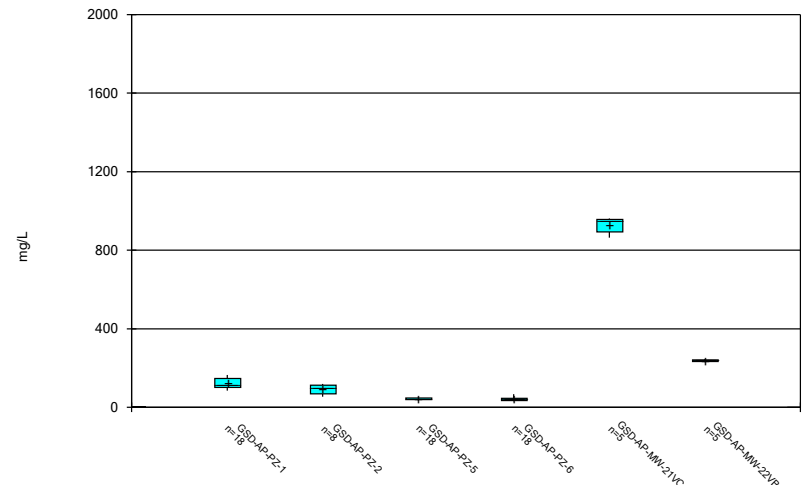
Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:39 PM
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

FIGURE C.

Outlier Summary

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/5/2024, 12:56 PM

No values were flagged as outliers.

Tukey's Outlier Test - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:30 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Fluoride (mg/L)	GSD-AP-MW-10	Yes	0.04,0.201	8/7/2018,10/11/2021	NP	NaN	17	0.09419	0.03204	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-5	Yes	0.122	10/5/2021	NP	NaN	17	0.06478	0.01763	ln(x)	ShapiroWilk
pH (pH)	GSD-AP-MW-12	Yes	4.78	5/10/2022	NP	NaN	17	5.402	0.1901	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-14 (bg)	Yes	3.25	3/22/2021	NP	NaN	17	3.946	0.2178	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-5	Yes	5.43	5/9/2022	NP	NaN	17	6.149	0.2062	x^6	ShapiroWilk

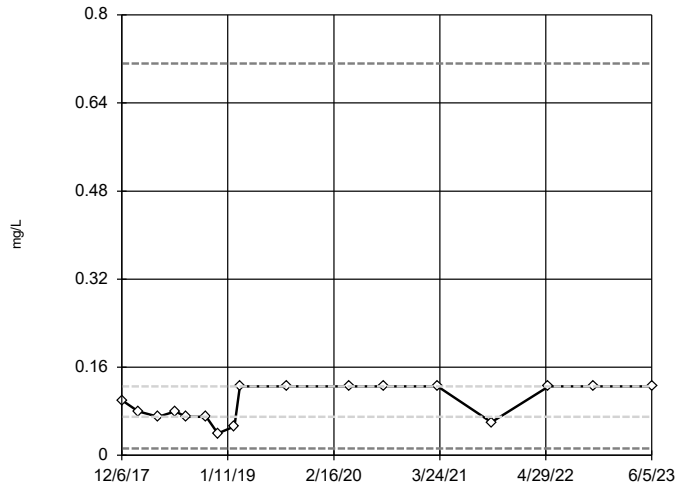
Tukey's Outlier Test - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:30 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Fluoride (mg/L)	GSD-AP-MW-1	No	n/a	n/a	NP	NaN	17	0.09545	0.03122	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-10	Yes	0.04,0.201	8/7/2018,10/11/2021	NP	NaN	17	0.09419	0.03204	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-11	No	n/a	n/a	NP	NaN	17	0.08729	0.03043	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-12	n/a	n/a	n/a	NP	NaN	17	0.1173	0.02277	unknown	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	No	n/a	n/a	NP	NaN	17	0.1482	0.04596	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	No	n/a	n/a	NP	NaN	18	0.1212	0.01606	sqrt(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	No	n/a	n/a	NP	NaN	17	0.1775	0.02544	x^2	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-2	No	n/a	n/a	NP	NaN	17	0.2407	0.0413	x^3	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-3	No	n/a	n/a	NP	NaN	18	0.097	0.02913	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-4	No	n/a	n/a	NP	NaN	17	0.2294	0.02644	x^2	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-5	Yes	0.122	10/5/2021	NP	NaN	17	0.06478	0.01763	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-6	No	n/a	n/a	NP	NaN	17	0.09204	0.03712	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-7	No	n/a	n/a	NP	NaN	17	0.09364	0.02433	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-8	No	n/a	n/a	NP	NaN	17	0.09425	0.024	sqrt(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-9	No	n/a	n/a	NP	NaN	17	0.1156	0.02942	x^4	ShapiroWilk
Fluoride (mg/L)	GSD-AP-PZ-1	No	n/a	n/a	NP	NaN	17	0.1102	0.01993	x^3	ShapiroWilk
Fluoride (mg/L)	GSD-AP-PZ-5	No	n/a	n/a	NP	NaN	17	0.09559	0.04111	ln(x)	ShapiroWilk
Fluoride (mg/L)	GSD-AP-PZ-6	No	n/a	n/a	NP	NaN	17	0.095	0.04187	sqrt(x)	ShapiroWilk
pH (pH)	GSD-AP-MW-1	No	n/a	n/a	NP	NaN	17	6.078	0.277	normal	ShapiroWilk
pH (pH)	GSD-AP-MW-10	No	n/a	n/a	NP	NaN	17	6.708	0.1467	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-11	No	n/a	n/a	NP	NaN	17	6.566	0.1724	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-12	Yes	4.78	5/10/2022	NP	NaN	17	5.402	0.1901	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-14 (bg)	Yes	3.25	3/22/2021	NP	NaN	17	3.946	0.2178	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-16 (bg)	No	n/a	n/a	NP	NaN	17	4.441	0.4368	x^3	ShapiroWilk
pH (pH)	GSD-AP-MW-17 (bg)	No	n/a	n/a	NP	NaN	17	8.434	0.6846	ln(x)	ShapiroWilk
pH (pH)	GSD-AP-MW-2	No	n/a	n/a	NP	NaN	17	6.529	0.1316	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-3	No	n/a	n/a	NP	NaN	17	6.001	0.2884	ln(x)	ShapiroWilk
pH (pH)	GSD-AP-MW-4	No	n/a	n/a	NP	NaN	17	6.662	0.1109	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-5	Yes	5.43	5/9/2022	NP	NaN	17	6.149	0.2062	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-6	No	n/a	n/a	NP	NaN	17	5.969	0.2656	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-7	No	n/a	n/a	NP	NaN	17	6.181	0.3519	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-8	No	n/a	n/a	NP	NaN	17	6.539	0.1782	x^6	ShapiroWilk
pH (pH)	GSD-AP-MW-9	No	n/a	n/a	NP	NaN	18	6.867	0.1148	x^6	ShapiroWilk
pH (pH)	GSD-AP-PZ-1	No	n/a	n/a	NP	NaN	17	6.531	0.3174	x^6	ShapiroWilk
pH (pH)	GSD-AP-PZ-5	No	n/a	n/a	NP	NaN	17	5.433	0.2895	x^6	ShapiroWilk
pH (pH)	GSD-AP-PZ-6	No	n/a	n/a	NP	NaN	17	5.492	0.1108	x^6	ShapiroWilk

Tukey's Outlier Screening

GSD-AP-MW-1

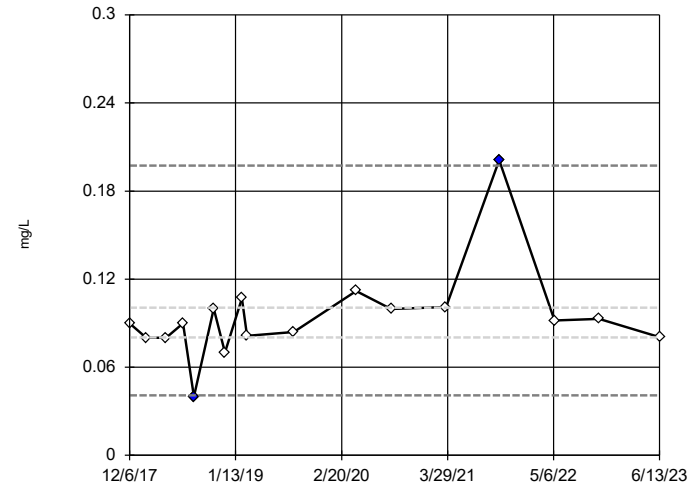


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.7118,
 low cutoff = 0.01229,
 based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-10

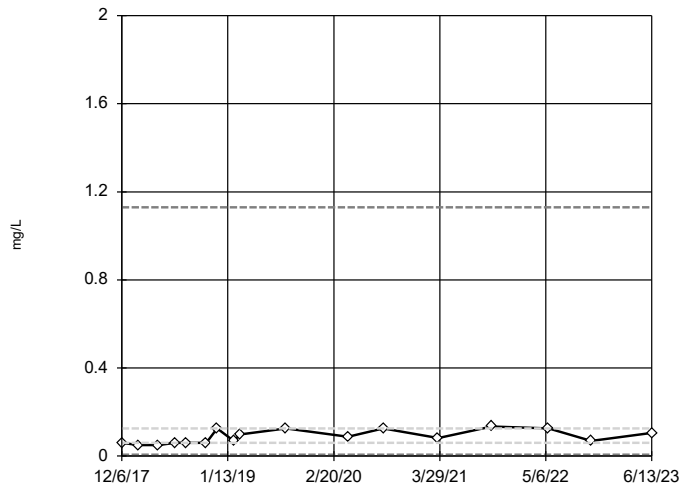


n = 17
 Outliers are drawn as solid.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.1974,
 low cutoff = 0.04086,
 based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-11

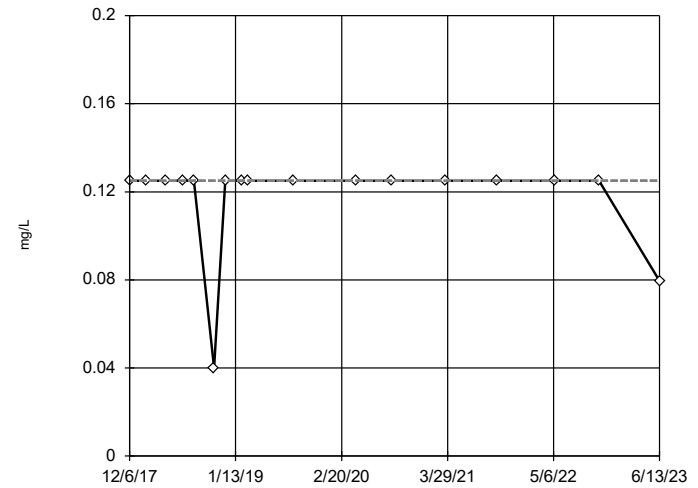


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1.13, low cutoff = 0.006636,
 based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-12

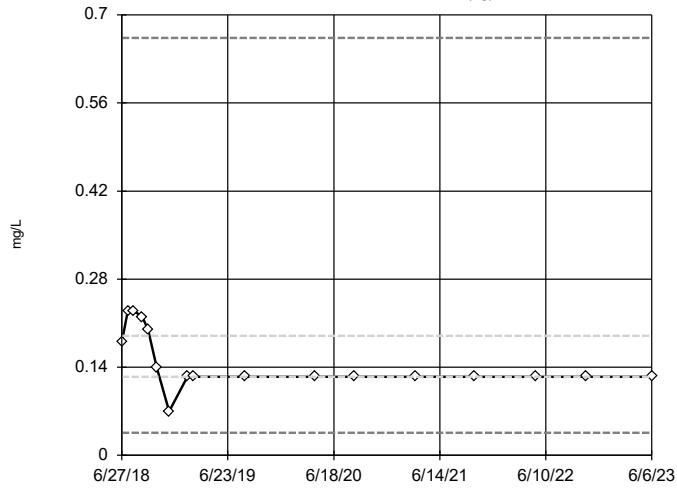


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-14 (bg)

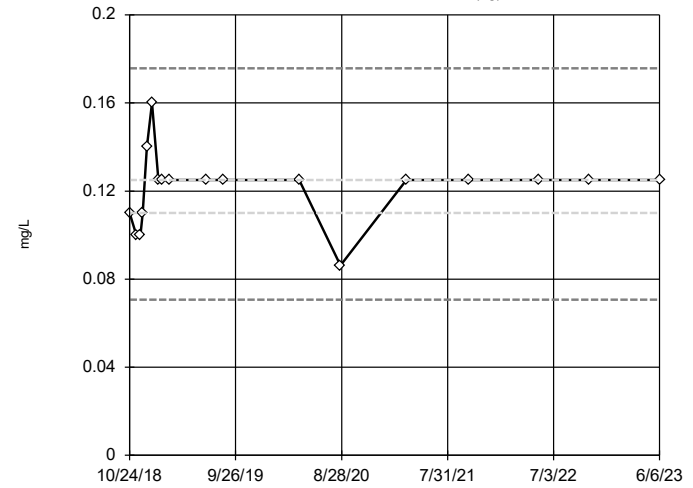


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.6636,
 low cutoff = 0.03574,
 based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-16 (bg)

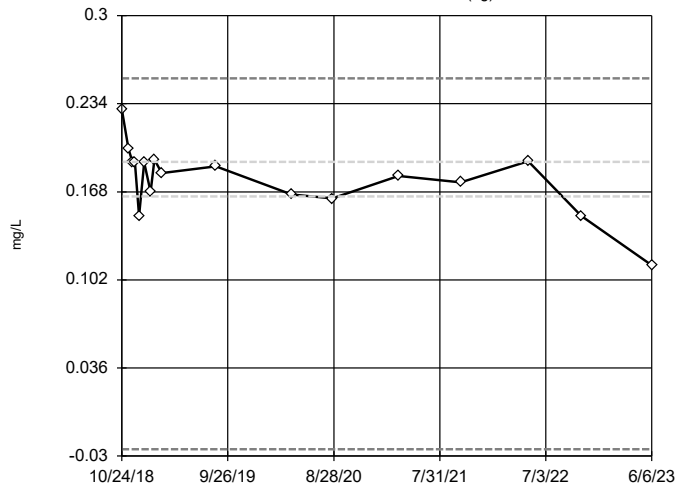


n = 18
 No outliers found.
 Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.1758,
 low cutoff = 0.07075,
 based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-17 (bg)

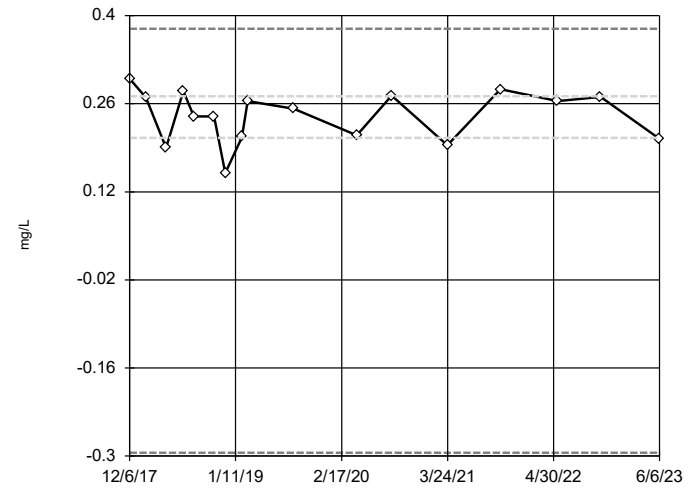


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.2529,
 low cutoff = -0.02493,
 based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-2

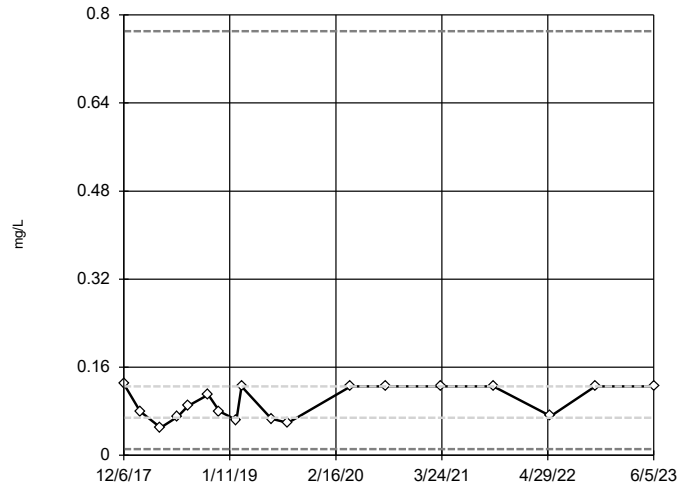


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were cube transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.379,
 low cutoff = -0.2949,
 based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-3

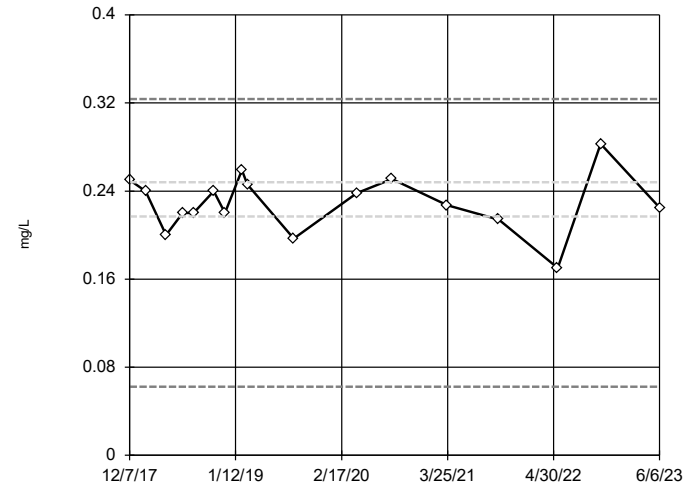


n = 18
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.7704, low cutoff = 0.01106, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-4

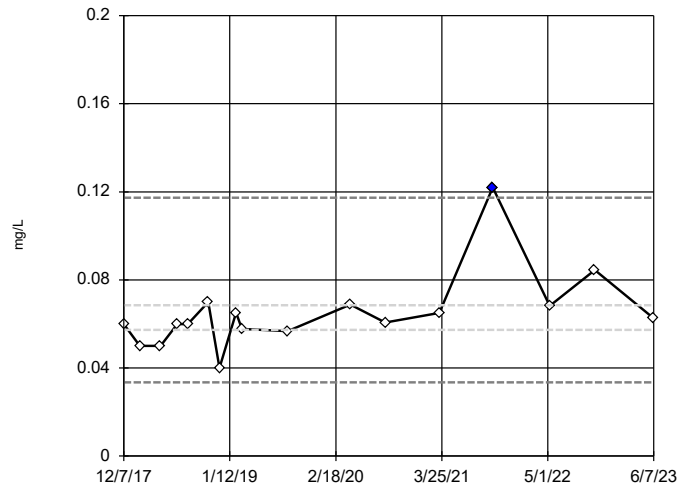


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.3236, low cutoff = 0.06219, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-5

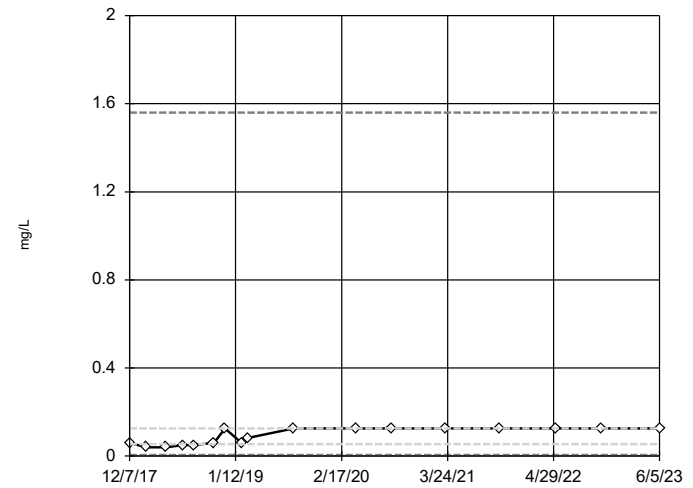


n = 17
 Outlier is drawn as solid.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.1173, low cutoff = 0.03342, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-6

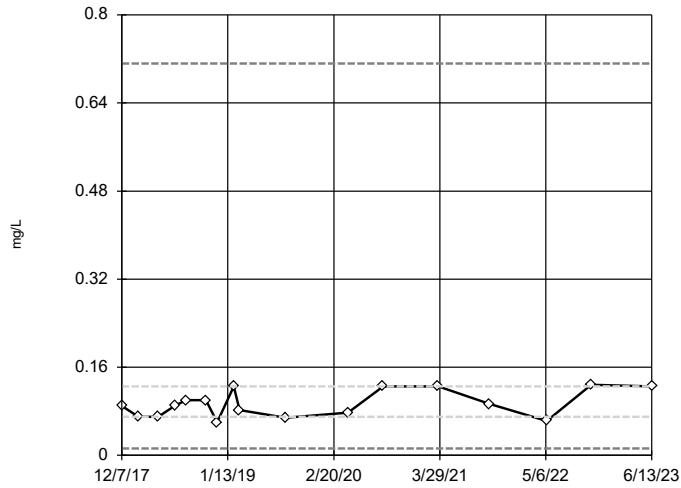


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1.559, low cutoff = 0.004321, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-7



n = 17

No outliers found. Tukey's method selected by user.

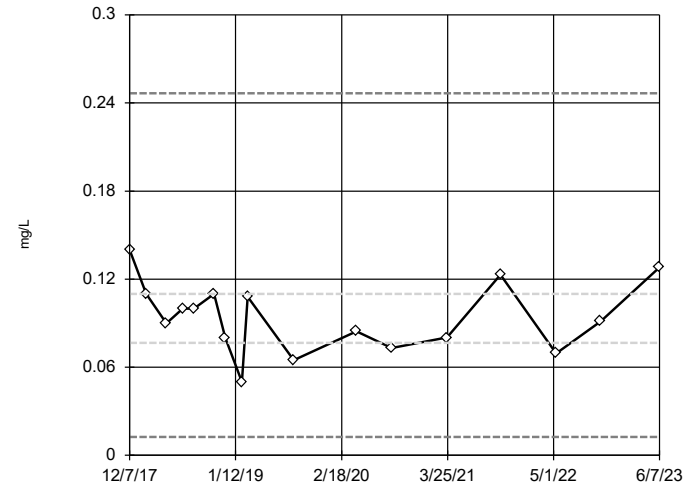
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.7118, low cutoff = 0.01229, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-8



n = 17

No outliers found. Tukey's method selected by user.

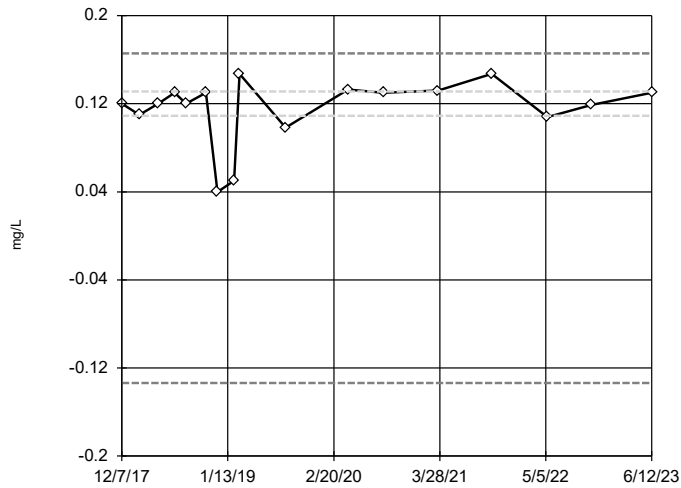
Data were square root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.2466, low cutoff = 0.0125, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-9



n = 17

No outliers found. Tukey's method selected by user.

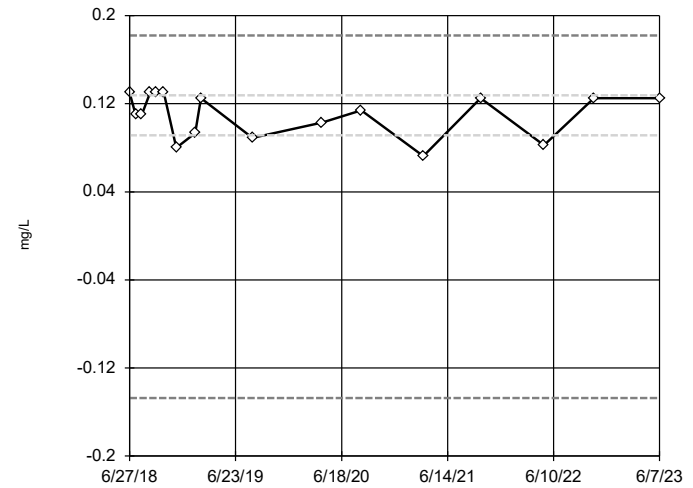
Data were x^4 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.1657, low cutoff = -0.1336, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-PZ-1



n = 17

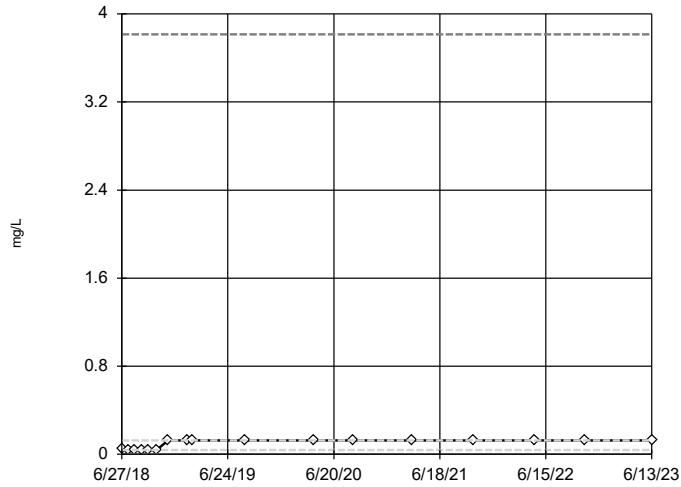
No outliers found. Tukey's method selected by user.

Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.182, low cutoff = -0.1472, based on IQR multiplier of 3.

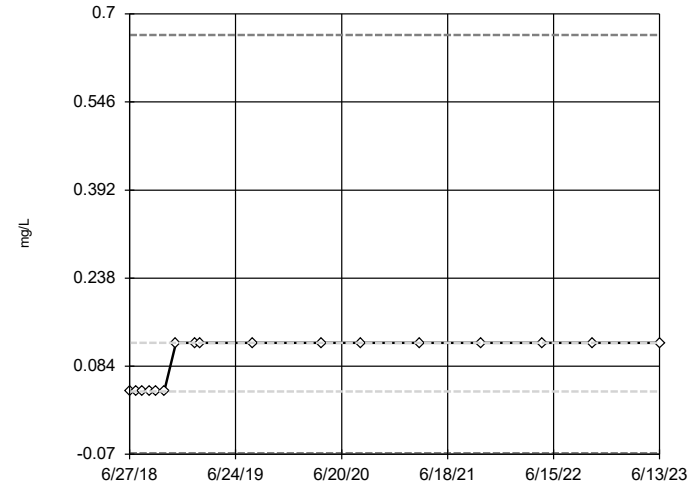
Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening GSD-AP-PZ-5



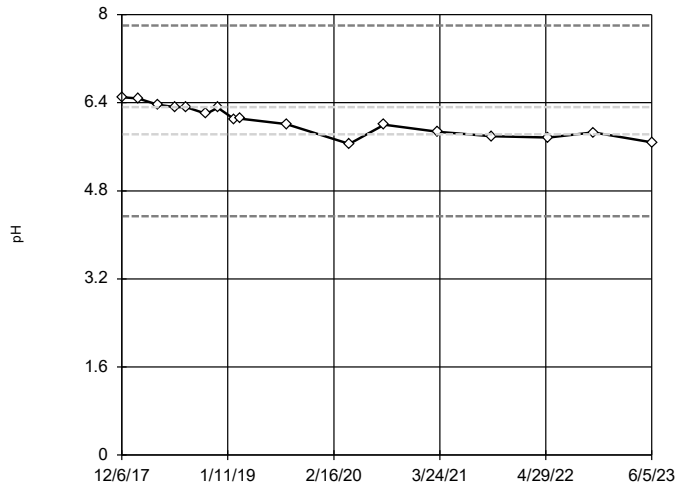
Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening GSD-AP-PZ-6



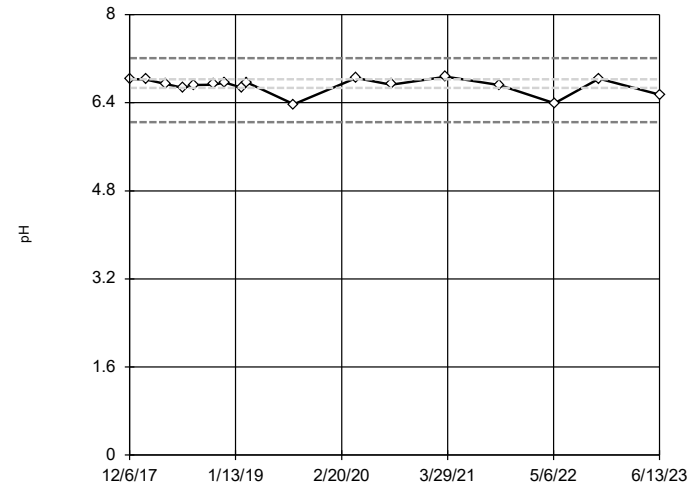
Constituent: Fluoride Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening GSD-AP-MW-1



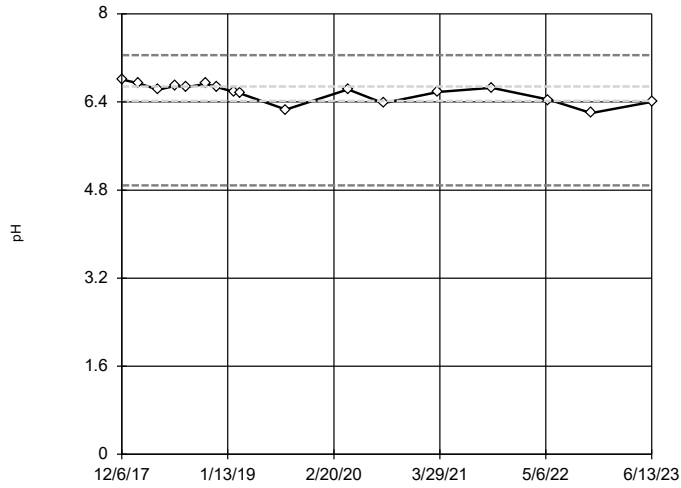
Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening GSD-AP-MW-10



Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

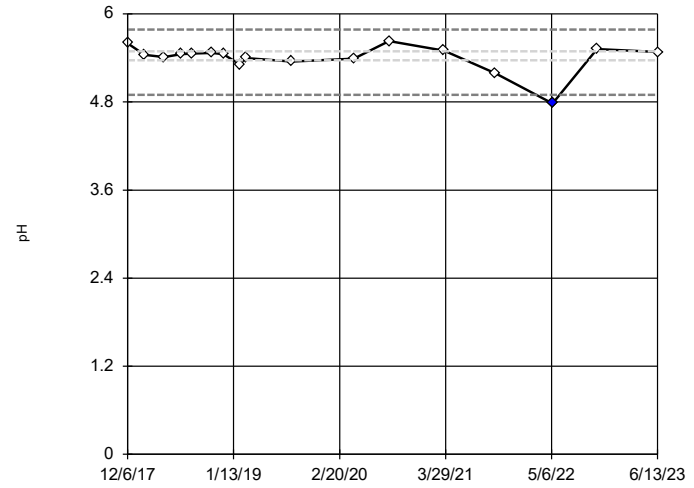
Tukey's Outlier Screening GSD-AP-MW-11



n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 7.251, low cutoff = 4.883, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

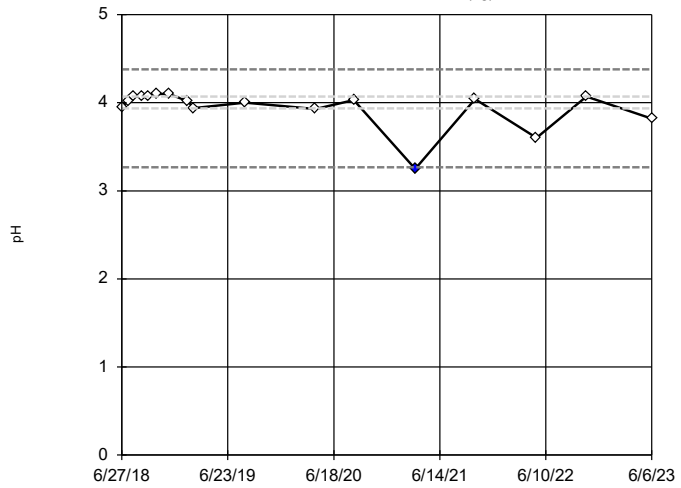
Tukey's Outlier Screening GSD-AP-MW-12



n = 17
 Outlier is drawn as solid.
 Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 5.787, low cutoff = 4.897, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

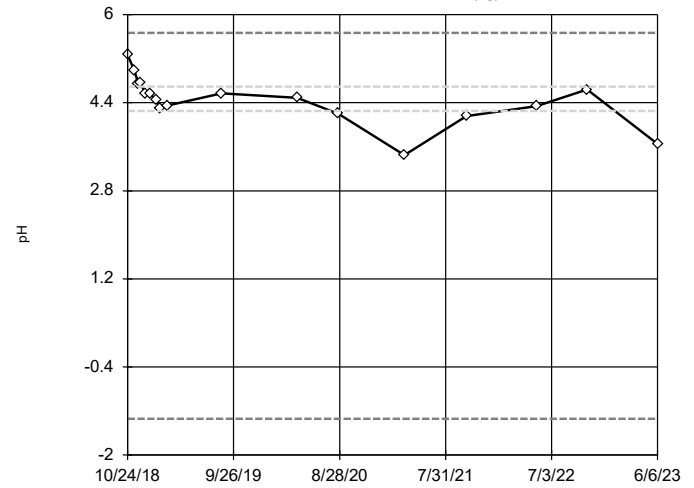
Tukey's Outlier Screening GSD-AP-MW-14 (bg)



n = 17
 Outlier is drawn as solid.
 Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 4.378, low cutoff = 3.266, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening GSD-AP-MW-16 (bg)

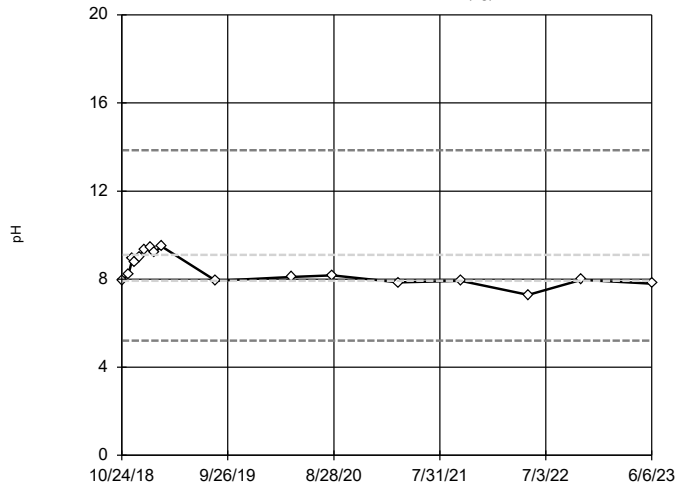


n = 17
 No outliers found.
 Tukey's method selected by user.
 Data were cube transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 5.671, low cutoff = -1.339, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-17 (bg)



n = 17

No outliers found. Tukey's method selected by user.

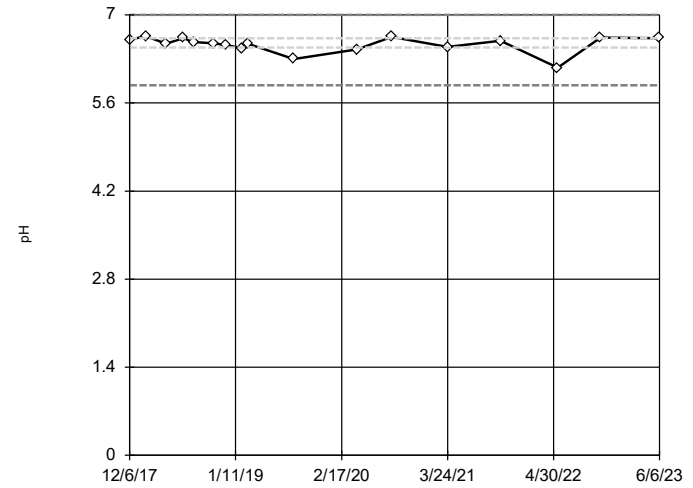
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 13.86, low cutoff = 5.205, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-2



n = 17

No outliers found. Tukey's method selected by user.

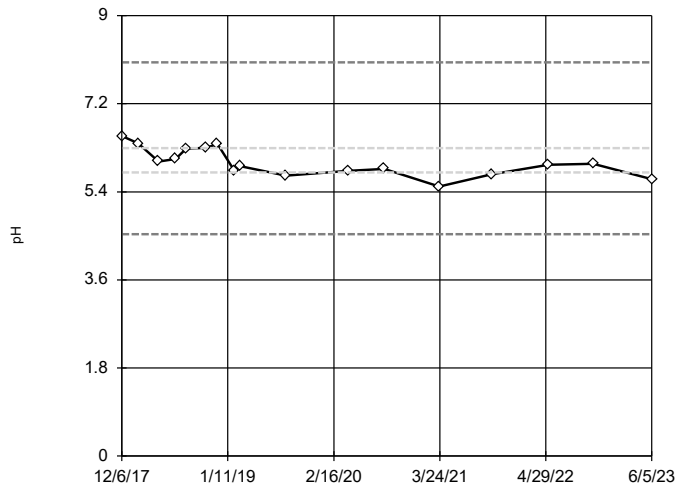
Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7, low cutoff = 5.881, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-3



n = 17

No outliers found. Tukey's method selected by user.

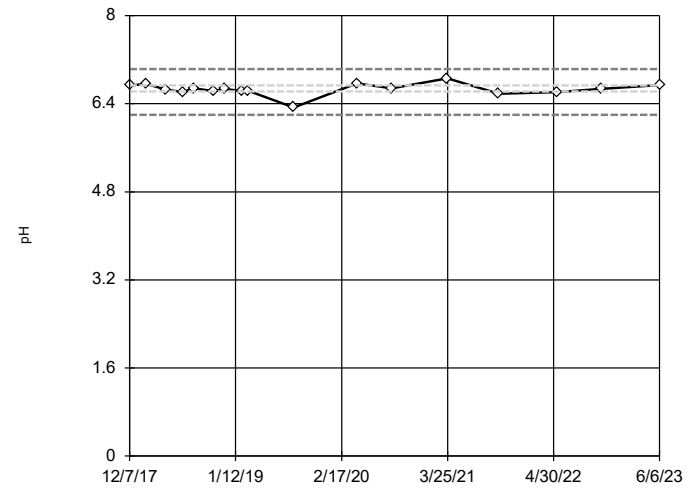
Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 8.044, low cutoff = 4.531, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-4



n = 17

No outliers found. Tukey's method selected by user.

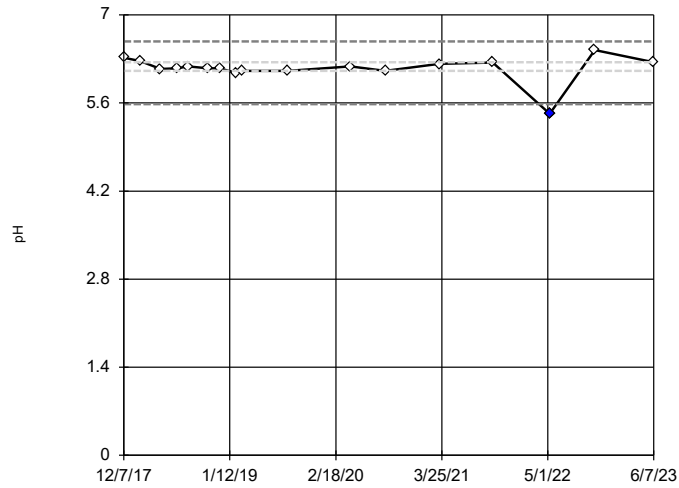
Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.031, low cutoff = 6.198, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-5

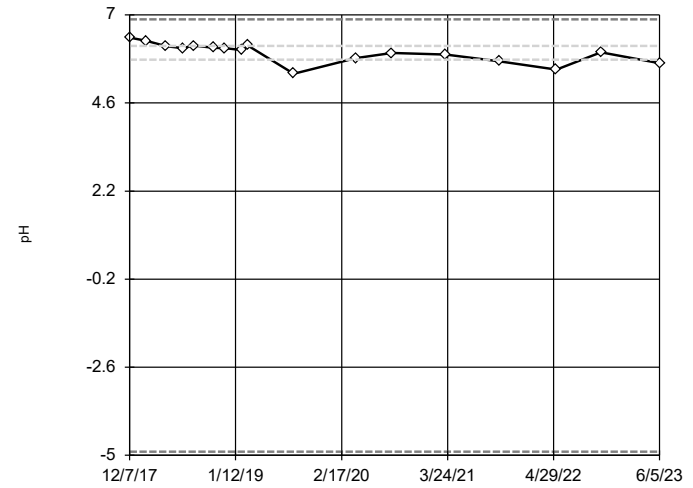


n = 17
 Outlier is drawn as solid. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 6.58, low cutoff = 5.579, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-6

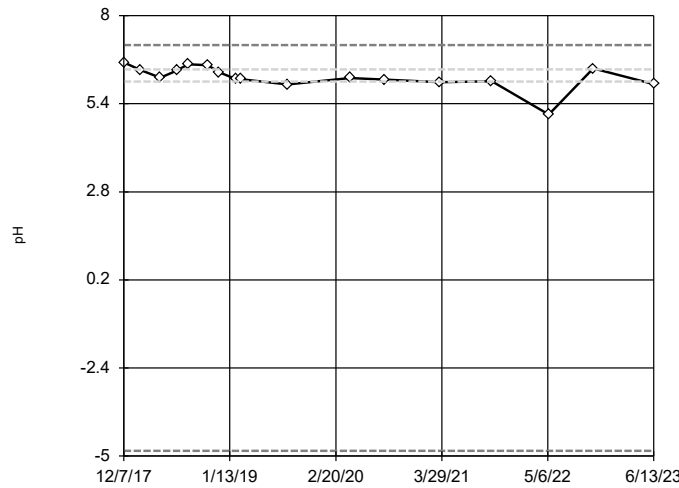


n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 6.874, low cutoff = -4.901, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-7

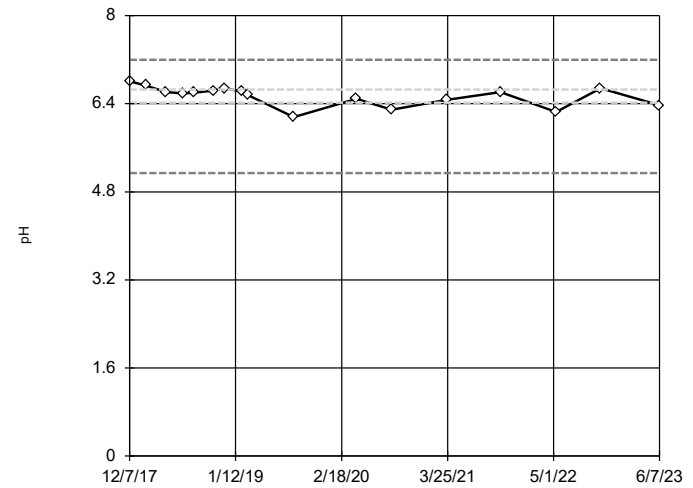


n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 7.133, low cutoff = -4.847, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-8

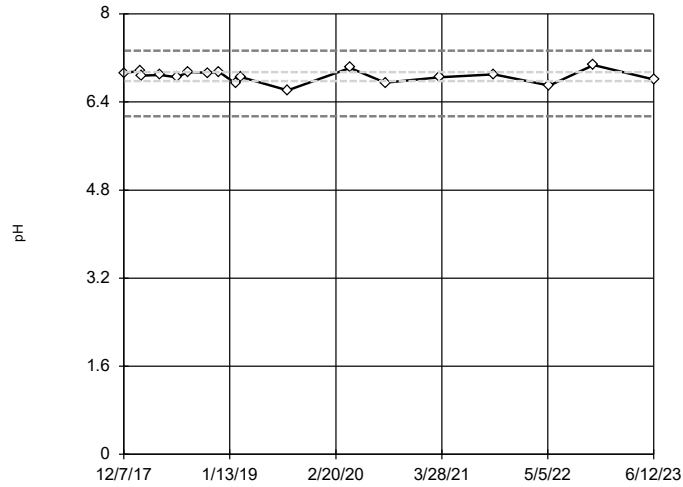


n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 7.196, low cutoff = 5.142, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-MW-9

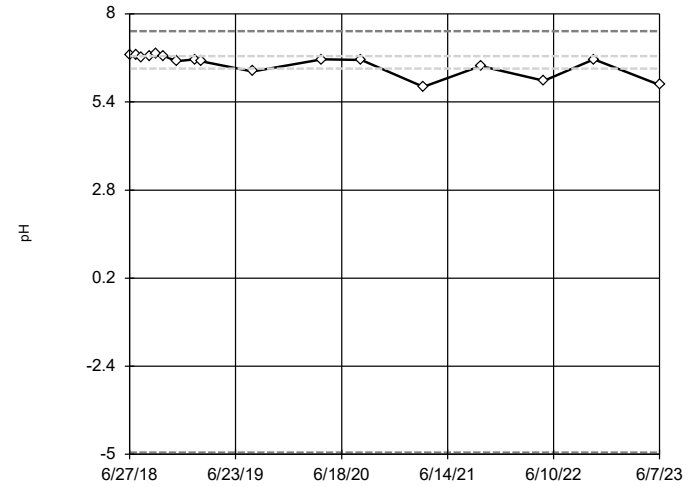


n = 18
 No outliers found. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 7.332, low cutoff = 6.138, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:29 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-PZ-1

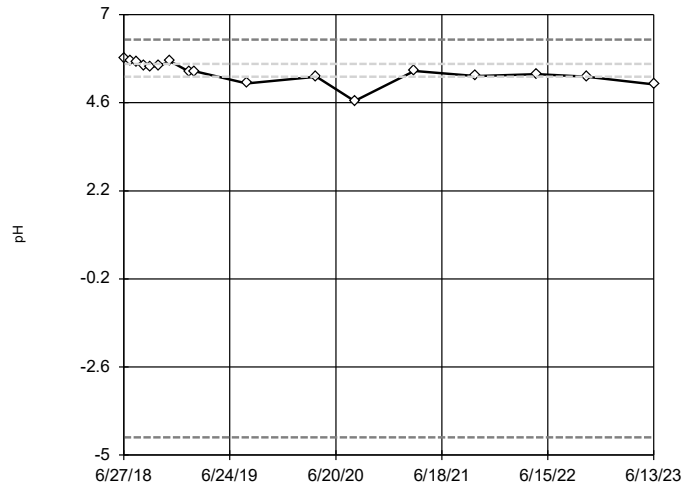


n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 7.495, low cutoff = -4.945, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:30 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-PZ-5

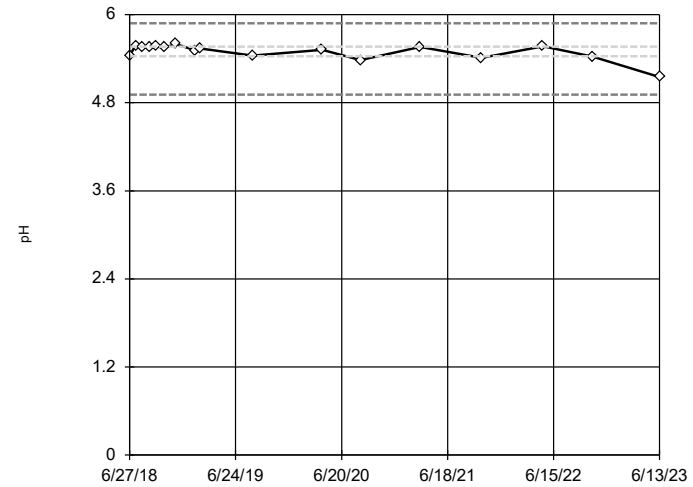


n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 6.319, low cutoff = -4.521, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:30 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening

GSD-AP-PZ-6



n = 17
 No outliers found. Tukey's method selected by user.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 5.884, low cutoff = 4.909, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/2/2024 5:30 PM View: Outliers
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Test - Upgradient Wells - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:34 PM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Beryllium (mg/L)	GSD-AP-MW-14,GSD-...	Yes	0.00157	NP	NaN	52	0.0009929	0.0002381	normal	ShapiroFrancia
Lithium (mg/L)	GSD-AP-MW-14,GSD-...	Yes	0.0083	NP	NaN	52	0.01772	0.004109	sqrt(x)	ShapiroFrancia

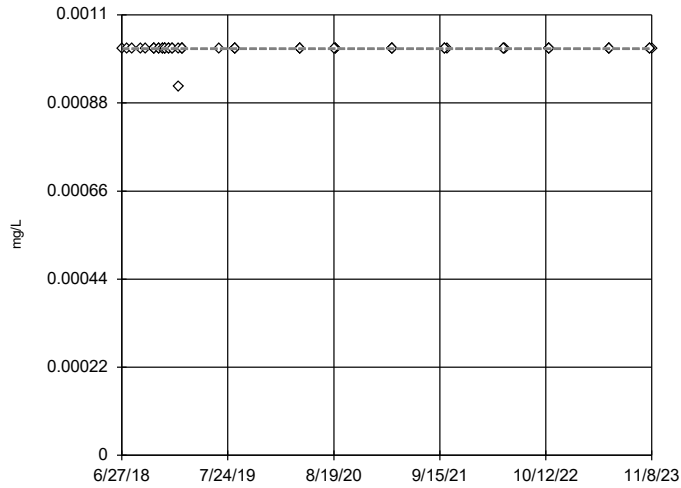
Tukey's Outlier Test - Upgradient Wells - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:34 PM

Constituent	Well	Outlier	Value(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	GSD-AP-MW-14,GSD-...	n/a	n/a	NP	NaN	52	0.001013	0.0000129	unknown	ShapiroFrancia
Arsenic (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	52	0.002944	0.001873	sqrt(x)	ShapiroFrancia
Barium (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	52	0.1022	0.1048	ln(x)	ShapiroFrancia
Beryllium (mg/L)	GSD-AP-MW-14,GSD-...	Yes	0.00157	NP	NaN	52	0.0009929	0.0002381	normal	ShapiroFrancia
Boron (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	55	0.07161	0.03572	ln(x)	ShapiroFrancia
Cadmium (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	52	0.0004448	0.0002538	x^(1/3)	ShapiroFrancia
Calcium (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	55	18.18	6.511	ln(x)	ShapiroFrancia
Chloride (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	55	3.202	0.3814	normal	ShapiroFrancia
Chromium (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	52	0.0009263	0.0004874	ln(x)	ShapiroFrancia
Cobalt (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	52	0.02162	0.01819	normal	ShapiroFrancia
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	45	0.7259	0.386	normal	ShapiroWilk
Fluoride (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	55	0.1476	0.03783	x^(1/3)	ShapiroFrancia
Lead (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	52	0.0008665	0.0006836	normal	ShapiroFrancia
Lithium (mg/L)	GSD-AP-MW-14,GSD-...	Yes	0.0083	NP	NaN	52	0.01772	0.004109	sqrt(x)	ShapiroFrancia
Mercury (mg/L)	GSD-AP-MW-14,GSD-...	n/a	n/a	NP	NaN	51	0.0004876	0.00008087	unknown	ShapiroFrancia
Molybdenum (mg/L)	GSD-AP-MW-14,GSD-...	n/a	n/a	NP	NaN	52	0.008296	0.003482	unknown	ShapiroFrancia
Selenium (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	52	0.002569	0.002455	ln(x)	ShapiroFrancia
Sulfate (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	55	70.44	55.66	sqrt(x)	ShapiroFrancia
Thallium (mg/L)	GSD-AP-MW-14,GSD-...	n/a	n/a	NP	NaN	52	0.0002004	0.00001844	unknown	ShapiroFrancia
Total Dissolved Solids (mg/L)	GSD-AP-MW-14,GSD-...	No	n/a	NP	NaN	55	165.6	51.6	x^(1/3)	ShapiroFrancia

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

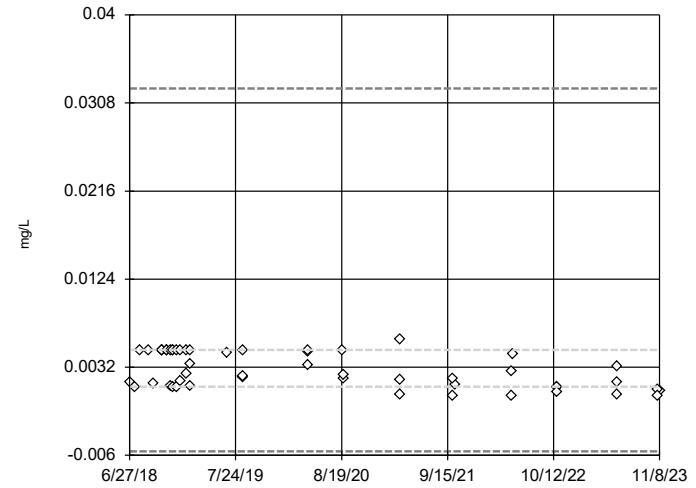


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Antimony Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

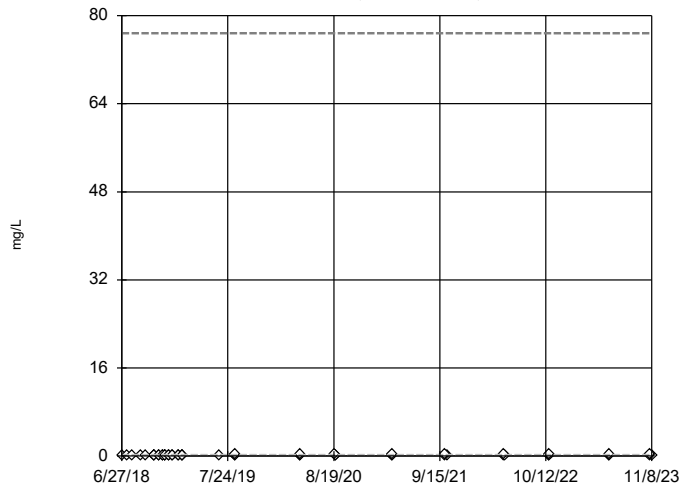


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.03232, low cutoff = -0.005584, based on IQR multiplier of 3.

Constituent: Arsenic Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

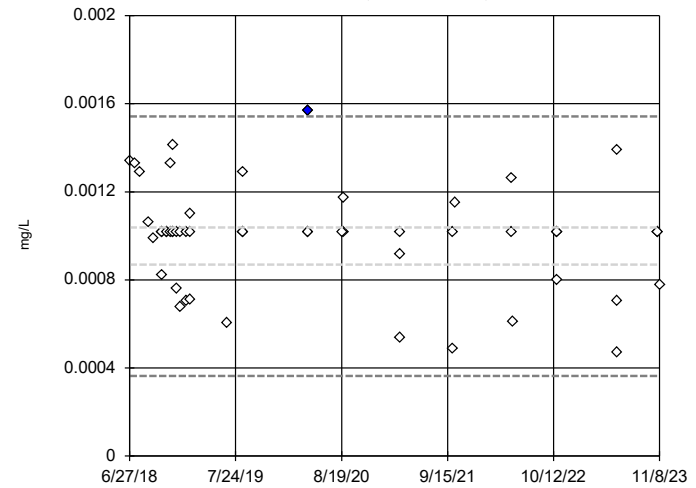


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 76.78, low cutoff = 0.00007251, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

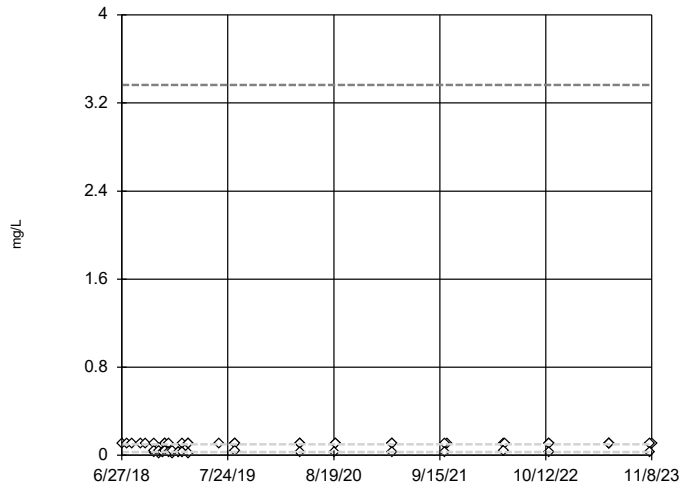


n = 52
 Outlier is drawn as solid.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 0.001543, low cutoff = 0.0003635, based on IQR multiplier of 3.

Constituent: Beryllium Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

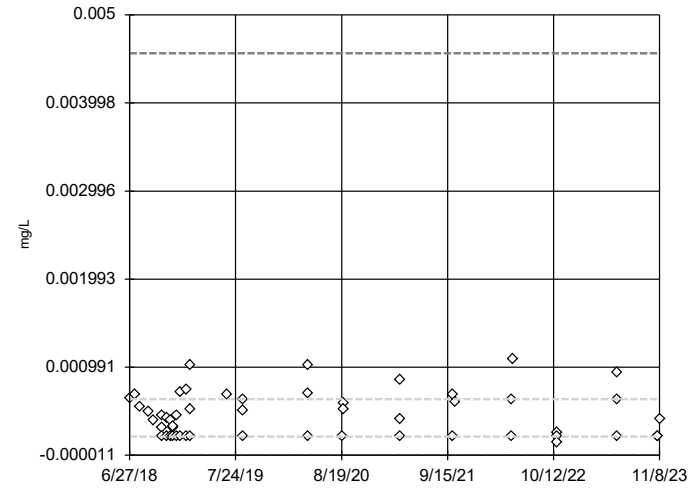


n = 55
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 3.364, low cutoff = 0.0009536, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

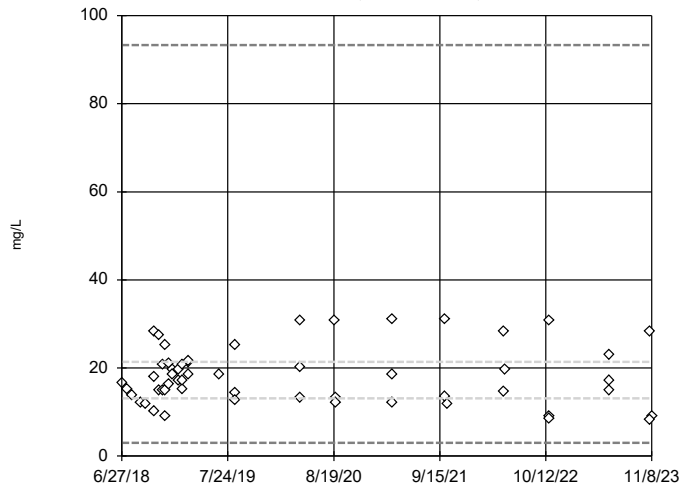


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were cube root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.004563, low cutoff = -0.000011, based on IQR multiplier of 3.

Constituent: Cadmium Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

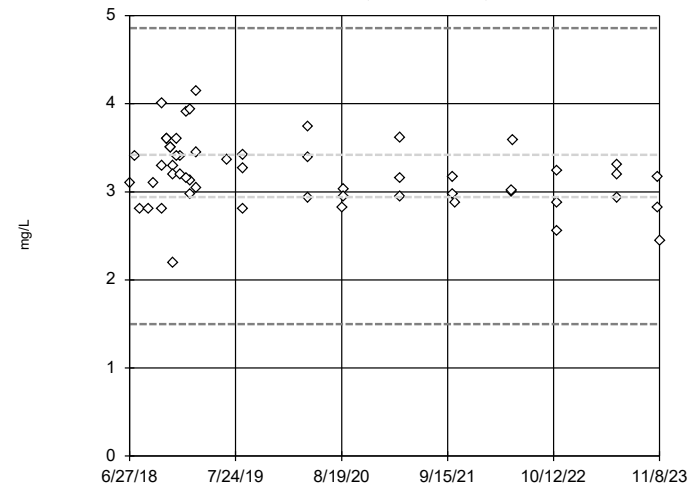


n = 55
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 93.29, low cutoff = 3.005, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

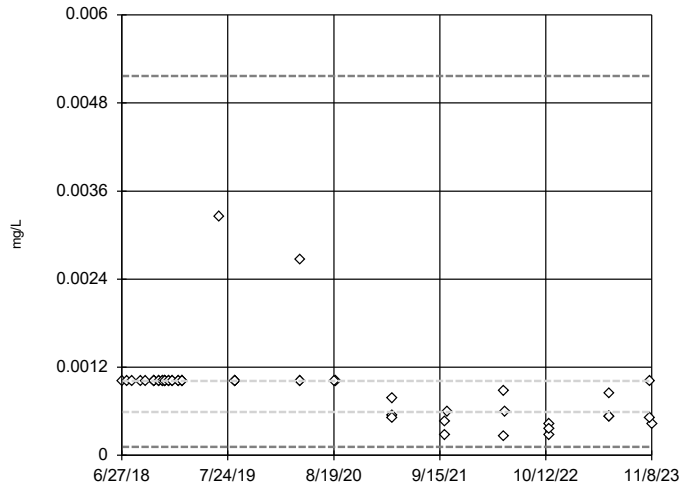


n = 55
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 4.86, low cutoff = 1.5, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

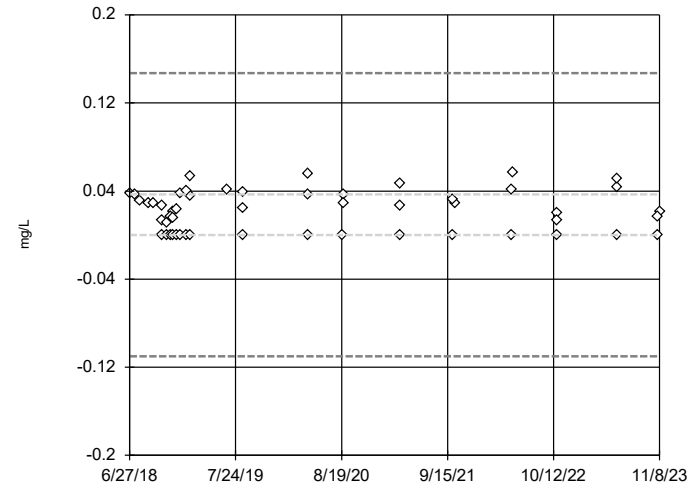


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.005168, low cutoff = 0.0001159, based on IQR multiplier of 3.

Constituent: Chromium Analysis Run 1/2/2024 5:32 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

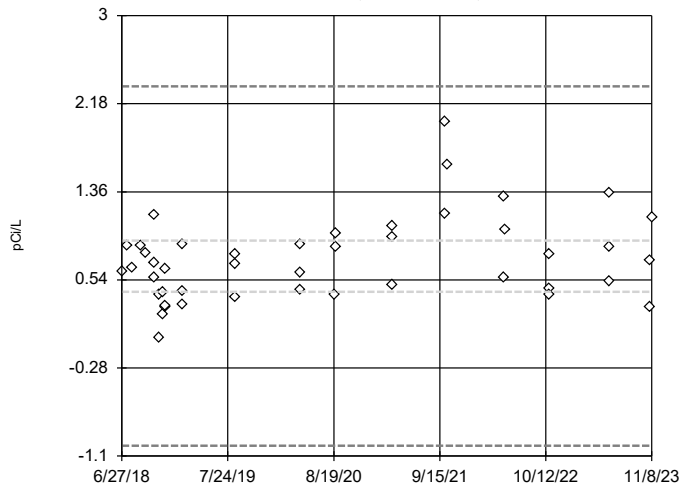


n = 52
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 0.1472, low cutoff = -0.11, based on IQR multiplier of 3.

Constituent: Cobalt Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

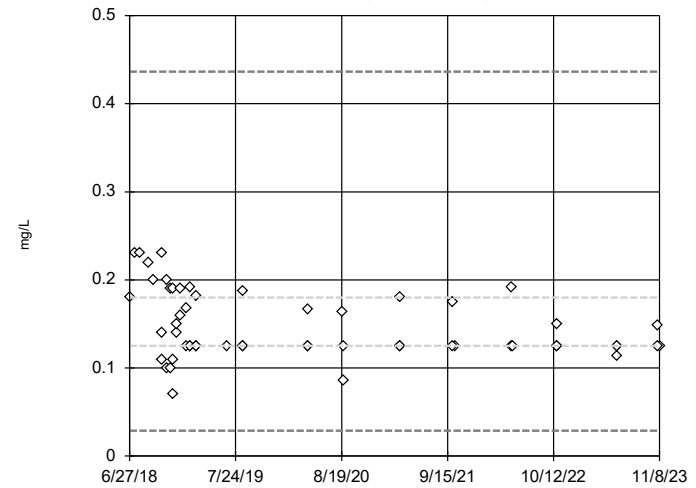


n = 45
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 2.342, low cutoff = -1.005, based on IQR multiplier of 3.

Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Well
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

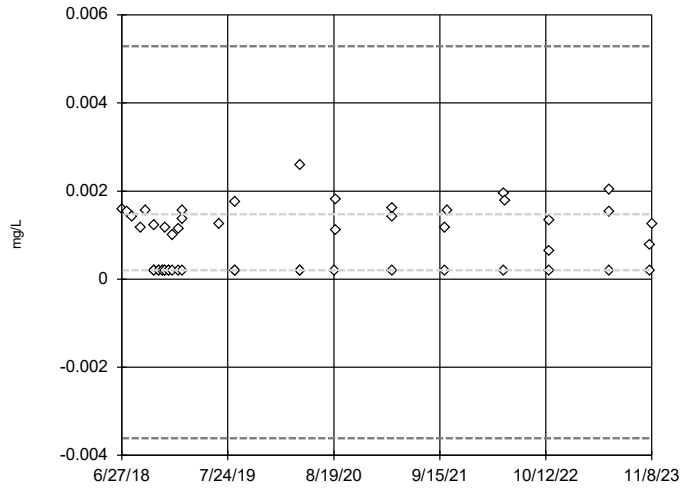


n = 55
 No outliers found.
 Tukey's method selected by user.
 Data were cube root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.4364, low cutoff = 0.02869, based on IQR multiplier of 3.

Constituent: Fluoride Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

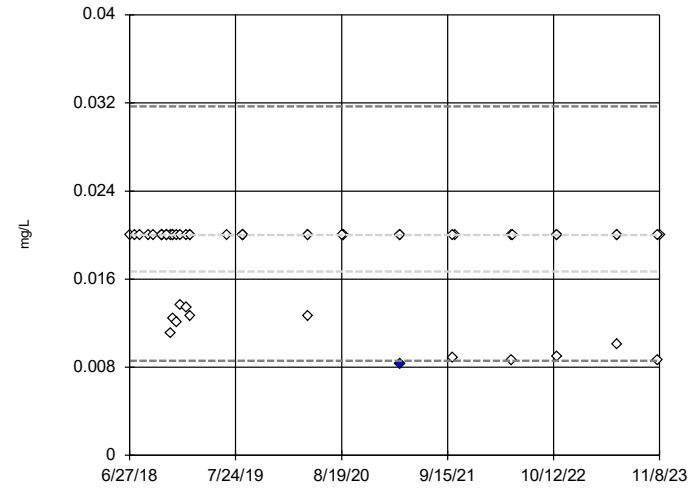


n = 52
 No outliers found.
 Tukey's method selected by user.
 Ladder of Powers transformations did not improve normality; analysis run on raw data.
 High cutoff = 0.005291, low cutoff = -0.003613, based on IQR multiplier of 3.

Constituent: Lead Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

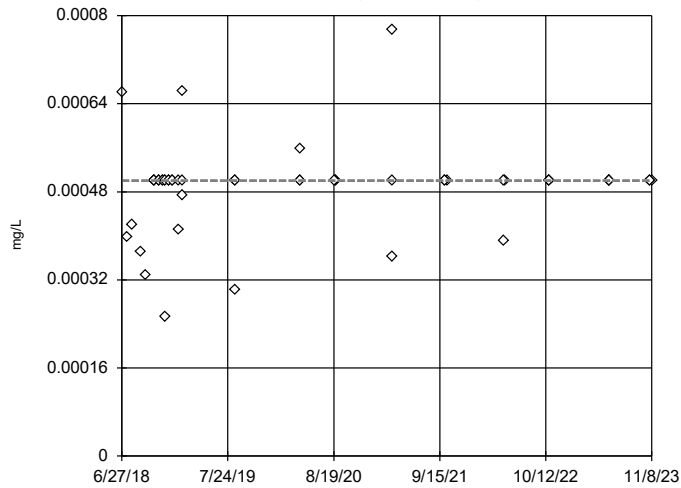


n = 52
 Outlier is drawn as solid. Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.03168, low cutoff = 0.008588, based on IQR multiplier of 3.

Constituent: Lithium Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

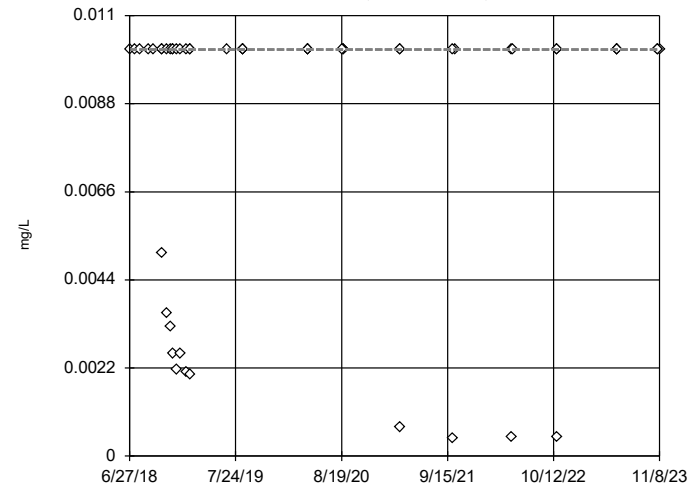


n = 51
 No outliers found.
 Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Mercury Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

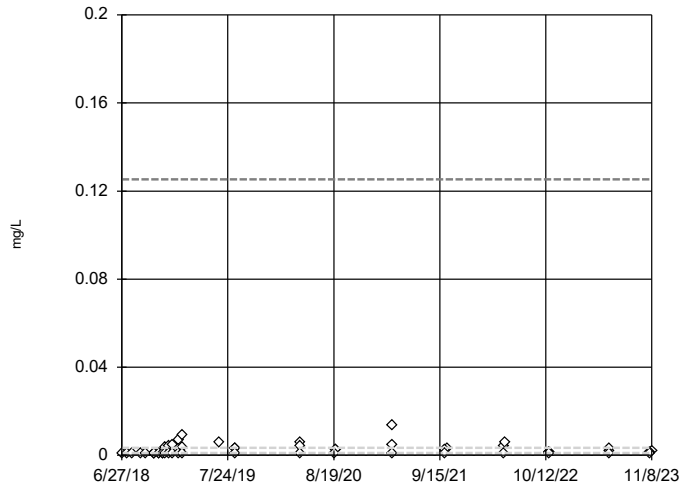


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Molybdenum Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

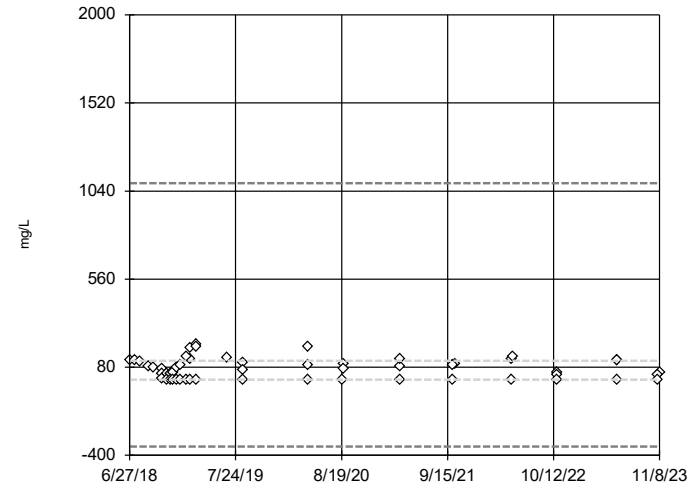


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.1253,
 low cutoff = 0.0000274,
 based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

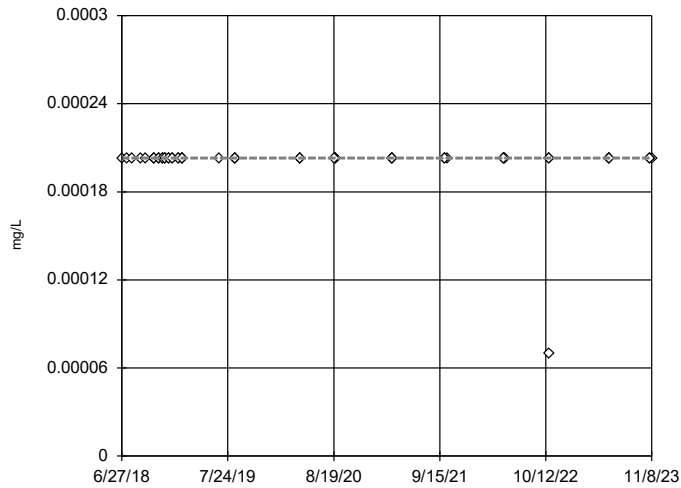


n = 55
 No outliers found.
 Tukey's method selected by user.
 Data were square root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 1083, low cutoff = -351.4, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...

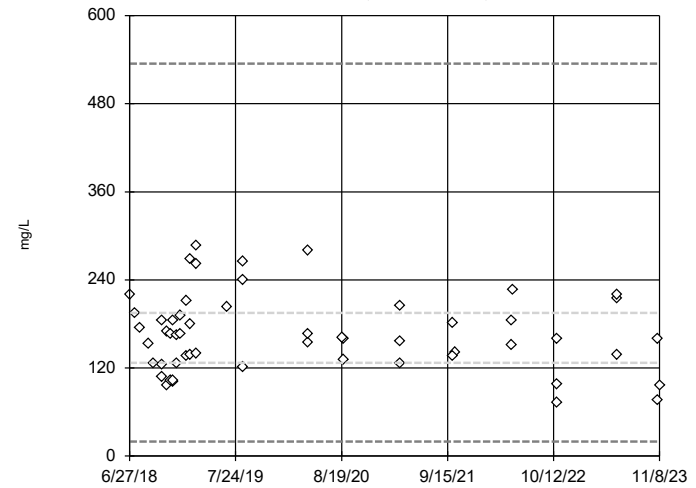


n = 52
 No outliers found.
 Tukey's method selected by user.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Thallium Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tukey's Outlier Screening, Pooled Background

GSD-AP-MW-14,GSD-AP-MW-16,GSD-AP-MW-1...



n = 55
 No outliers found.
 Tukey's method selected by user.
 Data were cube root transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 534.6, low cutoff = 19.89, based on IQR multiplier of 3.

Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:33 PM View: Outliers Upgradient Wells
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

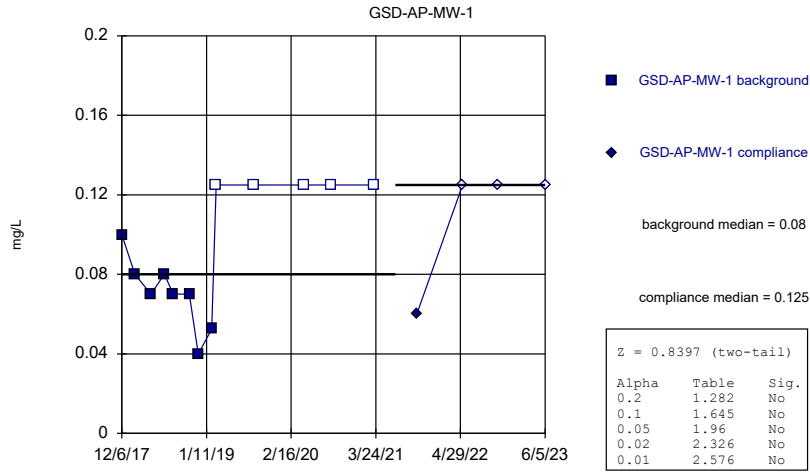
FIGURE D.

Welch's t-test/Mann-Whitney - All Results (No Significant)

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:43 PM

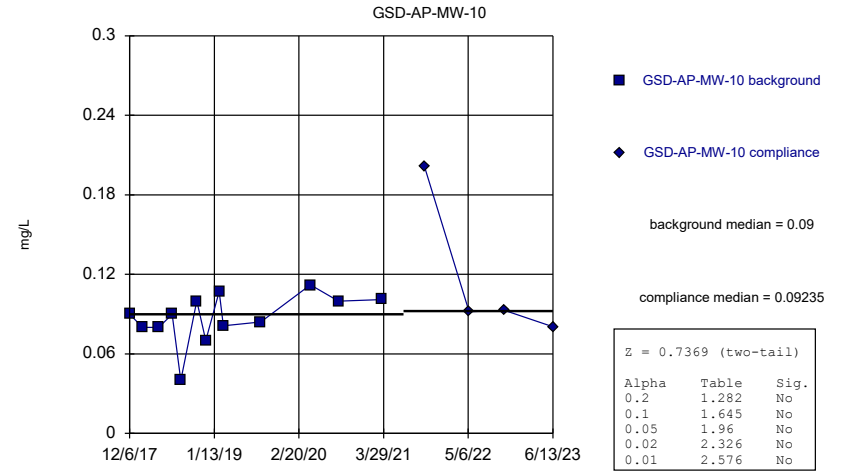
<u>Constituent</u>	<u>Well</u>	<u>Calc.</u>	<u>0.01</u>	<u>Alpha</u>	<u>Sig.</u>	<u>Method</u>
Fluoride (mg/L)	GSD-AP-MW-1	0.8397	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-10	0.7369	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-11	1.721	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-12	-0.9097	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-1.332	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	0.6652	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-1.363	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-2	0.7936	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-3	1.04	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-4	-0.7382	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-5	2.215	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-6	1.904	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-7	0.799	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-8	0.7369	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-MW-9	0.1714	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-1	0.1147	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-5	1.55	No	0.01	No	Mann-W
Fluoride (mg/L)	GSD-AP-PZ-6	1.57	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-1	-2.549	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-10	-1.135	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-11	-1.757	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-12	-0.6231	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-14 (bg)	-0.7985	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-16 (bg)	-1.416	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-17 (bg)	-2.493	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-2	0.4535	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-3	-1.303	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-4	-0.8513	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-5	0.9678	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-6	-2.209	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-7	-1.529	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-8	-0.6235	No	0.01	No	Mann-W
pH (pH)	GSD-AP-MW-9	-0.2663	No	0.01	No	Mann-W
pH (pH)	GSD-AP-PZ-1	-1.874	No	0.01	No	Mann-W
pH (pH)	GSD-AP-PZ-5	-1.926	No	0.01	No	Mann-W
pH (pH)	GSD-AP-PZ-6	-1.589	No	0.01	No	Mann-W

Mann-Whitney (Wilcoxon Rank Sum)



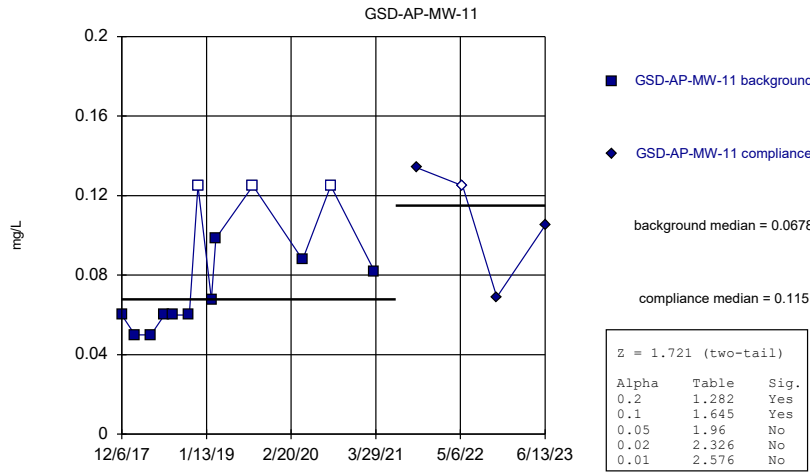
Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



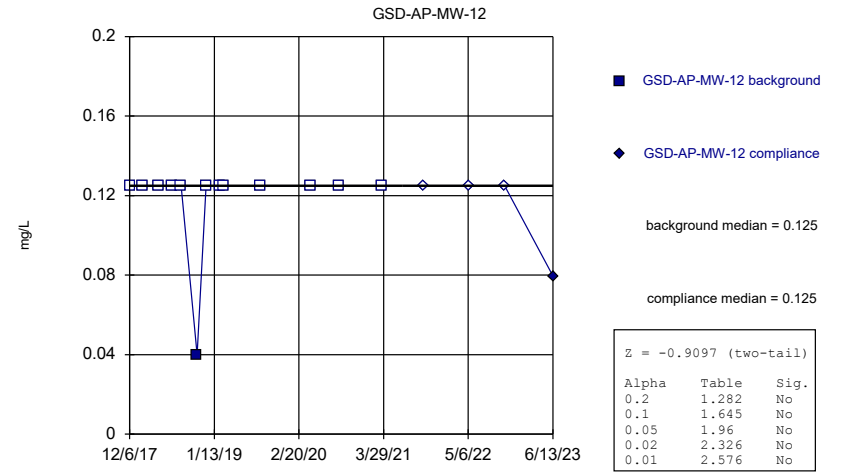
Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

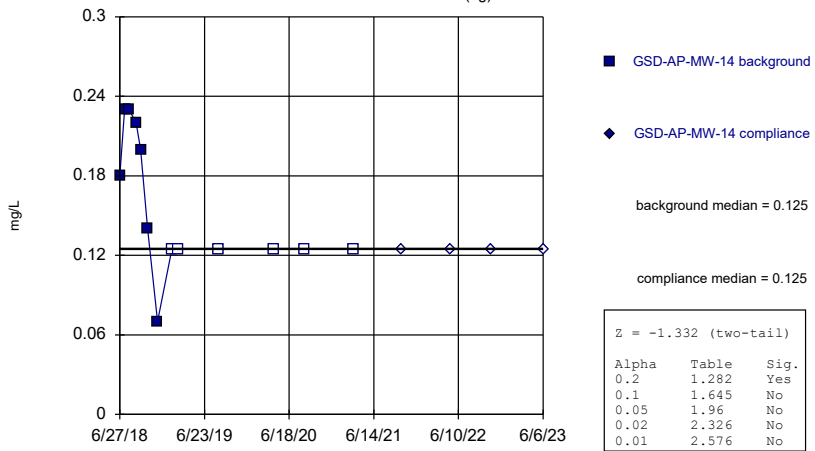
Mann-Whitney (Wilcoxon Rank Sum)



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

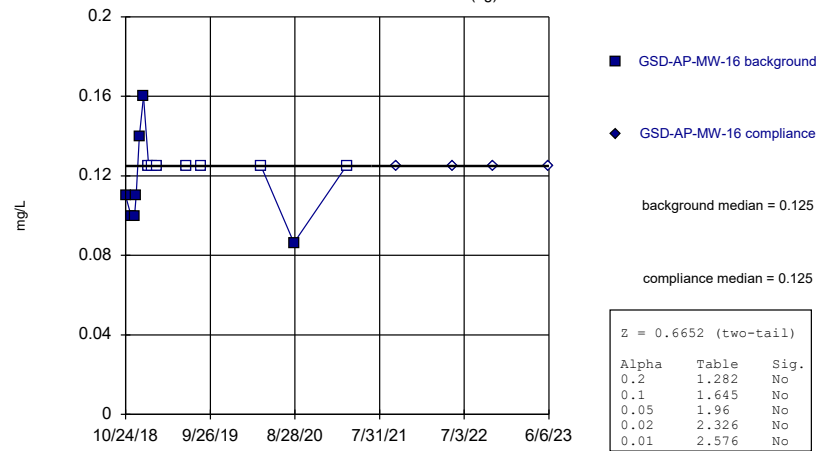
GSD-AP-MW-14 (bg)



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

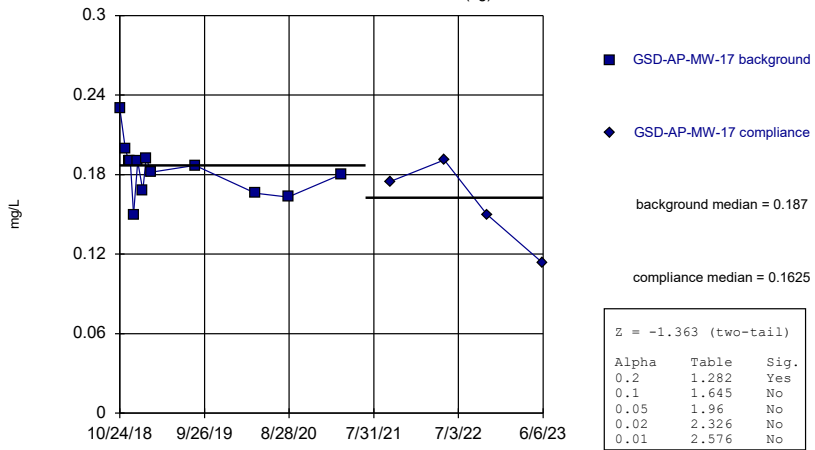
GSD-AP-MW-16 (bg)



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

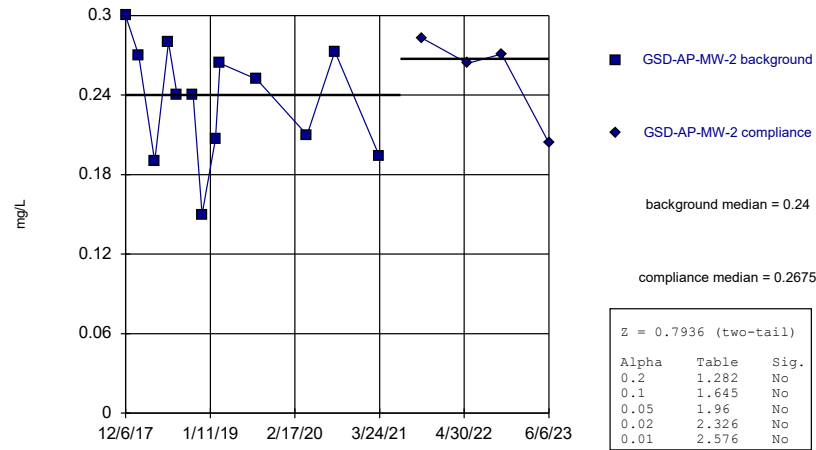
GSD-AP-MW-17 (bg)



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

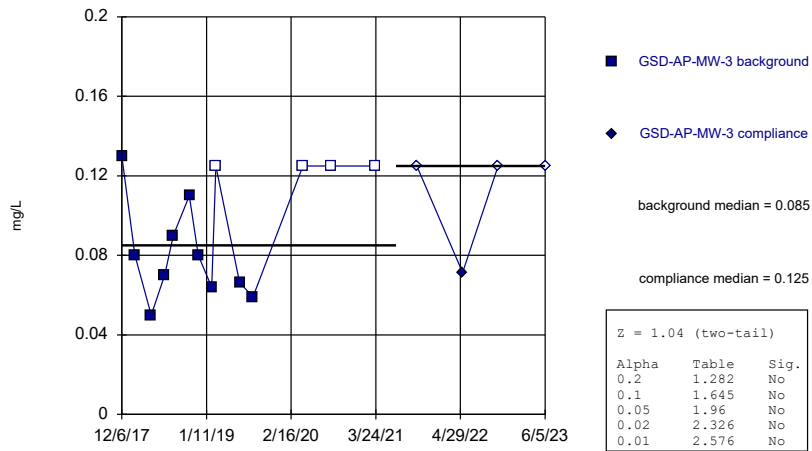
GSD-AP-MW-2



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

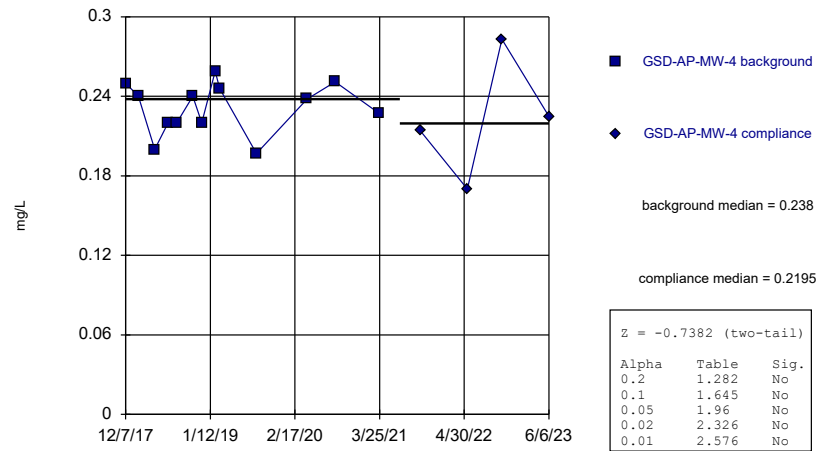
GSD-AP-MW-3



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

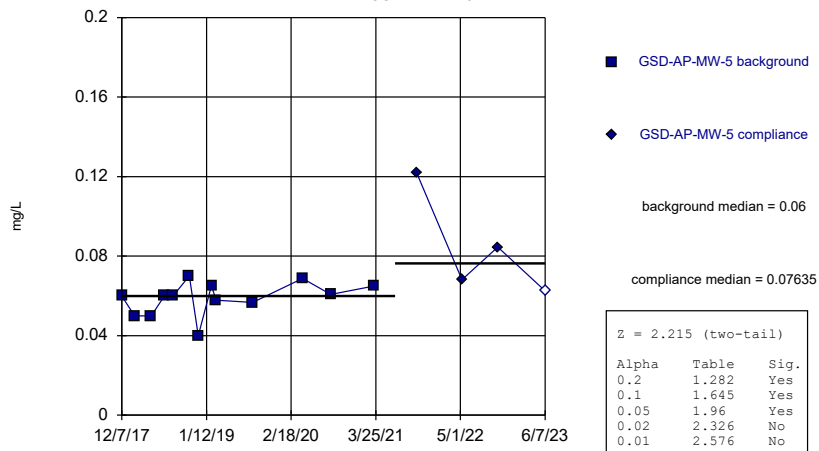
GSD-AP-MW-4



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

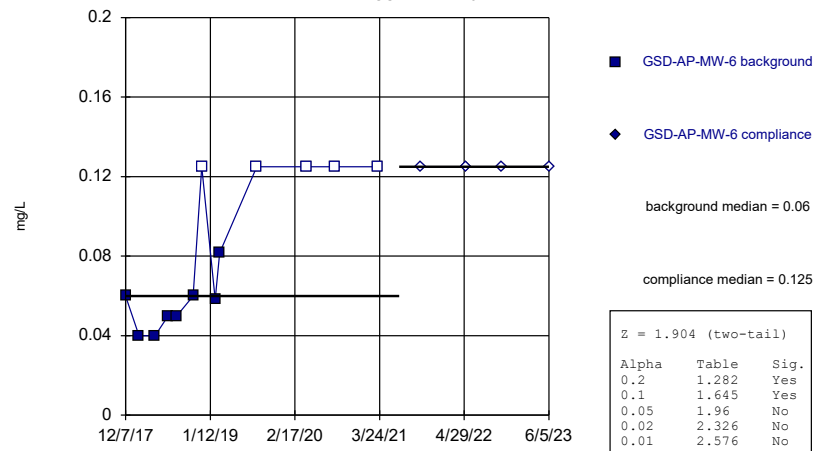
GSD-AP-MW-5



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

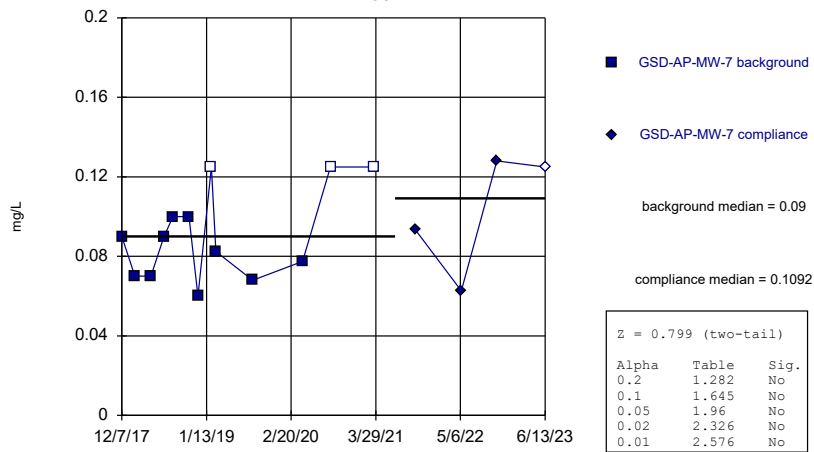
GSD-AP-MW-6



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

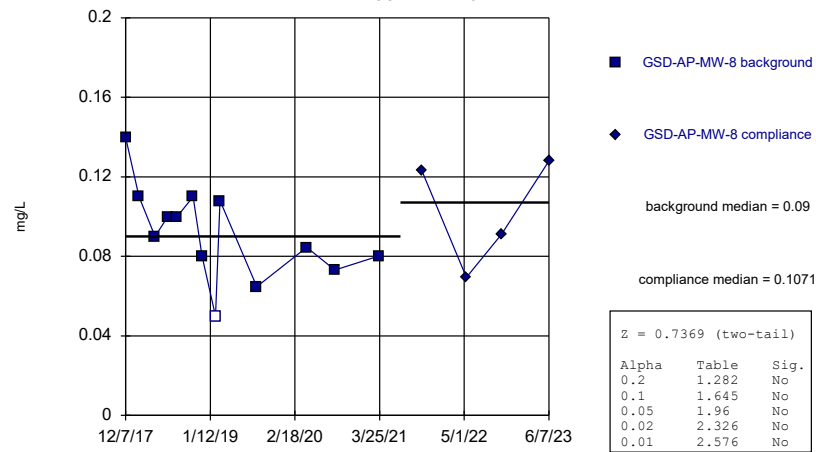
GSD-AP-MW-7



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

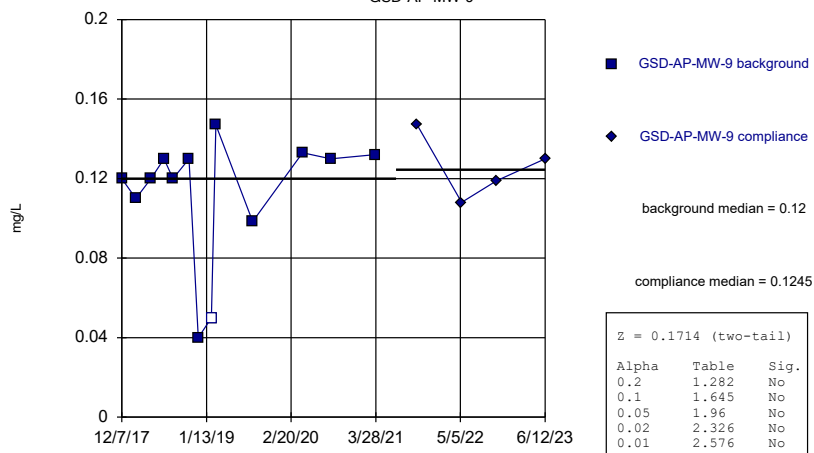
GSD-AP-MW-8



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

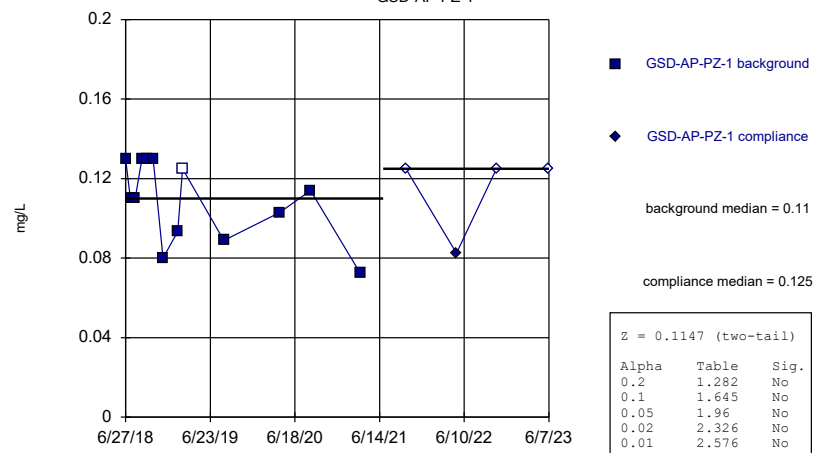
GSD-AP-MW-9



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

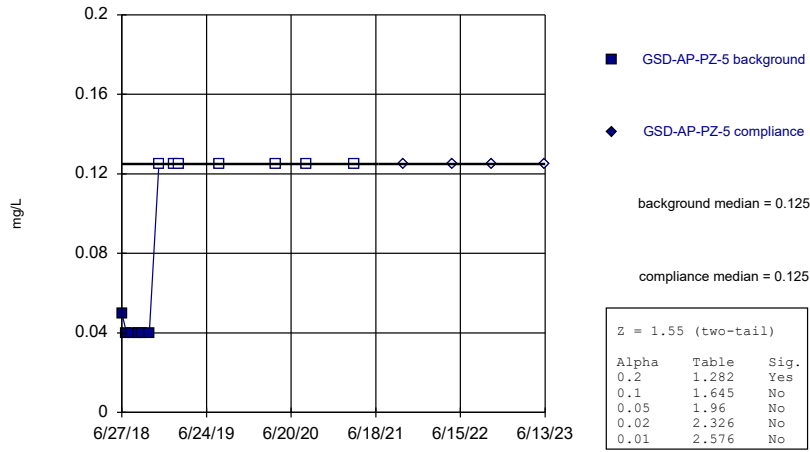
GSD-AP-PZ-1



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

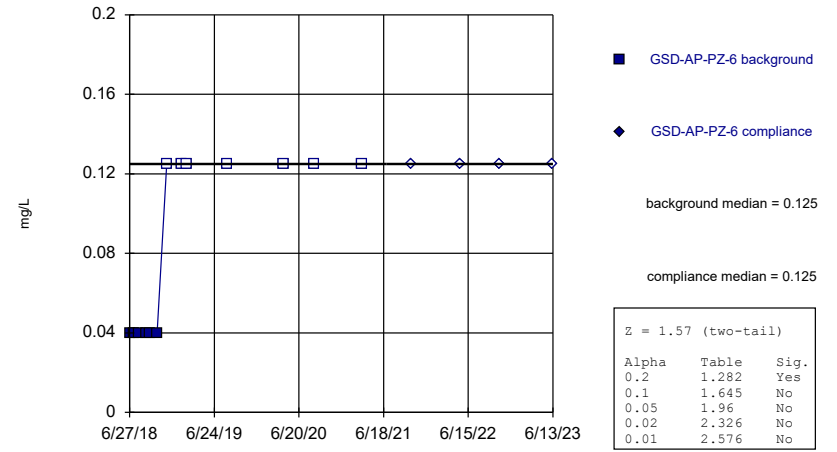
GSD-AP-PZ-5



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

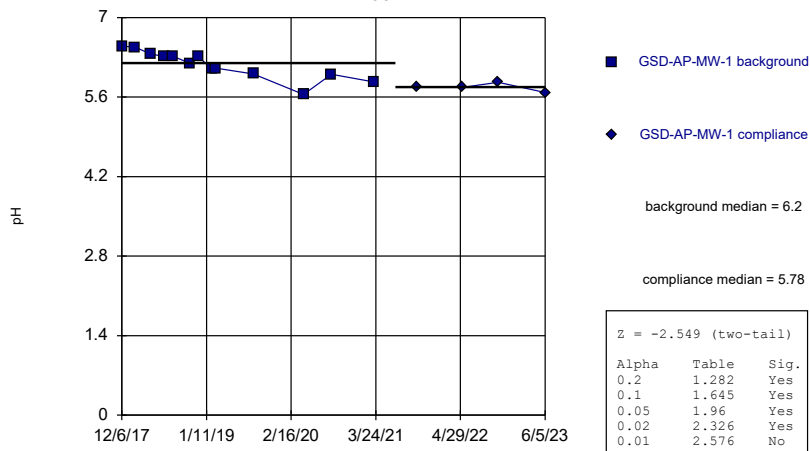
GSD-AP-PZ-6



Constituent: Fluoride Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

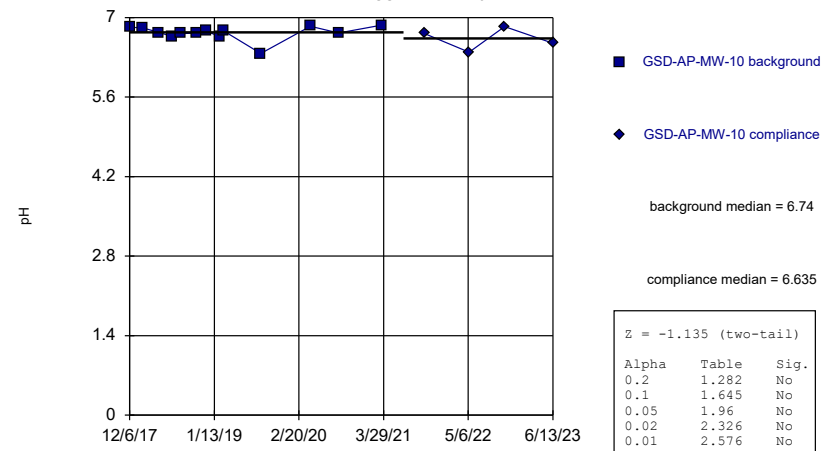
GSD-AP-MW-1



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

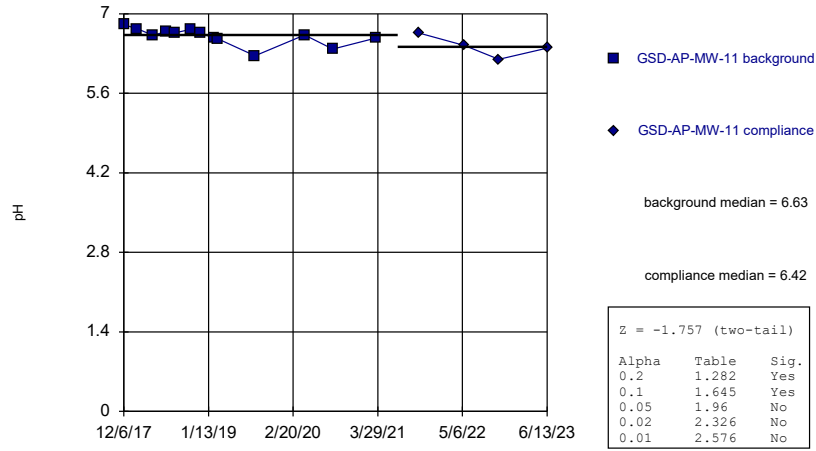
GSD-AP-MW-10



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

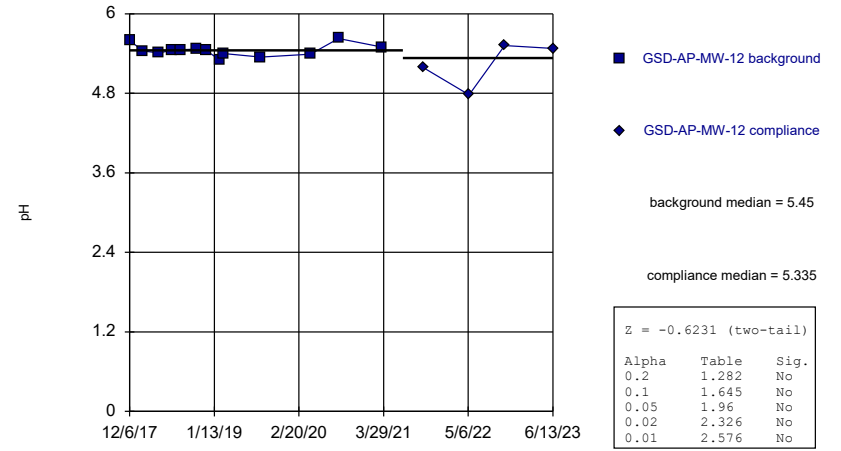
GSD-AP-MW-11



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

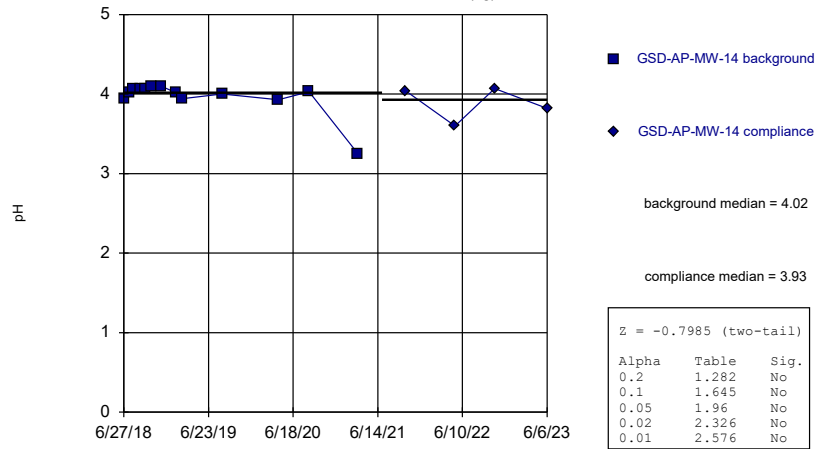
GSD-AP-MW-12



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

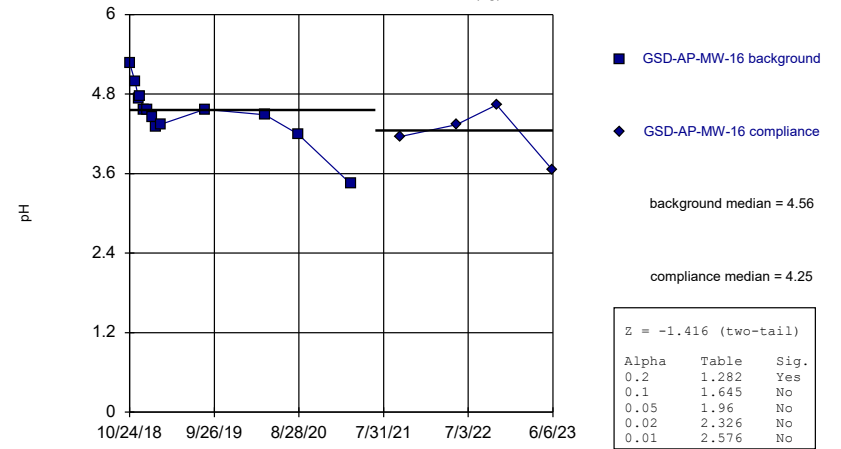
GSD-AP-MW-14 (bg)



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

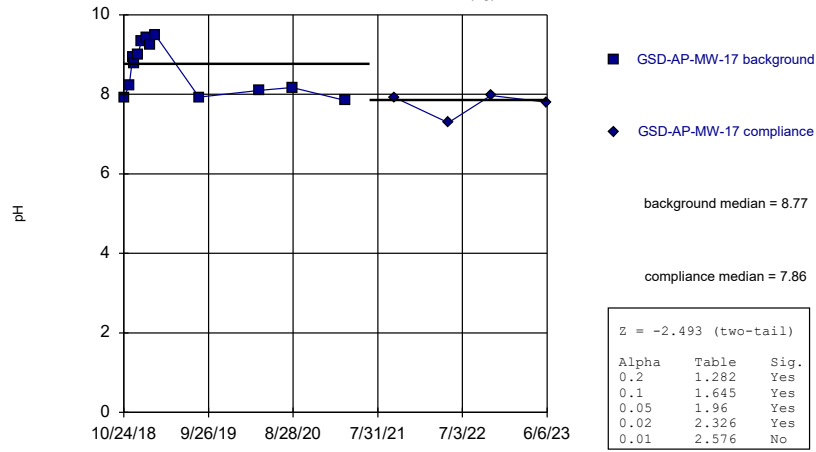
GSD-AP-MW-16 (bg)



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

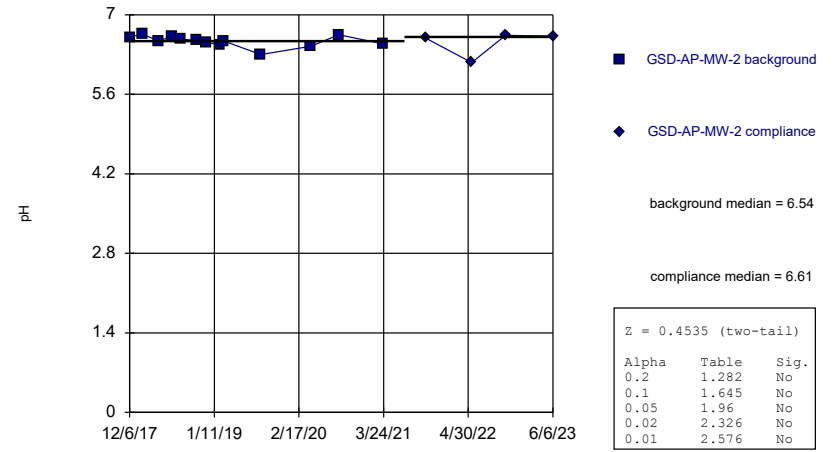
GSD-AP-MW-17 (bg)



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

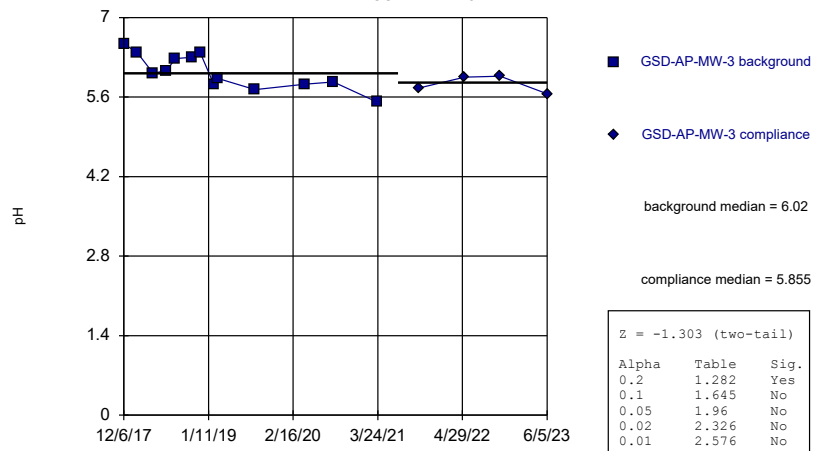
GSD-AP-MW-2



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

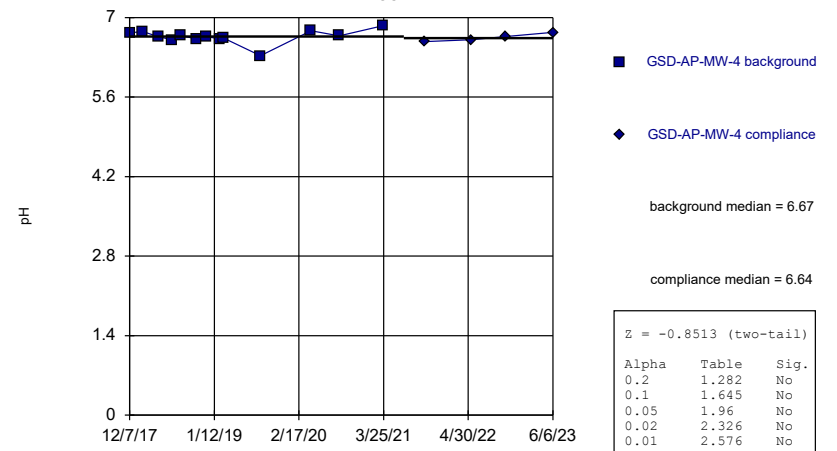
GSD-AP-MW-3



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

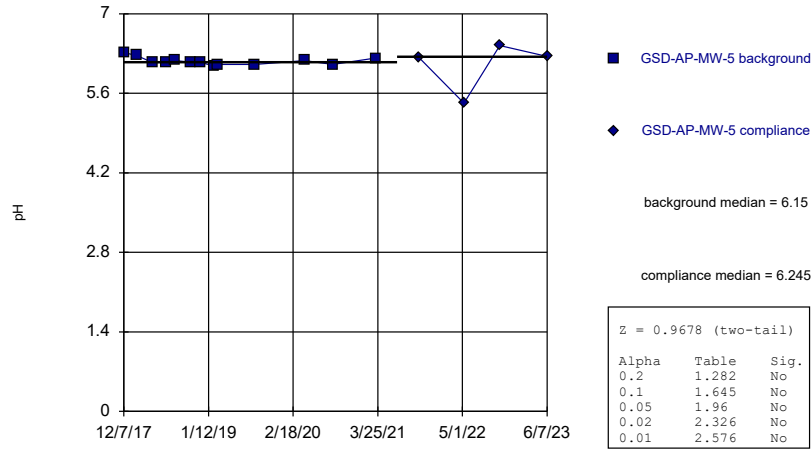
GSD-AP-MW-4



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

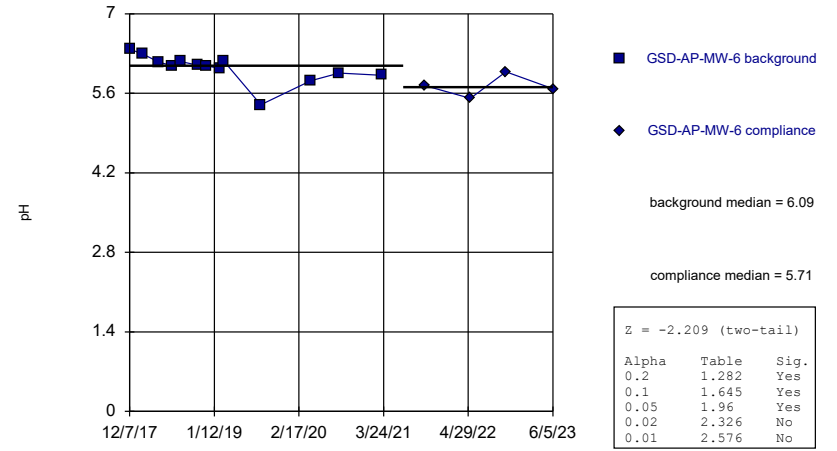
GSD-AP-MW-5



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

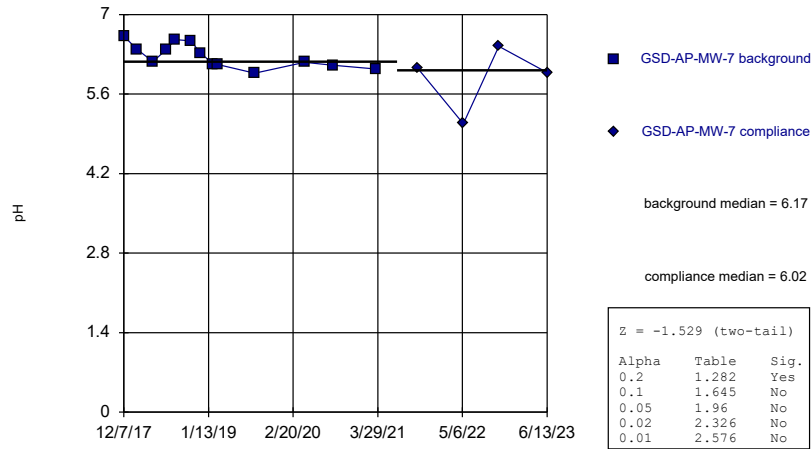
GSD-AP-MW-6



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

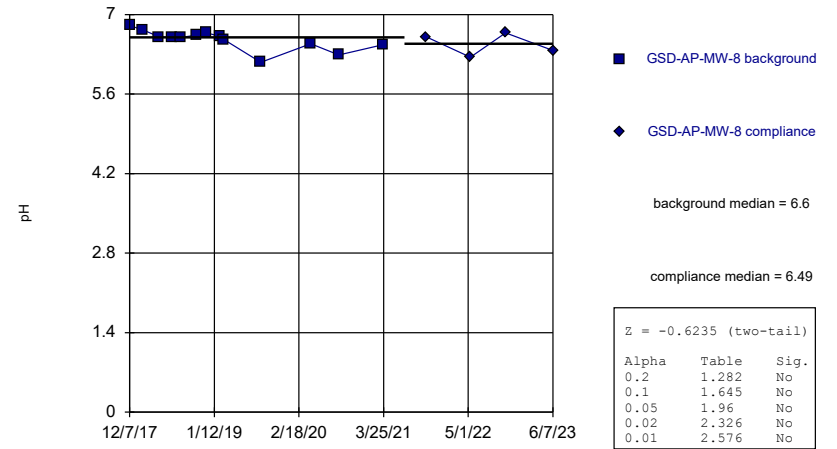
GSD-AP-MW-7



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

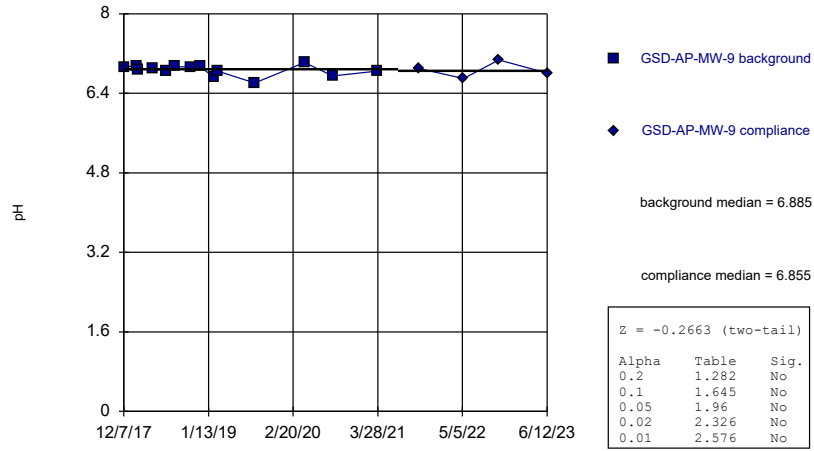
GSD-AP-MW-8



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

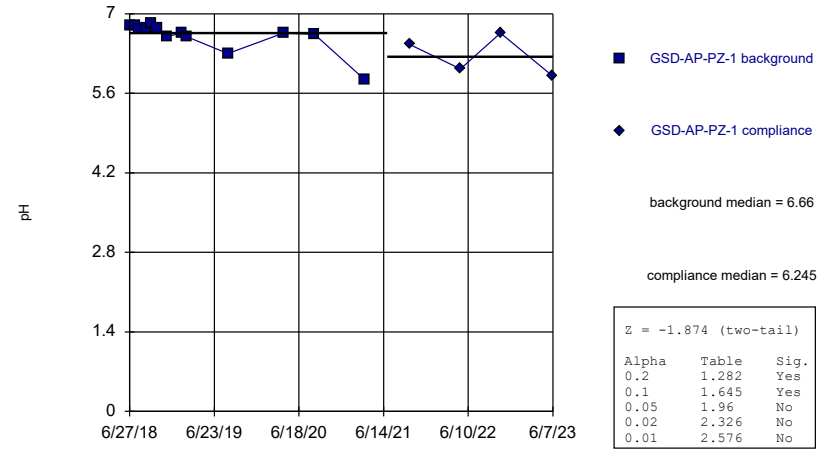
GSD-AP-MW-9



Constituent: pH Analysis Run 1/2/2024 5:42 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

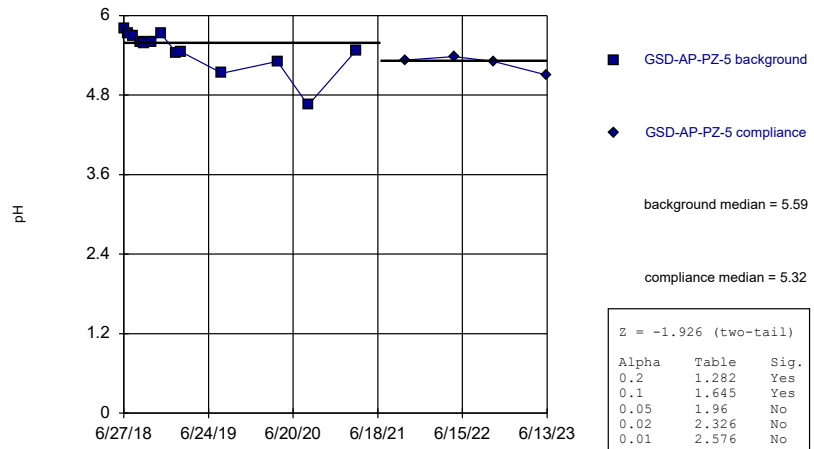
GSD-AP-PZ-1



Constituent: pH Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

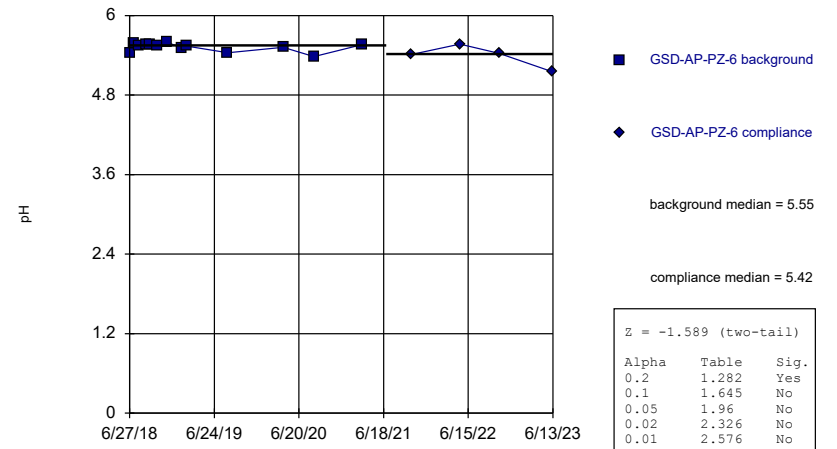
GSD-AP-PZ-5



Constituent: pH Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

GSD-AP-PZ-6



Constituent: pH Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-1
12/6/2017	0.1	
2/6/2018	0.08 (J)	
4/23/2018	0.07 (J)	
6/26/2018	0.08 (J)	
8/7/2018	0.07 (J)	
10/22/2018	0.07 (J)	
12/4/2018	0.04 (J)	
2/5/2019	0.0525 (J)	
2/26/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/25/2020	<0.125	
3/16/2021	<0.125	
10/5/2021		0.0601 (J)
5/10/2022		<0.125
10/26/2022		<0.125
6/5/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-10	GSD-AP-MW-10
12/6/2017	0.09 (J)	
2/7/2018	0.08 (J)	
4/24/2018	0.08 (J)	
6/27/2018	0.09 (J)	
8/7/2018	0.04 (J)	
10/22/2018	0.1	
12/4/2018	0.07 (J)	
2/6/2019	0.107	
2/26/2019	0.0813 (J)	
8/22/2019	0.084 (J)	
4/15/2020	0.112	
8/26/2020	0.0997 (J)	
3/23/2021	0.101	
10/11/2021		0.201
5/10/2022		0.0918 (J)
10/26/2022		0.0929 (J)
6/13/2023		0.0805 (J)

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-11	GSD-AP-MW-11
12/6/2017	0.06 (J)	
2/7/2018	0.05 (J)	
4/24/2018	0.05 (J)	
6/27/2018	0.06 (J)	
8/8/2018	0.06 (J)	
10/23/2018	0.06 (J)	
12/4/2018	<0.125	
2/6/2019	0.0678 (J)	
2/27/2019	0.0985 (J)	
8/22/2019	<0.125	
4/14/2020	0.0878 (J)	
8/26/2020	<0.125	
3/23/2021	0.0819 (J)	
10/12/2021		0.134
5/17/2022		<0.125
10/26/2022		0.069 (J)
6/13/2023		0.105 (J)

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-12	GSD-AP-MW-12
12/6/2017	<0.125	
2/8/2018	<0.125	
4/24/2018	<0.125	
6/27/2018	<0.125	
8/8/2018	<0.125	
10/23/2018	0.04 (J)	
12/5/2018	<0.125	
2/6/2019	<0.125	
2/27/2019	<0.125	
8/22/2019	<0.125	
4/14/2020	<0.125	
8/26/2020	<0.125	
3/23/2021	<0.125	
10/5/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125
6/13/2023		0.0795 (J)

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-14	GSD-AP-MW-14
6/27/2018	0.18	
7/18/2018	0.23	
8/6/2018	0.23	
9/5/2018	0.22	
9/24/2018	0.2	
10/24/2018	0.14	
12/5/2018	0.07 (J)	
2/5/2019	<0.125	
2/28/2019	<0.125	
8/20/2019	<0.125	
4/16/2020	<0.125	
8/25/2020	<0.125	
3/22/2021	<0.125	
10/12/2021		<0.125
5/9/2022		<0.125
10/26/2022		<0.125
6/6/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-16	GSD-AP-MW-16
10/24/2018	0.11	
11/14/2018	0.1	
11/28/2018	0.1	
12/5/2018	0.11	
12/18/2018	0.14	
1/3/2019	0.16	
1/24/2019	<0.125	
2/5/2019	<0.125	
2/28/2019	<0.125	
6/24/2019	<0.125 (D)	
8/19/2019	<0.125	
4/15/2020	<0.125	
8/25/2020	0.0863 (J)	
3/22/2021	<0.125	
10/6/2021		<0.125
5/17/2022		<0.125
10/25/2022		<0.125
6/6/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-17	GSD-AP-MW-17
10/24/2018	0.23	
11/14/2018	0.2	
11/28/2018	0.19	
12/5/2018	0.19	
12/18/2018	0.15	
1/3/2019	0.19	
1/24/2019	0.168	
2/5/2019	0.192	
2/28/2019	0.182	
8/19/2019	0.187	
4/16/2020	0.166	
8/24/2020	0.163	
3/22/2021	0.18	
10/6/2021		0.175
5/9/2022		0.191
10/25/2022		0.15
6/6/2023		0.113 (J)

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2	GSD-AP-MW-2
12/6/2017	0.3	
2/6/2018	0.27	
4/23/2018	0.19	
6/27/2018	0.28	
8/7/2018	0.24	
10/22/2018	0.24	
12/4/2018	0.15	
2/5/2019	0.207	
2/26/2019	0.264	
8/20/2019	0.252	
4/15/2020	0.21	
8/25/2020	0.273	
3/24/2021	0.194	
10/11/2021		0.283
5/16/2022		0.264
10/25/2022		0.271
6/6/2023		0.204

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-3	GSD-AP-MW-3
12/6/2017	0.13	
2/6/2018	0.08 (J)	
4/24/2018	0.05 (J)	
6/27/2018	0.07 (J)	
8/7/2018	0.09 (J)	
10/22/2018	0.11	
12/3/2018	0.08 (J)	
2/5/2019	0.064 (J)	
2/25/2019	<0.125	
6/18/2019	0.0664 (J)	
8/20/2019	0.0592 (J)	
4/13/2020	<0.125	
8/26/2020	<0.125	
3/22/2021	<0.125	
10/5/2021		<0.125
5/10/2022		0.0714 (J)
10/26/2022		<0.125
6/5/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4
12/7/2017	0.25	
2/6/2018	0.24	
4/24/2018	0.2	
6/26/2018	0.22	
8/6/2018	0.22	
10/22/2018	0.24	
12/3/2018	0.22	
2/5/2019	0.259	
2/26/2019	0.246	
8/20/2019	0.197	
4/15/2020	0.238	
8/26/2020	0.251	
3/24/2021	0.227	
10/5/2021		0.214
5/16/2022		0.17
10/26/2022		0.283
6/6/2023		0.225

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-5
12/7/2017	0.06 (J)	
2/6/2018	0.05 (J)	
4/25/2018	0.05 (J)	
6/27/2018	0.06 (J)	
8/7/2018	0.06 (J)	
10/23/2018	0.07 (J)	
12/5/2018	0.04 (J)	
2/5/2019	0.0651 (J)	
2/27/2019	0.0578 (J)	
8/20/2019	0.0567 (J)	
4/13/2020	0.0688 (J)	
8/24/2020	0.0607 (J)	
3/16/2021	0.065 (J)	
10/5/2021		0.122
5/9/2022		0.0682 (J)
10/26/2022		0.0845 (J)
6/7/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-6
12/7/2017	0.06 (J)	
2/8/2018	0.04 (J)	
4/25/2018	0.04 (J)	
6/26/2018	0.05 (J)	
8/7/2018	0.05 (J)	
10/23/2018	0.06 (J)	
12/3/2018	<0.125	
2/5/2019	0.0581 (J)	
2/26/2019	0.0816 (J)	
8/20/2019	<0.125	
4/13/2020	<0.125	
8/26/2020	<0.125	
3/17/2021	<0.125	
10/5/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125
6/5/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-7	GSD-AP-MW-7
12/7/2017	0.09 (J)	
2/8/2018	0.07 (J)	
4/25/2018	0.07 (J)	
6/26/2018	0.09 (J)	
8/8/2018	0.1	
10/23/2018	0.1	
12/4/2018	0.06 (J)	
2/6/2019	<0.125	
2/27/2019	0.0824 (J)	
8/21/2019	0.068 (J)	
4/15/2020	0.0775 (J)	
8/26/2020	<0.125	
3/23/2021	<0.125	
10/5/2021		0.0933 (J)
5/10/2022		0.0627 (J)
10/26/2022		0.128
6/13/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-8
12/7/2017	0.14	
2/8/2018	0.11	
4/25/2018	0.09 (J)	
6/26/2018	0.1	
8/8/2018	0.1	
10/23/2018	0.11	
12/4/2018	0.08 (J)	
2/6/2019	<0.1	
2/27/2019	0.108	
8/21/2019	0.0648 (J)	
4/14/2020	0.0845 (J)	
8/26/2020	0.0732 (J)	
3/23/2021	0.0802 (J)	
10/12/2021		0.123
5/11/2022		0.0695 (J)
10/26/2022		0.0911 (J)
6/7/2023		0.128

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-9
12/7/2017	0.12	
2/12/2018	0.11	
4/25/2018	0.12	
6/26/2018	0.13	
8/8/2018	0.12	
10/23/2018	0.13	
12/5/2018	0.04 (J)	
2/6/2019	<0.1	
2/27/2019	0.147	
8/21/2019	0.0984 (J)	
4/14/2020	0.133	
8/26/2020	0.13	
3/23/2021	0.132	
10/12/2021		0.147
5/11/2022		0.108 (J)
10/26/2022		0.119 (J)
6/12/2023		0.13

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-1
6/27/2018	0.13	
7/18/2018	0.11	
8/7/2018	0.11	
9/5/2018	0.13	
9/24/2018	0.13	
10/22/2018	0.13	
12/3/2018	0.08 (J)	
2/5/2019	0.0934 (J)	
2/25/2019	<0.125	
8/20/2019	0.0889 (J)	
4/13/2020	0.103	
8/24/2020	0.114	
3/24/2021	0.0725 (J)	
10/5/2021		<0.125
5/9/2022		0.0824 (J)
10/26/2022		<0.125
6/7/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-5	GSD-AP-PZ-5
6/27/2018	0.05 (J)	
7/18/2018	0.04 (J)	
8/8/2018	0.04 (J)	
9/5/2018	0.04 (J)	
9/24/2018	0.04 (J)	
10/23/2018	0.04 (J)	
12/3/2018	<0.125	
2/7/2019	<0.125	
2/25/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/24/2020	<0.125	
3/16/2021	<0.125	
10/12/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125
6/13/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-6	GSD-AP-PZ-6
6/27/2018	0.04 (J)	
7/18/2018	0.04 (J)	
8/8/2018	0.04 (J)	
9/5/2018	0.04 (J)	
9/24/2018	0.04 (J)	
10/23/2018	0.04 (J)	
12/3/2018	<0.125	
2/7/2019	<0.125	
2/25/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/24/2020	<0.125	
3/16/2021	<0.125	
10/12/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125
6/13/2023		<0.125

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-1
12/6/2017	6.5	
2/6/2018	6.48	
4/23/2018	6.36	
6/26/2018	6.32	
8/7/2018	6.32	
10/22/2018	6.2	
12/4/2018	6.31	
2/5/2019	6.1	
2/26/2019	6.11	
8/21/2019	6.01	
4/15/2020	5.65	
8/25/2020	6	
3/16/2021	5.87	
10/5/2021		5.79
5/10/2022		5.77
10/26/2022		5.86
6/5/2023		5.68

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-10	GSD-AP-MW-10
12/6/2017	6.83	
2/7/2018	6.82	
4/24/2018	6.74	
6/27/2018	6.67	
8/7/2018	6.72	
10/22/2018	6.73	
12/4/2018	6.77	
2/6/2019	6.67	
2/26/2019	6.77	
8/22/2019	6.37	
4/15/2020	6.85	
8/26/2020	6.73	
3/23/2021	6.87	
10/11/2021		6.72
5/10/2022		6.39
10/26/2022		6.84
6/13/2023		6.55

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-11	GSD-AP-MW-11
12/6/2017	6.81	
2/7/2018	6.74	
4/24/2018	6.62	
6/27/2018	6.69	
8/8/2018	6.67	
10/23/2018	6.73	
12/4/2018	6.67	
2/6/2019	6.58	
2/27/2019	6.56	
8/22/2019	6.26	
4/14/2020	6.63	
8/26/2020	6.38	
3/23/2021	6.58	
10/12/2021		6.66
5/17/2022		6.44
10/26/2022		6.2
6/13/2023		6.4

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-12	GSD-AP-MW-12
12/6/2017	5.6	
2/8/2018	5.44	
4/24/2018	5.41	
6/27/2018	5.45	
8/8/2018	5.46	
10/23/2018	5.47	
12/5/2018	5.45	
2/6/2019	5.31	
2/27/2019	5.4	
8/22/2019	5.35	
4/14/2020	5.39	
8/26/2020	5.63	
3/23/2021	5.5	
10/5/2021		5.19
5/10/2022		4.78
10/26/2022		5.52
6/13/2023		5.48

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-14	GSD-AP-MW-14
6/27/2018	3.95	
7/18/2018	4.02	
8/6/2018	4.07	
9/5/2018	4.07	
9/24/2018	4.07	
10/24/2018	4.1	
12/5/2018	4.1	
2/5/2019	4.02	
2/28/2019	3.94 (E)	
8/20/2019	4	
4/16/2020	3.93	
8/25/2020	4.03	
3/22/2021	3.25	
10/12/2021		4.04
5/9/2022		3.6
10/26/2022		4.07
6/6/2023		3.82

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-16	GSD-AP-MW-16
10/24/2018	5.27	
11/14/2018	4.99	
11/28/2018	4.74	
12/5/2018	4.76	
12/18/2018	4.57	
1/3/2019	4.56	
1/24/2019	4.45	
2/5/2019	4.3	
2/28/2019	4.35	
8/19/2019	4.57	
4/15/2020	4.49	
8/25/2020	4.2	
3/22/2021	3.45	
10/6/2021		4.16
5/17/2022		4.34
10/25/2022		4.64
6/6/2023		3.65

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-17	GSD-AP-MW-17
10/24/2018	7.92	
11/14/2018	8.23	
11/28/2018	8.95	
12/5/2018	8.77	
12/18/2018	8.99	
1/3/2019	9.35	
1/24/2019	9.42	
2/5/2019	9.23	
2/28/2019	9.48	
8/19/2019	7.93	
4/16/2020	8.1	
8/24/2020	8.17	
3/22/2021	7.85	
10/6/2021		7.92
5/9/2022		7.29
10/25/2022		7.97
6/6/2023		7.8

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2	GSD-AP-MW-2
12/6/2017	6.61	
2/6/2018	6.66	
4/23/2018	6.54	
6/27/2018	6.63	
8/7/2018	6.57	
10/22/2018	6.55	
12/4/2018	6.52	
2/5/2019	6.47	
2/26/2019	6.54	
8/20/2019	6.3	
4/15/2020	6.45	
8/25/2020	6.65	
3/24/2021	6.49	
10/11/2021		6.59
5/16/2022		6.16
10/25/2022		6.64
6/6/2023		6.63

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-3	GSD-AP-MW-3
12/6/2017	6.54	
2/6/2018	6.39	
4/24/2018	6.02	
6/27/2018	6.07	
8/7/2018	6.28	
10/22/2018	6.3	
12/3/2018	6.38	
2/5/2019	5.83	
2/25/2019	5.93	
8/20/2019	5.73	
4/13/2020	5.83	
8/26/2020	5.87	
3/22/2021	5.51	
10/5/2021		5.76
5/10/2022		5.95
10/26/2022		5.97
6/5/2023		5.66

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4
12/7/2017	6.73	
2/6/2018	6.76	
4/24/2018	6.66	
6/26/2018	6.61	
8/6/2018	6.68	
10/22/2018	6.63	
12/3/2018	6.67	
2/5/2019	6.63	
2/26/2019	6.64	
8/20/2019	6.33	
4/15/2020	6.77	
8/26/2020	6.68	
3/24/2021	6.86	
10/5/2021		6.58
5/16/2022		6.61
10/26/2022		6.67
6/6/2023		6.74

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-5
12/7/2017	6.32	
2/6/2018	6.27	
4/25/2018	6.14	
6/27/2018	6.15	
8/7/2018	6.18	
10/23/2018	6.15	
12/5/2018	6.15	
2/5/2019	6.08	
2/27/2019	6.11	
8/20/2019	6.11	
4/13/2020	6.18	
8/24/2020	6.11	
3/16/2021	6.22	
10/5/2021		6.24
5/9/2022		5.43
10/26/2022		6.44
6/7/2023		6.25

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-6
12/7/2017	6.38	
2/8/2018	6.29	
4/25/2018	6.15	
6/26/2018	6.09	
8/7/2018	6.16	
10/23/2018	6.1	
12/3/2018	6.09	
2/5/2019	6.04	
2/26/2019	6.17	
8/20/2019	5.4	
4/13/2020	5.82	
8/26/2020	5.96	
3/17/2021	5.92	
10/5/2021		5.74
5/10/2022		5.51
10/26/2022		5.98
6/5/2023		5.68

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-7	GSD-AP-MW-7
12/7/2017	6.62	
2/8/2018	6.39	
4/25/2018	6.17	
6/26/2018	6.38	
8/8/2018	6.56	
10/23/2018	6.54	
12/4/2018	6.33	
2/6/2019	6.13	
2/27/2019	6.12	
8/21/2019	5.97	
4/15/2020	6.16	
8/26/2020	6.11	
3/23/2021	6.04	
10/5/2021		6.06
5/10/2022		5.08
10/26/2022		6.44
6/13/2023		5.98

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-8
12/7/2017	6.81	
2/8/2018	6.73	
4/25/2018	6.61	
6/26/2018	6.59	
8/8/2018	6.6	
10/23/2018	6.64	
12/4/2018	6.68	
2/6/2019	6.62	
2/27/2019	6.56	
8/21/2019	6.16	
4/14/2020	6.49	
8/26/2020	6.29	
3/23/2021	6.47	
10/12/2021		6.61
5/11/2022		6.25
10/26/2022		6.68
6/7/2023		6.37

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-9
12/7/2017	6.93	
2/8/2018	6.96	
2/12/2018	6.88	
4/25/2018	6.89	
6/26/2018	6.85	
8/8/2018	6.94	
10/23/2018	6.93	
12/5/2018	6.94	
2/6/2019	6.73	
2/27/2019	6.85	
8/21/2019	6.61	
4/14/2020	7.02	
8/26/2020	6.75	
3/23/2021	6.85	
10/12/2021		6.9
5/11/2022		6.7
10/26/2022		7.07
6/12/2023		6.81

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-1
6/27/2018	6.79	
7/18/2018	6.8	
8/7/2018	6.73	
9/5/2018	6.75	
9/24/2018	6.83	
10/22/2018	6.76	
12/3/2018	6.6	
2/5/2019	6.66	
2/25/2019	6.6	
8/20/2019	6.3	
4/13/2020	6.66	
8/24/2020	6.64	
3/24/2021	5.85	
10/5/2021		6.46
5/9/2022		6.03
10/26/2022		6.66
6/7/2023		5.9

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-5	GSD-AP-PZ-5
6/27/2018	5.81	
7/18/2018	5.74	
8/8/2018	5.7	
9/5/2018	5.61	
9/24/2018	5.59	
10/23/2018	5.6	
12/3/2018	5.73	
2/7/2019	5.44	
2/25/2019	5.46	
8/21/2019	5.13	
4/15/2020	5.31	
8/24/2020	4.65	
3/16/2021	5.47	
10/12/2021		5.33
5/10/2022		5.38
10/26/2022		5.31
6/13/2023		5.1

Mann-Whitney (Wilcoxon Rank Sum)

Constituent: pH (pH) Analysis Run 1/2/2024 5:43 PM View: Mann-Whitney

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-6	GSD-AP-PZ-6
6/27/2018	5.44	
7/18/2018	5.58	
8/8/2018	5.55	
9/5/2018	5.56	
9/24/2018	5.57	
10/23/2018	5.55	
12/3/2018	5.6	
2/7/2019	5.51	
2/25/2019	5.54	
8/21/2019	5.44	
4/15/2020	5.52	
8/24/2020	5.38	
3/16/2021	5.56	
10/12/2021		5.41
5/10/2022		5.57
10/26/2022		5.43
6/13/2023		5.15

FIGURE E.

Trend Tests - Upgradient Wells - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:57 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP

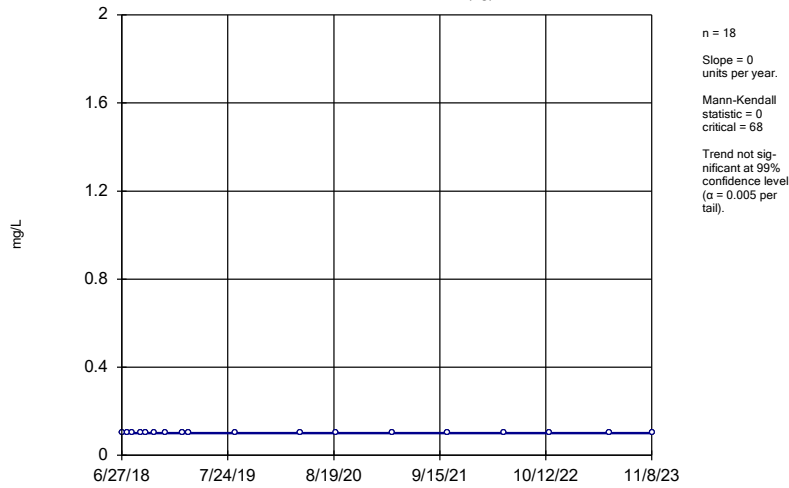
Trend Tests - Upgradient Wells - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:57 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	68	No	18	100	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0	68	74	No	19	68.42	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.0004234	-21	-68	No	18	5.556	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-0.6919	-36	-68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-1.068	-36	-74	No	19	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.017	38	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	-0.02759	-11	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-38	-74	No	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-5.287	-28	-68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	13.35	26	74	No	19	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-0.3395	-43	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-31	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	9.812	27	74	No	19	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.538	-47	-68	No	18	0	n/a	0.01	NP

Sen's Slope Estimator

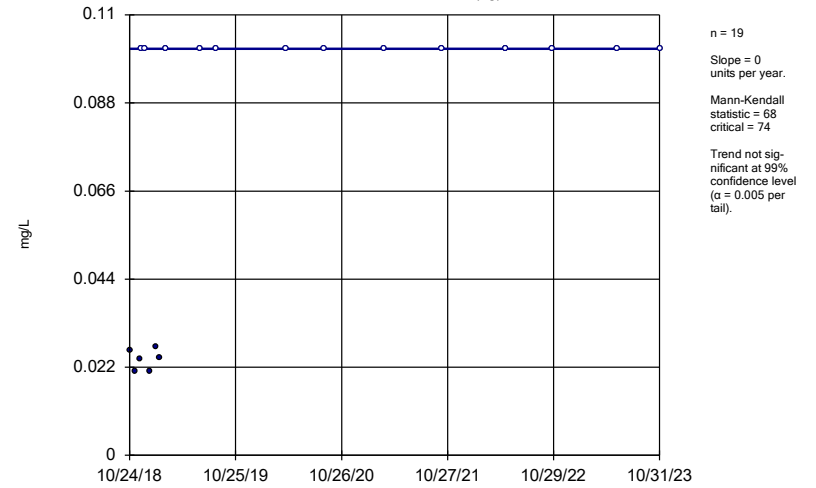
GSD-AP-MW-14 (bg)



Constituent: Boron Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

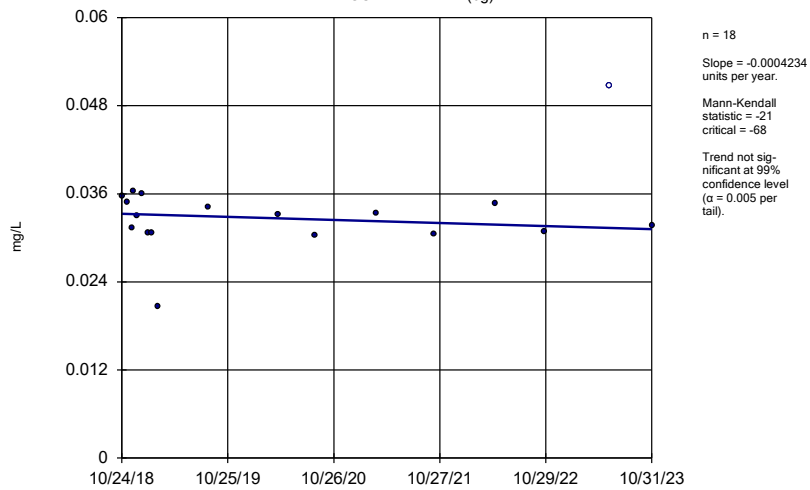
GSD-AP-MW-16 (bg)



Constituent: Boron Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

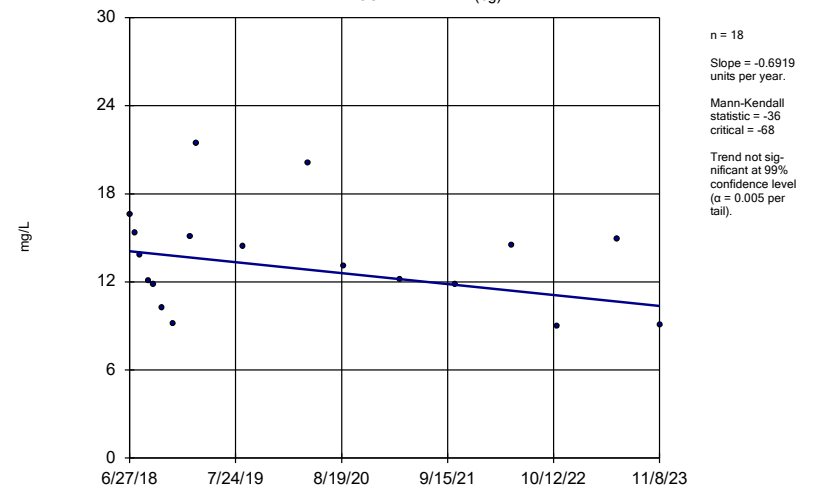
GSD-AP-MW-17 (bg)



Constituent: Boron Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

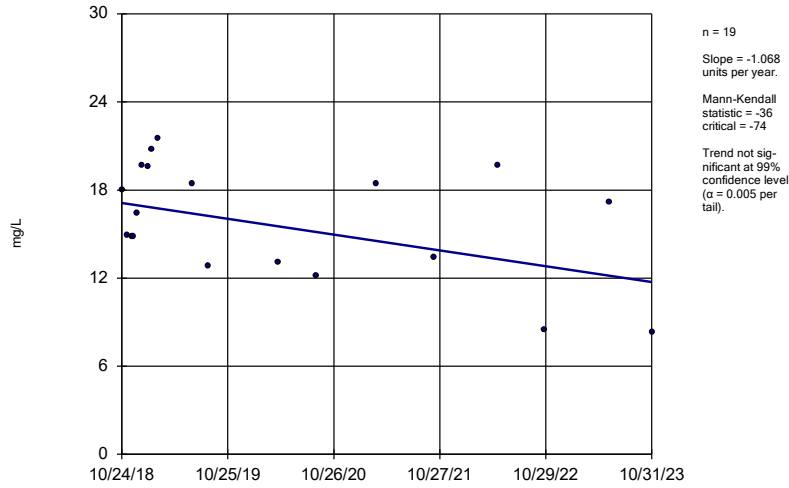
GSD-AP-MW-14 (bg)



Constituent: Calcium Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

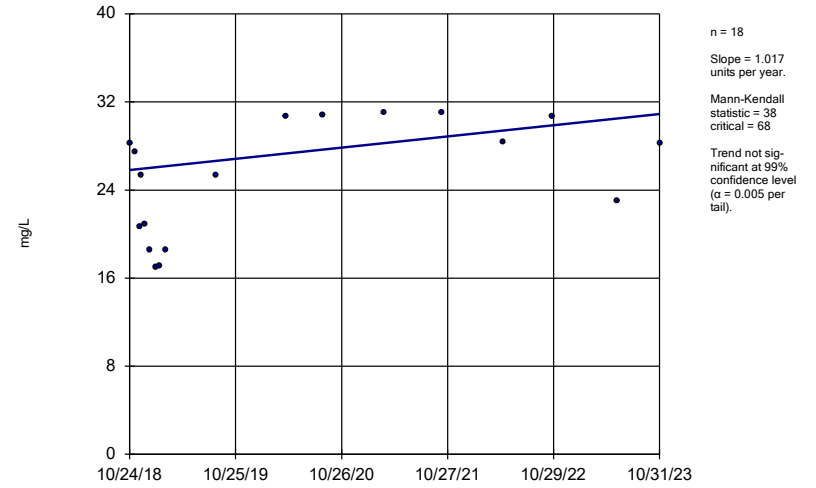
GSD-AP-MW-16 (bg)



Constituent: Calcium Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

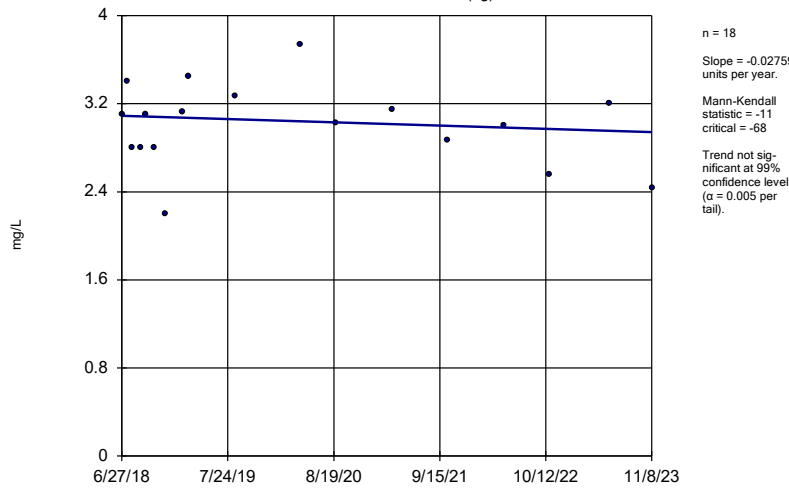
GSD-AP-MW-17 (bg)



Constituent: Calcium Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

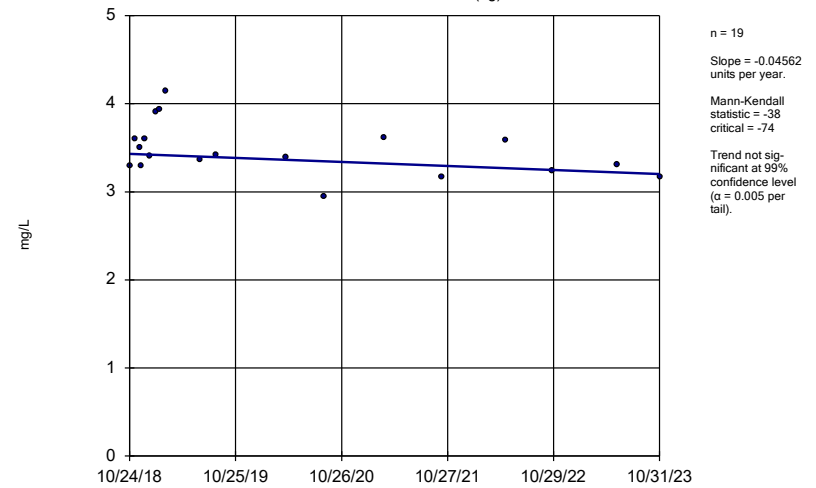
GSD-AP-MW-14 (bg)



Constituent: Chloride Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

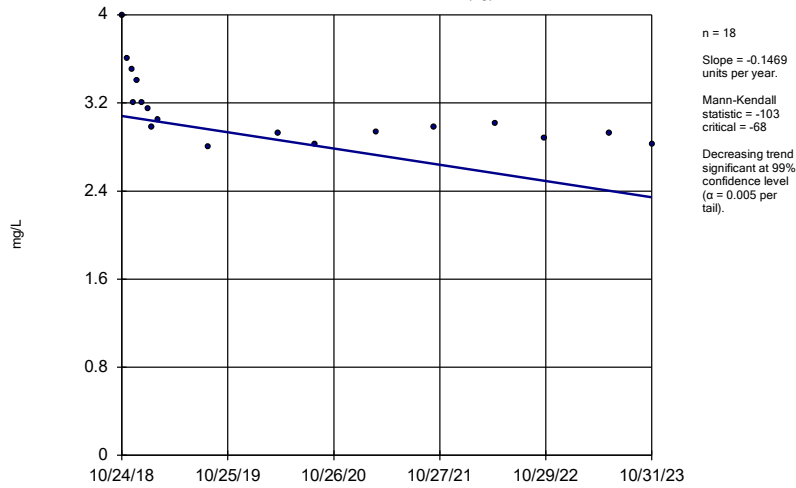
GSD-AP-MW-16 (bg)



Constituent: Chloride Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

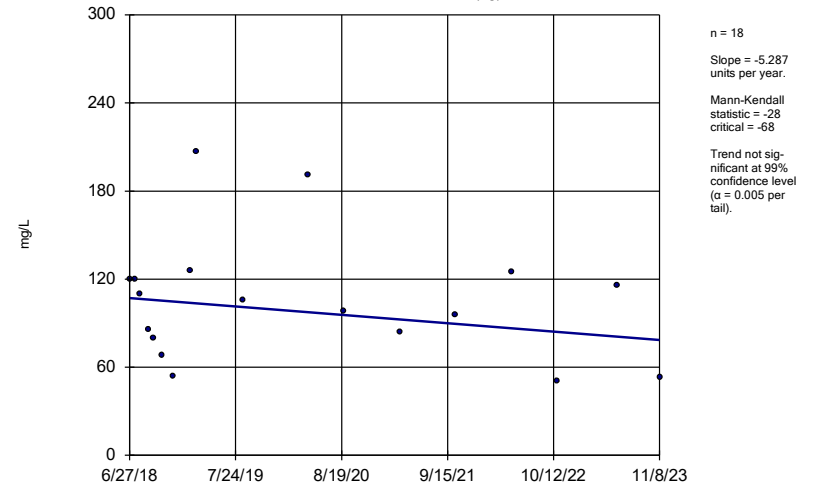
GSD-AP-MW-17 (bg)



Constituent: Chloride Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

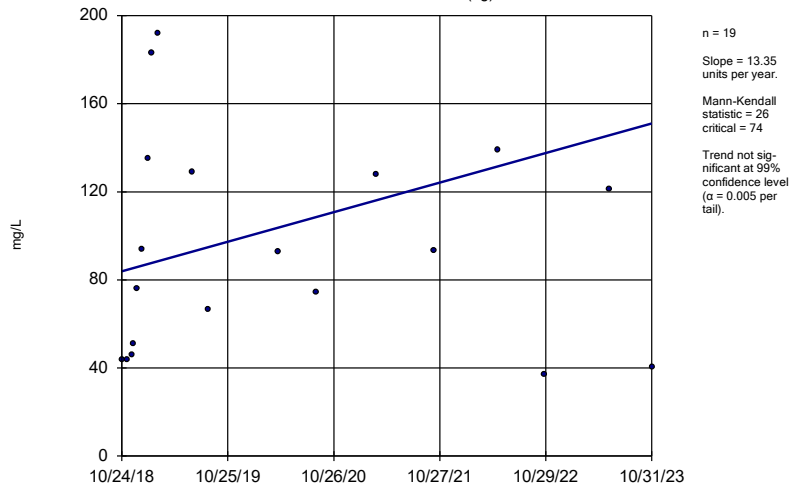
GSD-AP-MW-14 (bg)



Constituent: Sulfate Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

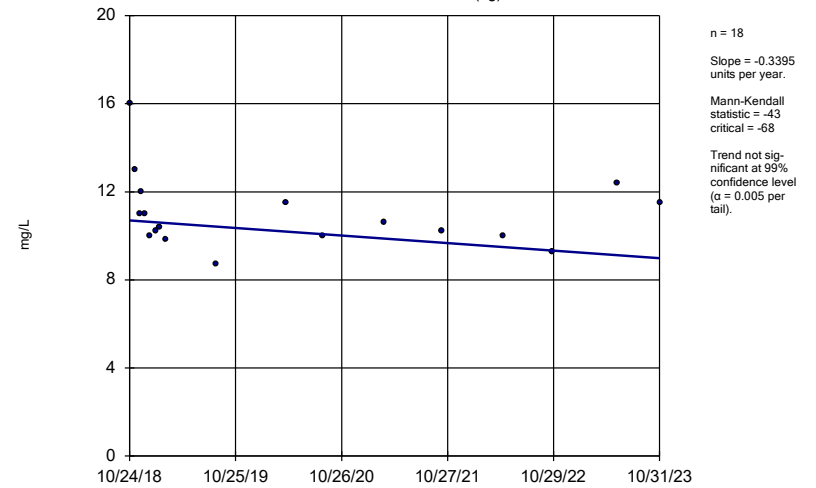
GSD-AP-MW-16 (bg)



Constituent: Sulfate Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

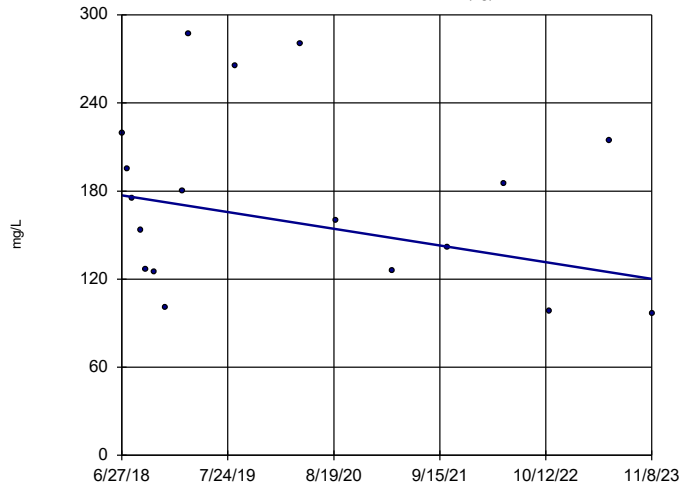
GSD-AP-MW-17 (bg)



Constituent: Sulfate Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-14 (bg)

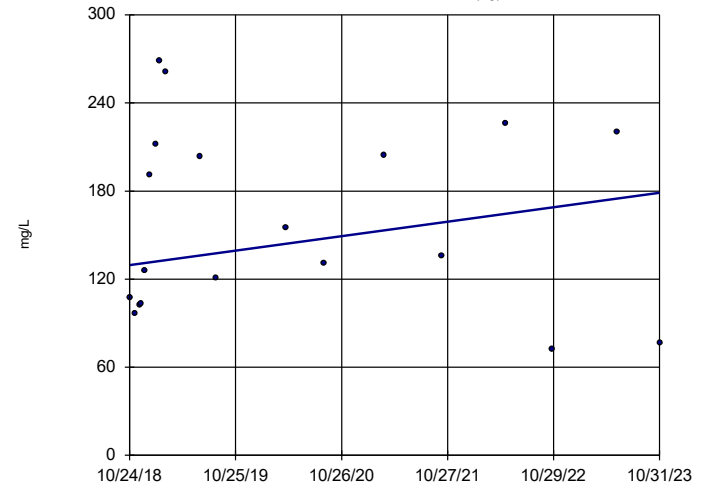


n = 18
 Slope = -10.61
 units per year.
 Mann-Kendall
 statistic = -31
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-16 (bg)

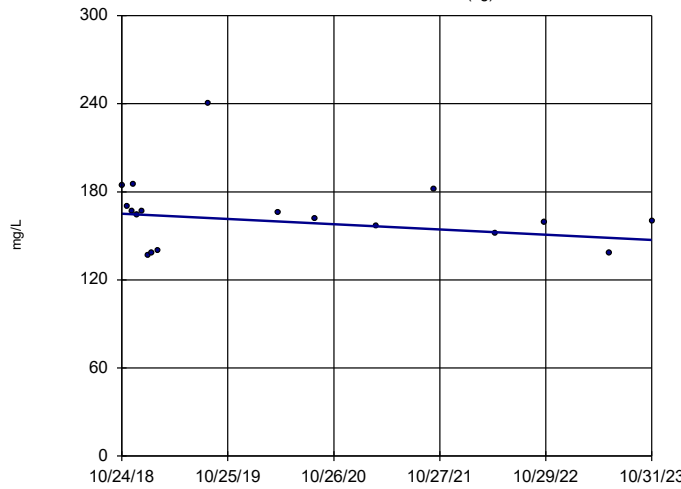


n = 19
 Slope = 9.812
 units per year.
 Mann-Kendall
 statistic = 27
 critical = 74
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-17 (bg)



n = 18
 Slope = -3.538
 units per year.
 Mann-Kendall
 statistic = -47
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/2/2024 5:55 PM View: Upgradient Wells Trend Tests
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Trend Tests - Upgradient Wells - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:57 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	68	No	18	100	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0	68	74	No	19	68.42	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.0004234	-21	-68	No	18	5.556	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-0.6919	-36	-68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-1.068	-36	-74	No	19	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.017	38	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	-0.02759	-11	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-38	-74	No	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-5.287	-28	-68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	13.35	26	74	No	19	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-0.3395	-43	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-31	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	9.812	27	74	No	19	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.538	-47	-68	No	18	0	n/a	0.01	NP

FIGURE F.

Intrawell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:47 PM

Constituent	Well	Upper Lim.	Lower Lim.Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform Alpha	Method		
pH (pH)	GSD-AP-MW-10	6.87	6.37	11/7/2023	6.94	Yes	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-5	6.44	5.43	11/7/2023	6.6	Yes	17	n/a	n/a	0	n/a	n/a	0.01183	NP Intra (normality) 1 of 2

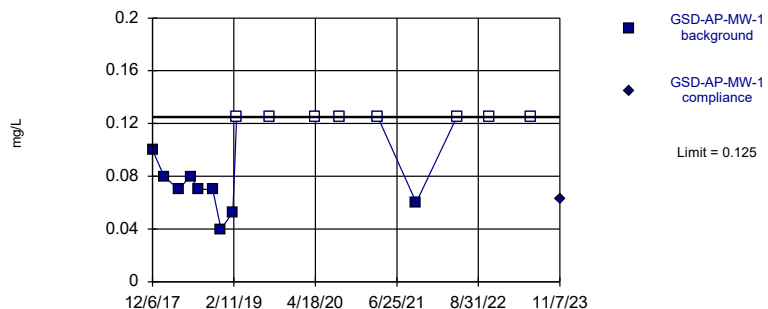
Intrawell Prediction Limits - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 5:47 PM

Constituent	Well	Upper Lim.	Lower Lim.Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GSD-AP-MW-1	0.125	n/a	11/7/2023	0.0626J	No	17	n/a	n/a	47.06	n/a	n/a	0.005914 NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-10	0.201	n/a	11/7/2023	0.0804J	No	17	n/a	n/a	0	n/a	n/a	0.005914 NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-11	0.134	n/a	11/7/2023	0.0709J	No	17	n/a	n/a	23.53	n/a	n/a	0.005914 NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-12	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	88.24	n/a	n/a	0.005914 NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-14	0.23	n/a	11/8/2023	0.125ND	No	17	n/a	n/a	58.82	n/a	n/a	0.005914 NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-16	0.16	n/a	10/31/2023	0.125ND	No	18	n/a	n/a	61.11	n/a	n/a	0.005373 NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-17	0.2411	n/a	10/31/2023	0.148	No	17	0.1775	0.02544	0	None	No	0.0005016 Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-2	0.3439	n/a	11/1/2023	0.217	No	17	0.2407	0.0413	0	None	No	0.0005016 Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-3	0.13	n/a	11/1/2023	0.125ND	No	18	n/a	n/a	38.89	n/a	n/a	0.005373 NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-4	0.2955	n/a	11/7/2023	0.168	No	17	0.2294	0.02644	0	None	No	0.0005016 Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-5	0.122	n/a	11/7/2023	0.0639J	No	17	n/a	n/a	5.882	n/a	n/a	0.005914 NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-6	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	52.94	n/a	n/a	0.005914 NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-7	0.1256	n/a	11/7/2023	0.0652J	No	17	0.2793	0.03004	23.53	Kaplan-Meier	sqrt(x)	0.0005016 Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-8	0.1518	n/a	11/7/2023	0.0625ND	No	17	0.09499	0.02271	5.882	None	No	0.0005016 Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-9	0.1582	n/a	11/7/2023	0.105J	No	17	0.001788	0.00086795	882	None	x^3	0.0005016 Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-1	0.13	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	23.53	n/a	n/a	0.005914 NP Intra (normality) 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-5	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	64.71	n/a	n/a	0.005914 NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-6	0.125	n/a	11/7/2023	0.125ND	No	17	n/a	n/a	64.71	n/a	n/a	0.005914 NP Intra (NDs) 1 of 2
pH (pH)	GSD-AP-MW-1	6.771	5.386	11/7/2023	5.94	No	17	6.078	0.277	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-10	6.87	6.37	11/7/2023	6.94	Yes	17	n/a	n/a	0	n/a	n/a	0.01183 NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-11	6.997	6.135	11/7/2023	6.36	No	17	6.566	0.1724	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-12	5.63	4.78	11/7/2023	5.54	No	17	n/a	n/a	0	n/a	n/a	0.01183 NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-14	4.1	3.25	11/8/2023	4.03	No	17	n/a	n/a	0	n/a	n/a	0.01183 NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-16	5.532	3.349	10/31/2023	4.5	No	17	4.441	0.4368	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-17	10.14	6.722	10/31/2023	7.98	No	17	8.434	0.6846	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-2	6.66	6.16	11/1/2023	6.49	No	17	n/a	n/a	0	n/a	n/a	0.01183 NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-3	6.722	5.28	11/1/2023	5.98	No	17	6.001	0.2884	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-4	6.913	6.374	11/7/2023	6.72	No	17	13154	1053	0	None	x^5	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-5	6.44	5.43	11/7/2023	6.6	Yes	17	n/a	n/a	0	n/a	n/a	0.01183 NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-6	6.633	5.306	11/7/2023	6.22	No	17	5.969	0.2656	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-7	6.868	5.225	11/7/2023	6.47	No	17	1485	295.9	0	None	x^4	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-8	6.984	6.093	11/7/2023	6.75	No	17	6.539	0.1782	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-MW-9	7.151	6.584	11/7/2023	6.98	No	18	6.867	0.1148	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-1	6.83	5.85	11/7/2023	6.83	No	17	n/a	n/a	0	n/a	n/a	0.01183 NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-PZ-5	6.157	4.709	11/7/2023	5.32	No	17	5.433	0.2895	0	None	No	0.0002508 Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-6	5.6	5.15	11/7/2023	5.27	No	17	n/a	n/a	0	n/a	n/a	0.01183 NP Intra (normality) 1 of 2

Within Limit

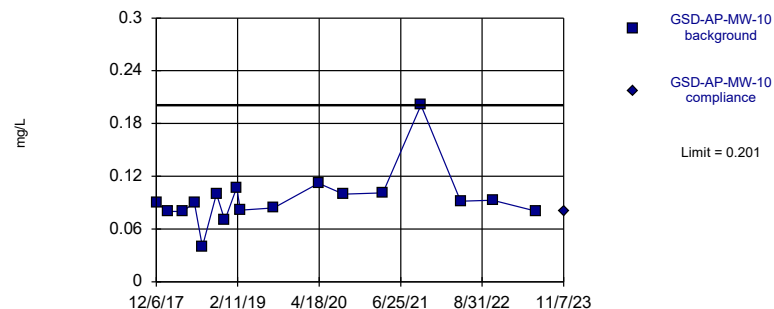
Prediction Limit
 Intrawell Non-parametric



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 0.05 alpha level. Limit is highest of 17 background values. 47.06% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

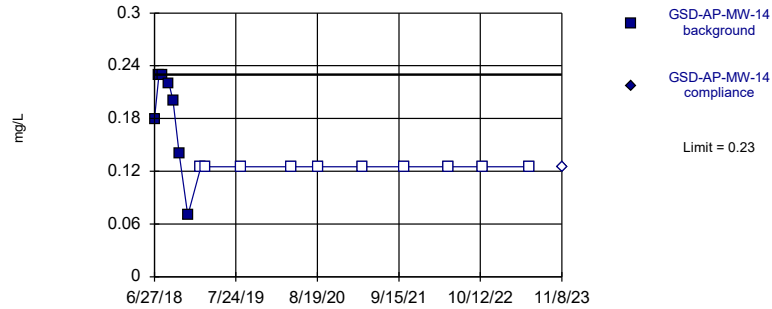
Within Limit

Prediction Limit
 Intrawell Non-parametric



Within Limit

Prediction Limit
Intrawell Non-parametric

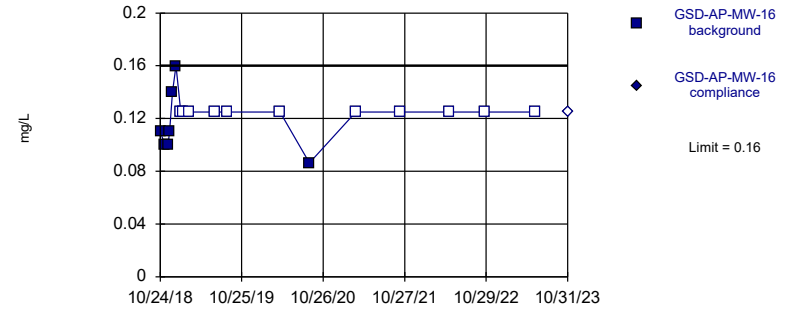


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 58.82% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:44 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

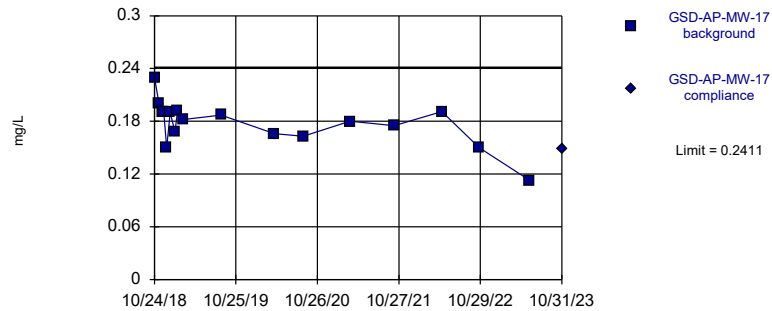


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 18 background values. 61.11% NDs. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:44 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
Intrawell Parametric

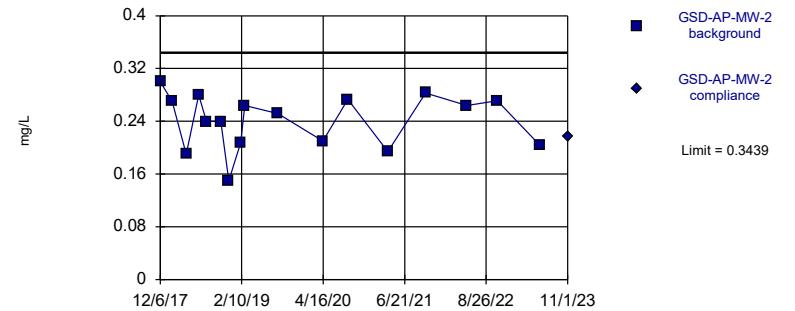


Background Data Summary: Mean=0.1775, Std. Dev.=0.02544, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9308, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/2/2024 5:44 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
Intrawell Parametric

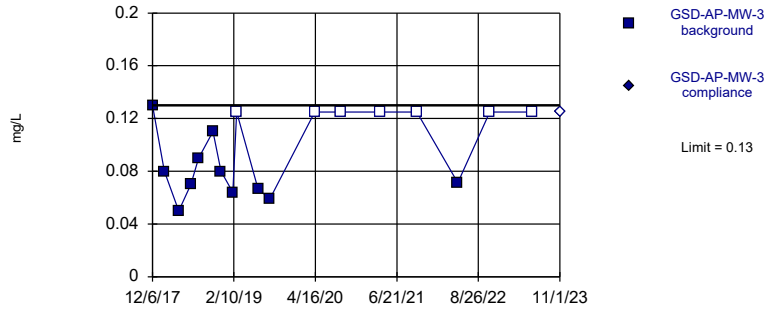


Background Data Summary: Mean=0.2407, Std. Dev.=0.0413, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9326, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/2/2024 5:44 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

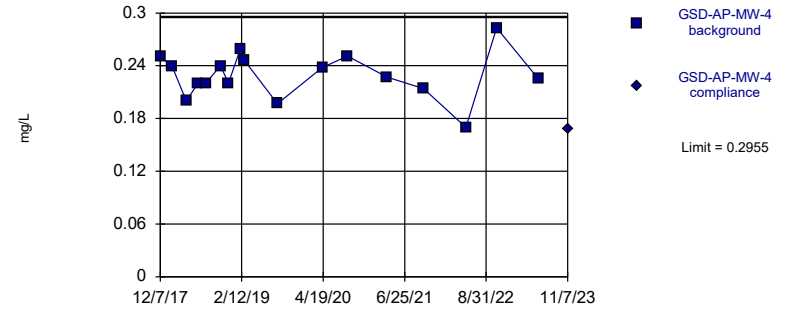


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 18 background values. 38.89% NDs. Well-constituent pair annual alpha = 0.01072. Individual comparison alpha = 0.005373 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:44 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
 Intrawell Parametric

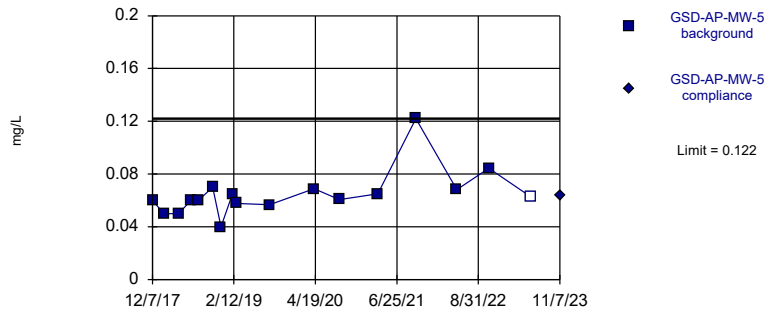


Background Data Summary: Mean=0.2294, Std. Dev.=0.02644, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.979, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/2/2024 5:44 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric

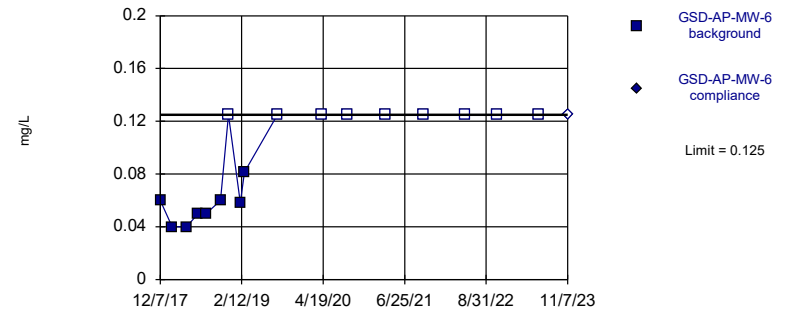


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. 5.882% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
 Intrawell Non-parametric



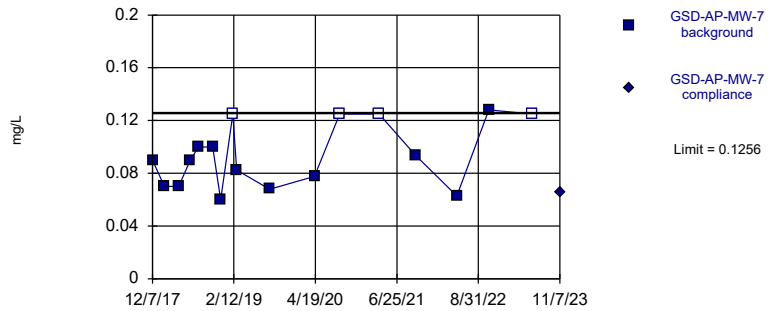
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 52.94% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit

Intrawell Parametric



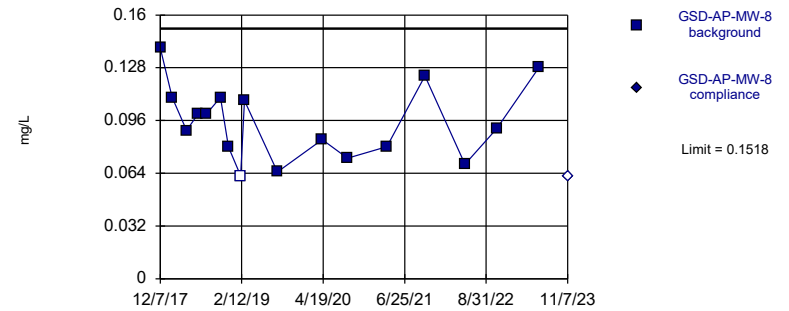
Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.2793, Std. Dev.=0.03004, n=17, 23.53% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.902, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit

Intrawell Parametric



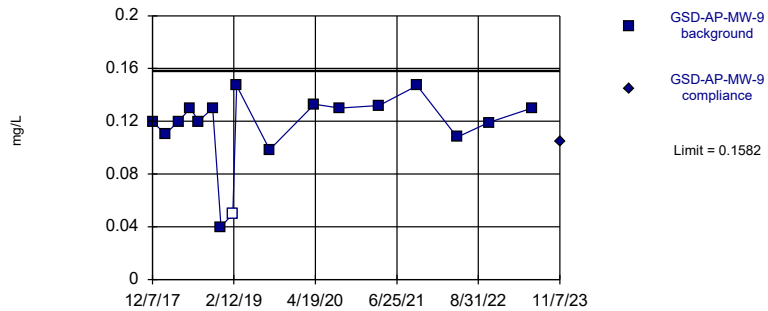
Background Data Summary: Mean=0.09499, Std. Dev.=0.02271, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9645, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit

Intrawell Parametric



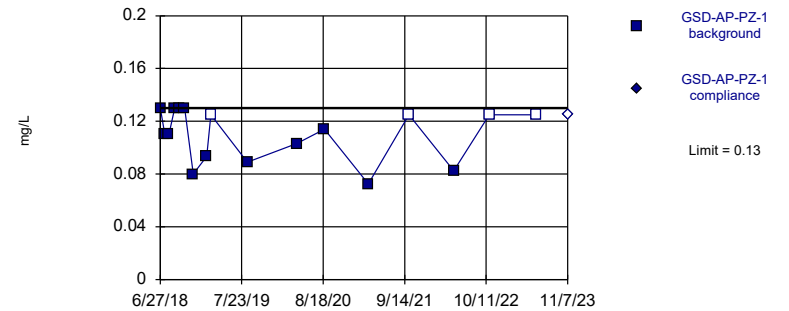
Background Data Summary (based on cube transformation): Mean=0.001788, Std. Dev.=0.0008679, n=17, 5.882% NDs. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9296, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit

Intrawell Non-parametric

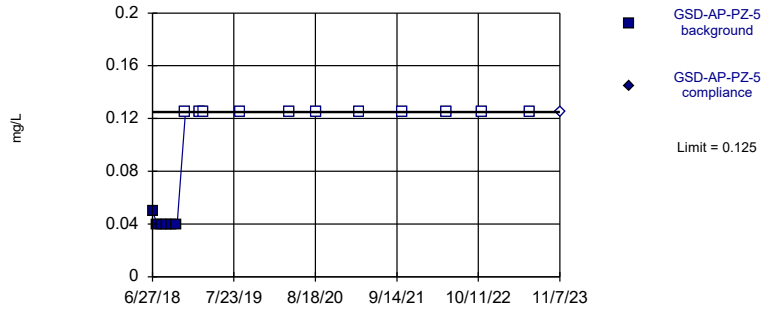


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. 23.53% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

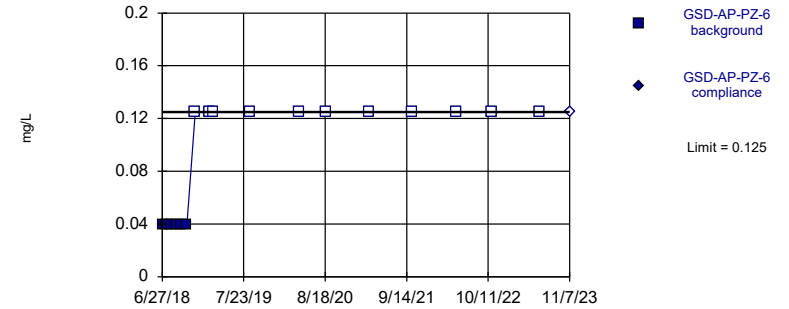


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 64.71% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit
Intrawell Non-parametric

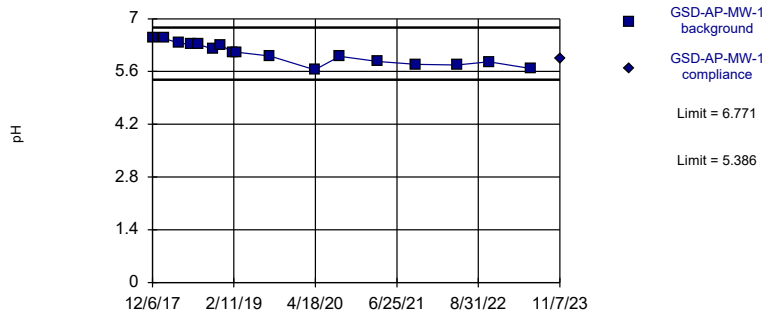


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 64.71% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Fluoride Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

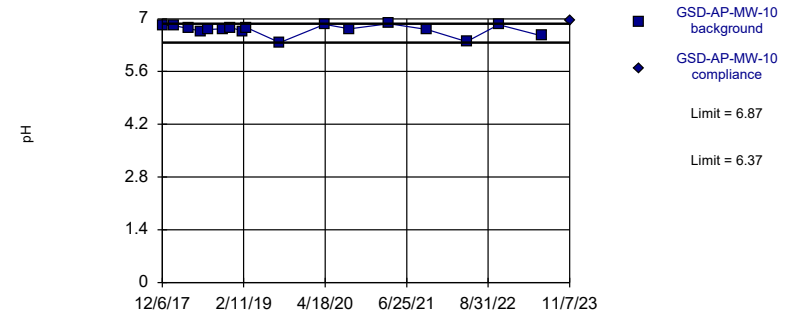


Background Data Summary: Mean=6.078, Std. Dev.=0.277, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9438, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Exceeds Limits

Prediction Limit
Intrawell Non-parametric

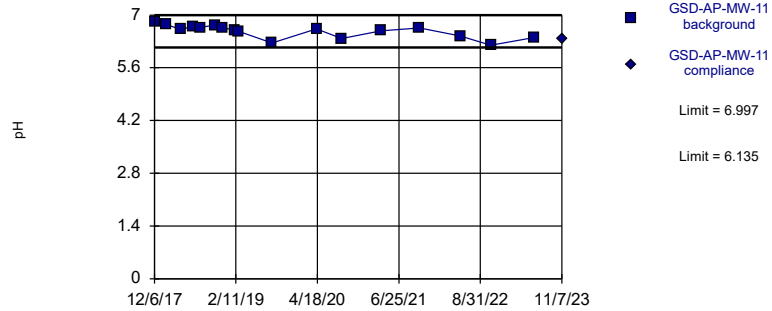


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 17 background values. Well-constituent pair annual alpha = 0.02359. Individual comparison alpha = 0.01183 (1 of 2).

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

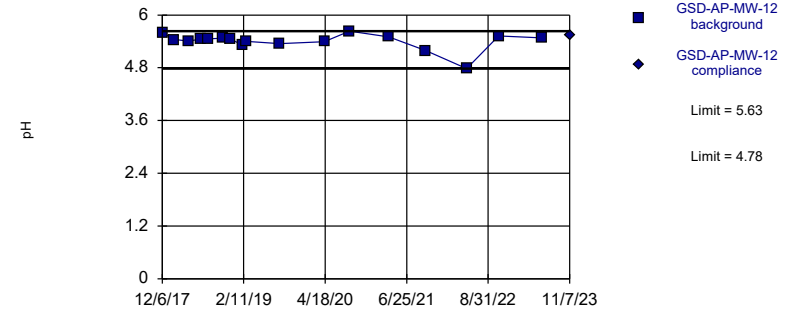


Background Data Summary: Mean=6.566, Std. Dev.=0.1724, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9202, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Non-parametric

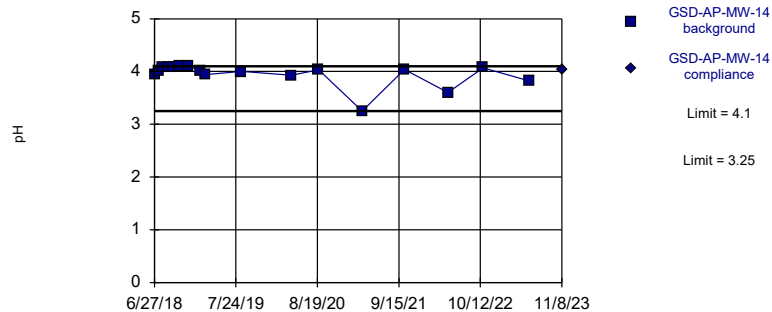


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 17 background values. Well-constituent pair annual alpha = 0.02359. Individual comparison alpha = 0.01183 (1 of 2).

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Non-parametric

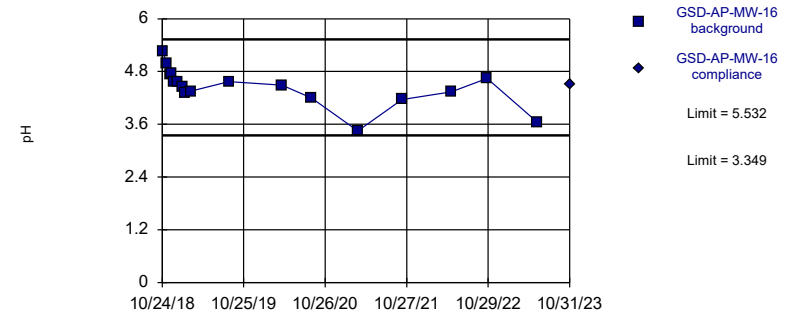


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 17 background values. Well-constituent pair annual alpha = 0.02359. Individual comparison alpha = 0.01183 (1 of 2).

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

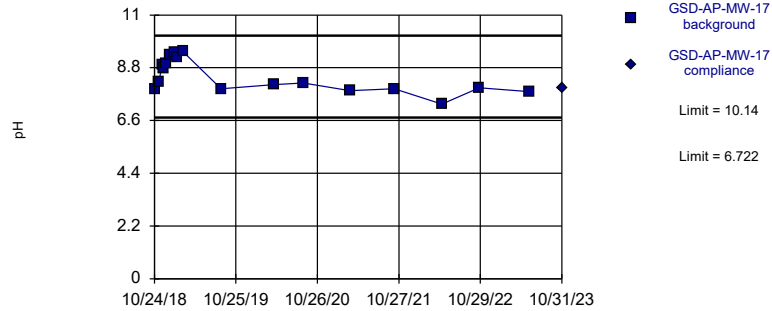


Background Data Summary: Mean=4.441, Std. Dev.=0.4368, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9465, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

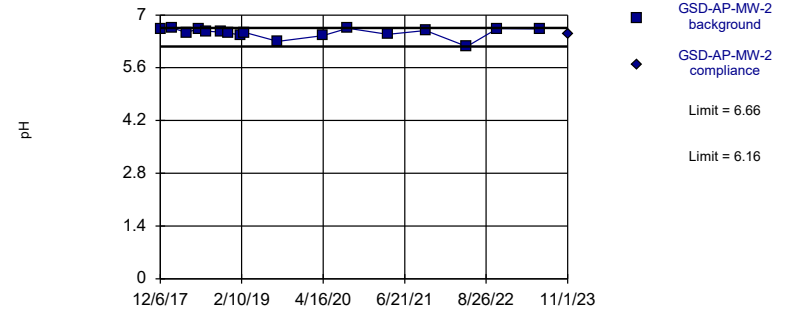


Background Data Summary: Mean=8.434, Std. Dev.=0.6846, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9003, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Non-parametric

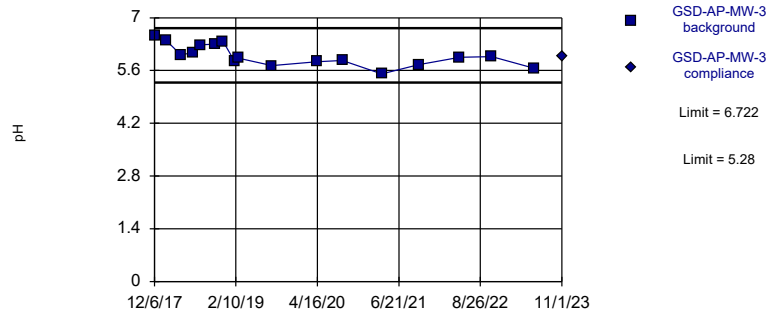


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 17 background values. Well-constituent pair annual alpha = 0.02359. Individual comparison alpha = 0.01183 (1 of 2).

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

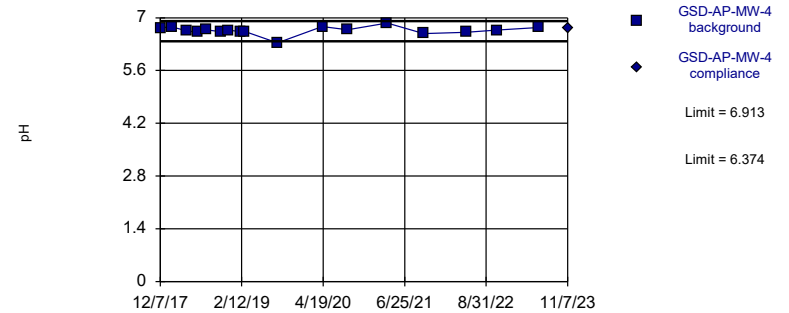


Background Data Summary: Mean=6.001, Std. Dev.=0.2884, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9604, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

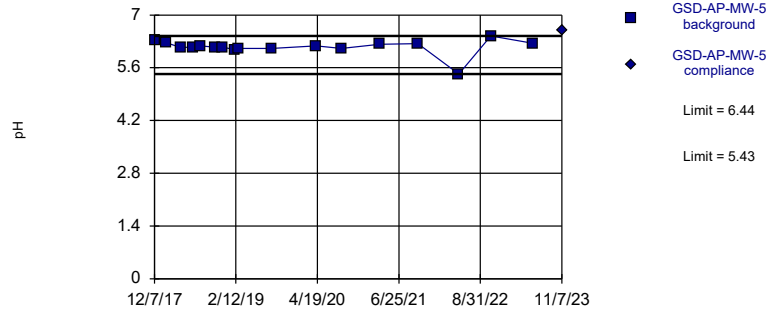


Background Data Summary (based on x^5 transformation): Mean=13154, Std. Dev.=1053, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8973, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Exceeds Limits

Prediction Limit
Intrawell Non-parametric

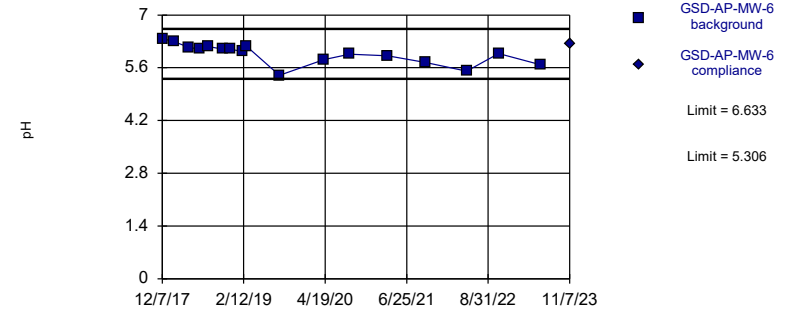


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 17 background values. Well-constituent pair annual alpha = 0.02359. Individual comparison alpha = 0.01183 (1 of 2).

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

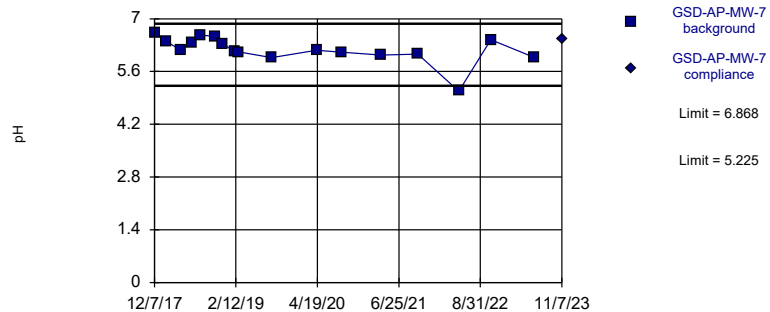


Background Data Summary: Mean=5.969, Std. Dev.=0.2656, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9471, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

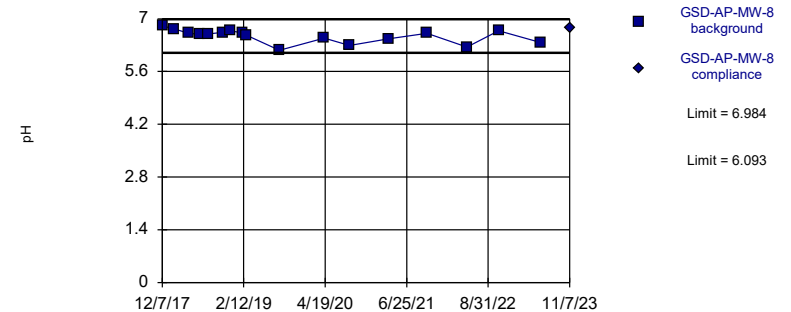


Background Data Summary (based on x^4 transformation): Mean=1485, Std. Dev.=295.9, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9028, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

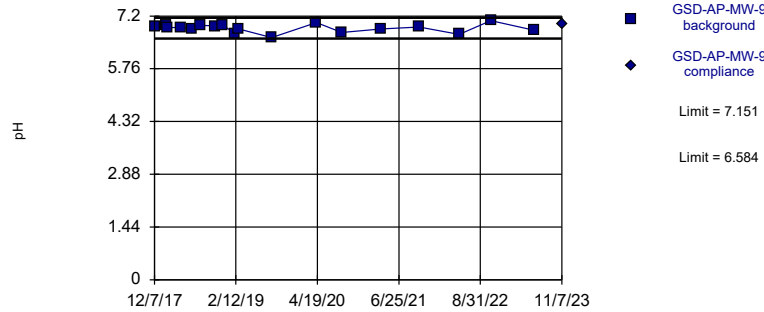


Background Data Summary: Mean=6.539, Std. Dev.=0.1782, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9244, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

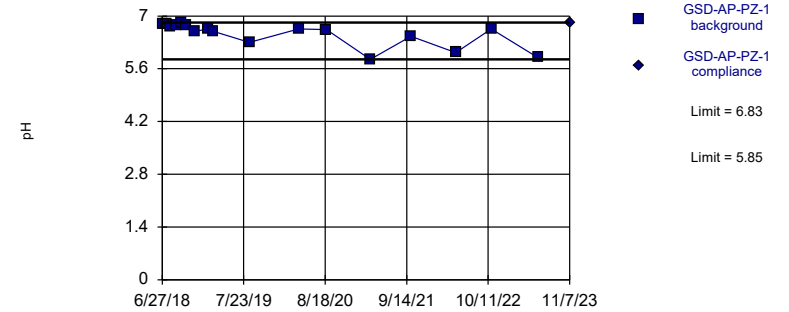


Background Data Summary: Mean=6.867, Std. Dev.=0.1148, n=18. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9672, critical = 0.897. Kappa = 2.468 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Non-parametric

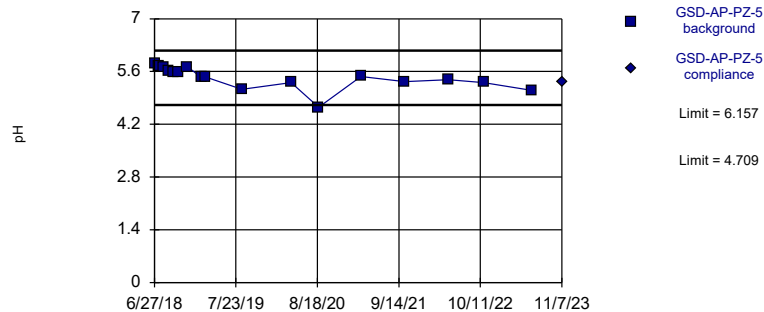


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 17 background values. Well-constituent pair annual alpha = 0.02359. Individual comparison alpha = 0.01183 (1 of 2).

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Parametric

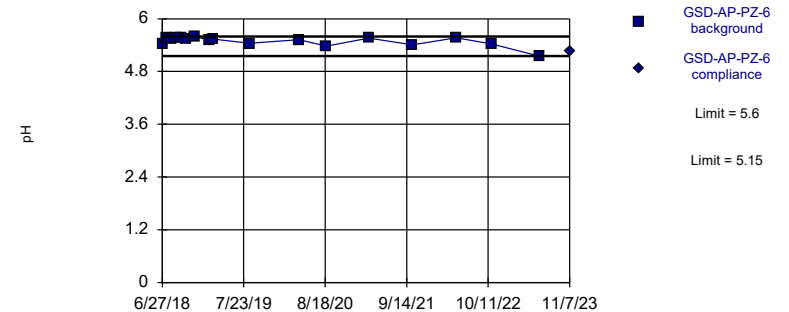


Background Data Summary: Mean=5.433, Std. Dev.=0.2895, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9147, critical = 0.892. Kappa = 2.5 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit
Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limits are highest and lowest of 17 background values. Well-constituent pair annual alpha = 0.02359. Individual comparison alpha = 0.01183 (1 of 2).

Constituent: pH Analysis Run 1/2/2024 5:45 PM View: Appendix III - Intrawell
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-1
12/6/2017	0.1	
2/6/2018	0.08 (J)	
4/23/2018	0.07 (J)	
6/26/2018	0.08 (J)	
8/7/2018	0.07 (J)	
10/22/2018	0.07 (J)	
12/4/2018	0.04 (J)	
2/5/2019	0.0525 (J)	
2/26/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/25/2020	<0.125	
3/16/2021	<0.125	
10/5/2021	0.0601 (J)	
5/10/2022	<0.125	
10/26/2022	<0.125	
6/5/2023	<0.125	
11/7/2023		0.0626 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-10	GSD-AP-MW-10
12/6/2017	0.09 (J)	
2/7/2018	0.08 (J)	
4/24/2018	0.08 (J)	
6/27/2018	0.09 (J)	
8/7/2018	0.04 (J)	
10/22/2018	0.1	
12/4/2018	0.07 (J)	
2/6/2019	0.107	
2/26/2019	0.0813 (J)	
8/22/2019	0.084 (J)	
4/15/2020	0.112	
8/26/2020	0.0997 (J)	
3/23/2021	0.101	
10/11/2021	0.201	
5/10/2022	0.0918 (J)	
10/26/2022	0.0929 (J)	
6/13/2023	0.0805 (J)	
11/7/2023		0.0804 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-11	GSD-AP-MW-11
12/6/2017	0.06 (J)	
2/7/2018	0.05 (J)	
4/24/2018	0.05 (J)	
6/27/2018	0.06 (J)	
8/8/2018	0.06 (J)	
10/23/2018	0.06 (J)	
12/4/2018	<0.125	
2/6/2019	0.0678 (J)	
2/27/2019	0.0985 (J)	
8/22/2019	<0.125	
4/14/2020	0.0878 (J)	
8/26/2020	<0.125	
3/23/2021	0.0819 (J)	
10/12/2021	0.134	
5/17/2022	<0.125	
10/26/2022	0.069 (J)	
6/13/2023	0.105 (J)	
11/7/2023		0.0709 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-12	GSD-AP-MW-12
12/6/2017	<0.125	
2/8/2018	<0.125	
4/24/2018	<0.125	
6/27/2018	<0.125	
8/8/2018	<0.125	
10/23/2018	0.04 (J)	
12/5/2018	<0.125	
2/6/2019	<0.125	
2/27/2019	<0.125	
8/22/2019	<0.125	
4/14/2020	<0.125	
8/26/2020	<0.125	
3/23/2021	<0.125	
10/5/2021	<0.125	
5/10/2022	<0.125	
10/26/2022	<0.125	
6/13/2023	0.0795 (J)	
11/7/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-14	GSD-AP-MW-14
6/27/2018	0.18	
7/18/2018	0.23	
8/6/2018	0.23	
9/5/2018	0.22	
9/24/2018	0.2	
10/24/2018	0.14	
12/5/2018	0.07 (J)	
2/5/2019	<0.125	
2/28/2019	<0.125	
8/20/2019	<0.125	
4/16/2020	<0.125	
8/25/2020	<0.125	
3/22/2021	<0.125	
10/12/2021	<0.125	
5/9/2022	<0.125	
10/26/2022	<0.125	
6/6/2023	<0.125	
11/8/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-16	GSD-AP-MW-16
10/24/2018	0.11	
11/14/2018	0.1	
11/28/2018	0.1	
12/5/2018	0.11	
12/18/2018	0.14	
1/3/2019	0.16	
1/24/2019	<0.125	
2/5/2019	<0.125	
2/28/2019	<0.125	
6/24/2019	<0.125 (D)	
8/19/2019	<0.125	
4/15/2020	<0.125	
8/25/2020	0.0863 (J)	
3/22/2021	<0.125	
10/6/2021	<0.125	
5/17/2022	<0.125	
10/25/2022	<0.125	
6/6/2023	<0.125	
10/31/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-17	GSD-AP-MW-17
10/24/2018	0.23	
11/14/2018	0.2	
11/28/2018	0.19	
12/5/2018	0.19	
12/18/2018	0.15	
1/3/2019	0.19	
1/24/2019	0.168	
2/5/2019	0.192	
2/28/2019	0.182	
8/19/2019	0.187	
4/16/2020	0.166	
8/24/2020	0.163	
3/22/2021	0.18	
10/6/2021	0.175	
5/9/2022	0.191	
10/25/2022	0.15	
6/6/2023	0.113 (J)	
10/31/2023		0.148

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2	GSD-AP-MW-2
12/6/2017	0.3	
2/6/2018	0.27	
4/23/2018	0.19	
6/27/2018	0.28	
8/7/2018	0.24	
10/22/2018	0.24	
12/4/2018	0.15	
2/5/2019	0.207	
2/26/2019	0.264	
8/20/2019	0.252	
4/15/2020	0.21	
8/25/2020	0.273	
3/24/2021	0.194	
10/11/2021	0.283	
5/16/2022	0.264	
10/25/2022	0.271	
6/6/2023	0.204	
11/1/2023		0.217

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-3	GSD-AP-MW-3
12/6/2017	0.13	
2/6/2018	0.08 (J)	
4/24/2018	0.05 (J)	
6/27/2018	0.07 (J)	
8/7/2018	0.09 (J)	
10/22/2018	0.11	
12/3/2018	0.08 (J)	
2/5/2019	0.064 (J)	
2/25/2019	<0.125	
6/18/2019	0.0664 (J)	
8/20/2019	0.0592 (J)	
4/13/2020	<0.125	
8/26/2020	<0.125	
3/22/2021	<0.125	
10/5/2021	<0.125	
5/10/2022	0.0714 (J)	
10/26/2022	<0.125	
6/5/2023	<0.125	
11/1/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4
12/7/2017	0.25	
2/6/2018	0.24	
4/24/2018	0.2	
6/26/2018	0.22	
8/6/2018	0.22	
10/22/2018	0.24	
12/3/2018	0.22	
2/5/2019	0.259	
2/26/2019	0.246	
8/20/2019	0.197	
4/15/2020	0.238	
8/26/2020	0.251	
3/24/2021	0.227	
10/5/2021	0.214	
5/16/2022	0.17	
10/26/2022	0.283	
6/6/2023	0.225	
11/7/2023		0.168

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-5
12/7/2017	0.06 (J)	
2/6/2018	0.05 (J)	
4/25/2018	0.05 (J)	
6/27/2018	0.06 (J)	
8/7/2018	0.06 (J)	
10/23/2018	0.07 (J)	
12/5/2018	0.04 (J)	
2/5/2019	0.0651 (J)	
2/27/2019	0.0578 (J)	
8/20/2019	0.0567 (J)	
4/13/2020	0.0688 (J)	
8/24/2020	0.0607 (J)	
3/16/2021	0.065 (J)	
10/5/2021	0.122	
5/9/2022	0.0682 (J)	
10/26/2022	0.0845 (J)	
6/7/2023	<0.125	
11/7/2023		0.0639 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-6
12/7/2017	0.06 (J)	
2/8/2018	0.04 (J)	
4/25/2018	0.04 (J)	
6/26/2018	0.05 (J)	
8/7/2018	0.05 (J)	
10/23/2018	0.06 (J)	
12/3/2018	<0.125	
2/5/2019	0.0581 (J)	
2/26/2019	0.0816 (J)	
8/20/2019	<0.125	
4/13/2020	<0.125	
8/26/2020	<0.125	
3/17/2021	<0.125	
10/5/2021	<0.125	
5/10/2022	<0.125	
10/26/2022	<0.125	
6/5/2023	<0.125	
11/7/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-7	GSD-AP-MW-7
12/7/2017	0.09 (J)	
2/8/2018	0.07 (J)	
4/25/2018	0.07 (J)	
6/26/2018	0.09 (J)	
8/8/2018	0.1	
10/23/2018	0.1	
12/4/2018	0.06 (J)	
2/6/2019	<0.125	
2/27/2019	0.0824 (J)	
8/21/2019	0.068 (J)	
4/15/2020	0.0775 (J)	
8/26/2020	<0.125	
3/23/2021	<0.125	
10/5/2021	0.0933 (J)	
5/10/2022	0.0627 (J)	
10/26/2022	0.128	
6/13/2023	<0.125	
11/7/2023		0.0652 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-8
12/7/2017	0.14	
2/8/2018	0.11	
4/25/2018	0.09 (J)	
6/26/2018	0.1	
8/8/2018	0.1	
10/23/2018	0.11	
12/4/2018	0.08 (J)	
2/6/2019	<0.125	
2/27/2019	0.108	
8/21/2019	0.0648 (J)	
4/14/2020	0.0845 (J)	
8/26/2020	0.0732 (J)	
3/23/2021	0.0802 (J)	
10/12/2021	0.123	
5/11/2022	0.0695 (J)	
10/26/2022	0.0911 (J)	
6/7/2023	0.128	
11/7/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-9
12/7/2017	0.12	
2/12/2018	0.11	
4/25/2018	0.12	
6/26/2018	0.13	
8/8/2018	0.12	
10/23/2018	0.13	
12/5/2018	0.04 (J)	
2/6/2019	<0.1	
2/27/2019	0.147	
8/21/2019	0.0984 (J)	
4/14/2020	0.133	
8/26/2020	0.13	
3/23/2021	0.132	
10/12/2021	0.147	
5/11/2022	0.108 (J)	
10/26/2022	0.119 (J)	
6/12/2023	0.13	
11/7/2023		0.105 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-1
6/27/2018	0.13	
7/18/2018	0.11	
8/7/2018	0.11	
9/5/2018	0.13	
9/24/2018	0.13	
10/22/2018	0.13	
12/3/2018	0.08 (J)	
2/5/2019	0.0934 (J)	
2/25/2019	<0.125	
8/20/2019	0.0889 (J)	
4/13/2020	0.103	
8/24/2020	0.114	
3/24/2021	0.0725 (J)	
10/5/2021	<0.125	
5/9/2022	0.0824 (J)	
10/26/2022	<0.125	
6/7/2023	<0.125	
11/7/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-5	GSD-AP-PZ-5
6/27/2018	0.05 (J)	
7/18/2018	0.04 (J)	
8/8/2018	0.04 (J)	
9/5/2018	0.04 (J)	
9/24/2018	0.04 (J)	
10/23/2018	0.04 (J)	
12/3/2018	<0.125	
2/7/2019	<0.125	
2/25/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/24/2020	<0.125	
3/16/2021	<0.125	
10/12/2021	<0.125	
5/10/2022	<0.125	
10/26/2022	<0.125	
6/13/2023	<0.125	
11/7/2023		<0.125

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-6	GSD-AP-PZ-6
6/27/2018	0.04 (J)	
7/18/2018	0.04 (J)	
8/8/2018	0.04 (J)	
9/5/2018	0.04 (J)	
9/24/2018	0.04 (J)	
10/23/2018	0.04 (J)	
12/3/2018	<0.125	
2/7/2019	<0.125	
2/25/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/24/2020	<0.125	
3/16/2021	<0.125	
10/12/2021	<0.125	
5/10/2022	<0.125	
10/26/2022	<0.125	
6/13/2023	<0.125	
11/7/2023		<0.125

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-1
12/6/2017	6.5	
2/6/2018	6.48	
4/23/2018	6.36	
6/26/2018	6.32	
8/7/2018	6.32	
10/22/2018	6.2	
12/4/2018	6.31	
2/5/2019	6.1	
2/26/2019	6.11	
8/21/2019	6.01	
4/15/2020	5.65	
8/25/2020	6	
3/16/2021	5.87	
10/5/2021	5.79	
5/10/2022	5.77	
10/26/2022	5.86	
6/5/2023	5.68	
11/7/2023		5.94

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-10	GSD-AP-MW-10
12/6/2017	6.83	
2/7/2018	6.82	
4/24/2018	6.74	
6/27/2018	6.67	
8/7/2018	6.72	
10/22/2018	6.73	
12/4/2018	6.77	
2/6/2019	6.67	
2/26/2019	6.77	
8/22/2019	6.37	
4/15/2020	6.85	
8/26/2020	6.73	
3/23/2021	6.87	
10/11/2021	6.72	
5/10/2022	6.39	
10/26/2022	6.84	
6/13/2023	6.55	
11/7/2023		6.94

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - Intrawell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-11	GSD-AP-MW-11
12/6/2017	6.81	
2/7/2018	6.74	
4/24/2018	6.62	
6/27/2018	6.69	
8/8/2018	6.67	
10/23/2018	6.73	
12/4/2018	6.67	
2/6/2019	6.58	
2/27/2019	6.56	
8/22/2019	6.26	
4/14/2020	6.63	
8/26/2020	6.38	
3/23/2021	6.58	
10/12/2021	6.66	
5/17/2022	6.44	
10/26/2022	6.2	
6/13/2023	6.4	
11/7/2023		6.36

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-12	GSD-AP-MW-12
12/6/2017	5.6	
2/8/2018	5.44	
4/24/2018	5.41	
6/27/2018	5.45	
8/8/2018	5.46	
10/23/2018	5.47	
12/5/2018	5.45	
2/6/2019	5.31	
2/27/2019	5.4	
8/22/2019	5.35	
4/14/2020	5.39	
8/26/2020	5.63	
3/23/2021	5.5	
10/5/2021	5.19	
5/10/2022	4.78	
10/26/2022	5.52	
6/13/2023	5.48	
11/7/2023		5.54

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-14	GSD-AP-MW-14
6/27/2018	3.95	
7/18/2018	4.02	
8/6/2018	4.07	
9/5/2018	4.07	
9/24/2018	4.07	
10/24/2018	4.1	
12/5/2018	4.1	
2/5/2019	4.02	
2/28/2019	3.94 (E)	
8/20/2019	4	
4/16/2020	3.93	
8/25/2020	4.03	
3/22/2021	3.25	
10/12/2021	4.04	
5/9/2022	3.6	
10/26/2022	4.07	
6/6/2023	3.82	
11/8/2023		4.03

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-16	GSD-AP-MW-16
10/24/2018	5.27	
11/14/2018	4.99	
11/28/2018	4.74	
12/5/2018	4.76	
12/18/2018	4.57	
1/3/2019	4.56	
1/24/2019	4.45	
2/5/2019	4.3	
2/28/2019	4.35	
8/19/2019	4.57	
4/15/2020	4.49	
8/25/2020	4.2	
3/22/2021	3.45	
10/6/2021	4.16	
5/17/2022	4.34	
10/25/2022	4.64	
6/6/2023	3.65	
10/31/2023		4.5

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-17	GSD-AP-MW-17
10/24/2018	7.92	
11/14/2018	8.23	
11/28/2018	8.95	
12/5/2018	8.77	
12/18/2018	8.99	
1/3/2019	9.35	
1/24/2019	9.42	
2/5/2019	9.23	
2/28/2019	9.48	
8/19/2019	7.93	
4/16/2020	8.1	
8/24/2020	8.17	
3/22/2021	7.85	
10/6/2021	7.92	
5/9/2022	7.29	
10/25/2022	7.97	
6/6/2023	7.8	
10/31/2023		7.98

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2	GSD-AP-MW-2
12/6/2017	6.61	
2/6/2018	6.66	
4/23/2018	6.54	
6/27/2018	6.63	
8/7/2018	6.57	
10/22/2018	6.55	
12/4/2018	6.52	
2/5/2019	6.47	
2/26/2019	6.54	
8/20/2019	6.3	
4/15/2020	6.45	
8/25/2020	6.65	
3/24/2021	6.49	
10/11/2021	6.59	
5/16/2022	6.16	
10/25/2022	6.64	
6/6/2023	6.63	
11/1/2023		6.49

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-3	GSD-AP-MW-3
12/6/2017	6.54	
2/6/2018	6.39	
4/24/2018	6.02	
6/27/2018	6.07	
8/7/2018	6.28	
10/22/2018	6.3	
12/3/2018	6.38	
2/5/2019	5.83	
2/25/2019	5.93	
8/20/2019	5.73	
4/13/2020	5.83	
8/26/2020	5.87	
3/22/2021	5.51	
10/5/2021	5.76	
5/10/2022	5.95	
10/26/2022	5.97	
6/5/2023	5.66	
11/1/2023		5.98

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4
12/7/2017	6.73	
2/6/2018	6.76	
4/24/2018	6.66	
6/26/2018	6.61	
8/6/2018	6.68	
10/22/2018	6.63	
12/3/2018	6.67	
2/5/2019	6.63	
2/26/2019	6.64	
8/20/2019	6.33	
4/15/2020	6.77	
8/26/2020	6.68	
3/24/2021	6.86	
10/5/2021	6.58	
5/16/2022	6.61	
10/26/2022	6.67	
6/6/2023	6.74	
11/7/2023		6.72

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-5
12/7/2017	6.32	
2/6/2018	6.27	
4/25/2018	6.14	
6/27/2018	6.15	
8/7/2018	6.18	
10/23/2018	6.15	
12/5/2018	6.15	
2/5/2019	6.08	
2/27/2019	6.11	
8/20/2019	6.11	
4/13/2020	6.18	
8/24/2020	6.11	
3/16/2021	6.22	
10/5/2021	6.24	
5/9/2022	5.43	
10/26/2022	6.44	
6/7/2023	6.25	
11/7/2023		6.6

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-6
12/7/2017	6.38	
2/8/2018	6.29	
4/25/2018	6.15	
6/26/2018	6.09	
8/7/2018	6.16	
10/23/2018	6.1	
12/3/2018	6.09	
2/5/2019	6.04	
2/26/2019	6.17	
8/20/2019	5.4	
4/13/2020	5.82	
8/26/2020	5.96	
3/17/2021	5.92	
10/5/2021	5.74	
5/10/2022	5.51	
10/26/2022	5.98	
6/5/2023	5.68	
11/7/2023		6.22

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-7	GSD-AP-MW-7
12/7/2017	6.62	
2/8/2018	6.39	
4/25/2018	6.17	
6/26/2018	6.38	
8/8/2018	6.56	
10/23/2018	6.54	
12/4/2018	6.33	
2/6/2019	6.13	
2/27/2019	6.12	
8/21/2019	5.97	
4/15/2020	6.16	
8/26/2020	6.11	
3/23/2021	6.04	
10/5/2021	6.06	
5/10/2022	5.08	
10/26/2022	6.44	
6/13/2023	5.98	
11/7/2023		6.47

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-8	GSD-AP-MW-8
12/7/2017	6.81	
2/8/2018	6.73	
4/25/2018	6.61	
6/26/2018	6.59	
8/8/2018	6.6	
10/23/2018	6.64	
12/4/2018	6.68	
2/6/2019	6.62	
2/27/2019	6.56	
8/21/2019	6.16	
4/14/2020	6.49	
8/26/2020	6.29	
3/23/2021	6.47	
10/12/2021	6.61	
5/11/2022	6.25	
10/26/2022	6.68	
6/7/2023	6.37	
11/7/2023		6.75

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-9
12/7/2017	6.93	
2/8/2018	6.96	
2/12/2018	6.88	
4/25/2018	6.89	
6/26/2018	6.85	
8/8/2018	6.94	
10/23/2018	6.93	
12/5/2018	6.94	
2/6/2019	6.73	
2/27/2019	6.85	
8/21/2019	6.61	
4/14/2020	7.02	
8/26/2020	6.75	
3/23/2021	6.85	
10/12/2021	6.9	
5/11/2022	6.7	
10/26/2022	7.07	
6/12/2023	6.81	
11/7/2023		6.98

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-1
6/27/2018	6.79	
7/18/2018	6.8	
8/7/2018	6.73	
9/5/2018	6.75	
9/24/2018	6.83	
10/22/2018	6.76	
12/3/2018	6.6	
2/5/2019	6.66	
2/25/2019	6.6	
8/20/2019	6.3	
4/13/2020	6.66	
8/24/2020	6.64	
3/24/2021	5.85	
10/5/2021	6.46	
5/9/2022	6.03	
10/26/2022	6.66	
6/7/2023	5.9	
11/7/2023		6.83

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-5	GSD-AP-PZ-5
6/27/2018	5.81	
7/18/2018	5.74	
8/8/2018	5.7	
9/5/2018	5.61	
9/24/2018	5.59	
10/23/2018	5.6	
12/3/2018	5.73	
2/7/2019	5.44	
2/25/2019	5.46	
8/21/2019	5.13	
4/15/2020	5.31	
8/24/2020	4.65	
3/16/2021	5.47	
10/12/2021	5.33	
5/10/2022	5.38	
10/26/2022	5.31	
6/13/2023	5.1	
11/7/2023		5.32

Prediction Limit

Constituent: pH (pH) Analysis Run 1/2/2024 5:47 PM View: Appendix III - IntraWell
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-6	GSD-AP-PZ-6
6/27/2018	5.44	
7/18/2018	5.58	
8/8/2018	5.55	
9/5/2018	5.56	
9/24/2018	5.57	
10/23/2018	5.55	
12/3/2018	5.6	
2/7/2019	5.51	
2/25/2019	5.54	
8/21/2019	5.44	
4/15/2020	5.52	
8/24/2020	5.38	
3/16/2021	5.56	
10/12/2021	5.41	
5/10/2022	5.57	
10/26/2022	5.43	
6/13/2023	5.15	
11/7/2023		5.27

FIGURE G.

Interwell Prediction Limits - Significant Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	0.1015	n/a	11/7/2023	0.934	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-11	0.1015	n/a	11/7/2023	0.238	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-12	0.1015	n/a	11/7/2023	0.183	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-2	0.1015	n/a	11/1/2023	0.453	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-3	0.1015	n/a	11/1/2023	0.792	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-4	0.1015	n/a	11/7/2023	0.466	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-5	0.1015	n/a	11/7/2023	0.227	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Calcium (mg/L)	GSD-AP-MW-1	32.13	n/a	11/7/2023	192	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-10	32.13	n/a	11/7/2023	38.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-11	32.13	n/a	11/7/2023	113	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-12	32.13	n/a	11/7/2023	85.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-2	32.13	n/a	11/1/2023	91	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-3	32.13	n/a	11/1/2023	63.1	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-4	32.13	n/a	11/7/2023	48.6	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-5	32.13	n/a	11/7/2023	44.7	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-8	32.13	n/a	11/7/2023	58	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-9	32.13	n/a	11/7/2023	35.4	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-1	4.019	n/a	11/7/2023	5.89	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-10	4.019	n/a	11/7/2023	5.68	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-11	4.019	n/a	11/7/2023	5.08	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-12	4.019	n/a	11/7/2023	4.92	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-3	4.019	n/a	11/1/2023	4.21	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-4	4.019	n/a	11/7/2023	7.87	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-5	4.019	n/a	11/7/2023	6.07	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-6	4.019	n/a	11/7/2023	9.61	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-7	4.019	n/a	11/7/2023	6.52	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-8	4.019	n/a	11/7/2023	5.39	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-9	4.019	n/a	11/7/2023	7.13	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-2	4.019	n/a	11/7/2023	5.27	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	GSD-AP-MW-1	207	n/a	11/7/2023	428	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-11	207	n/a	11/7/2023	230	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-12	207	n/a	11/7/2023	297	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	276.2	n/a	11/7/2023	732	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	276.2	n/a	11/7/2023	508	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	276.2	n/a	11/7/2023	496	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	276.2	n/a	11/1/2023	309	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	276.2	n/a	11/1/2023	313	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	276.2	n/a	11/7/2023	318	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2

Interwell Prediction Limits - All Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	0.1015	n/a	11/7/2023	0.934	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-10	0.1015	n/a	11/7/2023	0.089J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-11	0.1015	n/a	11/7/2023	0.238	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-12	0.1015	n/a	11/7/2023	0.183	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-2	0.1015	n/a	11/1/2023	0.453	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-3	0.1015	n/a	11/1/2023	0.792	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-4	0.1015	n/a	11/7/2023	0.466	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-5	0.1015	n/a	11/7/2023	0.227	Yes	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-6	0.1015	n/a	11/7/2023	0.0957J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-7	0.1015	n/a	11/7/2023	0.078J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-8	0.1015	n/a	11/7/2023	0.048J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-9	0.1015	n/a	11/7/2023	0.0693J	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-1	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-2	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-5	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-6	0.1015	n/a	11/7/2023	0.1015ND	No	55	n/a	n/a	58.18	n/a	n/a	0.0006133	NP Inter (NDs) 1 of 2
Calcium (mg/L)	GSD-AP-MW-1	32.13	n/a	11/7/2023	192	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-10	32.13	n/a	11/7/2023	38.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-11	32.13	n/a	11/7/2023	113	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-12	32.13	n/a	11/7/2023	85.2	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-2	32.13	n/a	11/1/2023	91	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-3	32.13	n/a	11/1/2023	63.1	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-4	32.13	n/a	11/7/2023	48.6	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-5	32.13	n/a	11/7/2023	44.7	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-6	32.13	n/a	11/7/2023	11.8	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-7	32.13	n/a	11/7/2023	17	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-8	32.13	n/a	11/7/2023	58	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-9	32.13	n/a	11/7/2023	35.4	Yes	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-1	32.13	n/a	11/7/2023	30.7	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-2	32.13	n/a	11/7/2023	24.9	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-5	32.13	n/a	11/7/2023	3.02	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-PZ-6	32.13	n/a	11/7/2023	3.32	No	55	18.18	6.511	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-1	4.019	n/a	11/7/2023	5.89	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-10	4.019	n/a	11/7/2023	5.68	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-11	4.019	n/a	11/7/2023	5.08	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-12	4.019	n/a	11/7/2023	4.92	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-2	4.019	n/a	11/1/2023	2.21	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-3	4.019	n/a	11/1/2023	4.21	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-4	4.019	n/a	11/7/2023	7.87	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-5	4.019	n/a	11/7/2023	6.07	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-6	4.019	n/a	11/7/2023	9.61	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-7	4.019	n/a	11/7/2023	6.52	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-8	4.019	n/a	11/7/2023	5.39	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-9	4.019	n/a	11/7/2023	7.13	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-1	4.019	n/a	11/7/2023	3.34	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-2	4.019	n/a	11/7/2023	5.27	Yes	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-5	4.019	n/a	11/7/2023	3.99	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-PZ-6	4.019	n/a	11/7/2023	3.54	No	55	3.202	0.3814	0	None	No	0.0004702	Param Inter 1 of 2
Sulfate (mg/L)	GSD-AP-MW-1	207	n/a	11/7/2023	428	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-10	207	n/a	11/7/2023	1.75J	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-11	207	n/a	11/7/2023	230	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-12	207	n/a	11/7/2023	297	Yes	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-2	207	n/a	11/1/2023	89.5	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-3	207	n/a	11/1/2023	158	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-4	207	n/a	11/7/2023	91.6	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2

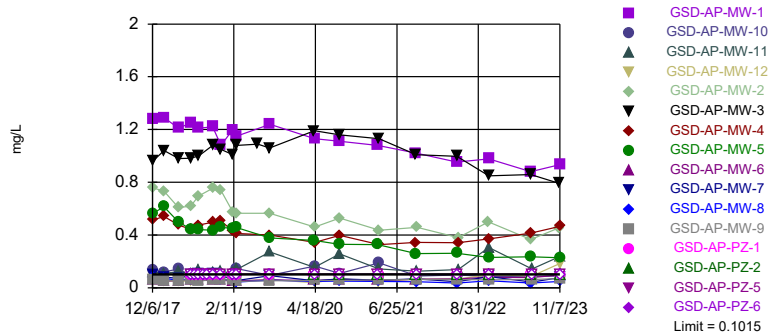
Interwell Prediction Limits - All Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 1:55 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Sulfate (mg/L)	GSD-AP-MW-5	207	n/a	11/7/2023	29.3	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-6	207	n/a	11/7/2023	12.5	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-7	207	n/a	11/7/2023	10.5	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-8	207	n/a	11/7/2023	8.1	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-9	207	n/a	11/7/2023	17.4	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-1	207	n/a	11/7/2023	3.69	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-2	207	n/a	11/7/2023	8.98	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-5	207	n/a	11/7/2023	1ND	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-6	207	n/a	11/7/2023	1.34J	No	55	n/a	n/a	0	n/a	n/a	0.0006133	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	276.2	n/a	11/7/2023	732	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-10	276.2	n/a	11/7/2023	195	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	276.2	n/a	11/7/2023	508	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	276.2	n/a	11/7/2023	496	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	276.2	n/a	11/1/2023	309	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	276.2	n/a	11/1/2023	313	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	276.2	n/a	11/7/2023	318	Yes	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-5	276.2	n/a	11/7/2023	191	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-6	276.2	n/a	11/7/2023	82.7	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-7	276.2	n/a	11/7/2023	106	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-8	276.2	n/a	11/7/2023	208	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-9	276.2	n/a	11/7/2023	171	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-1	276.2	n/a	11/7/2023	122	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-2	276.2	n/a	11/7/2023	109	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-5	276.2	n/a	11/7/2023	43.3	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-PZ-6	276.2	n/a	11/7/2023	44	No	55	165.6	51.6	0	None	No	0.0004702	Param Inter 1 of 2

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5

Prediction Limit
Interwell Non-parametric

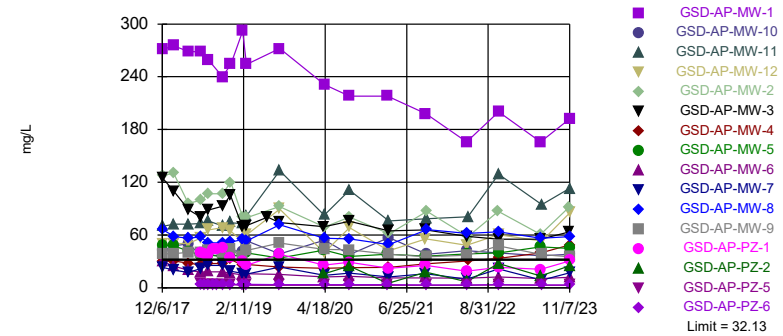


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 55 background values. 58.18% NDs. Annual per-constituent alpha = 0.01944. Individual comparison alpha = 0.0006133 (1 of 2). Comparing 16 points to limit.

Constituent: Boron Analysis Run 1/23/2024 1:53 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4...

Prediction Limit
Interwell Parametric

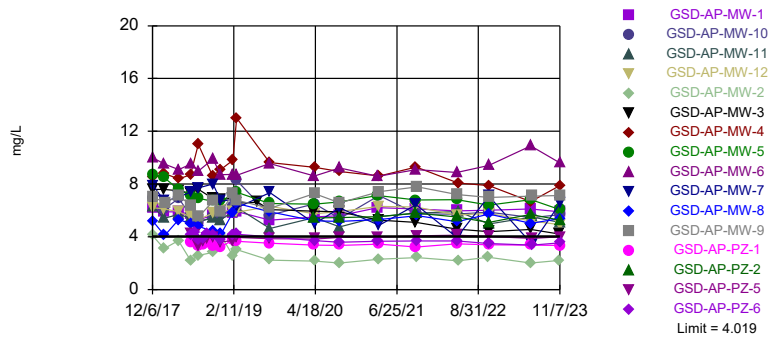


Background Data Summary: Mean=18.18, Std. Dev.=6.511, n=55. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9484, critical = 0.94. Kappa = 2.143 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Calcium Analysis Run 1/23/2024 1:53 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5...

Prediction Limit
Interwell Parametric

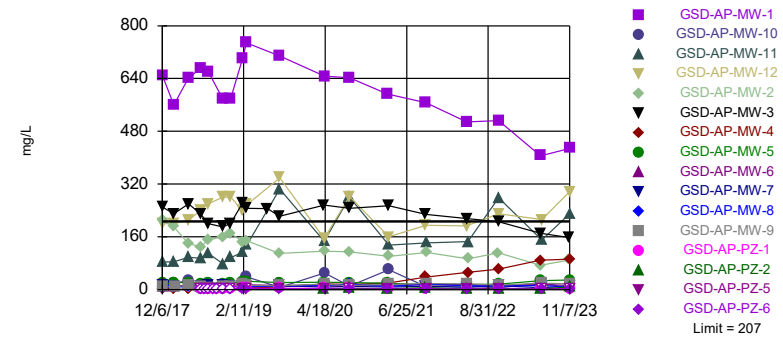


Background Data Summary: Mean=3.202, Std. Dev.=0.3814, n=55. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9779, critical = 0.94. Kappa = 2.143 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Chloride Analysis Run 1/23/2024 1:53 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-12

Prediction Limit
Interwell Non-parametric

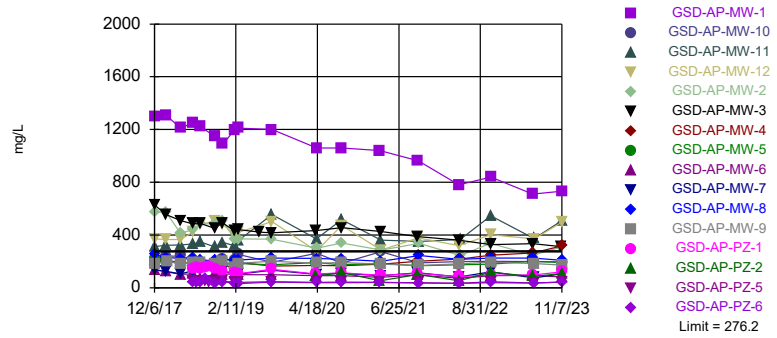


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 55 background values. Annual per-constituent alpha = 0.01944. Individual comparison alpha = 0.0006133 (1 of 2). Comparing 16 points to limit.

Constituent: Sulfate Analysis Run 1/23/2024 1:53 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4

Prediction Limit Interwell Parametric



Background Data Summary: Mean=165.6, Std. Dev.=51.6, n=55. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9737, critical = 0.94. Kappa = 2.143 (c=7, w=16, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0004702. Comparing 16 points to limit.

Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:53 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell

Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-11	GSD-AP-MW-8	GSD-AP-MW-5	GSD-AP-MW-6
12/6/2017	1.28	0.0605 (J)	0.758	0.135	0.959	0.12			
12/7/2017							0.0828 (J)	0.566	0.063 (J)
2/6/2018	1.29		0.733		1.04			0.614	
2/7/2018				0.12		0.109			
2/8/2018		0.0527 (J)					0.0691 (J)		0.0508 (J)
4/23/2018	1.21		0.608						
4/24/2018		0.0476 (J)		0.144	0.979	0.124			
4/25/2018							0.0571 (J)	0.498	0.0548 (J)
6/26/2018	1.25						0.0634 (J)		0.0571 (J)
6/27/2018		0.0539 (J)	0.619	0.0903 (J)	0.982	0.111		0.446	
7/18/2018									
8/6/2018									
8/7/2018	1.21		0.697	0.106	1			0.442	0.0571 (J)
8/8/2018		0.0637 (J)				0.135	0.0659 (J)		
9/5/2018									
9/24/2018									
10/22/2018	1.22		0.754	0.107	1.08				
10/23/2018		0.0696 (J)				0.114	0.0666 (J)	0.436	0.0636 (J)
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018					1.05				0.0568 (J)
12/4/2018	1.08		0.737	0.103		0.124	0.0617 (J)		
12/5/2018		0.0652 (J)						0.456	
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	1.2		0.575		1.01			0.453	0.0509 (J)
2/6/2019		0.0511 (J)		0.105		0.112	0.0586 (J)		
2/7/2019									
2/25/2019					1.08				
2/26/2019	1.15		0.566	0.146					0.0527 (J)
2/27/2019		0.0494 (J)				0.14	0.0428 (J)	0.457	
2/28/2019									
6/18/2019					1.09				
6/24/2019									
8/19/2019									
8/20/2019			0.566		1.06			0.378	0.0608 (J)
8/21/2019	1.24						0.0569 (J)		
8/22/2019		0.0625 (J)		0.0951 (J)		0.272			
4/13/2020					1.19			0.359	0.0561 (J)
4/14/2020		0.0377 (J)				0.154	0.0474 (J)		
4/15/2020	1.13		0.461	0.164					
4/16/2020									
8/24/2020								0.329	
8/25/2020	1.11		0.528						
8/26/2020		0.0698 (J)		0.108	1.16	0.257	0.0501 (J)		0.0633 (J)
3/16/2021	1.08							0.328	
3/17/2021									0.0563 (J)
3/22/2021					1.13				
3/23/2021		0.0452 (J)		0.188		0.142	0.0476 (J)		
3/24/2021			0.437						

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	0.0614 (J)	0.102	0.515						
2/6/2018			0.541						
2/7/2018									
2/8/2018	0.0531 (J)	0.0787 (J)							
4/23/2018									
4/24/2018			0.475						
4/25/2018	0.0551 (J)	0.0734 (J)							
6/26/2018	0.0568 (J)	0.094 (J)	0.444						
6/27/2018				<0.1015	<0.1015	<0.1015	<0.1015		
7/18/2018				<0.1015	<0.1015	<0.1015	<0.1015		
8/6/2018			0.474			<0.1015			
8/7/2018				<0.1015					
8/8/2018	0.0524 (J)	0.103			<0.1015		<0.1015		
9/5/2018				<0.1015	<0.1015	<0.1015	<0.1015		
9/24/2018				<0.1015	<0.1015	<0.1015	<0.1015		
10/22/2018			0.496	<0.1015					
10/23/2018	0.0576 (J)	0.106			<0.1015		<0.1015		
10/24/2018						<0.1015		0.0357 (J)	0.0261 (J)
11/14/2018								0.0348 (J)	0.0209 (J)
11/28/2018								0.0313 (J)	0.0239 (J)
12/3/2018			0.51	<0.1015	<0.1015		<0.1015		
12/4/2018		0.085 (J)							
12/5/2018	0.0561 (J)					<0.1015		0.0363 (J)	<0.1015
12/18/2018								0.033 (J)	<0.1015
1/3/2019								0.036 (J)	0.0209 (J)
1/24/2019								0.0307 (J)	0.0271 (J)
2/5/2019			0.43	<0.1015		<0.1015		0.0306 (J)	0.0245 (J)
2/6/2019	0.0627 (J)	0.0733 (J)							
2/7/2019					<0.1015		<0.1015		
2/25/2019				<0.1015	<0.1015		<0.1015		
2/26/2019			0.411						
2/27/2019	0.0474 (J)	0.0548 (J)							
2/28/2019						<0.1015		0.0206 (J)	<0.1015
6/18/2019									
6/24/2019									<0.1015
8/19/2019								0.0341 (J)	<0.1015
8/20/2019			0.399	<0.1015		<0.1015			
8/21/2019	0.0524 (J)	0.091 (J)			<0.1015		<0.1015		
8/22/2019									
4/13/2020				<0.1015					
4/14/2020	0.0562 (J)								
4/15/2020		0.0534 (J)	0.344		<0.1015		<0.1015		<0.1015
4/16/2020						<0.1015		0.0331 (J)	
8/24/2020				<0.1015	<0.1015		<0.1015	0.0303 (J)	
8/25/2020						<0.1015			<0.1015
8/26/2020	0.0565 (J)	0.0665 (J)	0.398						
3/16/2021					<0.1015		<0.1015		
3/17/2021									
3/22/2021						<0.1015		0.0333 (J)	<0.1015
3/23/2021	0.0609 (J)	0.0587 (J)							
3/24/2021			0.326	<0.1015					

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
10/5/2021		0.0673 (J)	0.344	<0.1015					
10/6/2021								0.0305 (J)	<0.1015
10/11/2021									
10/12/2021	0.0632 (J)				<0.1015	<0.1015	<0.1015		
5/9/2022				<0.1015		<0.1015		0.0347 (J)	
5/10/2022		0.0465 (J)			<0.1015		<0.1015		
5/11/2022	0.0636 (J)								
5/16/2022			0.342						
5/17/2022									<0.1015
10/25/2022								0.0308 (J)	<0.1015
10/26/2022	0.0595 (J)	0.0839 (J)	0.371	<0.1015	<0.1015	<0.1015	<0.1015		
6/5/2023									
6/6/2023			0.415			<0.1015		<0.1015	<0.1015
6/7/2023				<0.1015					
6/12/2023	0.062 (J)								
6/13/2023		0.0428 (J)			<0.1015		<0.1015		
10/31/2023								0.0316 (J)	<0.1015
11/1/2023									
11/7/2023	0.0693 (J)	0.078 (J)	0.466	<0.1015	<0.1015		<0.1015		
11/8/2023						<0.1015			

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

12/6/2017
12/7/2017
2/6/2018
2/7/2018
2/8/2018
4/23/2018
4/24/2018
4/25/2018
6/26/2018
6/27/2018
7/18/2018
8/6/2018
8/7/2018
8/8/2018
9/5/2018
9/24/2018
10/22/2018
10/23/2018
10/24/2018
11/14/2018
11/28/2018
12/3/2018
12/4/2018
12/5/2018
12/18/2018
1/3/2019
1/24/2019
2/5/2019
2/6/2019
2/7/2019
2/25/2019
2/26/2019
2/27/2019
2/28/2019
6/18/2019
6/24/2019
8/19/2019
8/20/2019
8/21/2019
8/22/2019
4/13/2020
4/14/2020
4/15/2020
4/16/2020
8/24/2020
8/25/2020
8/26/2020
3/16/2021
3/17/2021
3/22/2021
3/23/2021
3/24/2021

<0.1015

<0.1015

<0.1015

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-PZ-2
10/5/2021	<0.1015
10/6/2021	
10/11/2021	
10/12/2021	
5/9/2022	<0.1015
5/10/2022	
5/11/2022	
5/16/2022	
5/17/2022	
10/25/2022	
10/26/2022	<0.1015
6/5/2023	<0.1015
6/6/2023	
6/7/2023	
6/12/2023	
6/13/2023	
10/31/2023	
11/1/2023	
11/7/2023	<0.1015
11/8/2023	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell

Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-11	GSD-AP-MW-8	GSD-AP-MW-5	GSD-AP-MW-6
12/6/2017	271	49	128	42	125	70			
12/7/2017							66.1	48.2	29.8
2/6/2018	275		130		110			47.8	
2/7/2018				47.6		72.4			
2/8/2018		50					58		24.3
4/23/2018	269		95.9						
4/24/2018		50.5		50.1	88.8	72.3			
4/25/2018							56.3	41.8	19.8
6/26/2018	268						57.7		17.8
6/27/2018		56.3	99.4	37.1	80.8	73.1		36.9	
7/18/2018									
8/6/2018									
8/7/2018	259		107	37.4	88.5			37.6	18.3
8/8/2018		65.7				76	51.2		
9/5/2018									
9/24/2018									
10/22/2018	240		107	36.3	92.7				
10/23/2018		68.3				70.2	50.9	35.3	18.1
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018					105				16.6
12/4/2018	254		120	42.1		74	51.9		
12/5/2018		64.3						36.3	
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	292		80.6		68.6			36.6	14.5
2/6/2019		52.2		41.3		73.1	55		
2/7/2019									
2/25/2019					70.6				
2/26/2019	254		79.6	53.3					16
2/27/2019		60.2				82.2	53.4	39.6	
2/28/2019									
6/18/2019					80.5				
6/24/2019									
8/19/2019									
8/20/2019			92.3		74.1			33.7	15.1
8/21/2019	272						71.5		
8/22/2019		89.4		38.5		133			
4/13/2020					69.5			43	12.5
4/14/2020		40				82.4	56.2		
4/15/2020	231		69.2	54.1					
4/16/2020									
8/24/2020								35.5	
8/25/2020	218		80.5						
8/26/2020		68.4		37.8	75.7	111	55.5		12.9
3/16/2021	218							38.1	
3/17/2021									11.3
3/22/2021					64.9				
3/23/2021		42		57		75.9	48.9		
3/24/2021			61.5						

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	38.7	23.4	30.1						
2/6/2018			30.6						
2/7/2018									
2/8/2018	38.8	20.1							
4/23/2018									
4/24/2018			27.8						
4/25/2018	40.3	17.4							
6/26/2018	39.9	21.8	26.2						
6/27/2018				39.4	4.56	16.6	3.89		
7/18/2018				38.4	3.92	15.3	3.8		
8/6/2018			27.5			13.8			
8/7/2018				36.7					
8/8/2018	42.3	25.4			3.74		3.89		
9/5/2018				43.6	3.38	12.1	3.78		
9/24/2018				44.5	3.25	11.8	3.73		
10/22/2018			27.7	45					
10/23/2018	39.8	25.6			3.37		3.79		
10/24/2018						10.2		28.3	18
11/14/2018								27.5	14.9
11/28/2018								20.7	14.8
12/3/2018			32.3	33.7	3.67		3.79		
12/4/2018		19							
12/5/2018	43.8					9.14		25.3	14.8
12/18/2018								20.9	16.4
1/3/2019								18.5	19.7
1/24/2019								17	19.6
2/5/2019			25.5	30.1		15.1		17.1	20.8
2/6/2019	34.9	16.4							
2/7/2019					2.89		3.75		
2/25/2019				25.6	2.95		3.81		
2/26/2019			26.4						
2/27/2019	42.5	15.6							
2/28/2019						21.4		18.6	21.5
6/18/2019									
6/24/2019									18.4
8/19/2019								25.3	12.8
8/20/2019			23.5	38.3		14.4			
8/21/2019	50.9	23.5			3.04		3.71		
8/22/2019									
4/13/2020				25.9					
4/14/2020	43.6								
4/15/2020		14	22		2.93		3.56		13.1
4/16/2020						20.1		30.7	
8/24/2020				29	2.94		3.45	30.8	
8/25/2020						13.1			12.2
8/26/2020	43.2	16.7	22.8						
3/16/2021					2.9		3.44		
3/17/2021									
3/22/2021						12.2		31	18.4
3/23/2021	38.1	12.5							
3/24/2021			23.1	22.2					

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
10/5/2021		15.9	27.4	25.4					
10/6/2021								31	13.4
10/11/2021									
10/12/2021	35.4				2.94	11.8	3.29		
5/9/2022				18.9		14.5		28.4	
5/10/2022		9.95			2.87		3.24		
5/11/2022	36.9								
5/16/2022			30.7						
5/17/2022									19.7
10/25/2022								30.700001	8.46
10/26/2022	47.700001	21.4	33.599998	23.1	3.09	8.97	3.42		
6/5/2023									
6/6/2023			39.799999			14.9		23	17.200001
6/7/2023				20.9					
6/12/2023	37.799999								
6/13/2023		8.71			2.82		3.14		
10/31/2023								28.200001	8.31
11/1/2023									
11/7/2023	35.400002	17	48.599998	30.700001	3.02		3.32		
11/8/2023						9.1			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

12/6/2017	
12/7/2017	
2/6/2018	
2/7/2018	
2/8/2018	
4/23/2018	
4/24/2018	
4/25/2018	
6/26/2018	
6/27/2018	
7/18/2018	
8/6/2018	
8/7/2018	
8/8/2018	
9/5/2018	
9/24/2018	
10/22/2018	
10/23/2018	
10/24/2018	
11/14/2018	
11/28/2018	
12/3/2018	
12/4/2018	
12/5/2018	
12/18/2018	
1/3/2019	
1/24/2019	
2/5/2019	
2/6/2019	
2/7/2019	
2/25/2019	
2/26/2019	
2/27/2019	
2/28/2019	
6/18/2019	
6/24/2019	
8/19/2019	
8/20/2019	
8/21/2019	
8/22/2019	
4/13/2020	16.1
4/14/2020	
4/15/2020	
4/16/2020	
8/24/2020	24.8
8/25/2020	
8/26/2020	
3/16/2021	
3/17/2021	5.21
3/22/2021	
3/23/2021	
3/24/2021	

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-PZ-2
10/5/2021	17.6
10/6/2021	
10/11/2021	
10/12/2021	
5/9/2022	7.02
5/10/2022	
5/11/2022	
5/16/2022	
5/17/2022	
10/25/2022	
10/26/2022	27.5
6/5/2023	13.4
6/6/2023	
6/7/2023	
6/12/2023	
6/13/2023	
10/31/2023	
11/1/2023	
11/7/2023	24.9
11/8/2023	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell

Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-11	GSD-AP-MW-8	GSD-AP-MW-5	GSD-AP-MW-6
12/6/2017	6.2	6.2	4.1	6.9	7.6	6.3			
12/7/2017							5.2	8.7	10
2/6/2018	5.9		3.1		7.6			8.5	
2/7/2018				6.1		5.4			
2/8/2018		6.1					4.1		9.5
2/12/2018									
4/23/2018	5.9		3.7						
4/24/2018		5.9		6.9	7.5	5.7			
4/25/2018							5.3	7.6	9.1
6/26/2018	5.7						5		9.5
6/27/2018		5.5	2.2	5.6	7.3	5.4		7.1	
7/18/2018									
8/6/2018									
8/7/2018	5.3		2.6	5.1	7.6			6.9	9
8/8/2018		5.3				5.2	4.8		
9/5/2018									
9/24/2018									
10/22/2018	5.6		2.8	5.5	6.9				
10/23/2018		5.8				5.4	4.4	6.7	9.9
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018					6.8				8.7
12/4/2018	5.8		4.1	5.6		5.3	4.2		
12/5/2018		6						6.7	
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	5.8		2.56		6.95			7.24	8.73
2/6/2019		5.95		6.24		5.89	5.84		
2/7/2019									
2/25/2019					6.55				
2/26/2019	5.92		3.03	8.28					8.66
2/27/2019		5.88				6.2	6.52	7.38	
2/28/2019									
6/18/2019					6.62				
6/24/2019									
8/19/2019									
8/20/2019			2.24		6.07			6.53	9.55
8/21/2019	5.26						5.89		
8/22/2019		6.31		5.66		4.64			
4/13/2020					5.95			6.48	8.6
4/14/2020		5.74				5.46	5.21		
4/15/2020	5.5		2.16	6.49					
4/16/2020									
8/24/2020								6.64	
8/25/2020	5.59		2						
8/26/2020		5.91		5.39	5.89	4.74	5.16		9.21
3/16/2021	6.2							7.14	
3/17/2021									8.59
3/22/2021					5.26				
3/23/2021		6.3		7.14		5.54	5.3		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	7	7.9	8.5						
2/6/2018			8.8						
2/7/2018									
2/8/2018		6.7							
2/12/2018	6.6								
4/23/2018									
4/24/2018			8.4						
4/25/2018	7.1	7							
6/26/2018	6.4	7.4	8.7						
6/27/2018				3.6	4.2	3.1	4.1		
7/18/2018				3.8	4.1	3.4	4.3		
8/6/2018			11			2.8			
8/7/2018				3.3					
8/8/2018	5.5	7.7			3.3		3.8		
9/5/2018				3.4	3.7	2.8	3.9		
9/24/2018				3.8	3.9	3.1	4.2		
10/22/2018			8.6	3.3					
10/23/2018	6.7	8			4		4.1		
10/24/2018						2.8		4	3.3
11/14/2018								3.6	3.6
11/28/2018								3.5	3.5
12/3/2018			9.1	3.2	3.6		3.8		
12/4/2018		6.7							
12/5/2018	5.9					2.2		3.2	3.3
12/18/2018								3.4	3.6
1/3/2019								3.2	3.4
1/24/2019								3.15	3.91
2/5/2019			9.81	3.78		3.12		2.98	3.94
2/6/2019	7.26	6.84							
2/7/2019					3.72		4.15		
2/25/2019				3.66	3.95		4.2		
2/26/2019			13						
2/27/2019	6.77	6.21							
2/28/2019						3.45		3.05	4.15
6/18/2019									
6/24/2019									3.36 (D)
8/19/2019								2.8	3.42
8/20/2019			9.62	3.52		3.27			
8/21/2019	6.16	7.35			3.85		4		
8/22/2019									
4/13/2020				3.36					
4/14/2020	7.27								
4/15/2020		4.99	9.27		3.83		3.71		3.39
4/16/2020						3.74		2.93	
8/24/2020				3.35	3.96		3.59	2.82	
8/25/2020						3.03			2.94
8/26/2020	6.57	6.19	8.96						
3/16/2021					3.98		3.66		
3/17/2021									
3/22/2021						3.15		2.94	3.61
3/23/2021	7.42	4.87							

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
3/24/2021			8.61	3.45					
10/5/2021		6.43	9.3	3.23					
10/6/2021								2.98	3.17
10/11/2021									
10/12/2021	7.78				4.07	2.87	3.68		
5/9/2022				3.46		3		3.01	
5/10/2022		3.96			4.12		3.68		
5/11/2022	7.2								
5/16/2022			8.07						
5/17/2022									3.58
10/25/2022								2.88	3.24
10/26/2022	6.99	7.09	7.88	3.39	4.03	2.56	3.5		
6/5/2023									
6/6/2023			6.68			3.2		2.93	3.31
6/7/2023				3.37					
6/12/2023	7.07								
6/13/2023		3.43			3.88		3.38		
10/31/2023								2.82	3.17
11/1/2023									
11/7/2023	7.13	6.52	7.87	3.34	3.99		3.54		
11/8/2023						2.44			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

12/6/2017	
12/7/2017	
2/6/2018	
2/7/2018	
2/8/2018	
2/12/2018	
4/23/2018	
4/24/2018	
4/25/2018	
6/26/2018	
6/27/2018	
7/18/2018	
8/6/2018	
8/7/2018	
8/8/2018	
9/5/2018	
9/24/2018	
10/22/2018	
10/23/2018	
10/24/2018	
11/14/2018	
11/28/2018	
12/3/2018	
12/4/2018	
12/5/2018	
12/18/2018	
1/3/2019	
1/24/2019	
2/5/2019	
2/6/2019	
2/7/2019	
2/25/2019	
2/26/2019	
2/27/2019	
2/28/2019	
6/18/2019	
6/24/2019	
8/19/2019	
8/20/2019	
8/21/2019	
8/22/2019	
4/13/2020	5.42
4/14/2020	
4/15/2020	
4/16/2020	
8/24/2020	5.46
8/25/2020	
8/26/2020	
3/16/2021	
3/17/2021	5.53
3/22/2021	
3/23/2021	

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

3/24/2021	
10/5/2021	5.79
10/6/2021	
10/11/2021	
10/12/2021	
5/9/2022	5.51
5/10/2022	
5/11/2022	
5/16/2022	
5/17/2022	
10/25/2022	
10/26/2022	5.09
6/5/2023	5.7
6/6/2023	
6/7/2023	
6/12/2023	
6/13/2023	
10/31/2023	
11/1/2023	
11/7/2023	5.27
11/8/2023	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell

Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-11	GSD-AP-MW-8	GSD-AP-MW-5	GSD-AP-MW-6
12/6/2017	650	200	210	11	250	83			
12/7/2017							6.5	19	10
2/6/2018	560		190		230			20	
2/7/2018				19		84			
2/8/2018		200					8.9		11
2/12/2018									
4/23/2018	640		140						
4/24/2018		210		27	260	98			
4/25/2018							7.9	22	13
6/26/2018	670						7.5		11
6/27/2018		240	130	<2	230	95		18	
7/18/2018									
8/6/2018									
8/7/2018	660		150	<2	200			20	12
8/8/2018		260				110	7.3		
9/5/2018									
9/24/2018									
10/22/2018	580		160	<2	190				
10/23/2018		280				78	7.8	18	11
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018					200				12
12/4/2018	580		170	11		97	8.2		
12/5/2018		280						20	
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	702		145		263			24.3	13.9
2/6/2019		239		16.8		113	9.53		
2/7/2019									
2/25/2019					246				
2/26/2019	748		148	38.4					14.1
2/27/2019		257				135	8.25	24.7	
2/28/2019									
6/18/2019					245				
6/24/2019									
8/19/2019									
8/20/2019			110		222			21.3	12.3
8/21/2019	708						10.8		
8/22/2019		339		6.74		305			
4/13/2020					256			21.9	13.9
4/14/2020		155				146	12.5		
4/15/2020	647		116	50.7					
4/16/2020									
8/24/2020								21.2	
8/25/2020	642		114						
8/26/2020		282		10.5	246	280	16.1		13.1
3/16/2021	593							18.8	
3/17/2021									13.7
3/22/2021					254				
3/23/2021		160		60.1		135	9.21		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	9	14	<2						
2/6/2018			<2						
2/7/2018									
2/8/2018		10							
2/12/2018	8.3								
4/23/2018									
4/24/2018			<2						
4/25/2018	12	11							
6/26/2018	8.5	11	<2						
6/27/2018				2.2 (J)	<2	120	<2		
7/18/2018				2.5 (J)	<2	120	<2		
8/6/2018			<2			110			
8/7/2018				<2					
8/8/2018	6.7	13			<2		<2		
9/5/2018				1.4 (J)	<2	86	<2		
9/24/2018				<2	<2	80	<2		
10/22/2018			<2	1.7 (J)					
10/23/2018	9.4	13			<2		<2		
10/24/2018						68		16	44
11/14/2018								13	44
11/28/2018								11	46
12/3/2018			<2	2.1 (J)	<2		<2		
12/4/2018		9.8							
12/5/2018	7.8					54		12	51
12/18/2018								11	76
1/3/2019								10	94
1/24/2019								10.2	135
2/5/2019			5.38	3.99		126		10.4	183
2/6/2019	17	10.8							
2/7/2019					0.639 (J)		1.69		
2/25/2019				4.01	<2		1.53		
2/26/2019			5.1						
2/27/2019	12.4	8.98							
2/28/2019						207		9.86	192
6/18/2019									
6/24/2019									129 (D)
8/19/2019								8.74	66.6
8/20/2019			7.34	3.73		106			
8/21/2019	11.3	11.8			1.21		1.62		
8/22/2019									
4/13/2020				3.83					
4/14/2020	15.9								
4/15/2020		7.95	17.2		0.554 (J)		1.68		92.8
4/16/2020						191		11.5	
8/24/2020				4.16	<2		1.31	10	
8/25/2020						98.4			74.1
8/26/2020	12.9	9.19	15.5						
3/16/2021					1.02		1.7		
3/17/2021									
3/22/2021						83.8		10.6	128
3/23/2021	15.7	8.08							

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
3/24/2021			19.9	2.88					
10/5/2021		9.19	37.8	2.17					
10/6/2021								10.2	93.5
10/11/2021									
10/12/2021	18				0.895 (J)	95.7	1.34		
5/9/2022				2.51		125		10	
5/10/2022		7.13			1.02 (J)		1.28 (J)		
5/11/2022	17.7								
5/16/2022			51.8						
5/17/2022									139
10/25/2022								9.25	37.099998
10/26/2022	13.8	11.4	61.799999	3.43	0.992 (J)	50.700001	1.7 (J)		
6/5/2023									
6/6/2023			88.699997			116		12.4	121
6/7/2023				2.38					
6/12/2023	18.9								
6/13/2023		6.16			<2		1.14 (J)		
10/31/2023								11.5	40.200001
11/1/2023									
11/7/2023	17.4	10.5	91.599998	3.69	<2		1.34 (J)		
11/8/2023						52.900002			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

12/6/2017	
12/7/2017	
2/6/2018	
2/7/2018	
2/8/2018	
2/12/2018	
4/23/2018	
4/24/2018	
4/25/2018	
6/26/2018	
6/27/2018	
7/18/2018	
8/6/2018	
8/7/2018	
8/8/2018	
9/5/2018	
9/24/2018	
10/22/2018	
10/23/2018	
10/24/2018	
11/14/2018	
11/28/2018	
12/3/2018	
12/4/2018	
12/5/2018	
12/18/2018	
1/3/2019	
1/24/2019	
2/5/2019	
2/6/2019	
2/7/2019	
2/25/2019	
2/26/2019	
2/27/2019	
2/28/2019	
6/18/2019	
6/24/2019	
8/19/2019	
8/20/2019	
8/21/2019	
8/22/2019	
4/13/2020	1.48
4/14/2020	
4/15/2020	
4/16/2020	
8/24/2020	3.88
8/25/2020	
8/26/2020	
3/16/2021	
3/17/2021	1.64
3/22/2021	
3/23/2021	

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

3/24/2021	
10/5/2021	5.29
10/6/2021	
10/11/2021	
10/12/2021	
5/9/2022	1.15 (J)
5/10/2022	
5/11/2022	
5/16/2022	
5/17/2022	
10/25/2022	
10/26/2022	3.32
6/5/2023	1.31 (J)
6/6/2023	
6/7/2023	
6/12/2023	
6/13/2023	
10/31/2023	
11/1/2023	
11/7/2023	8.98
11/8/2023	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell

Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-11	GSD-AP-MW-8	GSD-AP-MW-5	GSD-AP-MW-6
12/6/2017	1300	371	574	215	628	312			
12/7/2017							253	215	136
2/6/2018	1310		572		556			204	
2/7/2018				237		323			
2/8/2018		367					229		122
2/12/2018									
4/23/2018	1210		414						
4/24/2018		365		242	510	324			
4/25/2018							223	192	102
6/26/2018	1250						232		106
6/27/2018		421	440	194	486	333		180	
7/18/2018									
8/6/2018									
8/7/2018	1220		485	195	487			183	71.3
8/8/2018		479				346	208		
9/5/2018									
9/24/2018									
10/22/2018	1150		484	184	450				
10/23/2018		507				311	209	169	105
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018					492				102
12/4/2018	1090		504	215		343	213		
12/5/2018		479						177	
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	1200		366		428			198	107
2/6/2019		399		208		317	212		
2/7/2019									
2/25/2019					441				
2/26/2019	1210		372	252					99.3
2/27/2019		422				360	211	185	
2/28/2019									
6/18/2019					422				
6/24/2019									
8/19/2019									
8/20/2019			369		416			174	98.7
8/21/2019	1200						226		
8/22/2019		501		194		555			
4/13/2020					433			192	90.7
4/14/2020		278				372	222		
4/15/2020	1060		300	262					
4/16/2020									
8/24/2020								175	
8/25/2020	1060		339						
8/26/2020		472		186	455	517	215		91.3
3/16/2021	1040							184	
3/17/2021									80
3/22/2021					427				
3/23/2021		286		273		361	200		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	183	137	189						
2/6/2018			206						
2/7/2018									
2/8/2018		124							
2/12/2018	201								
4/23/2018									
4/24/2018			193						
4/25/2018	180	106							
6/26/2018	191	129	180						
6/27/2018				144	48.7	219	44		
7/18/2018				156	46	195	42.7		
8/6/2018			182			175			
8/7/2018				140					
8/8/2018	192	142			48		46		
9/5/2018				154	47.3	153	67.3		
9/24/2018				165	44.7	127	49.3		
10/22/2018			204	148					
10/23/2018	185	142			35.3		31.3		
10/24/2018						125		184	107
11/14/2018								170	96.7
11/28/2018								167	102
12/3/2018			168	127	48.7		46		
12/4/2018		121							
12/5/2018	200					101		185	103
12/18/2018								164	126
1/3/2019								167	191
1/24/2019								137	212
2/5/2019			158	113		180		138	269
2/6/2019	151	108							
2/7/2019					42.7		32.7		
2/25/2019				106	40.7		31.3		
2/26/2019			191						
2/27/2019	186	103							
2/28/2019						287		140	261
6/18/2019									
6/24/2019									203.5 (D)
8/19/2019								240	121
8/20/2019			164	141		265			
8/21/2019	200	133			46		42.7		
8/22/2019									
4/13/2020				104					
4/14/2020	187								
4/15/2020		102	170		41.3		37.3		155
4/16/2020						280		166	
8/24/2020				114	42.7		37.3	162	
8/25/2020						160			131
8/26/2020	192	109	168						
3/16/2021					42		41.3		
3/17/2021									
3/22/2021						126		157	204
3/23/2021	178	92.7							

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
 Plant Gadsden Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-MW-7	GSD-AP-MW-4	GSD-AP-PZ-1	GSD-AP-PZ-5	GSD-AP-MW-14 ...	GSD-AP-PZ-6	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
3/24/2021			180	94					
10/5/2021		113	200	108					
10/6/2021								182	136
10/11/2021									
10/12/2021	169				38.7	142	35.3		
5/9/2022				85.3		185		152	
5/10/2022		82.7			33.3		33.3		
5/11/2022	181								
5/16/2022			218						
5/17/2022									226
10/25/2022								159	72.699997
10/26/2022	194	121	247	96	45.299999	98	38		
6/5/2023									
6/6/2023			263			214		138	220
6/7/2023				96.699997					
6/12/2023	185								
6/13/2023		74.699997			36.700001		36		
10/31/2023								160	76.699997
11/1/2023									
11/7/2023	171	106	318	122	43.299999		44		
11/8/2023						96.699997			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

12/6/2017	
12/7/2017	
2/6/2018	
2/7/2018	
2/8/2018	
2/12/2018	
4/23/2018	
4/24/2018	
4/25/2018	
6/26/2018	
6/27/2018	
7/18/2018	
8/6/2018	
8/7/2018	
8/8/2018	
9/5/2018	
9/24/2018	
10/22/2018	
10/23/2018	
10/24/2018	
11/14/2018	
11/28/2018	
12/3/2018	
12/4/2018	
12/5/2018	
12/18/2018	
1/3/2019	
1/24/2019	
2/5/2019	
2/6/2019	
2/7/2019	
2/25/2019	
2/26/2019	
2/27/2019	
2/28/2019	
6/18/2019	
6/24/2019	
8/19/2019	
8/20/2019	
8/21/2019	
8/22/2019	
4/13/2020	88
4/14/2020	
4/15/2020	
4/16/2020	
8/24/2020	115
8/25/2020	
8/26/2020	
3/16/2021	
3/17/2021	53.3
3/22/2021	
3/23/2021	

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/23/2024 1:55 PM View: Appendix III - Interwell
Plant Gadsden Data: Plant Gadsden CCR

GSD-AP-PZ-2

3/24/2021	
10/5/2021	101
10/6/2021	
10/11/2021	
10/12/2021	
5/9/2022	53.3
5/10/2022	
5/11/2022	
5/16/2022	
5/17/2022	
10/25/2022	
10/26/2022	119
6/5/2023	84
6/6/2023	
6/7/2023	
6/12/2023	
6/13/2023	
10/31/2023	
11/1/2023	
11/7/2023	109
11/8/2023	

FIGURE H.

Appendix III Trend Tests - Significant Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 2:00 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	-0.06249	-119	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-11	0.01069	82	68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.05855	-112	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.03049	-82	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.05689	-125	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-18.72	-108	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.58	94	68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-8.732	-82	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-7.429	-125	-74	Yes	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.6584	-156	-74	Yes	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.2128	-79	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.491	-72	-68	Yes	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.203	-82	-68	Yes	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-11	21.37	98	68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-94.54	-126	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	20.7	91	68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-45.84	-108	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-36.45	-137	-74	Yes	19	0	n/a	0.01	NP

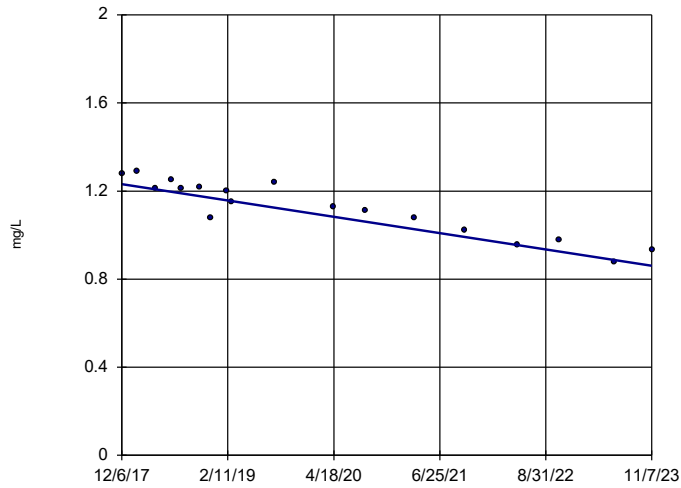
Appendix III Trend Tests - All Results

Plant Gadsden Data: Plant Gadsden CCR Printed 1/23/2024, 2:00 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	-0.06249	-119	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-11	0.01069	82	68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-12	0.00538	57	68	No	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	68	No	18	100	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0	68	74	No	19	68.42	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.0004234	-21	-68	No	18	5.556	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.05855	-112	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-3	0	1	74	No	19	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.03049	-82	-68	Yes	18	0	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.05689	-125	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-18.72	-108	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-10	-0.2061	-8	-68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.58	94	68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-12	1.774	22	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-0.6919	-36	-68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-1.068	-36	-74	No	19	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.017	38	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-8.732	-82	-68	Yes	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-7.429	-125	-74	Yes	19	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-4	0.5214	13	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-5	-5.5e-7	0	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-8	0.3069	13	68	No	18	0	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-9	-0.1872	-10	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-1	0.02659	22	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-10	-0.03314	-12	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-11	-0.05489	-16	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-12	-0.07235	-37	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	-0.02759	-11	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.04562	-38	-74	No	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.1469	-103	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.6584	-156	-74	Yes	19	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-4	-0.1794	-37	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.2128	-79	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-6	-0.03458	-12	-68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.491	-72	-68	Yes	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-8	0.09319	32	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-9	0.1343	45	68	No	18	0	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-PZ-2	0.005915	0	21	No	8	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-10	0	-1	-68	No	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-14 (bg)	-0.01388	-32	-68	No	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.203	-82	-68	Yes	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-17 (bg)	-0.1778	-46	-68	No	18	0	n/a	0.01	NP
pH (pH)	GSD-AP-MW-5	0.01629	16	68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-1	-31.41	-60	-68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-11	21.37	98	68	Yes	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-12	2.245	11	68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-5.287	-28	-68	No	18	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	13.35	26	74	No	19	0	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-0.3395	-43	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-94.54	-126	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	20.7	91	68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	-0.1811	-2	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-10.61	-31	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	9.812	27	74	No	19	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.538	-47	-68	No	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-45.84	-108	-68	Yes	18	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-36.45	-137	-74	Yes	19	0	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	10.03	41	68	No	18	0	n/a	0.01	NP

Sen's Slope Estimator

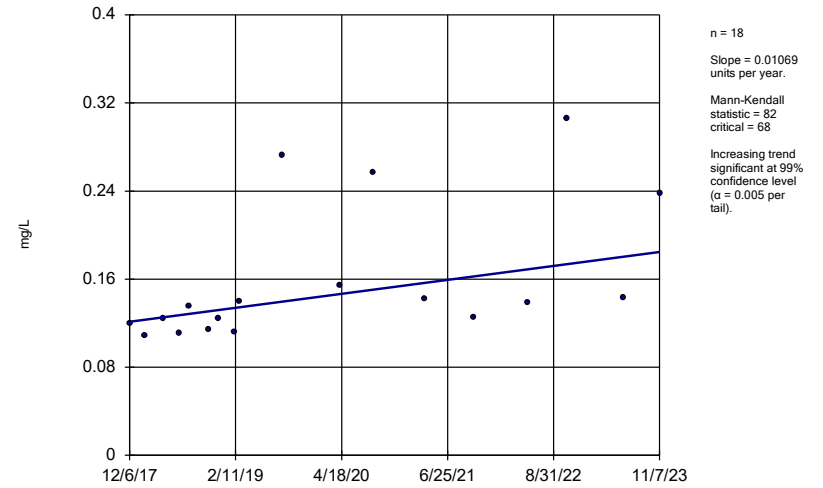
GSD-AP-MW-1



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

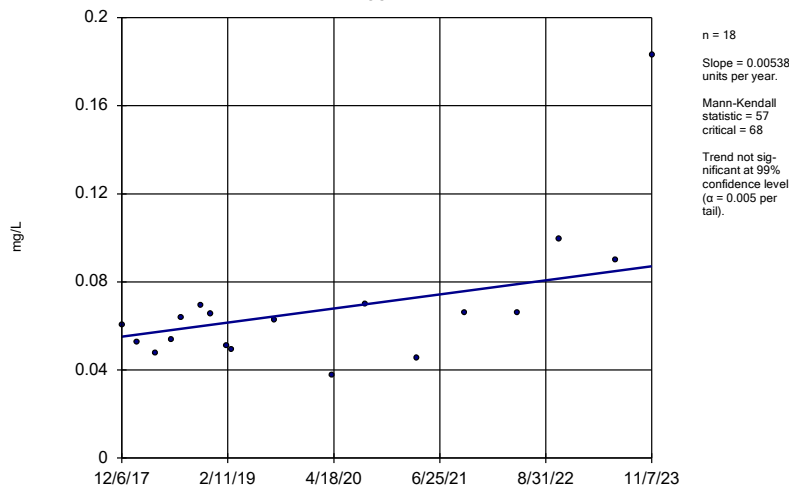
GSD-AP-MW-11



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

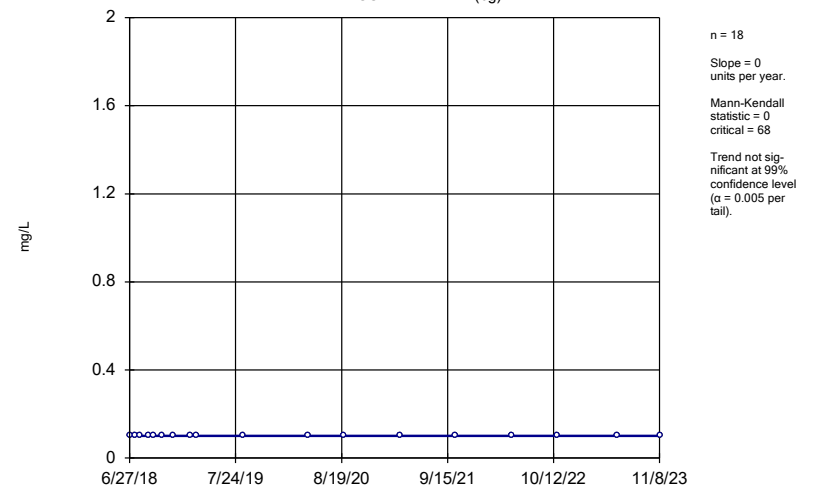
GSD-AP-MW-12



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

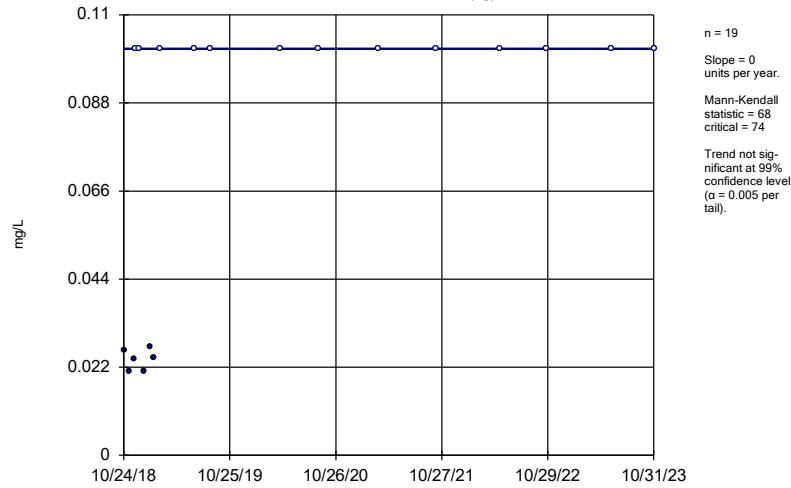
GSD-AP-MW-14 (bg)



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

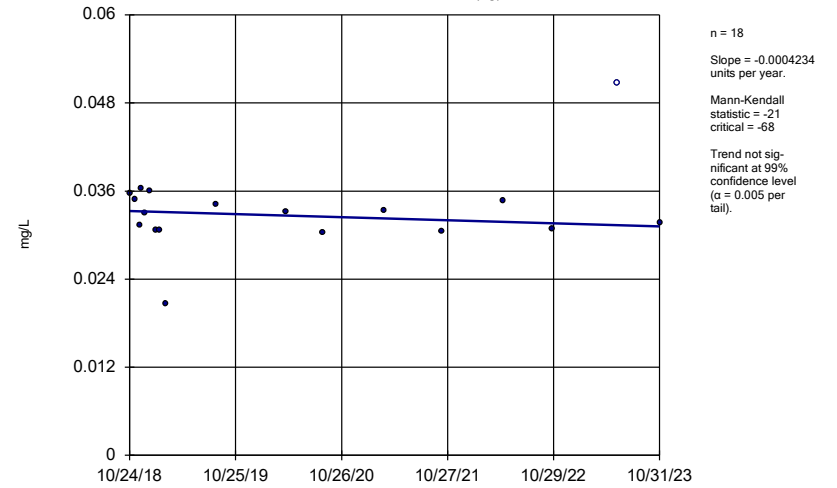
GSD-AP-MW-16 (bg)



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

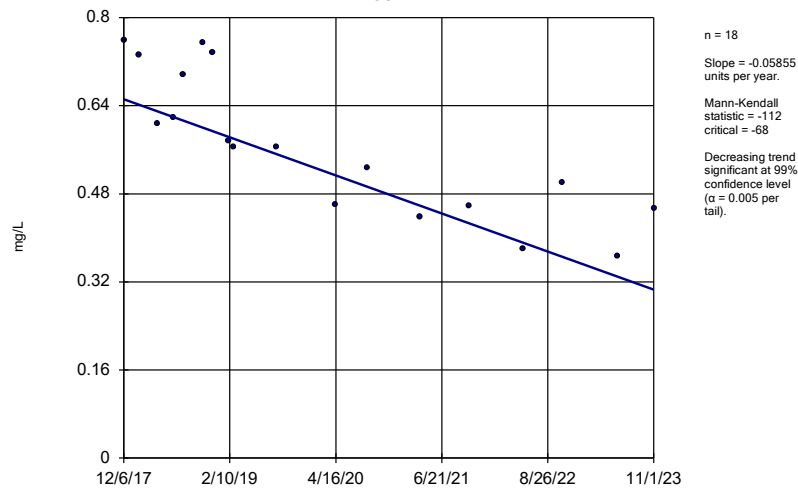
GSD-AP-MW-17 (bg)



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

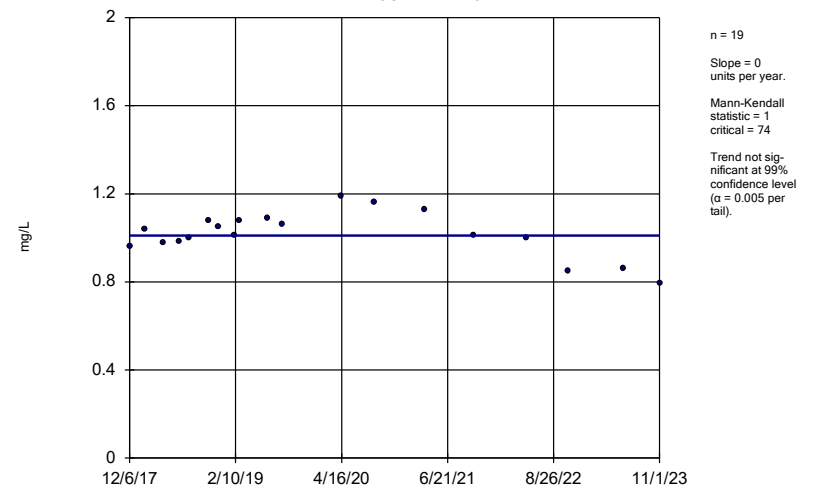
GSD-AP-MW-2



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

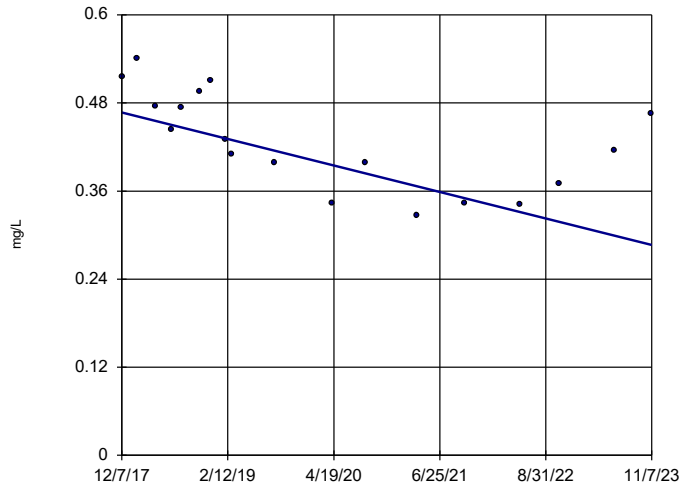
GSD-AP-MW-3



Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-4

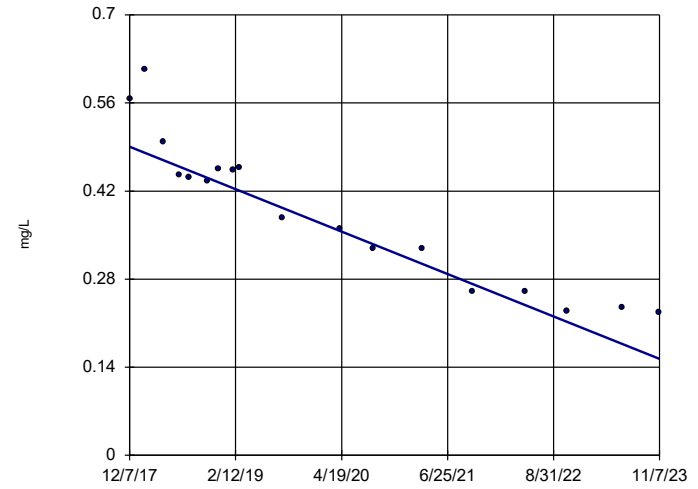


n = 18
 Slope = -0.03049
 units per year.
 Mann-Kendall
 statistic = -82
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-5

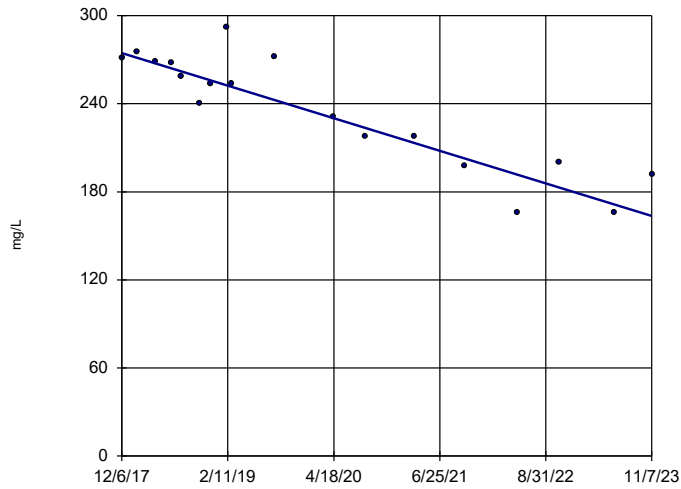


n = 18
 Slope = -0.05689
 units per year.
 Mann-Kendall
 statistic = -125
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Boron Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-1

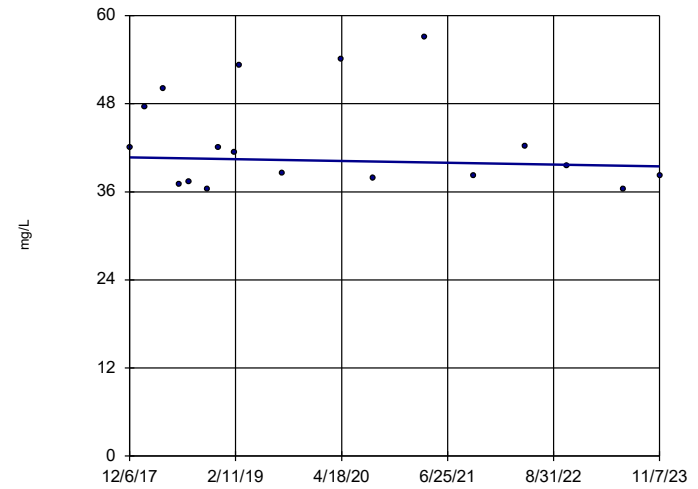


n = 18
 Slope = -18.72
 units per year.
 Mann-Kendall
 statistic = -108
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-10

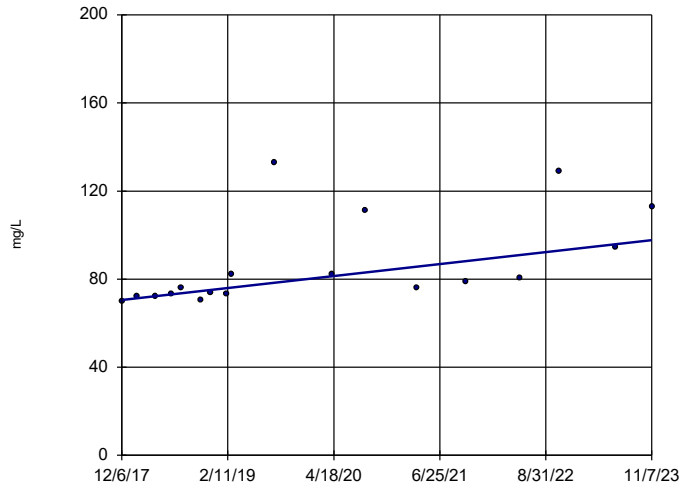


n = 18
 Slope = -0.2061
 units per year.
 Mann-Kendall
 statistic = -8
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

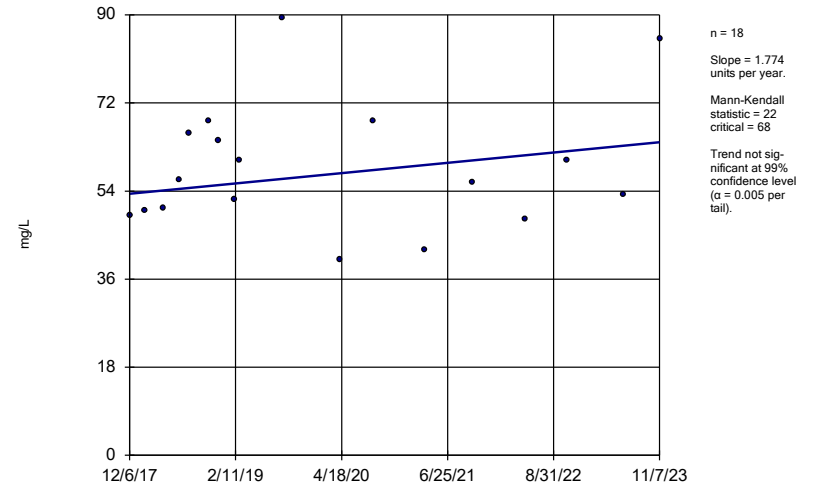
GSD-AP-MW-11



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

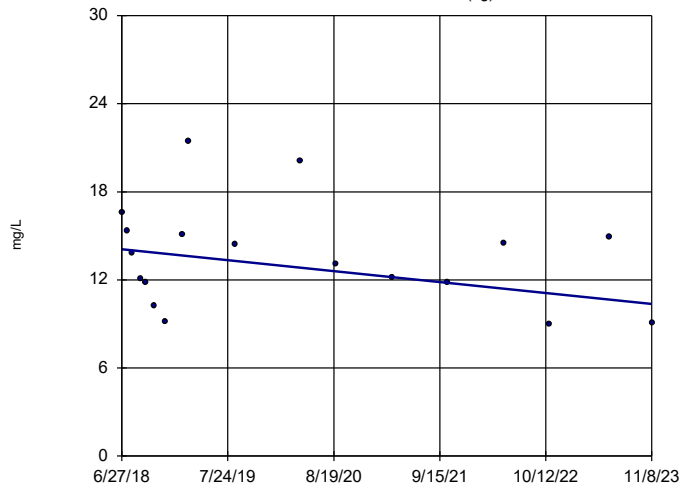
GSD-AP-MW-12



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

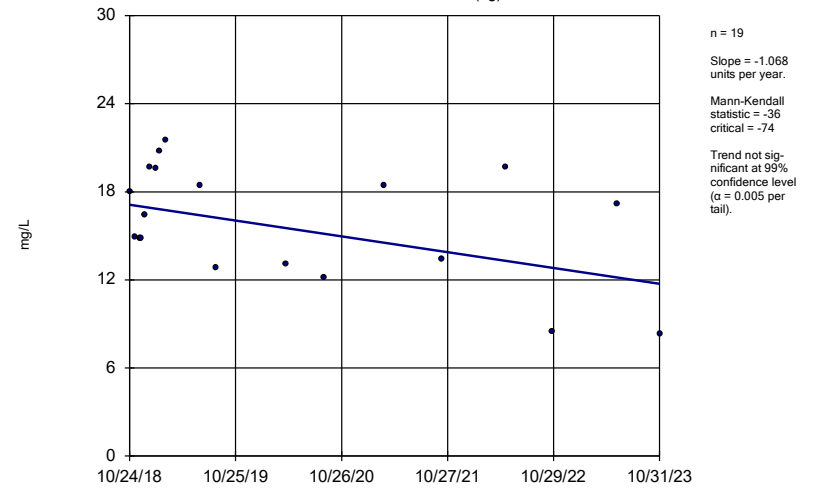
GSD-AP-MW-14 (bg)



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

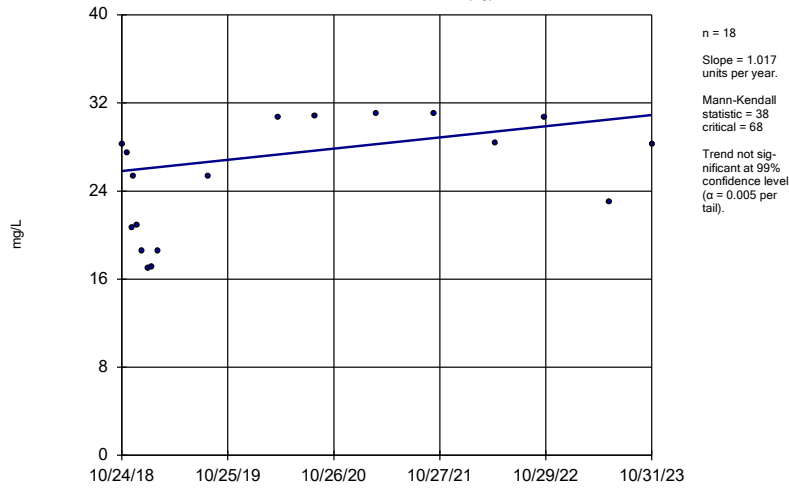
GSD-AP-MW-16 (bg)



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

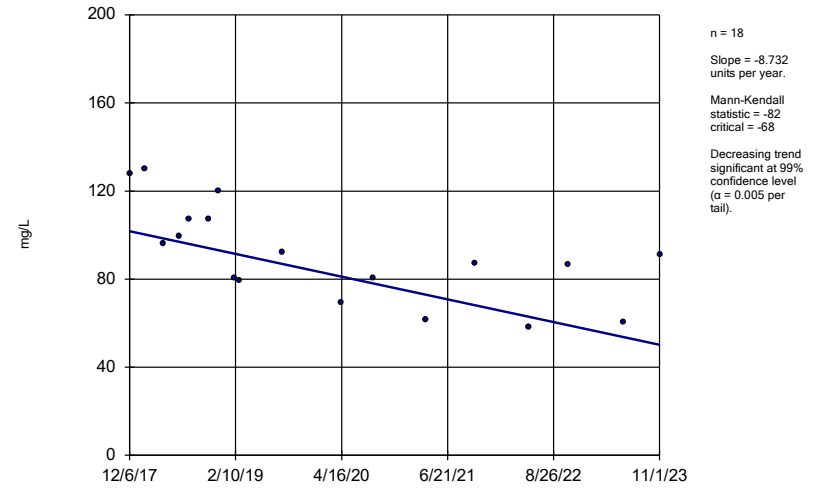
GSD-AP-MW-17 (bg)



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

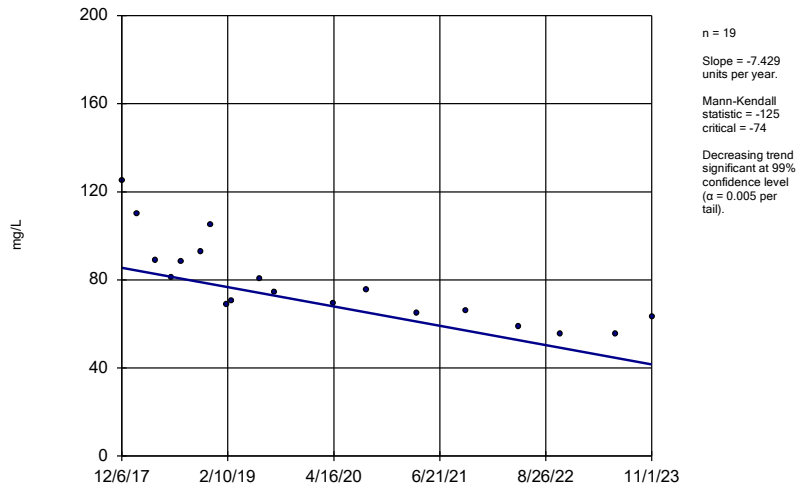
GSD-AP-MW-2



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

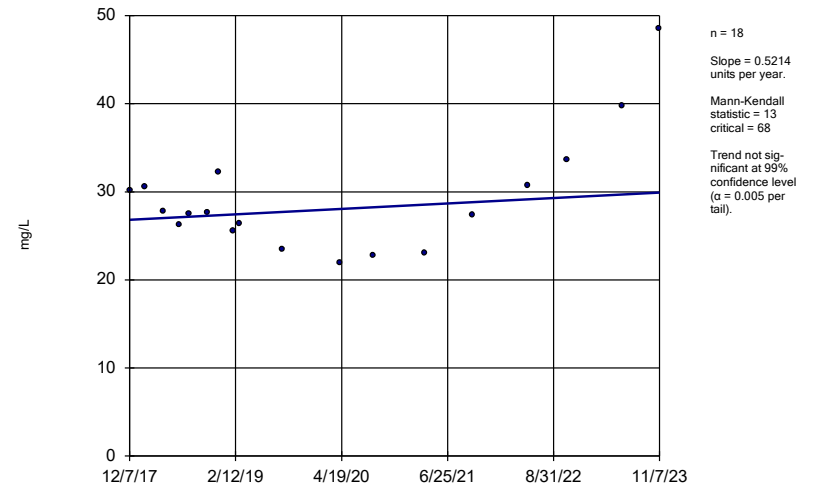
GSD-AP-MW-3



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

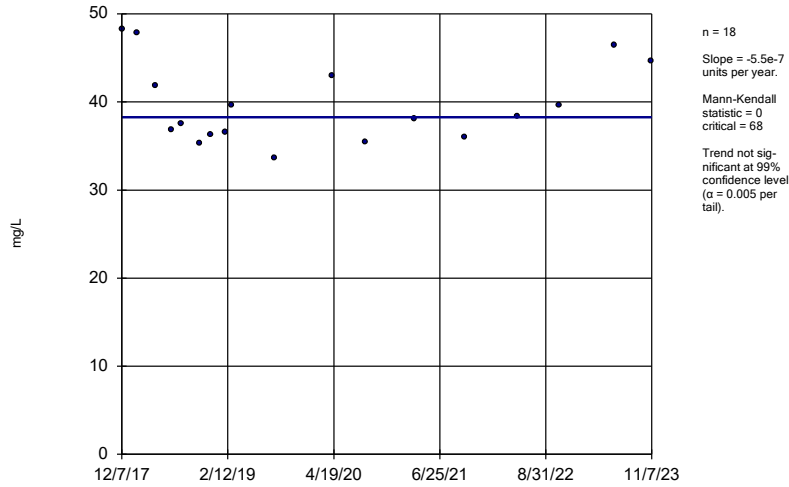
GSD-AP-MW-4



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

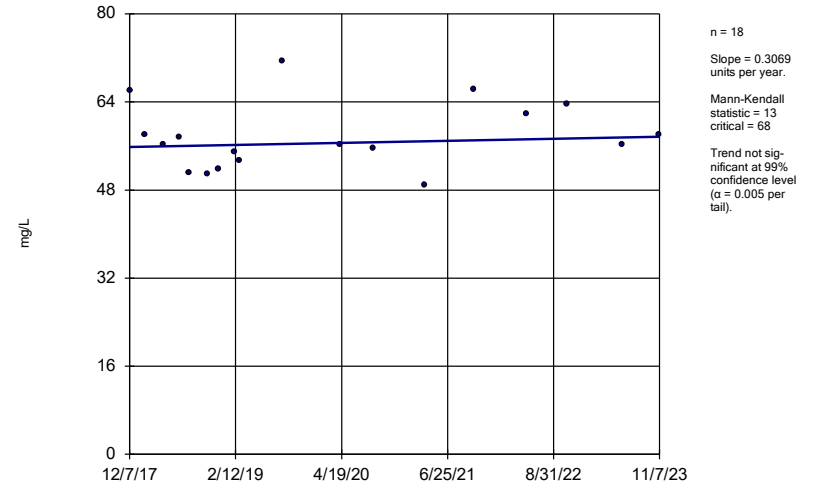
GSD-AP-MW-5



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

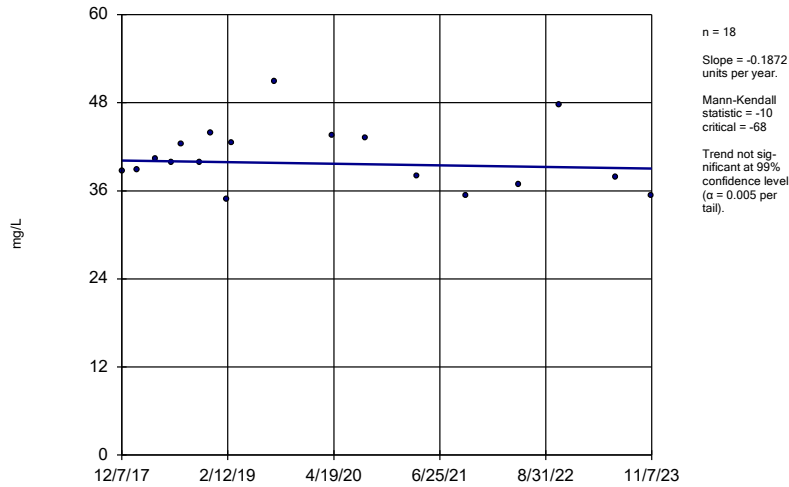
GSD-AP-MW-8



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

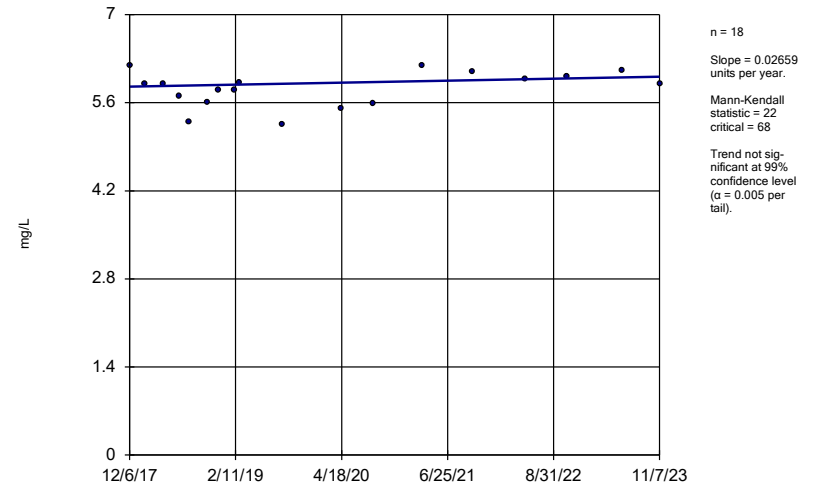
GSD-AP-MW-9



Constituent: Calcium Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

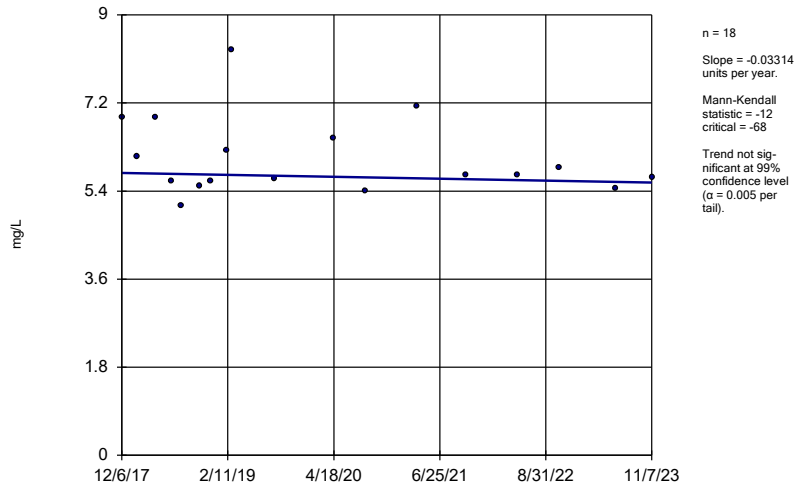
GSD-AP-MW-1



Constituent: Chloride Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

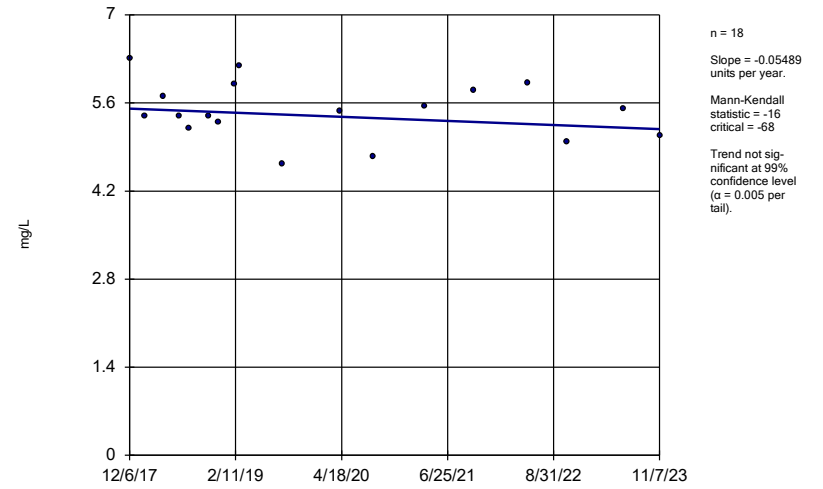
GSD-AP-MW-10



Constituent: Chloride Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

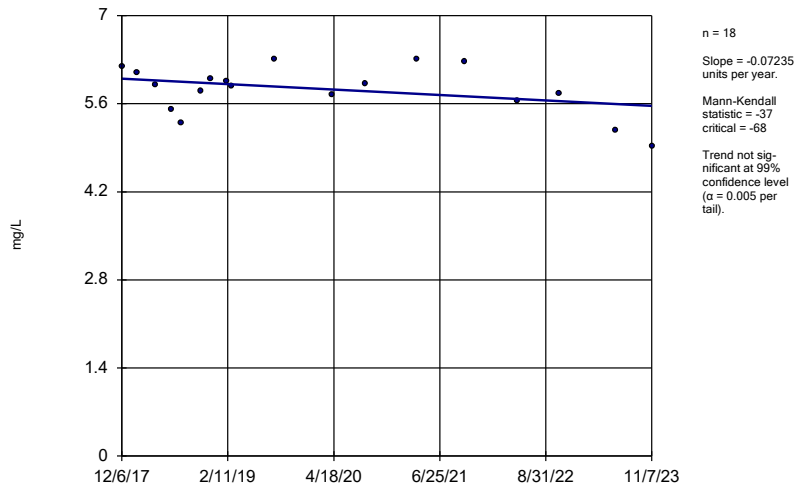
GSD-AP-MW-11



Constituent: Chloride Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

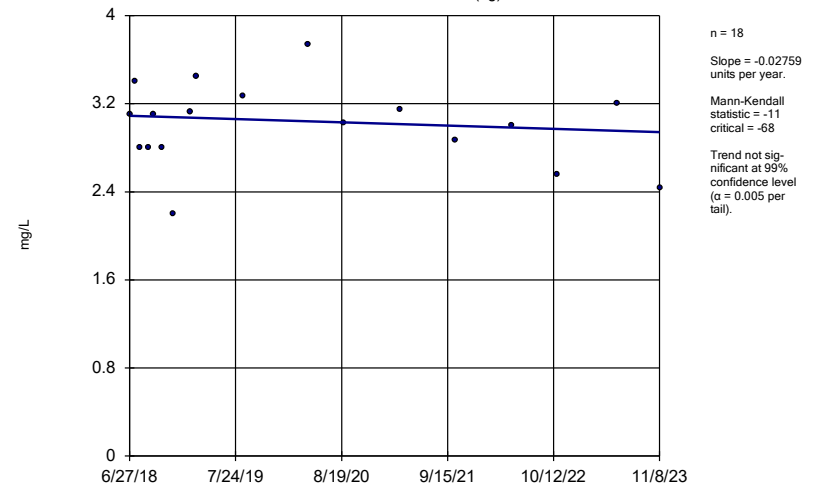
GSD-AP-MW-12



Constituent: Chloride Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

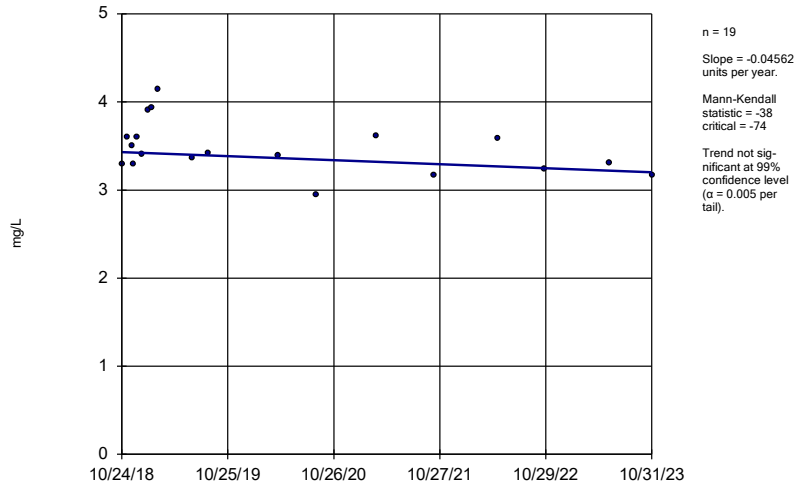
GSD-AP-MW-14 (bg)



Constituent: Chloride Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

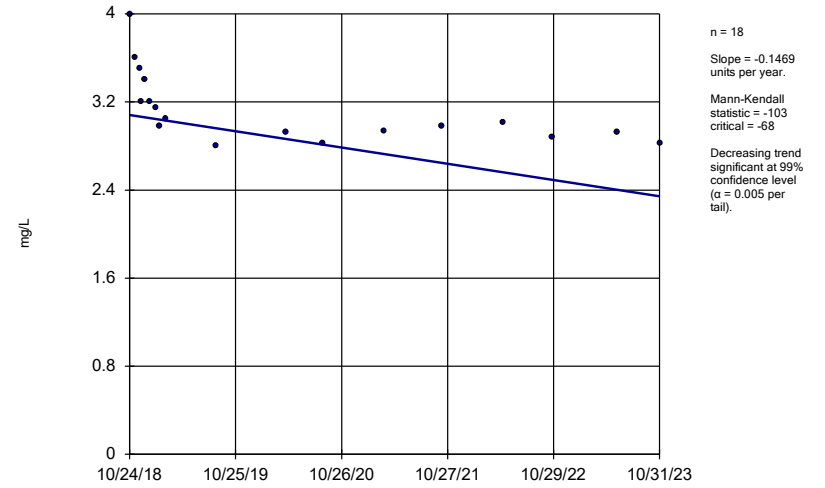
GSD-AP-MW-16 (bg)



Constituent: Chloride Analysis Run 1/23/2024 1:58 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

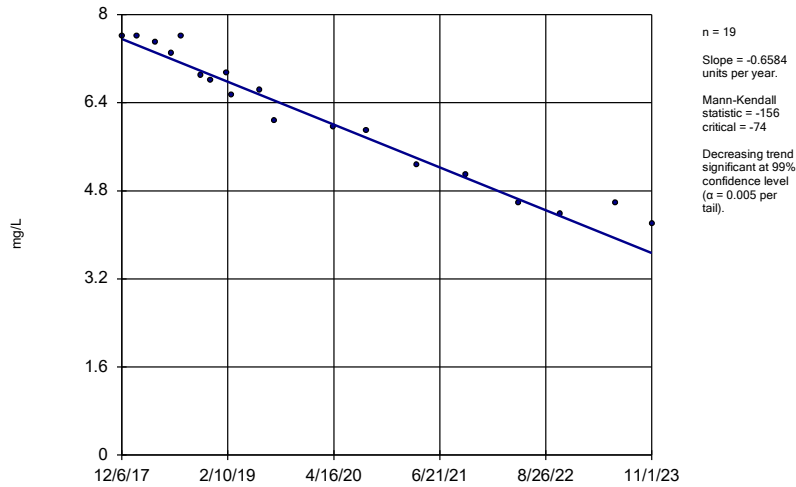
GSD-AP-MW-17 (bg)



Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

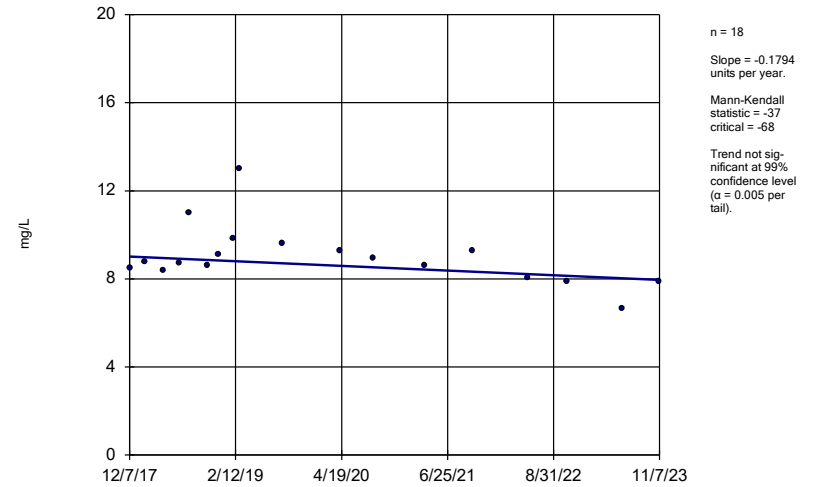
GSD-AP-MW-3



Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

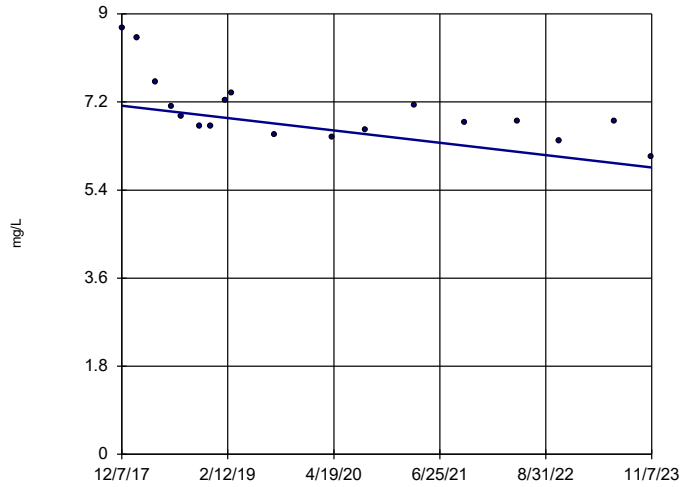
GSD-AP-MW-4



Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-5

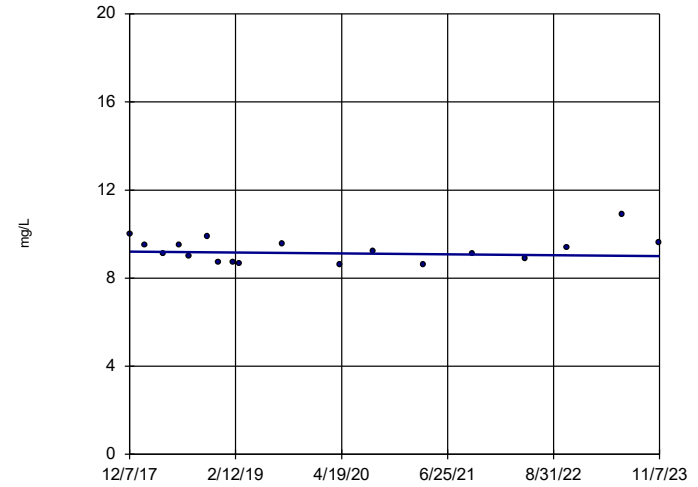


n = 18
 Slope = -0.2128
 units per year.
 Mann-Kendall
 statistic = -79
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-6

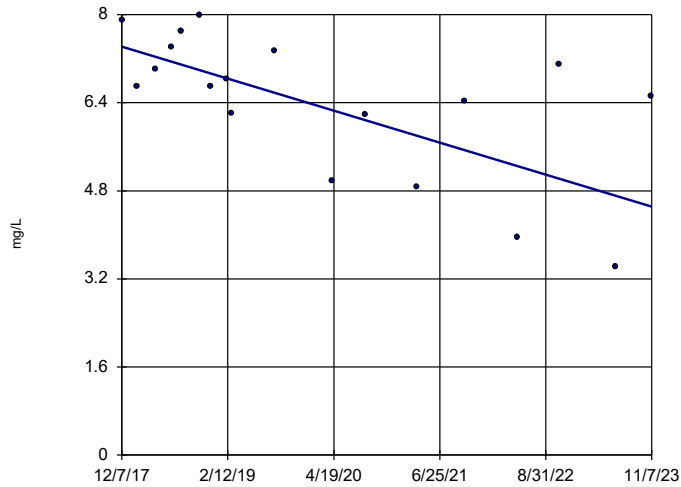


n = 18
 Slope = -0.03458
 units per year.
 Mann-Kendall
 statistic = -12
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-7

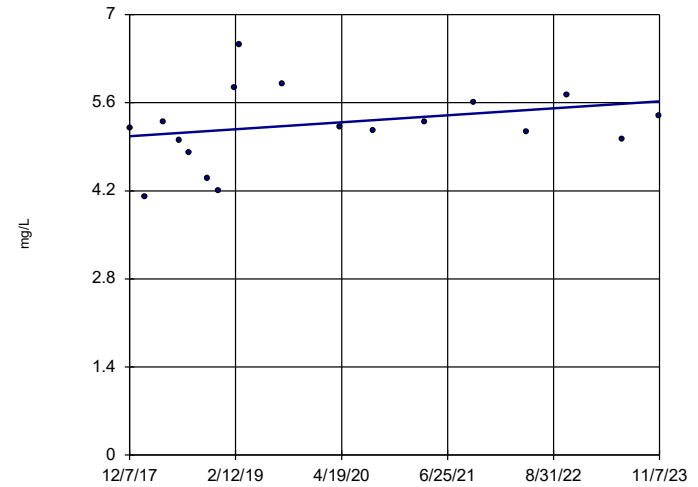


n = 18
 Slope = -0.491
 units per year.
 Mann-Kendall
 statistic = -72
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-8

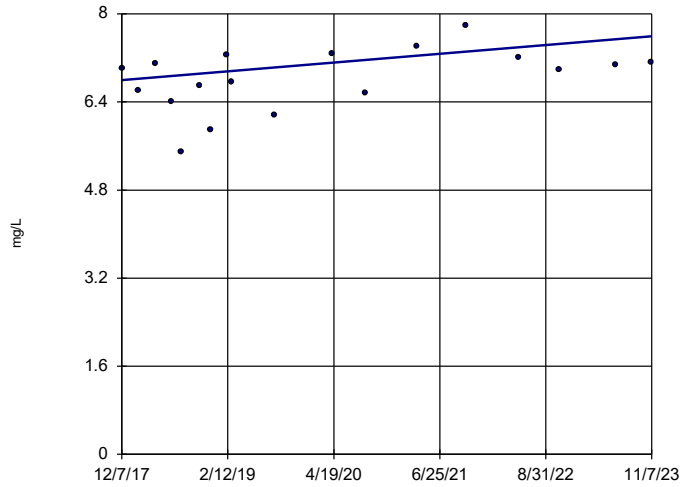


n = 18
 Slope = 0.09319
 units per year.
 Mann-Kendall
 statistic = 32
 critical = 68
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-9

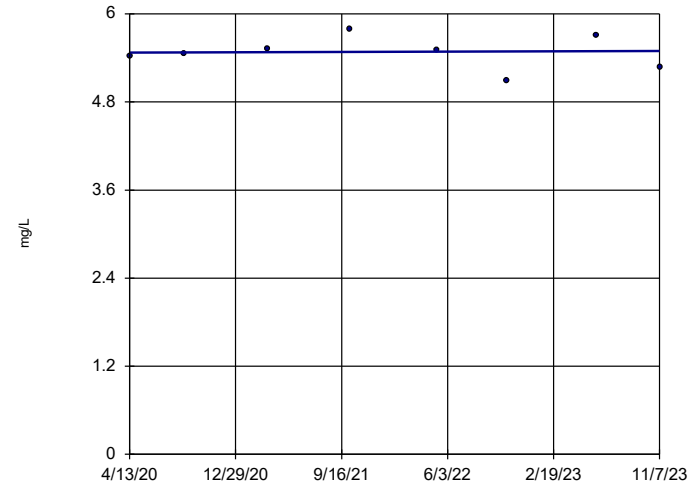


n = 18
 Slope = 0.1343 units per year.
 Mann-Kendall statistic = 45
 critical = 68
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-PZ-2

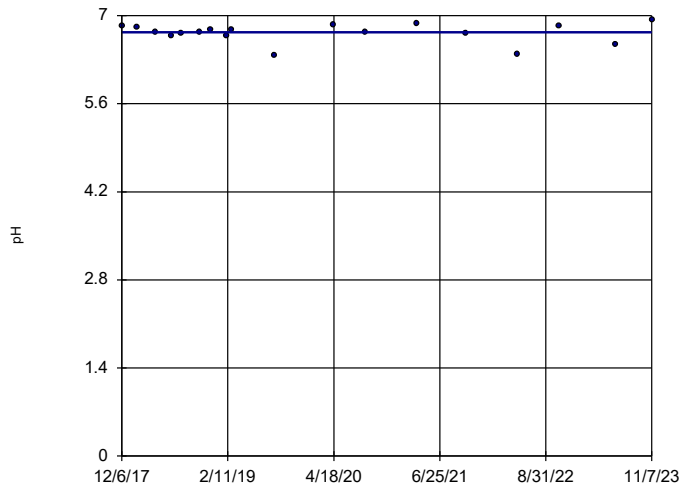


n = 8
 Slope = 0.005915 units per year.
 Mann-Kendall statistic = 0
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-10

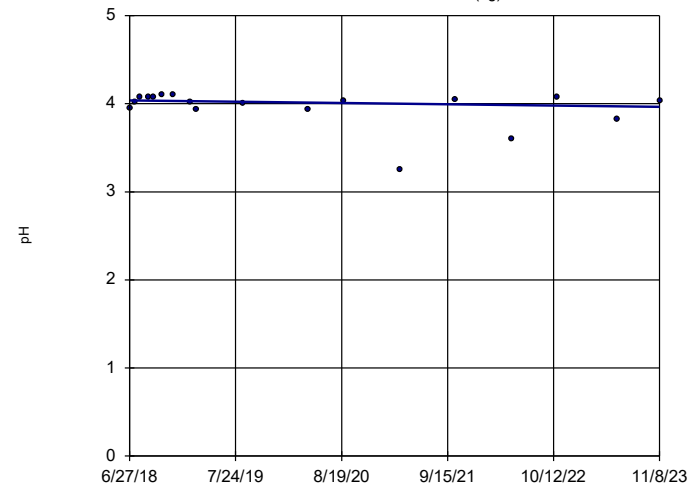


n = 18
 Slope = 0 units per year.
 Mann-Kendall statistic = -1
 critical = -68
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-14 (bg)

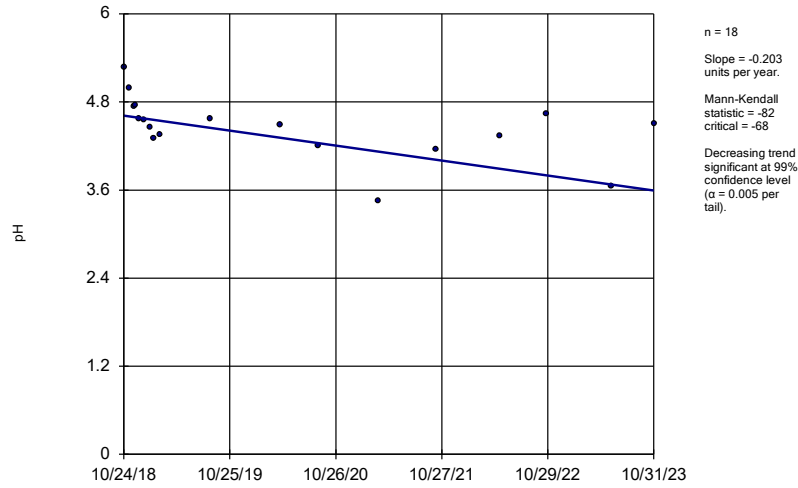


n = 18
 Slope = -0.01388 units per year.
 Mann-Kendall statistic = -32
 critical = -68
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: pH Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

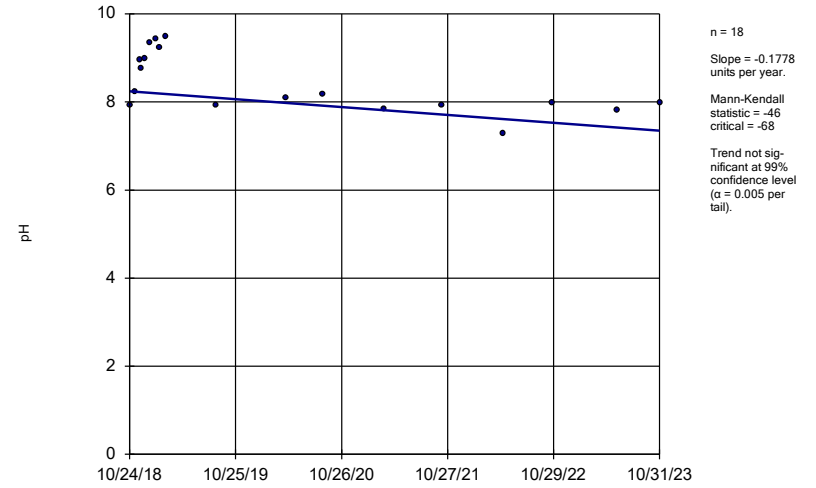
GSD-AP-MW-16 (bg)



Constituent: pH Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

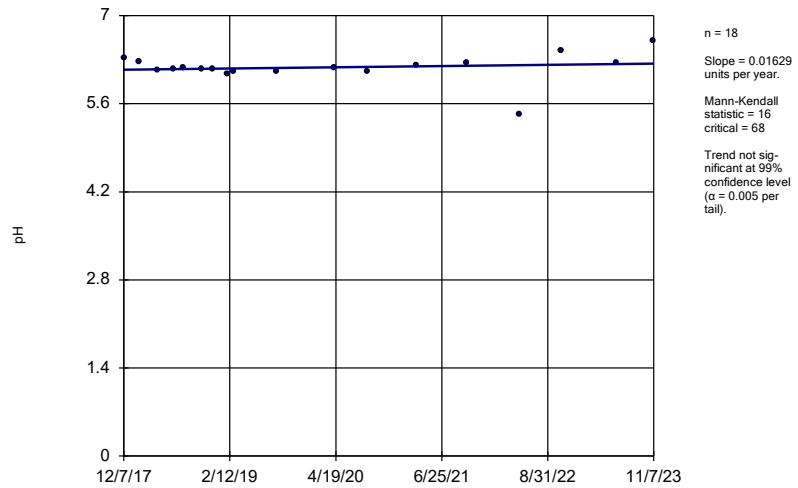
GSD-AP-MW-17 (bg)



Constituent: pH Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

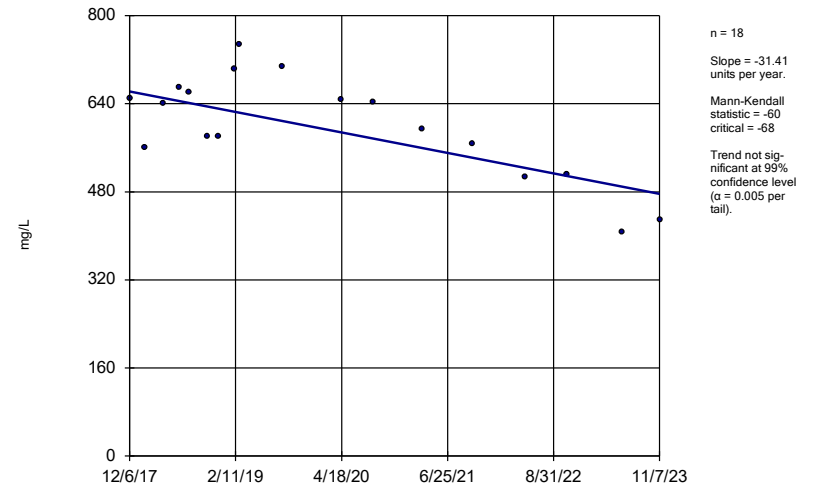
GSD-AP-MW-5



Constituent: pH Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

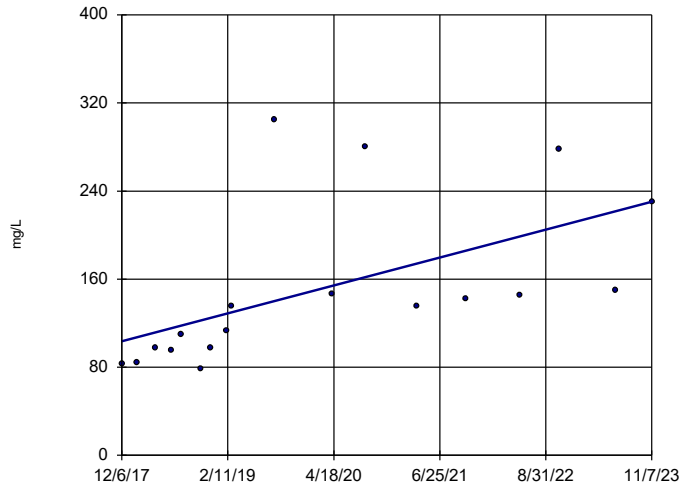
GSD-AP-MW-1



Constituent: Sulfate Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

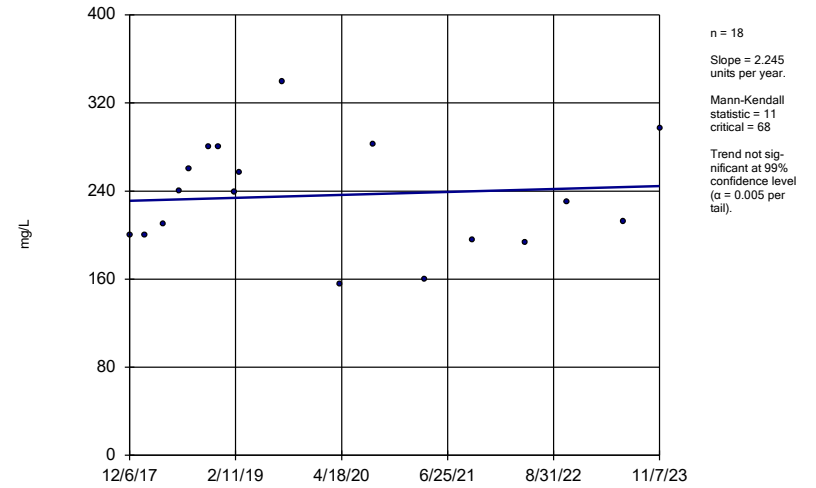
GSD-AP-MW-11



Constituent: Sulfate Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

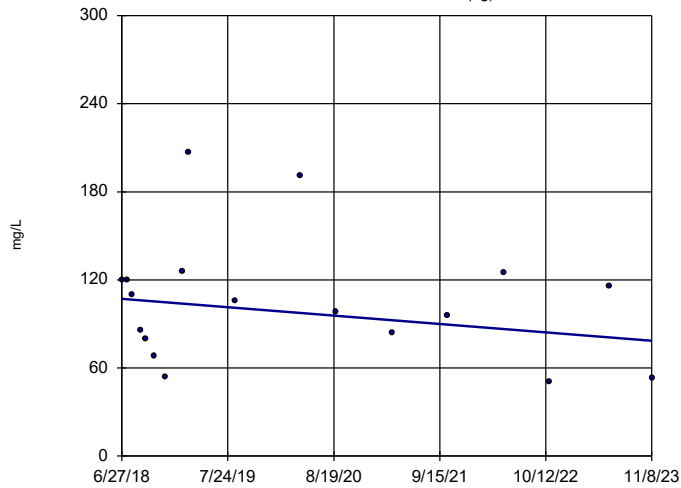
GSD-AP-MW-12



Constituent: Sulfate Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

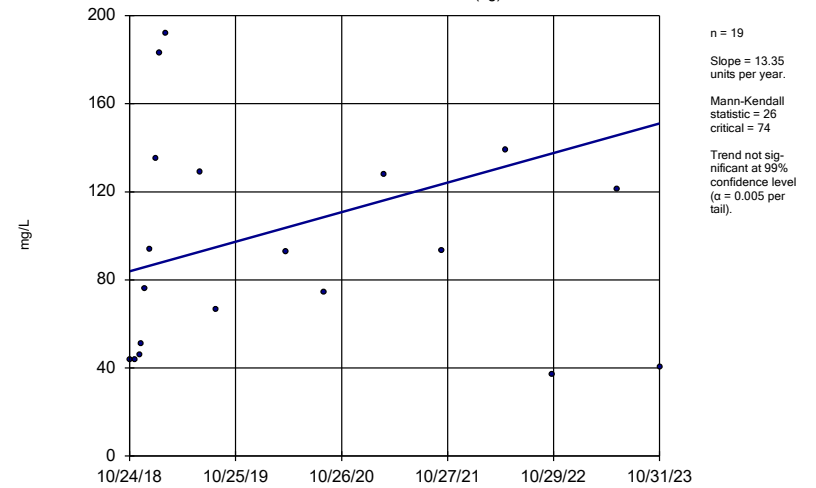
GSD-AP-MW-14 (bg)



Constituent: Sulfate Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

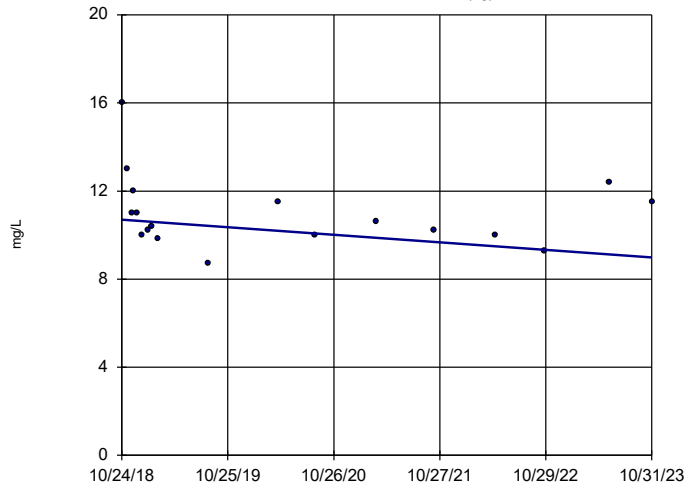
GSD-AP-MW-16 (bg)



Constituent: Sulfate Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

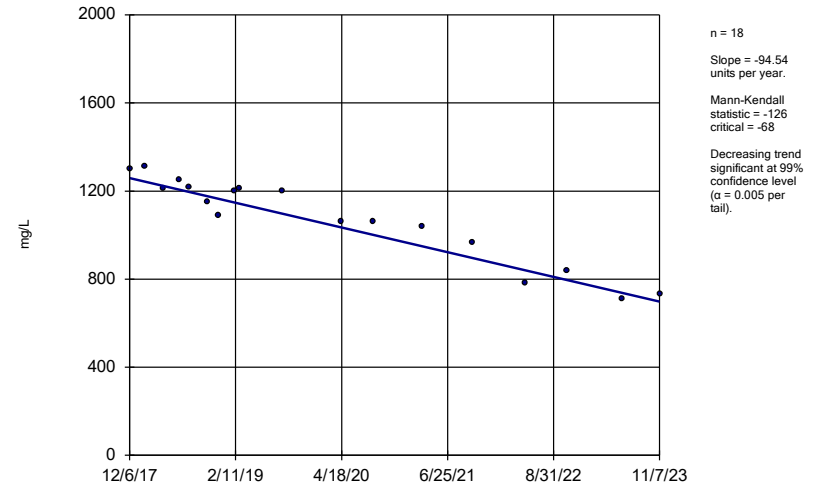
GSD-AP-MW-17 (bg)



Constituent: Sulfate Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

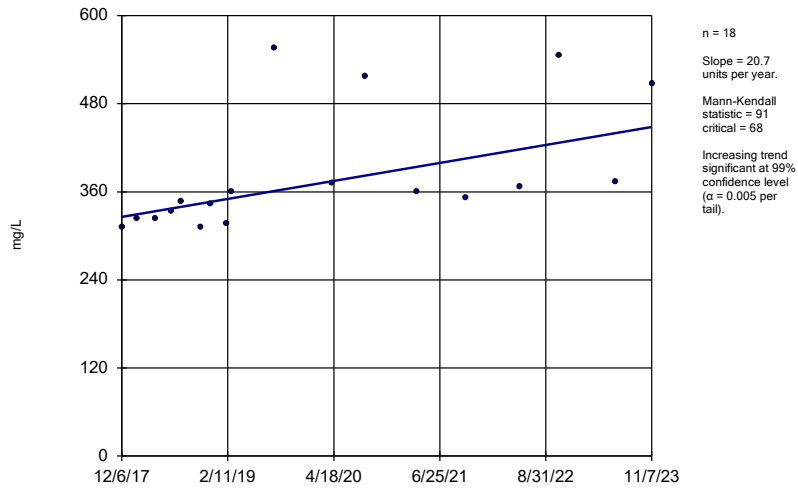
GSD-AP-MW-1



Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

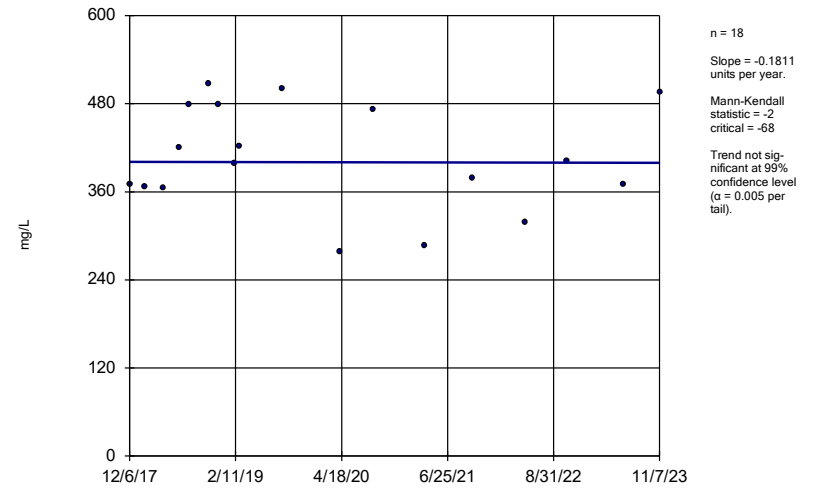
GSD-AP-MW-11



Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

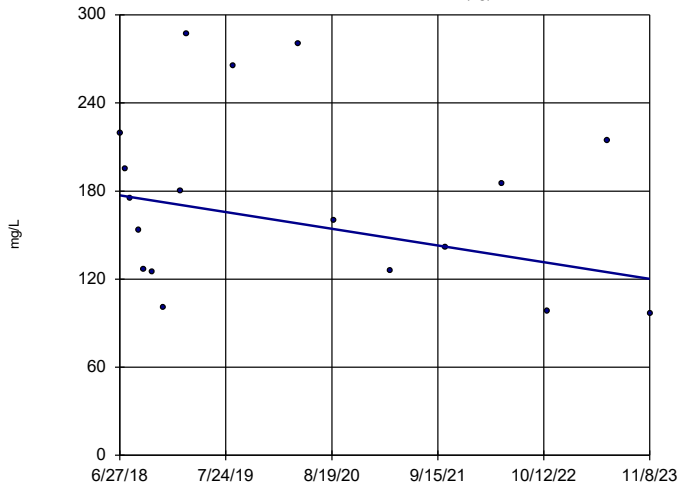
GSD-AP-MW-12



Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-14 (bg)

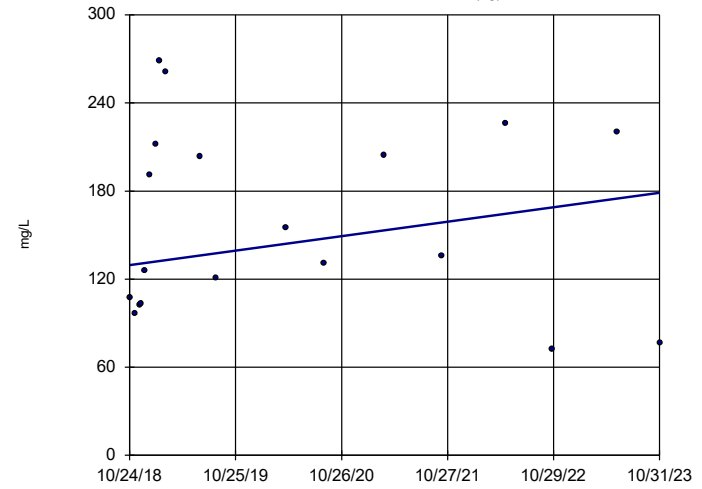


n = 18
 Slope = -10.61
 units per year.
 Mann-Kendall
 statistic = -31
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-16 (bg)

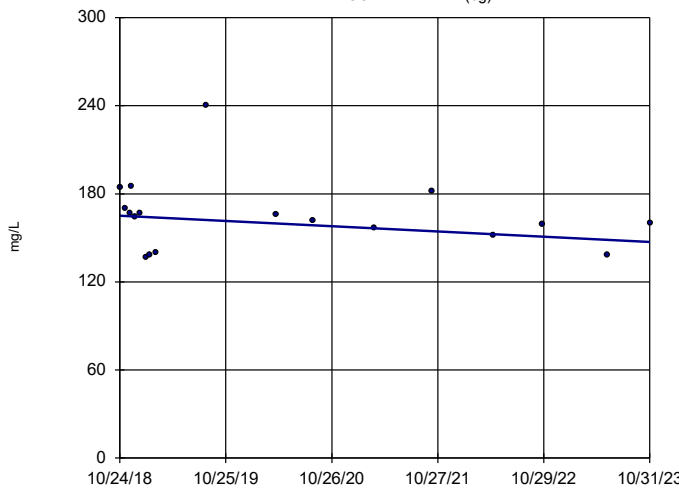


n = 19
 Slope = 9.812
 units per year.
 Mann-Kendall
 statistic = 27
 critical = 74
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-17 (bg)

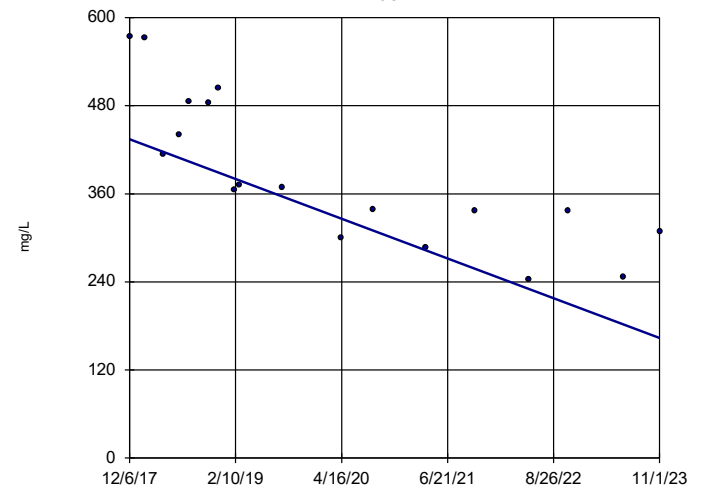


n = 18
 Slope = -3.538
 units per year.
 Mann-Kendall
 statistic = -47
 critical = -68
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-2

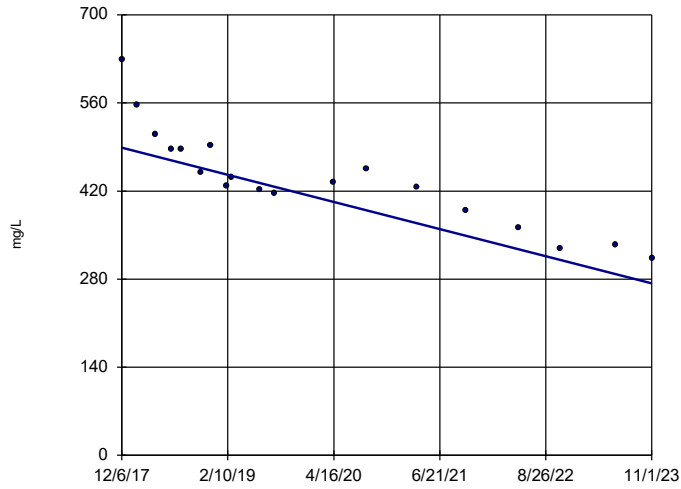


n = 18
 Slope = -45.84
 units per year.
 Mann-Kendall
 statistic = -108
 critical = -68
 Decreasing trend
 significant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
 Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-3

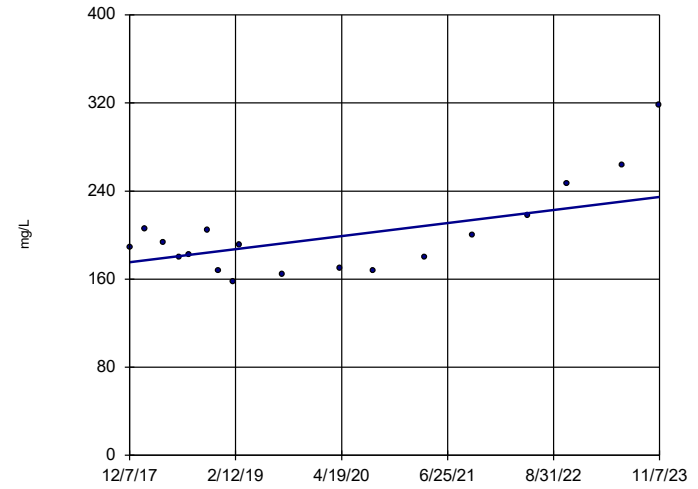


n = 19
Slope = -36.45 units per year.
Mann-Kendall statistic = -137
critical = -74
Decreasing trend significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-4



n = 18
Slope = 10.03 units per year.
Mann-Kendall statistic = 41
critical = 68
Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Total Dissolved Solids Analysis Run 1/23/2024 1:59 PM View: Appendix III - Trend Tests
Plant Gadsden Data: Plant Gadsden CCR

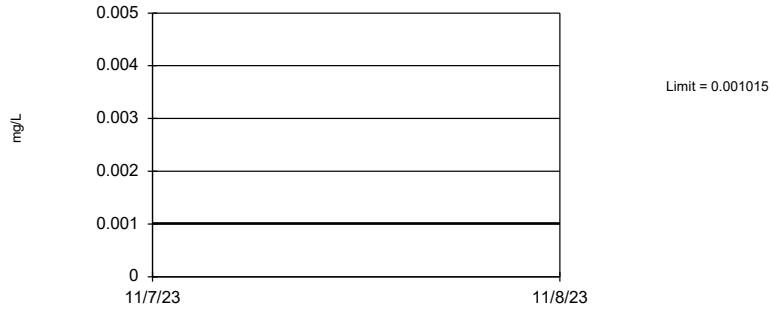
FIGURE I.

Upper Tolerance Limits Summary Table

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 6:59 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</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)	0.001015	n/a	n/a	n/a	52	n/a	n/a	98.08	n/a	n/a	0.06944	NP Inter(NDs)
Arsenic (mg/L)	0.00614	n/a	n/a	n/a	52	n/a	n/a	32.69	n/a	n/a	0.06944	NP Inter(normality)
Barium (mg/L)	0.312	n/a	n/a	n/a	52	n/a	n/a	0	n/a	n/a	0.06944	NP Inter(normality)
Beryllium (mg/L)	0.00157	n/a	n/a	n/a	52	n/a	n/a	46.15	n/a	n/a	0.06944	NP Inter(normality)
Cadmium (mg/L)	0.00108	n/a	n/a	n/a	52	n/a	n/a	30.77	n/a	n/a	0.06944	NP Inter(normality)
Chromium (mg/L)	0.00325	n/a	n/a	n/a	52	n/a	n/a	63.46	n/a	n/a	0.06944	NP Inter(NDs)
Cobalt (mg/L)	0.0563	n/a	n/a	n/a	52	n/a	n/a	25	n/a	n/a	0.06944	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	1.533	n/a	n/a	n/a	45	0.7259	0.386	0	None	No	0.05	Inter
Fluoride (mg/L)	0.23	n/a	n/a	n/a	55	n/a	n/a	41.82	n/a	n/a	0.05954	NP Inter(normality)
Lead (mg/L)	0.00258	n/a	n/a	n/a	52	n/a	n/a	44.23	n/a	n/a	0.06944	NP Inter(normality)
Lithium (mg/L)	0.02	n/a	n/a	n/a	52	n/a	n/a	75	n/a	n/a	0.06944	NP Inter(NDs)
Mercury (mg/L)	0.000775	n/a	n/a	n/a	51	n/a	n/a	72.55	n/a	n/a	0.0731	NP Inter(NDs)
Molybdenum (mg/L)	0.01015	n/a	n/a	n/a	52	n/a	n/a	76.92	n/a	n/a	0.06944	NP Inter(NDs)
Selenium (mg/L)	0.0134	n/a	n/a	n/a	52	n/a	n/a	50	n/a	n/a	0.06944	NP Inter(normality)
Thallium (mg/L)	0.000203	n/a	n/a	n/a	52	n/a	n/a	98.08	n/a	n/a	0.06944	NP Inter(NDs)

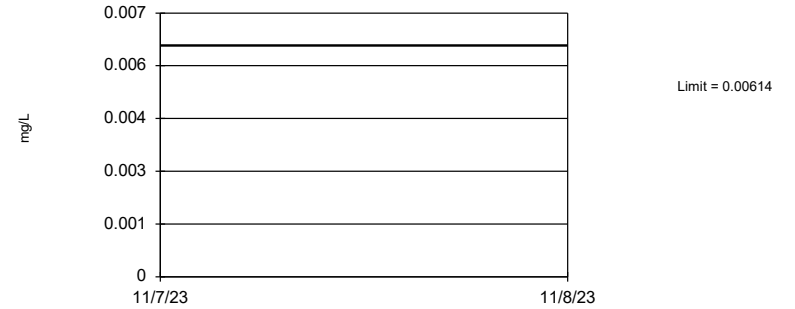
Tolerance Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 52 background values. 98.08% 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 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

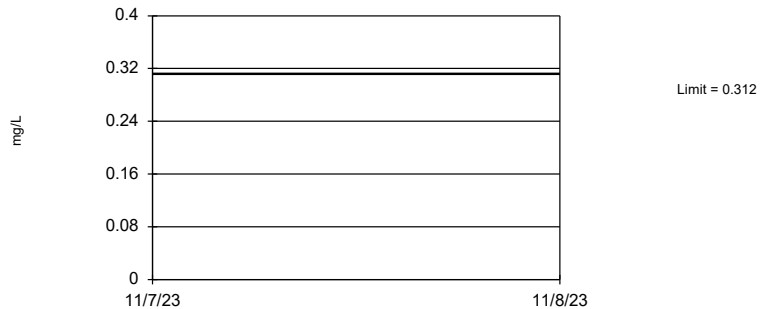
Tolerance Limit
Interwell Non-parametric



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. 32.69% 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: Arsenic Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

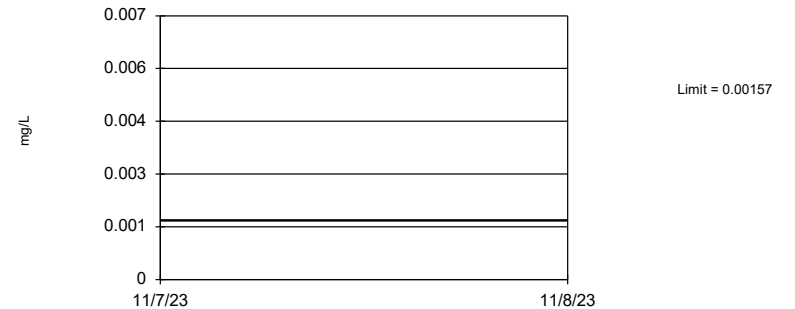
Tolerance Limit
Interwell Non-parametric



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 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

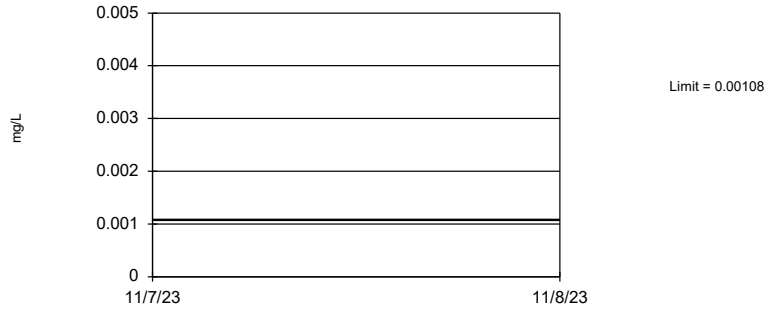
Tolerance Limit
Interwell Non-parametric



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. 46.15% 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: Beryllium Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

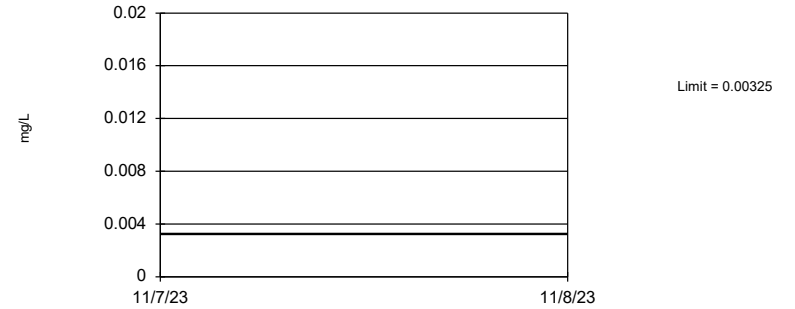
Tolerance Limit Interwell Non-parametric



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. 30.77% 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: Cadmium Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

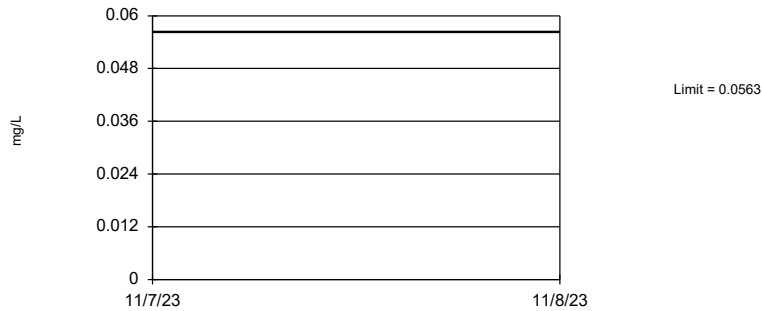
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 52 background values. 63.46% 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 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

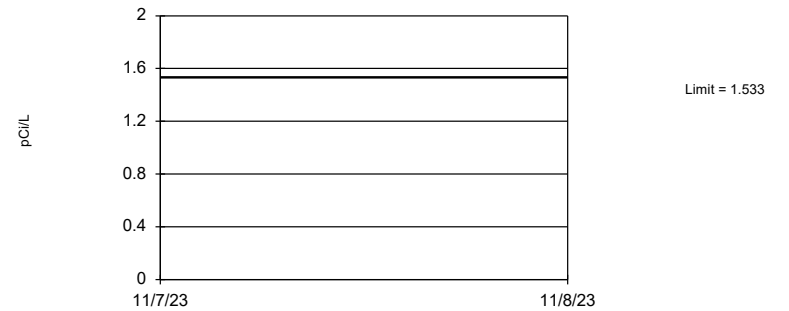
Tolerance Limit Interwell Non-parametric



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. 25% 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 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

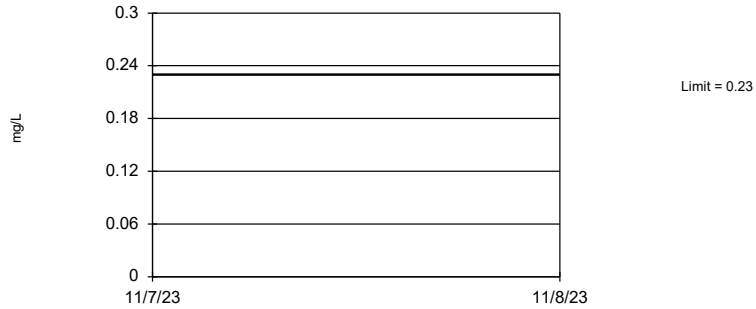
Tolerance Limit Interwell Parametric



95% coverage. Background Data Summary: Mean=0.7259, Std. Dev.=0.386, n=45. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9479, critical = 0.926. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

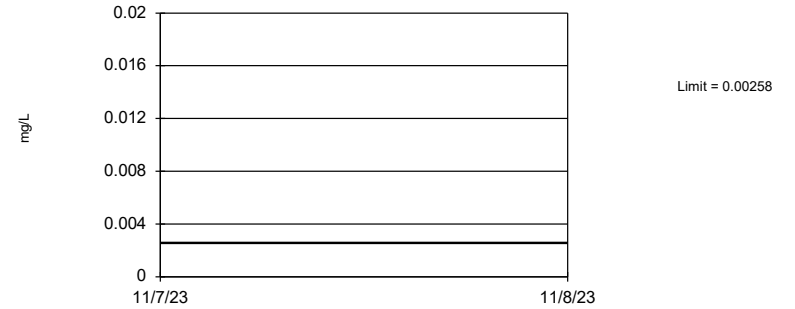
Tolerance Limit Interwell Non-parametric



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 55 background values. 41.82% NDs. 91.99% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05954.

Constituent: Fluoride Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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: Lead Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

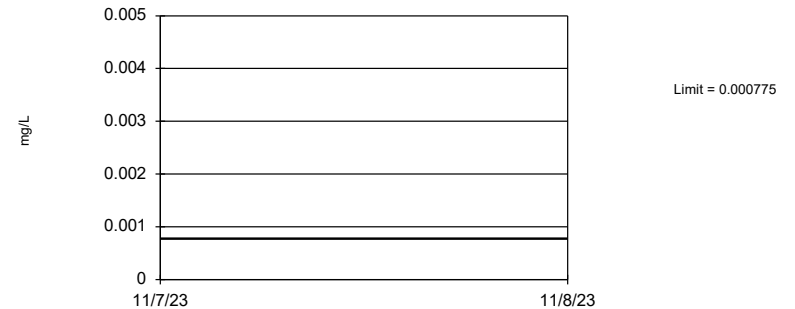
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 52 background values. 75% 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: Lithium Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

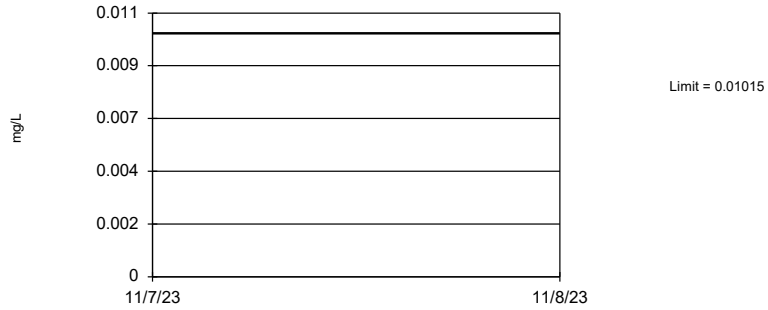
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 51 background values. 72.55% NDs. 91.21% coverage at alpha=0.01; 94.34% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.0731.

Constituent: Mercury Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

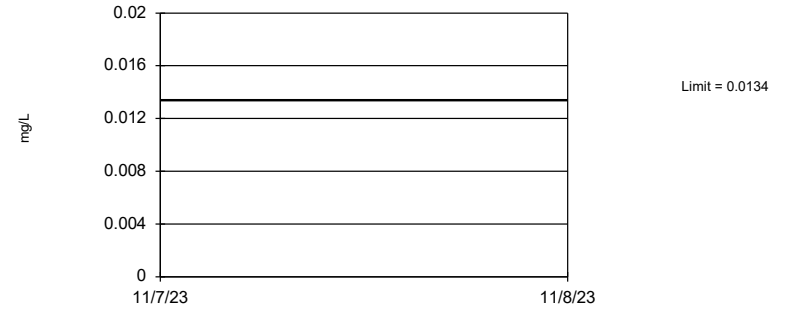
Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 52 background values. 76.92% 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: Molybdenum Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

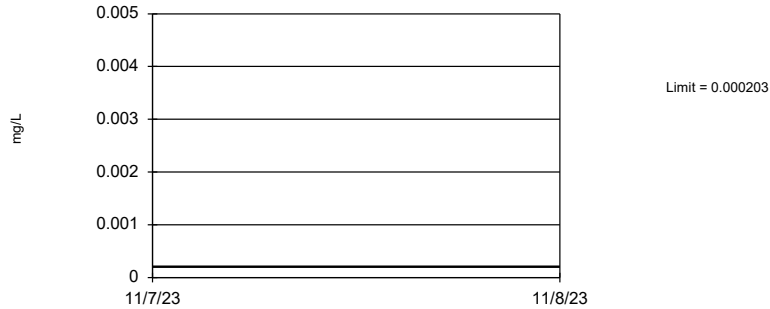
Tolerance Limit Interwell Non-parametric



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. 50% 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: Selenium Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Tolerance Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 52 background values. 98.08% 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: Thallium Analysis Run 1/2/2024 6:57 PM View: Appendix IV
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

FIGURE J.

GADSDEN ASH POND GWPS			
Analyte	Units	Background	GWPS
Antimony	mg/L	0.001015	0.006
Arsenic	mg/L	0.00614	0.01
Barium	mg/L	0.312	2
Beryllium	mg/L	0.00157	0.004
Cadmium	mg/L	0.00108	0.005
Chromium	mg/L	0.00325	0.1
Cobalt	mg/L	0.0563	0.0563
Combined Radium-226/228	pCi/L	1.533	5
Fluoride	mg/L	0.23	4
Lead	mg/L	0.00258	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.000775	0.002
Molybdenum	mg/L	0.01015	0.1
Selenium	mg/L	0.0134	0.05
Thallium	mg/L	0.000203	0.002

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during first semi-annual sampling event in 2023.

FIGURE K.

Confidence Intervals - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/3/2024, 9:12 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig. N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-2	0.6954	0.4714	0.01	Yes 8	0.5834	0.1057	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01478	0.01187	0.01	Yes 8	0.01333	0.001377	0	None	No	0.01	Param.

Confidence Intervals - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/3/2024, 9:12 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GSD-AP-MW-2	0.001015	0.000538	0.006	No 8	0.0009554	0.0001686	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-1	0.003706	0.001746	0.01	No 8	0.002726	0.0009245	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-10	0.00424	0.002738	0.01	No 8	0.003451	0.0009418	0	None	x^3	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-11	0.002882	0.002425	0.01	No 8	0.002655	0.0002399	0	None	x^3	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-12	0.000203	0.000102	0.01	No 8	0.0001796	0.00004347	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-2	0.6954	0.4714	0.01	Yes 8	0.5834	0.1057	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-3	0.0002392	0.0001434	0.01	No 8	0.0002043	0.00004934	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01478	0.01187	0.01	Yes 8	0.01333	0.001377	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-5	0.0001949	0.00007265	0.01	No 8	0.000166	0.0000622	37.5	Kaplan-Meier	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-6	0.000203	0.000151	0.01	No 8	0.0001965	0.00001838	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-7	0.000203	0.00007	0.01	No 8	0.0001741	0.00005428	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-8	0.0033	0.002855	0.01	No 8	0.003078	0.0002099	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-9	0.0025	0.00046	0.01	No 8	0.0008904	0.0006866	12.5	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-1	0.000203	0.000164	0.01	No 8	0.0001981	0.00001379	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-2	0.000203	0.0000826	0.01	No 8	0.0001591	0.0000569	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-5	0.000203	0.0000808	0.01	No 8	0.0001877	0.0000432	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-6	0.000203	0.00015	0.01	No 8	0.0001964	0.00001874	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	GSD-AP-MW-1	0.03383	0.02637	2	No 8	0.0301	0.003518	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-10	0.3586	0.2737	2	No 8	0.3161	0.04007	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-11	0.1843	0.1227	2	No 8	0.1535	0.0291	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-12	0.04522	0.03073	2	No 8	0.03798	0.00684	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-2	0.1172	0.06461	2	No 8	0.09093	0.02483	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-3	0.0358	0.02933	2	No 8	0.03256	0.00305	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-4	0.2525	0.1708	2	No 8	0.2116	0.03853	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-5	0.2434	0.2211	2	No 8	0.2323	0.0105	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-6	0.0793	0.06658	2	No 8	0.07294	0.005999	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-7	0.08131	0.05499	2	No 8	0.06815	0.01242	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-8	0.3132	0.2166	2	No 8	0.2649	0.04555	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-9	0.1846	0.1367	2	No 8	0.1606	0.0226	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-1	0.07784	0.05396	2	No 8	0.0659	0.01127	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-2	0.1352	0.06147	2	No 8	0.09834	0.03478	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-5	0.05486	0.04632	2	No 8	0.05059	0.00403	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-6	0.03095	0.02838	2	No 8	0.02966	0.001211	0	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-1	0.0002162	0.00009016	0.005	No 8	0.0001735	0.00006205	25	Kaplan-Meier	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-12	0.0004912	0.0003001	0.005	No 8	0.0003941	0.00009931	0	None	x^(1/3)	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-2	0.000203	0.0000688	0.005	No 8	0.0001862	0.00004745	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-3	0.0004051	0.0001446	0.005	No 8	0.0002748	0.0001229	12.5	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-7	0.000203	0.000097	0.005	No 8	0.000188	0.00003709	75	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-8	0.000203	0.00007	0.005	No 8	0.0001714	0.00005862	75	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-PZ-5	0.000203	0.00008	0.005	No 8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-1	0.001015	0.00023	0.1	No 8	0.0005616	0.0003781	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-10	0.001015	0.000207	0.1	No 8	0.0005663	0.0003742	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-11	0.0004714	0.0002936	0.1	No 8	0.000619	0.0003356	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	GSD-AP-MW-12	0.001015	0.000276	0.1	No 8	0.0006233	0.0003302	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-2	0.0004511	0.0002487	0.1	No 8	0.0005154	0.0003211	25	Kaplan-Meier	x^(1/3)	0.01	Param.
Chromium (mg/L)	GSD-AP-MW-3	0.001015	0.00023	0.1	No 8	0.0004835	0.0003369	25	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-4	0.001015	0.000206	0.1	No 8	0.0007293	0.0003958	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-5	0.001015	0.000266	0.1	No 8	0.0005988	0.0003554	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-6	0.001015	0.000222	0.1	No 8	0.0006403	0.000402	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-7	0.001015	0.000203	0.1	No 8	0.0005603	0.0003814	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-8	0.001015	0.00022	0.1	No 8	0.00073	0.0003939	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-9	0.001015	0.00021	0.1	No 8	0.000573	0.0003713	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-1	0.001015	0.00027	0.1	No 8	0.0006815	0.0003596	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-2	0.001015	0.00029	0.1	No 8	0.0007605	0.0003091	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-5	0.0004765	0.0002728	0.1	No 8	0.000534	0.0003105	25	Kaplan-Meier	x^(1/3)	0.01	Param.
Chromium (mg/L)	GSD-AP-PZ-6	0.0004496	0.0002442	0.1	No 8	0.0005968	0.0003575	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-1	0.01868	0.01274	0.056	No 8	0.01571	0.002802	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-10	0.00091	0.000203	0.056	No 8	0.0006573	0.0003344	25	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-11	0.005184	0.0001619	0.056	No 8	0.002565	0.00337	12.5	None	ln(x)	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-12	0.00698	0.003635	0.056	No 8	0.005308	0.001578	0	None	No	0.01	Param.

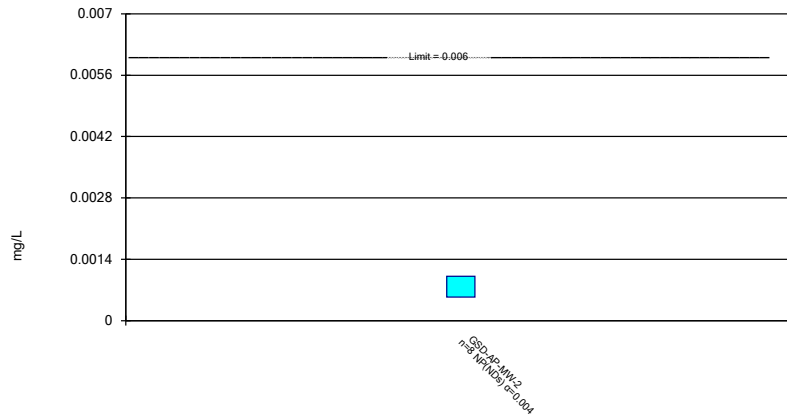
Confidence Intervals - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/3/2024, 9:12 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	GSD-AP-MW-2	0.03814	0.02363	0.056	No 8	0.03089	0.006844	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-3	0.01939	0.01201	0.056	No 8	0.0157	0.003479	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-4	0.03012	0.02413	0.056	No 8	0.02713	0.00283	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-5	0.001682	0.0004029	0.056	No 8	0.001042	0.0006034	12.5	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-6	0.001217	0.000722	0.056	No 8	0.0008958	0.0004334	25	Kaplan-Meier	x^3	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-7	0.00463	0.00016	0.056	No 8	0.0008705	0.001547	25	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-8	0.004074	0.002573	0.056	No 8	0.003324	0.0007082	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-9	0.001114	0.0005075	0.056	No 8	0.000789	0.0003806	25	Kaplan-Meier	x^2	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-1	0.00044	0.00014	0.056	No 8	0.0002248	0.00008972	75	Kaplan-Meier	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-2	0.006002	0.001893	0.056	No 8	0.003948	0.001939	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-5	0.0002501	0.00004842	0.056	No 8	0.000182	0.00009644	37.5	Kaplan-Meier	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-6	0.0001263	0.00007366	0.056	No 8	0.0001258	0.00005294	25	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-1	1.095	0.4578	5	No 8	0.7766	0.3008	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-10	2.479	0.2799	5	No 8	1.459	2.085	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-11	1.192	0.6482	5	No 8	0.9199	0.2564	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-12	1.195	0.4352	5	No 8	0.8028	0.3962	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-2	1.589	0.3287	5	No 8	0.9326	0.658	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-3	1.566	0.1448	5	No 8	0.8246	1.006	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-4	1.563	0.1932	5	No 8	0.8784	0.6464	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-5	1.277	0.5462	5	No 8	0.9114	0.3445	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-6	0.9509	0.1016	5	No 8	0.5263	0.4007	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-7	0.9876	0.4473	5	No 8	0.7103	0.2997	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-8	0.728	0.3678	5	No 8	0.5479	0.1699	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-9	0.8998	0.2314	5	No 8	0.5656	0.3153	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-1	1.368	-0.1106	5	No 8	0.6285	0.6973	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-2	0.8987	0.1948	5	No 8	0.5467	0.3321	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-5	1.058	0.3916	5	No 8	0.7246	0.3142	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-6	0.9926	0.08184	5	No 8	0.5093	0.4618	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-1	0.125	0.0601	4	No 8	0.1091	0.02947	75	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-10	0.201	0.0804	4	No 8	0.1074	0.03926	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-11	0.1114	0.06722	4	No 8	0.09983	0.02595	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-12	0.125	0.0795	4	No 8	0.1193	0.01609	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-2	0.2787	0.2012	4	No 8	0.2395	0.03648	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-3	0.125	0.0714	4	No 8	0.1183	0.01895	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-4	0.2631	0.1809	4	No 8	0.222	0.0388	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-5	0.122	0.0607	4	No 8	0.07445	0.02058	12.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-7	0.128	0.0627	4	No 8	0.1002	0.02881	37.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-8	0.1147	0.06331	4	No 8	0.089	0.02423	12.5	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-9	0.1403	0.1107	4	No 8	0.1255	0.01399	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-1	0.125	0.0725	4	No 8	0.109	0.02113	50	None	No	0.004	NP (normality)
Lead (mg/L)	GSD-AP-MW-2	0.000203	0.00009	0.015	No 8	0.0001889	0.00003995	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-2	0.0002533	0.0001183	0.015	No 8	0.0002038	0.00008326	37.5	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	GSD-AP-PZ-5	0.000203	0.000078	0.015	No 8	0.0001783	0.00004789	75	Kaplan-Meier	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-6	0.000203	0.0000835	0.015	No 8	0.0001673	0.00005053	62.5	Kaplan-Meier	No	0.004	NP (NDs)
Lithium (mg/L)	GSD-AP-MW-2	0.03795	0.02268	0.04	No 8	0.03031	0.007203	0	None	No	0.01	Param.
Mercury (mg/L)	GSD-AP-PZ-6	0.00286	0.0005	0.002	No 8	0.000795	0.0008344	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-1	0.01015	0.000198	0.1	No 8	0.008906	0.003519	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-10	0.01015	0.000204	0.1	No 8	0.00527	0.005217	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-11	0.01015	0.00012	0.1	No 8	0.006393	0.005185	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-2	0.0269	0.0164	0.1	No 8	0.02084	0.002931	0	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-4	0.01015	0.00106	0.1	No 8	0.005646	0.004815	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-5	0.01015	0.00011	0.1	No 8	0.006423	0.005145	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-7	0.01015	0.0001	0.1	No 8	0.007646	0.004636	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-8	0.01015	0.00032	0.1	No 8	0.005262	0.005225	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-9	0.01015	0.00018	0.1	No 8	0.005196	0.005296	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-PZ-1	0.01015	0.00007	0.1	No 8	0.007634	0.004659	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-2	0.01015	0.00022	0.1	No 8	0.007675	0.004583	75	None	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-1	0.000203	0.000101	0.002	No 8	0.0001698	0.00004655	62.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-2	0.0004049	0.0003096	0.002	No 8	0.0003573	0.00004492	0	None	No	0.01	Param.
Thallium (mg/L)	GSD-AP-MW-3	0.000203	0.000104	0.002	No 8	0.0001375	0.00004193	25	None	No	0.004	NP (normality)

Non-Parametric Confidence Interval

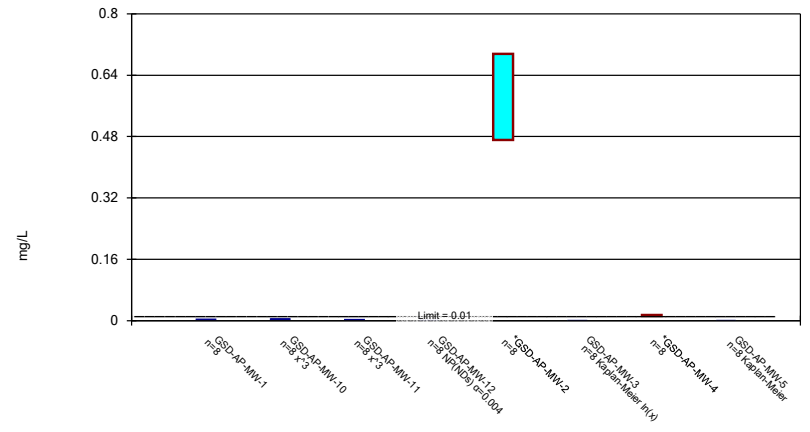
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

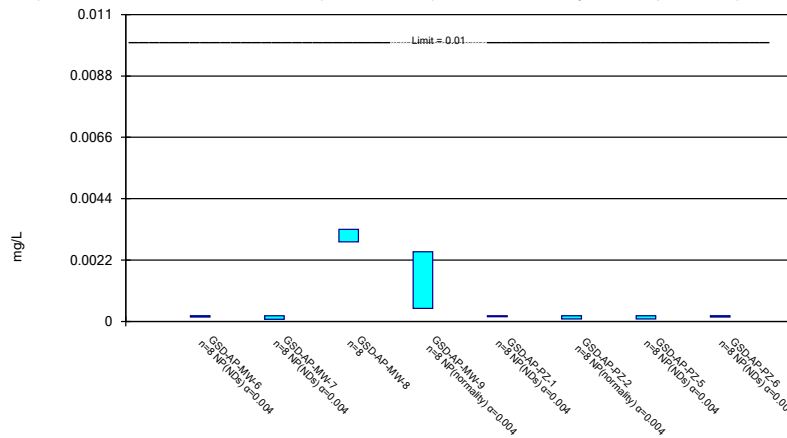
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

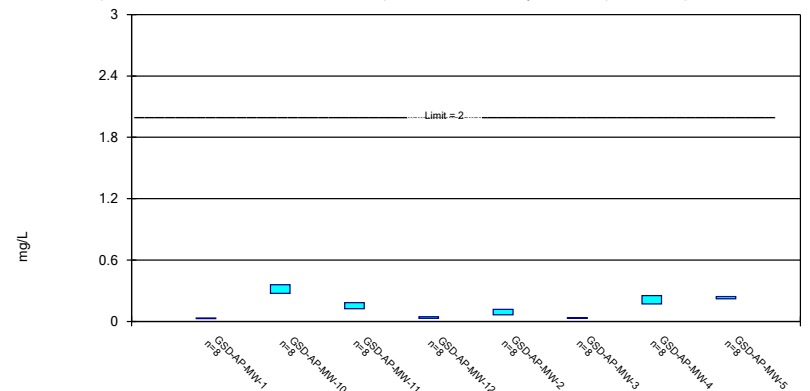
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Constituent: Arsenic Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric Confidence Interval

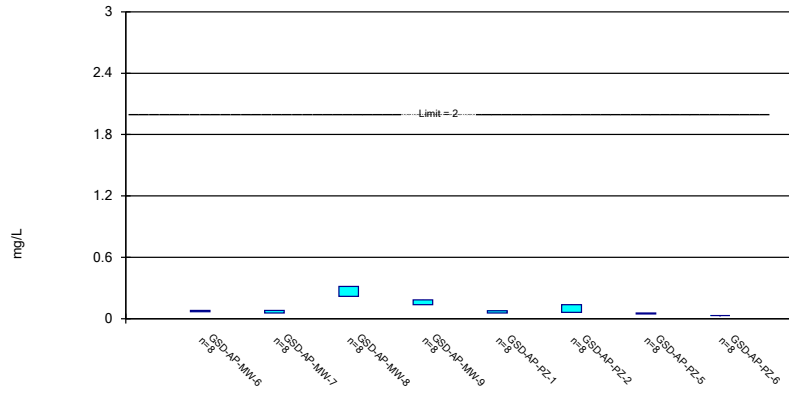
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Constituent: Barium Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric Confidence Interval

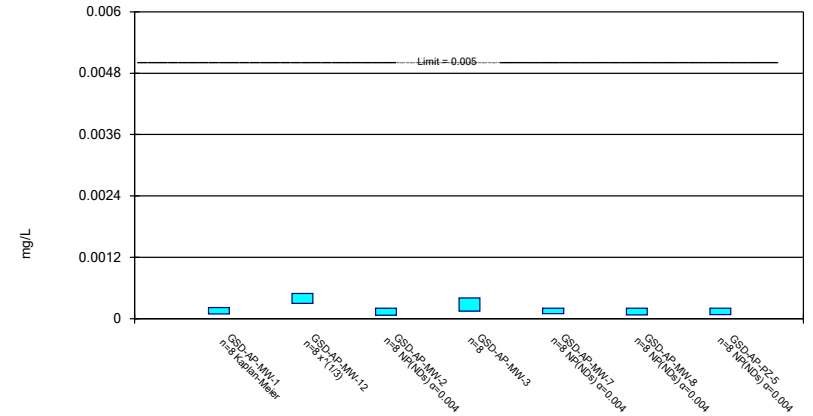
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Constituent: Barium Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

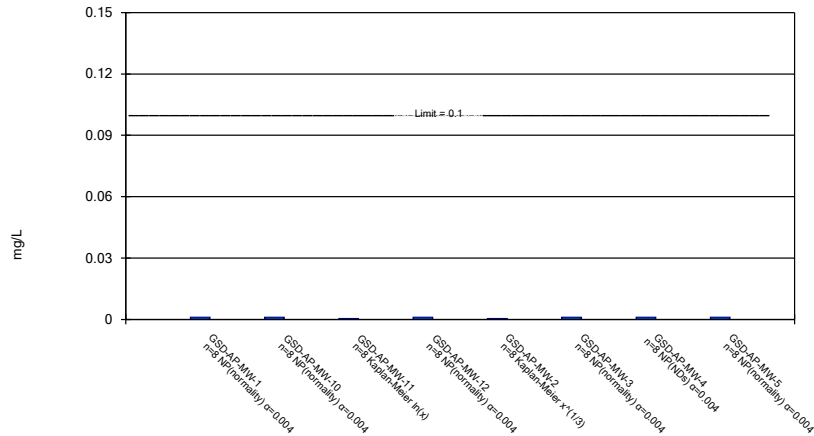
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Constituent: Cadmium Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

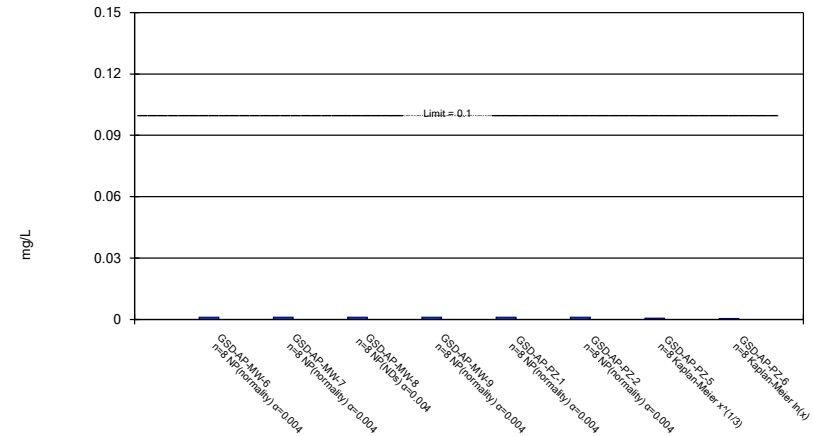
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Constituent: Chromium Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

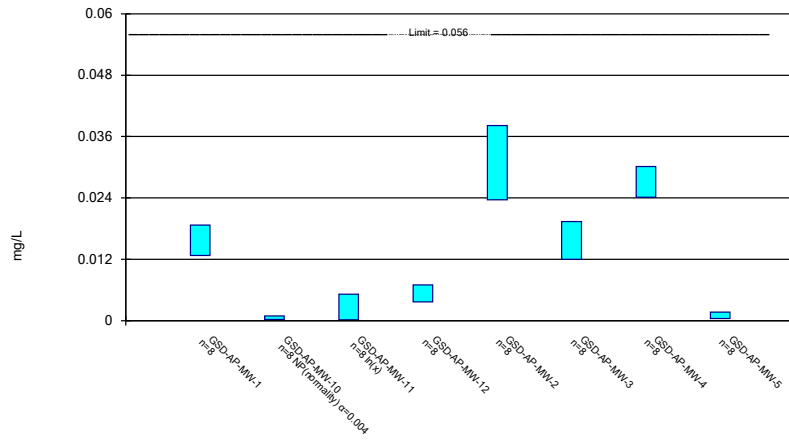
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Constituent: Chromium Analysis Run 1/3/2024 9:10 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

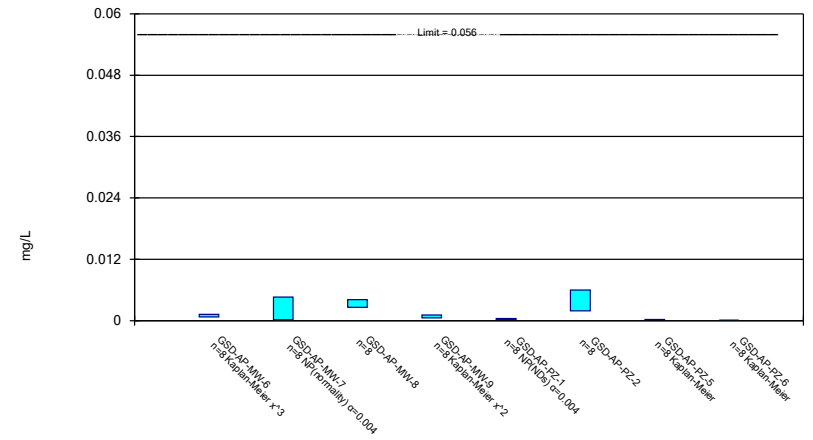
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Constituent: Cobalt Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

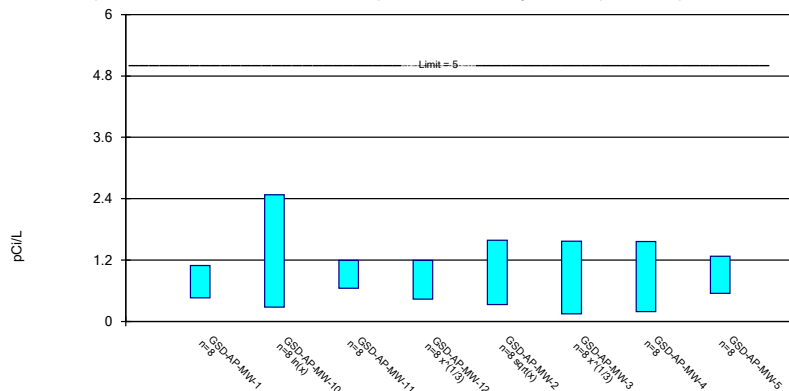
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Constituent: Cobalt Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric Confidence Interval

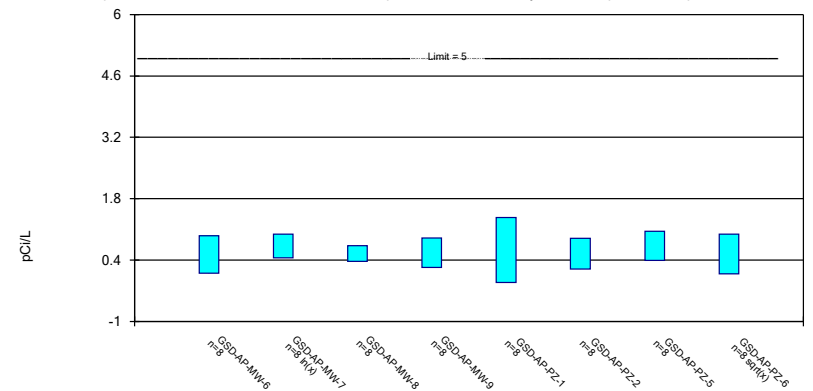
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Constituent: Combined Radium 226 + 228 Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric Confidence Interval

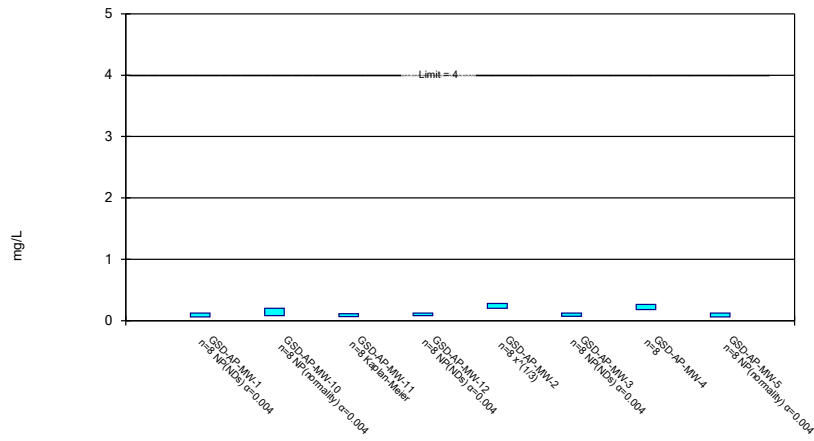
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Constituent: Combined Radium 226 + 228 Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

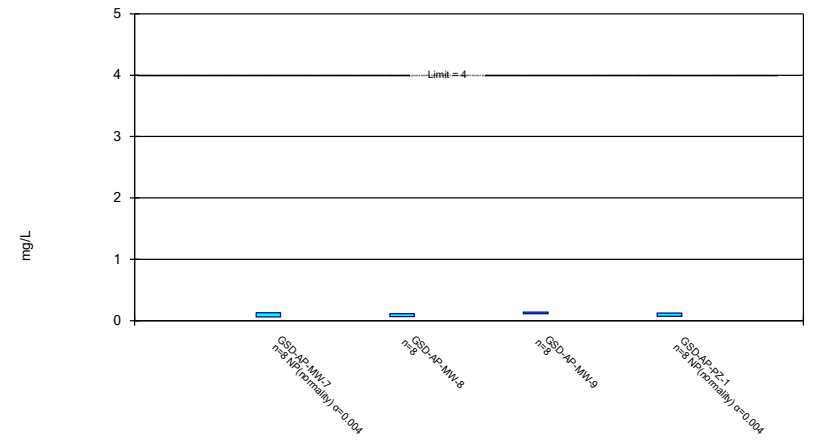
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Constituent: Fluoride Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

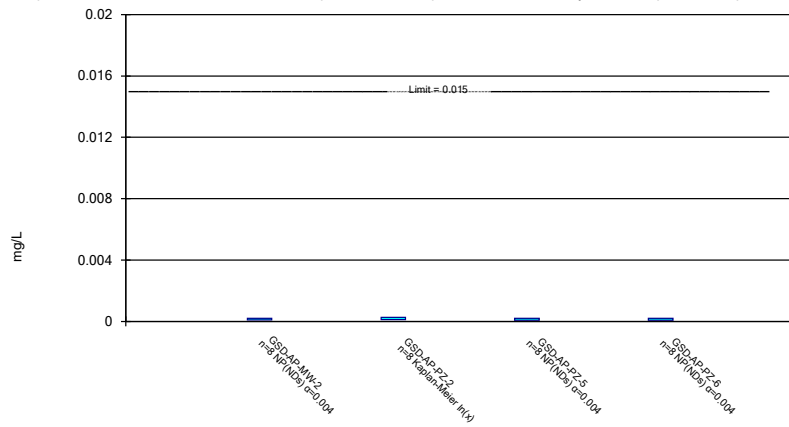
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Constituent: Fluoride Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

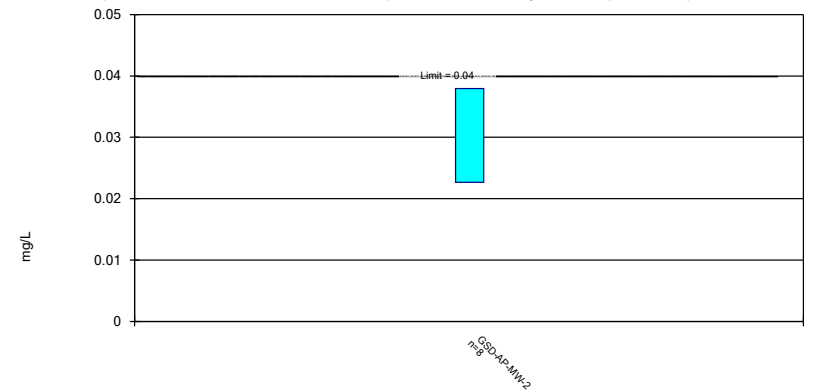
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric Confidence Interval

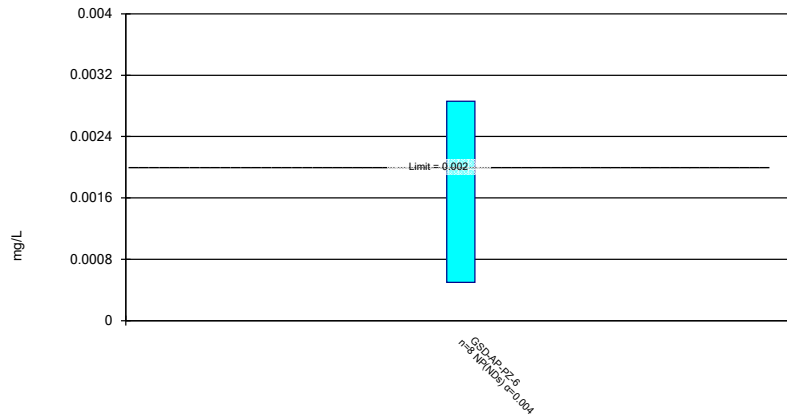
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Non-Parametric Confidence Interval

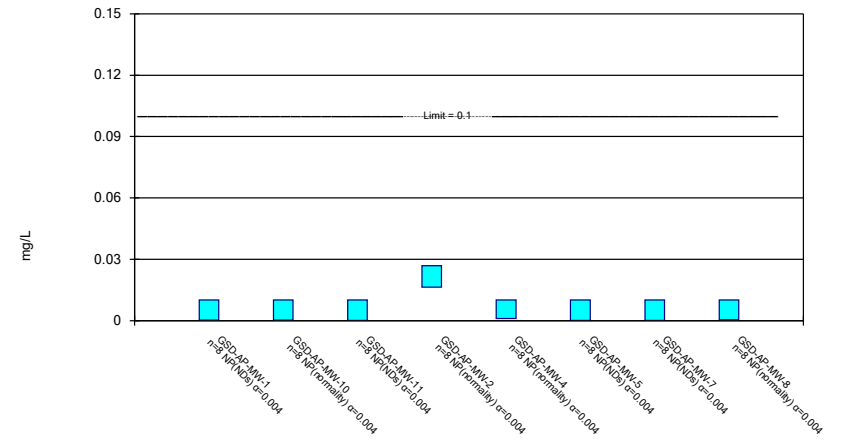
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Non-Parametric Confidence Interval

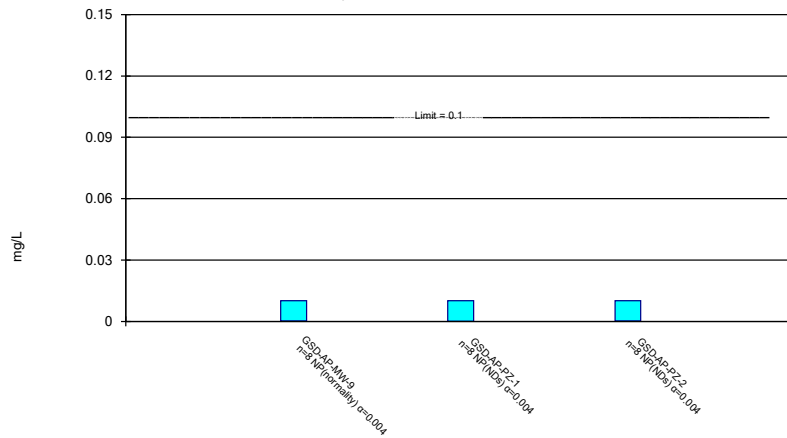
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Non-Parametric Confidence Interval

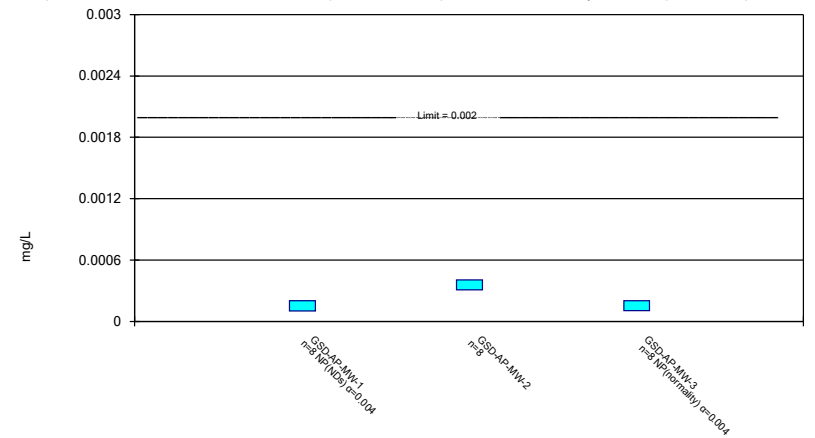
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 1/3/2024 9:11 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

GSD-AP-MW-2

4/15/2020	<0.001015
8/25/2020	<0.001015
3/24/2021	<0.001015
10/11/2021	<0.001015
5/16/2022	<0.001015
10/25/2022	0.000538 (J)
6/6/2023	<0.001015
11/1/2023	<0.001015
Mean	0.0009554
Std. Dev.	0.0001686
Upper Lim.	0.001015
Lower Lim.	0.000538

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-5
4/13/2020						<0.000203		<0.000203
4/14/2020			0.00286 (J)	<0.000203				
4/15/2020	0.00309 (J)	0.00236 (J)			0.709		0.0121	
8/24/2020								<0.000203
8/25/2020	0.00435 (J)				0.727			
8/26/2020		0.00422 (J)	0.00246 (J)	<0.000203		<0.000203	0.0133	
3/16/2021	0.0029							8.17E-05 (J)
3/22/2021						0.0002 (J)		
3/23/2021		0.00163	0.00275	<0.000203				
3/24/2021					0.489		0.011	
10/5/2021	0.00356			<0.000203		0.00021	0.0147	0.00013 (J)
10/11/2021		0.0037			0.424			
10/12/2021			0.00272					
5/9/2022								8E-05 (J)
5/10/2022	0.00221	0.00361		<0.000203		0.00016 (J)		
5/16/2022					0.569		0.0132	
5/17/2022			0.00281					
10/25/2022					0.555			
10/26/2022	0.00223	0.00414	0.00215	0.000102 (J)		0.000311	0.0145	0.00025
6/5/2023	0.00181					<0.000203		
6/6/2023					0.652		0.0128	
6/7/2023								<0.000203
6/13/2023		0.00397	0.00283	<0.000203				
11/1/2023					0.542	0.000144 (J)		
11/7/2023	0.00166	0.00398	0.00266	0.000117 (J)			0.015	0.000177 (J)
Mean	0.002726	0.003451	0.002655	0.0001796	0.5834	0.0002043	0.01333	0.000166
Std. Dev.	0.0009245	0.0009418	0.0002399	4.347E-05	0.1057	4.934E-05	0.001377	6.22E-05
Upper Lim.	0.003706	0.00424	0.002882	0.000203	0.6954	0.0002392	0.01478	0.0001949
Lower Lim.	0.001746	0.002738	0.002425	0.000102	0.4714	0.0001434	0.01187	7.265E-05

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
4/13/2020	<0.000203				<0.000203	<0.000203		
4/14/2020			0.00295 (J)	0.00118 (J)				
4/15/2020		<0.000203					<0.000203	<0.000203
8/24/2020					<0.000203	<0.000203	<0.000203	<0.000203
8/26/2020	<0.000203	<0.000203	0.00304 (J)	<0.005				
3/16/2021							8.08E-05 (J)	<0.000203
3/17/2021	<0.000203					8.26E-05 (J)		
3/23/2021		<0.000203	0.00282	0.00063				
3/24/2021					<0.000203			
10/5/2021	<0.000203	7E-05 (J)			<0.000203	9E-05 (J)		
10/12/2021			0.00287	0.00064			<0.000203	<0.000203
5/9/2022					<0.000203	0.0001 (J)		
5/10/2022	<0.000203	<0.000203					<0.000203	<0.000203
5/11/2022			0.00323	0.00055				
10/26/2022	0.000151 (J)	0.000105 (J)	0.0033	0.000618	0.000164 (J)	0.000188 (J)	<0.000203	0.00015 (J)
6/5/2023	<0.000203					<0.000203		
6/7/2023			0.00301		<0.000203			
6/12/2023				0.000545				
6/13/2023		<0.000203					<0.000203	<0.000203
11/7/2023	<0.000203	<0.000203	0.0034	0.00046	<0.000203	<0.000203	<0.000203	<0.000203
Mean	0.0001965	0.0001741	0.003078	0.0008904	0.0001981	0.0001591	0.0001877	0.0001964
Std. Dev.	1.838E-05	5.428E-05	0.0002099	0.0006866	1.379E-05	5.69E-05	4.32E-05	1.874E-05
Upper Lim.	0.000203	0.000203	0.0033	0.0025	0.000203	0.000203	0.000203	0.000203
Lower Lim.	0.000151	7E-05	0.002855	0.00046	0.000164	8.26E-05	8.08E-05	0.00015

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-5
4/13/2020						0.0349		0.241
4/14/2020			0.168	0.0279				
4/15/2020	0.0329	0.35			0.0607		0.159	
8/24/2020								0.238
8/25/2020	0.0358				0.0812			
8/26/2020		0.322	0.165	0.0503		0.0363	0.181	
3/16/2021	0.0331							0.217
3/22/2021						0.0354		
3/23/2021		0.395	0.169	0.0315				
3/24/2021					0.0676		0.171	
10/5/2021	0.0304			0.0417		0.0344	0.202	0.221
10/11/2021		0.292			0.0807			
10/12/2021			0.17					
5/9/2022								0.236
5/10/2022	0.0275	0.318		0.0377		0.0287		
5/16/2022					0.0974		0.23	
5/17/2022			0.195					
10/25/2022					0.0888			
10/26/2022	0.028	0.278	0.117	0.0376		0.0306	0.239	0.231
6/5/2023	0.0272					0.0288		
6/6/2023					0.115		0.254	
6/7/2023								0.226
6/13/2023		0.294	0.126	0.0356				
11/1/2023					0.136	0.0314		
11/7/2023	0.0259	0.28	0.118	0.0415			0.257	0.248
Mean	0.0301	0.3161	0.1535	0.03798	0.09093	0.03256	0.2116	0.2323
Std. Dev.	0.003518	0.04007	0.0291	0.00684	0.02483	0.00305	0.03853	0.0105
Upper Lim.	0.03383	0.3586	0.1843	0.04522	0.1172	0.0358	0.2525	0.2434
Lower Lim.	0.02637	0.2737	0.1227	0.03073	0.06461	0.02933	0.1708	0.2211

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
4/13/2020	0.0635				0.0529	0.0832		
4/14/2020			0.262	0.186				
4/15/2020		0.0653					0.0535	0.0296
8/24/2020					0.0733	0.132	0.0565	0.031
8/26/2020	0.0771	0.0845	0.235	0.202				
3/16/2021							0.0553	0.0293
3/17/2021	0.0656					0.045		
3/23/2021		0.0602	0.249	0.157				
3/24/2021					0.0525			
10/5/2021	0.0741	0.0716			0.0811	0.118		
10/12/2021			0.203	0.147			0.0494	0.0303
5/9/2022					0.057	0.0593		
5/10/2022	0.0762	0.0527					0.0497	0.0309
5/11/2022			0.32	0.16				
10/26/2022	0.0702	0.0852	0.224	0.154	0.0682	0.133	0.0474	0.0282
6/5/2023	0.0809					0.0862		
6/7/2023			0.303		0.0635			
6/12/2023				0.146				
6/13/2023		0.0544					0.0456	0.0277
11/7/2023	0.0759	0.0713	0.323	0.133	0.0787	0.13	0.0473	0.0303
Mean	0.07294	0.06815	0.2649	0.1606	0.0659	0.09834	0.05059	0.02966
Std. Dev.	0.005999	0.01242	0.04555	0.0226	0.01127	0.03478	0.00403	0.001211
Upper Lim.	0.0793	0.08131	0.3132	0.1846	0.07784	0.1352	0.05486	0.03095
Lower Lim.	0.06658	0.05499	0.2166	0.1367	0.05396	0.06147	0.04632	0.02838

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-PZ-5
4/13/2020				0.000438 (J)			
4/14/2020		0.000425 (J)				<0.000203	
4/15/2020	<0.000203		<0.000203		<0.000203		<0.000203
8/24/2020							<0.000203
8/25/2020	<0.000203		<0.000203				
8/26/2020		0.000618 (J)		<0.000203	<0.000203	<0.000203	
3/16/2021	0.000102 (J)						<0.000203
3/22/2021				0.00039			
3/23/2021		0.000405			9.7E-05 (J)	8.32E-05 (J)	
3/24/2021			6.88E-05 (J)				
10/5/2021	0.0001 (J)	0.00037		0.00021	<0.000203		
10/11/2021			<0.000203				
10/12/2021						<0.000203	8E-05 (J)
5/10/2022	0.00022	0.00033		0.00035	<0.000203		<0.000203
5/11/2022						7E-05 (J)	
5/16/2022			<0.000203				
10/25/2022			<0.000203				
10/26/2022	0.00013 (J)	0.000299		0.000147 (J)	<0.000203	<0.000203	<0.000203
6/5/2023	0.000275			0.00035			
6/6/2023			<0.000203				
6/7/2023						<0.000203	
6/13/2023		0.000334			0.000189 (J)		<0.000203
11/1/2023			<0.000203	0.000212			
11/7/2023	0.000155 (J)	0.000372			<0.000203	<0.000203	<0.000203
Mean	0.0001735	0.0003941	0.0001862	0.0002748	0.000188	0.0001714	0.0001876
Std. Dev.	6.205E-05	9.931E-05	4.745E-05	0.0001229	3.709E-05	5.862E-05	4.349E-05
Upper Lim.	0.0002162	0.0004912	0.000203	0.0004051	0.000203	0.000203	0.000203
Lower Lim.	9.016E-05	0.0003001	6.88E-05	0.0001446	9.7E-05	7E-05	8E-05

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-5
4/13/2020						<0.001015		<0.001015
4/14/2020			<0.001015	<0.001015				
4/15/2020	<0.001015	<0.001015			<0.001015		<0.001015	
8/24/2020								<0.001015
8/25/2020	<0.001015				<0.001015			
8/26/2020		<0.001015	<0.001015	<0.001015		<0.001015	<0.001015	
3/16/2021	0.000376 (J)							0.000397 (J)
3/22/2021						0.000293 (J)		
3/23/2021		0.00035 (J)	0.000513 (J)	0.000431 (J)				
3/24/2021					0.00047 (J)		0.000323 (J)	
10/5/2021	0.00023 (J)			0.00034 (J)		0.00023 (J)	<0.001015	0.00028 (J)
10/11/2021		0.00028 (J)			0.00048 (J)			
10/12/2021			0.00027 (J)					
5/9/2022								0.00053 (J)
5/10/2022	0.00025 (J)	0.0003 (J)		0.00041 (J)		0.00029 (J)		
5/16/2022					0.00034 (J)		0.00023 (J)	
5/17/2022			0.00038 (J)					
10/25/2022					0.00022 (J)			
10/26/2022	0.000321 (J)	0.000207 (J)	0.000318 (J)	0.000276 (J)		0.000276 (J)	<0.001015	<0.001015
6/5/2023	0.000271 (J)					0.000263 (J)		
6/6/2023					0.000313 (J)		0.000206 (J)	
6/7/2023								0.000272 (J)
6/13/2023		0.000348 (J)	0.000426 (J)	0.000484 (J)				
11/1/2023					0.00027 (J)	0.000486 (J)		
11/7/2023	<0.001015	<0.001015	<0.001015	<0.001015			<0.001015	0.000266 (J)
Mean	0.0005616	0.0005663	0.000619	0.0006233	0.0005154	0.0004835	0.0007293	0.0005988
Std. Dev.	0.0003781	0.0003742	0.0003356	0.0003302	0.0003211	0.0003369	0.0003958	0.0003554
Upper Lim.	0.001015	0.001015	0.0004714	0.001015	0.0004511	0.001015	0.001015	0.001015
Lower Lim.	0.00023	0.000207	0.0002936	0.000276	0.0002487	0.00023	0.000206	0.000266

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
4/13/2020	<0.001015				<0.001015	<0.001015		
4/14/2020			<0.001015	<0.001015				
4/15/2020		<0.001015					<0.001015	<0.001015
8/24/2020					<0.001015	<0.001015	<0.001015	<0.001015
8/26/2020	<0.001015	<0.001015	<0.001015	<0.001015				
3/16/2021							0.000534 (J)	0.000534 (J)
3/17/2021	0.000338 (J)					0.000764 (J)		
3/23/2021		0.000406 (J)	0.0003 (J)	0.000422 (J)				
3/24/2021					0.000442 (J)			
10/5/2021	0.00025 (J)	0.00025 (J)			0.00035 (J)	0.00035 (J)		
10/12/2021			<0.001015	0.00031 (J)			0.00034 (J)	0.00031 (J)
5/9/2022					0.00027 (J)	0.00062 (J)		
5/10/2022	<0.001015	0.00025 (J)					0.00037 (J)	0.00037 (J)
5/11/2022			0.00022 (J)	0.00021 (J)				
10/26/2022	0.000222 (J)	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	0.000251 (J)	0.000224 (J)
6/5/2023	0.000252 (J)					0.00029 (J)		
6/7/2023			0.000245 (J)		0.00033 (J)			
6/12/2023				0.000345 (J)				
6/13/2023		0.000328 (J)					0.000463 (J)	0.000291 (J)
11/7/2023	<0.001015	0.000203 (J)	<0.001015	0.000252 (J)	<0.001015	<0.001015	0.000284 (J)	<0.001015
Mean	0.0006403	0.0005603	0.00073	0.000573	0.0006815	0.0007605	0.000534	0.0005968
Std. Dev.	0.000402	0.0003814	0.0003939	0.0003713	0.0003596	0.0003091	0.0003105	0.0003575
Upper Lim.	0.001015	0.001015	0.001015	0.001015	0.001015	0.001015	0.0004765	0.0004496
Lower Lim.	0.000222	0.000203	0.00022	0.00021	0.00027	0.00029	0.0002728	0.0002442

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-5
4/13/2020						0.0209		<0.000203
4/14/2020			<0.000203	0.0035 (J)				
4/15/2020	0.0178	<0.000203			0.0324		0.0252	
8/24/2020								0.00222 (J)
8/25/2020	0.0193				0.0298			
8/26/2020		<0.000203	0.00599	0.00547		0.0191	0.0231	
3/16/2021	0.0184							0.00136
3/22/2021						0.0183		
3/23/2021		0.00037	0.000388	0.00378				
3/24/2021					0.0316		0.0268	
10/5/2021	0.0169			0.00448		0.016	0.0238	0.00116
10/11/2021		0.00089				0.0165		
10/12/2021			0.00027					
5/9/2022								0.00101
5/10/2022	0.0136	0.00091		0.0049		0.0147		
5/16/2022					0.0366		0.0289	
5/17/2022			0.00044					
10/25/2022					0.0302			
10/26/2022	0.0152	0.000907	0.009	0.00603		0.0132	0.0289	0.000936
6/5/2023	0.0118					0.0118		
6/6/2023					0.04		0.0297	
6/7/2023								0.000715
6/13/2023		0.000866	0.000517	0.0058				
11/1/2023					0.03	0.0116		
11/7/2023	0.0127	0.000909	0.00381	0.0085			0.0306	0.000837
Mean	0.01571	0.0006573	0.002565	0.005308	0.03089	0.0157	0.02713	0.001042
Std. Dev.	0.002802	0.0003344	0.00337	0.001578	0.006844	0.003479	0.00283	0.0006034
Upper Lim.	0.01868	0.00091	0.005184	0.00698	0.03814	0.01939	0.03012	0.001682
Lower Lim.	0.01274	0.000203	0.0001619	0.003635	0.02363	0.01201	0.02413	0.0004029

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
4/13/2020	<0.000203				<0.000203	0.00489 (J)		
4/14/2020			0.00385 (J)	<0.000203				
4/15/2020		<0.000203					<0.000203	<0.000203
8/24/2020					<0.000203	0.00237 (J)	<0.000203	<0.000203
8/26/2020	<0.000203	<0.000203	0.00388 (J)	<0.000203				
3/16/2021							0.000384	0.000108 (J)
3/17/2021	0.00102					0.00616		
3/23/2021		0.00102	0.003	0.00103				
3/24/2021					<0.000203			
10/5/2021	0.00104	0.00018 (J)			0.00044	0.00287		
10/12/2021			0.00298	0.00113			8E-05 (J)	0.00014 (J)
5/9/2022					0.00014 (J)	0.00691		
5/10/2022	0.00114	0.0004					0.00015 (J)	0.00012 (J)
5/11/2022			0.00461	0.00091				
10/26/2022	0.0012	0.00016 (J)	0.00266	0.000812	<0.000203	0.0021	<0.000203	7.8E-05 (J)
6/5/2023	0.00113					0.00444		
6/7/2023			0.00299		<0.000203			
6/12/2023				0.000874				
6/13/2023		0.00463					0.000155 (J)	8.4E-05 (J)
11/7/2023	0.00123	0.000168 (J)	0.00262	0.00115	<0.000203	0.00184	7.8E-05 (J)	7E-05 (J)
Mean	0.0008958	0.0008705	0.003324	0.000789	0.0002248	0.003948	0.000182	0.0001258
Std. Dev.	0.0004334	0.001547	0.0007082	0.0003806	8.972E-05	0.001939	9.644E-05	5.294E-05
Upper Lim.	0.001217	0.00463	0.004074	0.001114	0.00044	0.006002	0.0002501	0.0001263
Lower Lim.	0.000722	0.00016	0.002573	0.0005075	0.00014	0.001893	4.842E-05	7.366E-05

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-5
4/13/2020						0.942 (U)		1.19
4/14/2020			0.922 (U)	0.643 (U)				
4/15/2020	0.538 (U)	0.64 (U)			0.182 (U)		-0.0841 (U)	
8/24/2020								0.482 (U)
8/25/2020	0.502 (U)				0.43 (U)			
8/26/2020		0.221 (U)	1.28	1.31		0.177 (U)	0.26 (U)	
3/16/2021	0.722 (U)							0.709 (U)
3/22/2021						0.263 (U)		
3/23/2021		0.83 (U)	0.592 (U)	0.565 (U)				
3/24/2021					0.769 (U)		0.664 (U)	
10/5/2021	1.21			1.48		3.21	1.75	1.44
10/11/2021		6.52			2.38			
10/12/2021			1.02 (U)					
5/9/2022								1.16
5/10/2022	0.761 (U)	0.421 (U)		0.531 (U)		0.189 (U)		
5/16/2022					1.06		0.978	
5/17/2022			1.01 (U)					
10/25/2022					0.683 (U)			
10/26/2022	0.38 (U)	0.42 (U)	0.505 (U)	0.446 (U)		0.551 (U)	0.609 (U)	0.643 (U)
6/5/2023	1.09 (U)					0.422 (U)		
6/6/2023					0.907 (U)		1.17 (U)	
6/7/2023								1.06 (U)
6/13/2023		1.38	1.1 (U)	0.515 (U)				
11/1/2023					1.05 (U)	0.843 (U)		
11/7/2023	1.01 (U)	1.24	0.93 (U)	0.932 (U)			1.68	0.607 (U)
Mean	0.7766	1.459	0.9199	0.8028	0.9326	0.8246	0.8784	0.9114
Std. Dev.	0.3008	2.085	0.2564	0.3962	0.658	1.006	0.6464	0.3445
Upper Lim.	1.095	2.479	1.192	1.195	1.589	1.566	1.563	1.277
Lower Lim.	0.4578	0.2799	0.6482	0.4352	0.3287	0.1448	0.1932	0.5462

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
4/13/2020	0.0901 (U)				-0.129 (U)	0.472 (U)		
4/14/2020			0.641 (U)	0.119 (U)				
4/15/2020		0.526 (U)					0.432 (U)	0.000738 (U)
8/24/2020					0.177 (U)	-0.00312 (U)	0.454 (U)	0.404 (U)
8/26/2020	0.416 (U)	0.691 (U)	0.339 (U)	1.18				
3/16/2021							0.32 (U)	0.589 (U)
3/17/2021	0.539 (U)					0.756 (U)		
3/23/2021		0.45 (U)	0.662 (U)	0.694 (U)				
3/24/2021					0.245 (U)			
10/5/2021	1.36	1.27			2.07	1.13		
10/12/2021			0.291 (U)	0.311 (U)			0.963 (U)	1.57
5/9/2022					0.784 (U)	0.352 (U)		
5/10/2022	0.0979 (U)	0.599 (U)					0.659 (U)	0.468 (U)
5/11/2022			0.475 (U)	0.605 (U)				
10/26/2022	0.432 (U)	0.559 (U)	0.528 (U)	0.572 (U)	0.561 (U)	0.391 (U)	1.08	0.283 (U)
6/5/2023	0.704 (U)					0.662 (U)		
6/7/2023			0.682 (U)		1.09 (U)			
6/12/2023				0.395 (U)				
6/13/2023		1.08					0.739 (U)	0.33 (U)
11/7/2023	0.571 (U)	0.507 (U)	0.765 (U)	0.649 (U)	0.23 (U)	0.614 (U)	1.15 (U)	0.43 (U)
Mean	0.5263	0.7103	0.5479	0.5656	0.6285	0.5467	0.7246	0.5093
Std. Dev.	0.4007	0.2997	0.1699	0.3153	0.6973	0.3321	0.3142	0.4618
Upper Lim.	0.9509	0.9876	0.728	0.8998	1.368	0.8987	1.058	0.9926
Lower Lim.	0.1016	0.4473	0.3678	0.2314	-0.1106	0.1948	0.3916	0.08184

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-4	GSD-AP-MW-5
4/13/2020						<0.125		0.0688 (J)
4/14/2020			0.0878 (J)	<0.125				
4/15/2020	<0.125	0.112			0.21		0.238	
8/24/2020								0.0607 (J)
8/25/2020	<0.125				0.273			
8/26/2020		0.0997 (J)	<0.125	<0.125		<0.125	0.251	
3/16/2021	<0.125							0.065 (J)
3/22/2021						<0.125		
3/23/2021		0.101	0.0819 (J)	<0.125				
3/24/2021					0.194		0.227	
10/5/2021	0.0601 (J)			<0.125		<0.125	0.214	0.122
10/11/2021		0.201			0.283			
10/12/2021			0.134					
5/9/2022								0.0682 (J)
5/10/2022	<0.125	0.0918 (J)		<0.125		0.0714 (J)		
5/16/2022					0.264		0.17	
5/17/2022			<0.125					
10/25/2022					0.271			
10/26/2022	<0.125	0.0929 (J)	0.069 (J)	<0.125		<0.125	0.283	0.0845 (J)
6/5/2023	<0.125					<0.125		
6/6/2023					0.204		0.225	
6/7/2023								<0.125
6/13/2023		0.0805 (J)	0.105 (J)	0.0795 (J)				
11/1/2023					0.217	<0.125		
11/7/2023	0.0626 (J)	0.0804 (J)	0.0709 (J)	<0.125			0.168	0.0639 (J)
Mean	0.1091	0.1074	0.09983	0.1193	0.2395	0.1183	0.222	0.07445
Std. Dev.	0.02947	0.03926	0.02595	0.01609	0.03648	0.01895	0.0388	0.02058
Upper Lim.	0.125	0.201	0.1114	0.125	0.2787	0.125	0.2631	0.122
Lower Lim.	0.0601	0.0804	0.06722	0.0795	0.2012	0.0714	0.1809	0.0607

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1
4/13/2020				0.103
4/14/2020		0.0845 (J)	0.133	
4/15/2020	0.0775 (J)			
8/24/2020				0.114
8/26/2020	<0.125	0.0732 (J)	0.13	
3/23/2021	<0.125	0.0802 (J)	0.132	
3/24/2021				0.0725 (J)
10/5/2021	0.0933 (J)			<0.125
10/12/2021		0.123	0.147	
5/9/2022				0.0824 (J)
5/10/2022	0.0627 (J)			
5/11/2022		0.0695 (J)	0.108 (J)	
10/26/2022	0.128	0.0911 (J)	0.119 (J)	<0.125
6/7/2023		0.128		<0.125
6/12/2023			0.13	
6/13/2023	<0.125			
11/7/2023	0.0652 (J)	<0.125	0.105 (J)	<0.125
Mean	0.1002	0.089	0.1255	0.109
Std. Dev.	0.02881	0.02423	0.01399	0.02113
Upper Lim.	0.128	0.1147	0.1403	0.125
Lower Lim.	0.0627	0.06331	0.1107	0.0725

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
4/13/2020		<0.000203		
4/15/2020	<0.000203		<0.000203	<0.000203
8/24/2020		<0.000203	<0.000203	<0.000203
8/25/2020	<0.000203			
3/16/2021			0.00013 (J)	8.35E-05 (J)
3/17/2021		0.000191 (J)		
3/24/2021	<0.000203			
10/5/2021		0.00012 (J)		
10/11/2021	9E-05 (J)			
10/12/2021			<0.000203	0.00012 (J)
5/9/2022		0.00018 (J)		
5/10/2022			<0.000203	0.00012 (J)
5/16/2022	<0.000203			
10/25/2022	<0.000203			
10/26/2022		<0.000203	<0.000203	<0.000203
6/5/2023		0.000394		
6/6/2023	<0.000203			
6/13/2023			7.8E-05 (J)	<0.000203
11/1/2023	<0.000203			
11/7/2023		0.000136 (J)	<0.000203	<0.000203
Mean	0.0001889	0.0002038	0.0001783	0.0001673
Std. Dev.	3.995E-05	8.326E-05	4.789E-05	5.053E-05
Upper Lim.	0.000203	0.0002533	0.000203	0.000203
Lower Lim.	9E-05	0.0001183	7.8E-05	8.35E-05

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

GSD-AP-MW-2

4/15/2020	0.0406
8/25/2020	0.041
3/24/2021	0.0318
10/11/2021	0.0225
5/16/2022	0.0271
10/25/2022	0.0304
6/6/2023	0.0258
11/1/2023	0.0233
Mean	0.03031
Std. Dev.	0.007203
Upper Lim.	0.03795
Lower Lim.	0.02268

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

GSD-AP-PZ-6

4/15/2020	<0.0005
8/24/2020	<0.0005
3/16/2021	<0.0005
10/12/2021	<0.0005
5/10/2022	0.00286
10/26/2022	<0.0005
6/13/2023	<0.0005
11/7/2023	<0.0005
Mean	0.000795
Std. Dev.	0.0008344
Upper Lim.	0.00286
Lower Lim.	0.0005

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-2	GSD-AP-MW-4	GSD-AP-MW-5	GSD-AP-MW-7	GSD-AP-MW-8
4/13/2020						<0.01015		
4/14/2020			<0.01015					<0.01015
4/15/2020	<0.01015	<0.01015		0.0202	<0.01015		<0.01015	
8/24/2020						<0.01015		
8/25/2020	<0.01015			0.0269				
8/26/2020		<0.01015	<0.01015		<0.01015		<0.01015	<0.01015
3/16/2021	<0.01015					<0.01015		
3/23/2021		0.000204	0.000124 (J)				<0.01015	0.000357
3/24/2021				0.0164	0.00118			
10/5/2021	<0.01015				0.00111	0.00015 (J)	0.0001 (J)	
10/11/2021		0.00045		0.0204				
10/12/2021			0.00015 (J)					0.00032
5/9/2022						0.00011 (J)		
5/10/2022	<0.01015	0.00047					<0.01015	
5/11/2022								0.0004
5/16/2022				0.0201	0.00122			
5/17/2022			0.00012 (J)					
10/25/2022				0.0202				
10/26/2022	0.000198 (J)	0.000438	<0.01015		0.00106	0.000371	0.000169 (J)	0.000422
6/5/2023	<0.01015							
6/6/2023				0.0203	<0.01015			
6/7/2023						<0.01015		<0.01015
6/13/2023		<0.01015	<0.01015				<0.01015	
11/1/2023				0.0222				
11/7/2023	<0.01015	<0.01015	<0.01015		<0.01015	<0.01015	<0.01015	<0.01015
Mean	0.008906	0.00527	0.006393	0.02084	0.005646	0.006423	0.007646	0.005262
Std. Dev.	0.003519	0.005217	0.005185	0.002931	0.004815	0.005145	0.004636	0.005225
Upper Lim.	0.01015	0.01015	0.01015	0.0269	0.01015	0.01015	0.01015	0.01015
Lower Lim.	0.000198	0.000204	0.00012	0.0164	0.00106	0.00011	0.0001	0.00032

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2
4/13/2020		<0.01015	<0.01015
4/14/2020	<0.01015		
8/24/2020		<0.01015	<0.01015
8/26/2020	<0.01015		
3/17/2021			<0.01015
3/23/2021	0.00027		
3/24/2021		9.88E-05 (J)	
10/5/2021		7E-05 (J)	0.00028
10/12/2021	0.00018 (J)		
5/9/2022		<0.01015	<0.01015
5/11/2022	0.00024		
10/26/2022	0.000276	<0.01015	0.00022
6/5/2023			<0.01015
6/7/2023		<0.01015	
6/12/2023	<0.01015		
11/7/2023	<0.01015	<0.01015	<0.01015
Mean	0.005196	0.007634	0.007675
Std. Dev.	0.005296	0.004659	0.004583
Upper Lim.	0.01015	0.01015	0.01015
Lower Lim.	0.00018	7E-05	0.00022

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 1/3/2024 9:12 AM View: Confidence Intervals
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-3
4/13/2020			<0.000203
4/15/2020	<0.000203	0.000318 (J)	
8/25/2020	<0.000203	0.000347 (J)	
8/26/2020			<0.000203
3/16/2021	0.000112 (J)		
3/22/2021			0.000121 (J)
3/24/2021		0.00037	
10/5/2021	<0.000203		0.00014 (J)
10/11/2021		0.00029	
5/10/2022	0.00013 (J)		0.00011 (J)
5/16/2022		0.00041	
10/25/2022		0.000361	
10/26/2022	<0.000203		0.00011 (J)
6/5/2023	0.000101 (J)		0.000104 (J)
6/6/2023		0.000425	
11/1/2023		0.000337	0.000109 (J)
11/7/2023	<0.000203		
Mean	0.0001698	0.0003573	0.0001375
Std. Dev.	4.655E-05	4.492E-05	4.193E-05
Upper Lim.	0.000203	0.0004049	0.000203
Lower Lim.	0.000101	0.0003096	0.000104

FIGURE L.

Appendix IV Trend Tests - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 7:16 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-17 (bg)	-0.0002415	-69	-49	Yes	17	64.71	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-2	-0.05246	-63	-49	Yes	17	0	n/a	0.05	NP

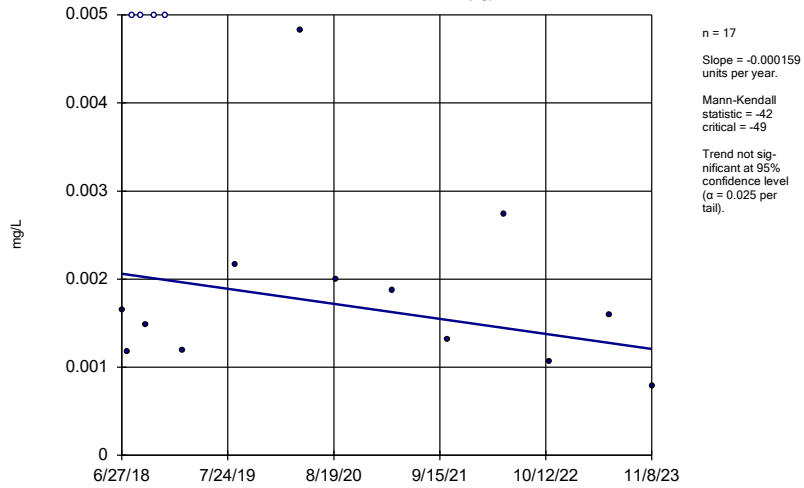
Appendix IV Trend Tests - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/2/2024, 7:16 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	GSD-AP-MW-14 (bg)	-0.000159	-42	-49	No	17	23.53	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-16 (bg)	0.0001667	13	53	No	18	11.11	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-17 (bg)	-0.0002415	-69	-49	Yes	17	64.71	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-2	-0.05246	-63	-49	Yes	17	0	n/a	0.05	NP
Arsenic (mg/L)	GSD-AP-MW-4	0.0002444	39	49	No	17	0	n/a	0.05	NP

Sen's Slope Estimator

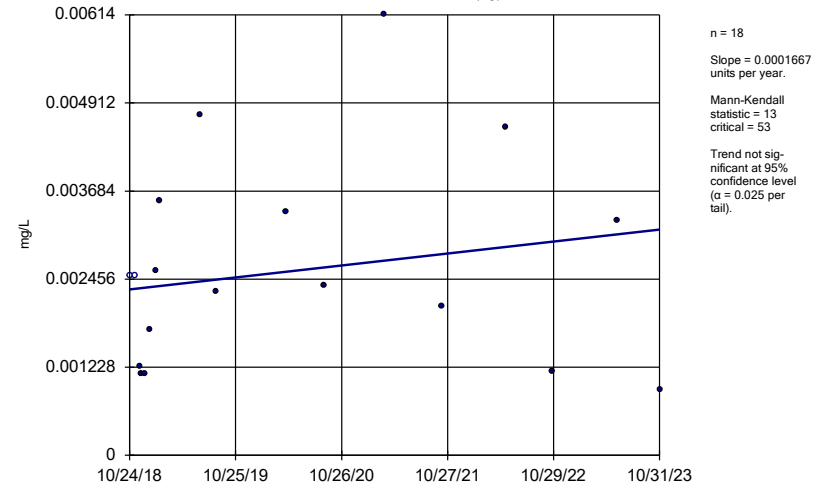
GSD-AP-MW-14 (bg)



Constituent: Arsenic Analysis Run 1/2/2024 7:16 PM View: Appendix IV - Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

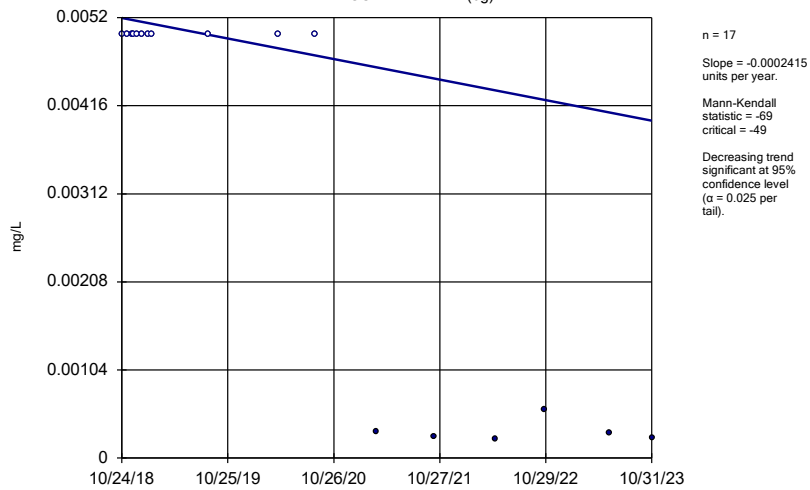
GSD-AP-MW-16 (bg)



Constituent: Arsenic Analysis Run 1/2/2024 7:16 PM View: Appendix IV - Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

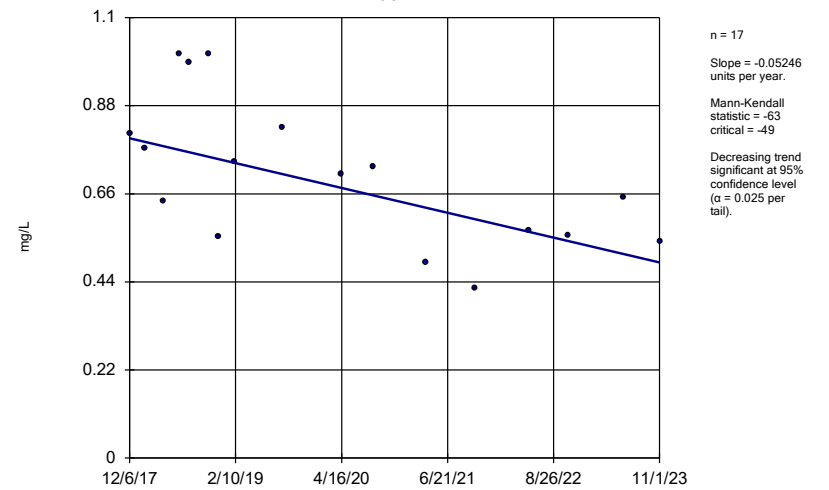
GSD-AP-MW-17 (bg)



Constituent: Arsenic Analysis Run 1/2/2024 7:16 PM View: Appendix IV - Trend Tests
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Sen's Slope Estimator

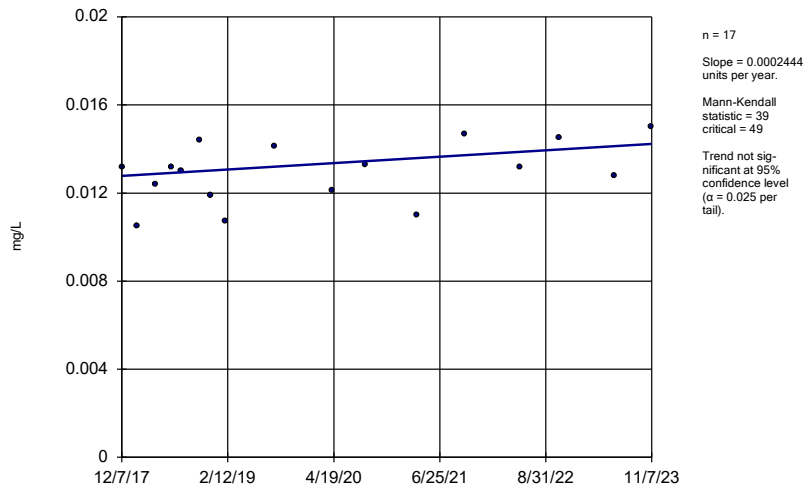
GSD-AP-MW-2



Constituent: Arsenic Analysis Run 1/2/2024 7:16 PM View: Appendix IV - Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator

GSD-AP-MW-4



Constituent: Arsenic Analysis Run 1/2/2024 7:16 PM View: Appendix IV - Trend Tests
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Appendix F



January 2024
Plant Gadsden



Laboratory Treatability Study Results

Prepared for Alabama Power Company

January 2024
Plant Gadsden

Laboratory Treatability Study Results

Prepared for
Alabama Power Company
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APPENDIX

Appendix A Laboratory Analytical Reports

ABBREVIATIONS

$\mu\text{g/L}$	microgram per liter
BaCl_2	barium chloride
CleanER	CleanER-10
cm	centimeter
COI	constituent of interest
DO	dissolved oxygen
EGL	Anchor QEA Environmental Geochemistry Laboratory
FB-Fe+	FerroBlack-Fe+
FC	ferric chloride
$\text{Fe}(\text{OH})_3$	ferrihydrate
FeCl_3	ferric chloride
FerroBlack	FerroBlack-Fe+
FeSO_4	ferrous sulfate
FS	ferrous sulfate
GWPS	groundwater protection standard
KMnO_4	potassium permanganate
LDH	layered double hydroxide
M	molar
mg/kg	milligram per kilogram
mL	milliliter
MnCl_2	manganese chloride
N_2	nitrogen
Na_2CO_3	sodium carbonate
$\text{Na}_2\text{HAsO}_4 \cdot 7\text{H}_2\text{O}$	sodium arsenate heptahydrate
Na_2SO_4	sodium sulfate
NaAlO_2	sodium aluminate
NaHCO_3	sodium bicarbonate
NaOH	sodium hydroxide
ORP	oxidation reduction potential
Plant Gadsden	Gadsden Electric Generating Plant
PM	potassium permanganate
PV	pore volume
SC	specific conductivity
Site	Plant Gadsden Ash Pond
SSE	selective sequential extraction
USEPA	U.S. Environmental Protection Agency

Executive Summary

As described in the *Groundwater Remedy Selection Report* (Anchor QEA 2021a), geochemical manipulation via injections was selected as one corrective measure for arsenic and lithium in groundwater at the Gadsden Electric Generating Plant (Plant Gadsden) Ash Pond (Site) located in Etowah County, Alabama. Geochemical manipulation was selected because of its effectiveness, ease of implementation, versatility (ability to treat more than one constituent of interest [COI]), ability to implement in areas with limited working space, and because it produces no byproducts that would require further treatment or disposal. Treatability studies were performed to determine the optimum treatments and their doses and to provide information for the required underground injection control permit and design of the injection treatment at the Site.

Treatability studies for injection treatment (geochemical manipulation) at the Site consisted of the following steps:

- Sampling and characterization of aquifer soil and groundwater
- Batch tests, both screening and optimization
- Column tests, including treatment effectiveness and post-treatment flushing with upgradient groundwater to determine stability
- Selective sequential extraction (SSE) on post-treatment soils recovered from columns

Aquifer soil and groundwater samples were collected from multiple areas, based on the number and concentrations of COIs, to help select areas for field pilot testing. Geochemical characterization of aquifer soils was performed to support the design and interpretation of the treatability testing. Homogenized soil samples were analyzed for the COIs (arsenic and lithium), other Appendix IV parameters, iron, manganese, sulfide, and total organic carbon. Extractable aluminum, iron, and manganese oxides, and cation exchange capacity of aquifer soil samples were also measured. Physical testing included percent moisture content and grain size distribution (gravel, sand, silt, and clay).

Groundwater samples were analyzed for major cations, anions, COIs, and other Appendix III/IV parameters, and water quality parameters influencing the chemical behavior of the COIs. Prior to beginning treatability testing, confirmatory analysis of the COIs and dissolved iron and manganese concentrations was performed. Aquifer soil samples were paired with their respective groundwater samples based on their sampling location proximity. Those pairs were used for both batch slurry and column testing.

Based on previous successful treatability studies at other sites and geochemical studies performed as part of remedy selection (Anchor QEA 2021a), a series of batch tests was performed to determine the effectiveness and to rank the performance of the selected treatments in reducing the COI concentrations in Site groundwater and groundwater-soil slurries. All batch tests were conducted

with the following two configurations: 1) groundwater batch tests; and 2) slurry batch tests. In groundwater batch tests, treatment reagents (or reagent mixes) were added to test containers filled with Site groundwater only. In slurry batch tests, the paired aquifer soils were mixed with the Site groundwaters to prepare slurries in test containers, and then reagents (or reagent mixes) were added to the test containers. Slurry tests were performed to identify potential influence of the aquifer soil matrix on groundwater treatment performance in the field.

Groundwater samples collected from four locations at the Site were used in the initial screening batch tests and include the following (COIs indicated in parentheses): GSD-AP-MW-2 (arsenic), GSD-AP-MW-4 (arsenic), GSD-AP-MW-2VA (lithium), and GSD-AP-MW-2VB (lithium). A second set of groundwater samples was used in the optimization batch tests and column tests; the arsenic-containing groundwaters remained the same, but GSD-AP-MW-21VC was substituted for GSD-AP-MW-2VA and GSD-AP-MW-2VB due to sampling feasibility and similar groundwater characteristics.

In the screening batch tests, 13 treatments were initially tested. More than one treatment was effective at removing arsenic from Site groundwater and slurries. Multiple treatments, including ferrous sulfate (FeSO_4), potassium permanganate (KMnO_4); FeSO_4 , followed by KMnO_4 (designated Fe-Mn- SO_4 LDH [layered double hydroxide]); and ferric chloride (FeCl_3), followed by manganese chloride (MnCl_2), followed by KMnO_4 (designated Fe-Mn-Cl LDH), achieved the groundwater protection standard (GWPS) for arsenic in both groundwaters tested (GSD-AP-MW-2 and GSD-AP-MW-4). Although several treatments, including Fe-Mn- SO_4 LDH (pH 9.5) and Fe-Mn-Cl LDH (pH 9.5), also achieved reductions in lithium concentrations relative to untreated groundwater, no treatment consistently achieved the GWPS for lithium in the screening batch tests.

Based on the screening batch test results, optimization batch tests were designed and carried out to refine the treatment reagent mixes and dosing and, in particular, to improve lithium removal. Three treatments (FeSO_4 , KMnO_4 , and Fe-Mn- SO_4 LDH) were tested at lower doses for arsenic removal, and all three treatments reduced arsenic concentrations to less than the GWPS in GSD-AP-MW-4 groundwater and slurries. The Fe-Mn- SO_4 LDH treatment achieved the GWPS for arsenic in GSD-AP-MW-2 in both the groundwater and slurry optimization batch tests. The KMnO_4 treatment achieved the GWPS for arsenic in GSD-AP-MW-2 in the slurry batch test but not in the groundwater-only optimization batch test. The slurry batch test is more representative of field conditions in unconsolidated aquifer systems in that the soil oxidant demand drives the transformation of permanganate and precipitation of the treatment products. The KMnO_4 treatment, therefore, was selected for the column tests for GSD-AP-MW-2 and GSD-AP-MW-4 based on overall effectiveness for arsenic removal in the batch tests and the relatively simpler field implementation of a single-solution injection treatment compared to the more complex two-solution approach required for Fe-Mn- SO_4 LDH treatment.

Five treatments aimed at producing different LDH phases were tested for lithium removal in the optimization batch tests, and sodium hydroxide was replaced with sodium carbonate (Na_2CO_3) or sodium bicarbonate (NaHCO_3) for pH adjustment, as these chemicals are safer to handle in the field. Four of the five treatments tested achieved the GWPS for lithium. These treatments include FerroBlack-Fe+, followed by sodium aluminate (NaAlO_2) and KMnO_4 with Na_2CO_3 (designated FB-Mn-Al- CO_3 LDH); MnCl_2 , followed by NaAlO_2 and KMnO_4 with Na_2CO_3 (designated Mn-Al-Cl- CO_3 LDH); molasses, followed by NaAlO_2 and KMnO_4 with Na_2CO_3 (designated Mls-Mn-Al- CO_3 LDH); and molasses and NaHCO_3 , followed by NaAlO_2 and KMnO_4 (designated Mls-Mn-Al- HCO_3 LDH). Compared to the other treatments, the Mls-Mn-Al- HCO_3 LDH treatment resulted in no appreciable secondary water quality impacts, such as excessively high pH or elevated dissolved manganese levels and was, therefore, selected for the column testing for the lithium-containing groundwater (GSD-AP-MW-21VC).

Column tests were conducted to simulate injection applications of the selected treatments and to evaluate the COI removal performance of aquifer soils treated with the selected reagent or reagent mix under flow conditions. Column tests more closely simulate treatment under groundwater flow conditions than batch tests and provide information on removal efficiency, as well as capacity and the stability of the treatments under field conditions. Column test results will also be used to provide data to support pilot test design and confirm the selected reagents will not inadvertently increase concentrations of other Appendix III/IV constituents above the GWPS due to, for example, release from the aquifer matrix. The two treatments selected from the batch tests (KMnO_4 and Mls-Mn-Al- HCO_3 LDH) were mixed with aquifer soils to produce treated soils. Impacted groundwater was then run through the treated soils in columns to assess removal efficiency and capacity for treatment. The KMnO_4 treatment effectively removed arsenic from impacted groundwaters, removing >99% of the influent mass for more than 30 pore volumes (PVs). Similarly, Mls-Mn-Al- HCO_3 LDH effectively removed lithium from impacted groundwater with >99% removal efficiency for more than 50 PVs.

After the column studies with impacted groundwater, upgradient groundwater (GSD-AP-MW-14) was flushed through the columns to determine the stability of each treatment. During this phase of testing, effluent arsenic concentrations remained below the GWPS, showing the stability of the KMnO_4 treatment. Approximately 0.09% to 0.25% of the arsenic sequestered by the treatment was released to groundwater during the flushing phase. Lithium was stabilized to a lesser extent by the Mls-Mn-Al- HCO_3 LDH treatment, with approximately 19% of the sequestered lithium being released during the flushing phase. Lithium was detected above the GWPS during the flushing phase when the pH decreased to 7.1. This result suggests a pH of 8 or above is essential for lithium stability. It should be noted that the GSD-AP-MW-14 upgradient groundwater has an acidic pH (approximately 4) and that the pH of this groundwater is not representative of background

groundwater conditions in the vicinity of potential field pilot study locations (e.g., GSD-AP-MW-21VC).

Following completion of the column tests, the treated aquifer soils and their associated untreated soils were tested using a five-step SSE procedure to help evaluate the long-term stability of the sequestered COIs. In SSE, the treated and untreated aquifer soils are extracted by a series of increasingly chemically aggressive solutions that target different binding forms, and the COIs released by each extraction step are quantified. The results are used to determine the mechanisms and strength of binding and inform long-term stability (or reversibility) of the treatment.

SSE results indicate only 1% to 3% of arsenic is in the soluble (F1) fraction for the KMnO_4 -treated soils, with the remaining 97% to 99% of arsenic sequestered through chemical bonding to, or incorporation into, metal oxides and hydroxides, such as iron and manganese oxides/hydroxides, and recalcitrant phases (F3, F4, and F5). Similarly, most of the lithium in the MIs-Mn-Al-HCO_3 LDH-treated soil was also sequestered in F3 through F5 (59%) and F2 (29%). The association of COIs with metal oxide and hydroxide phases was expected and indicates successful treatment, as manganese was a major component of the treatment solutions and precipitates formed, and iron is a component of the Site soils and groundwater.

Overall, the KMnO_4 treatment effectively treated arsenic in Site groundwater and is the recommended single-solution treatment for pilot-scale testing at locations with arsenic as the sole COI. The MIs-Mn-Al-HCO_3 LDH treatment is recommended at locations with lithium as the sole COI. As part of the pre-design investigation, concentrations and proportions of treatment constituents may need to be adjusted to achieve optimal groundwater pH for lithium removal and long-term stability. Furthermore, injection treatment is only one component of the remedy, as source control (consolidation and capping) and natural attenuation are also expected to reduce concentrations of COIs in groundwater over time (Anchor QEA 2021a).

1 Introduction

As discussed in the *Groundwater Remedy Selection Report* (Anchor QEA 2021a), geochemical manipulation via injections was selected as one corrective measure for constituents of interest (COIs) at the Gadsden Electric Generating Plant (Plant Gadsden) Ash Pond (Site) located in Etowah County, Alabama. COIs at the Site are arsenic and lithium. Geochemical manipulation removes COIs from groundwater and immobilizes them in situ through the creation of solid precipitates (e.g., layered double hydroxide [LDH] precipitates) formed from injection of treatment solutions (reagents or reagent mixes). COIs adsorb to the solid surfaces of precipitates and are incorporated into the solid structures. Geochemical manipulation was selected because of its effectiveness, ease of implementation, versatility (ability to treat more than one COI), ability to implement in areas with limited working space, and because it produces no byproducts that would require further treatment or disposal. Before geochemical manipulation via injection treatment can be implemented, laboratory treatability studies need to be performed using the Site aquifer media (soil) and impacted groundwater.

The site-specific treatability studies discussed herein were conducted to evaluate reagent selection, dosing, and injection sequencing for in situ groundwater remediation. The treatability study approach includes the following:

- Sampling and characterization (analysis) of Site aquifer soil and groundwater
- Batch testing (screening batch tests, followed by optimization batch tests) to identify, rank, and refine reagents and reagent mixes for removal of COIs from Site groundwater
- Column testing of the two best-performing treatments to assess COI removal efficiency and determine COI uptake capacity of treated aquifer soils to support pilot test design
- Determining the stability of each treatment by doing the following:
 - Flushing upgradient Site groundwater through treated soils in the columns to assess potential for rerelease of COIs
 - Selective sequential extraction (SSE) of post-column-treated soil to provide information on the mechanisms and stability of COI sequestration

2 Selection of Reagents

Selection and formulation of reagents that can be injected to treat site-specific COIs were based on site-specific soil and groundwater geochemistry; previous Site work; and prior experience from successful treatability studies performed by Anchor QEA, for the same COIs at other sites for confidential clients. The *Monitored Natural Attenuation Demonstration* (Anchor QEA 2021b) documented key geochemical attenuation mechanisms occurring at the Site, including the following:

- Sorption on and/or coprecipitation with iron, manganese, and aluminum oxides and hydroxides for arsenic and lithium
- Cation exchange on oxides and clay minerals for lithium
- Potential precipitation of barium arsenate phases for arsenic (predicted by geochemical modeling)

Iron, manganese, and aluminum oxides are strong sorbents for many metals and metalloids, including arsenic (Dixit and Hering 2003; Manning et al. 2003; Mohan and Pittman 2007; Ouyard et al. 2002) and lithium (Ooi et al. 1988; Yu et al. 2022). Subsurface geochemical conditions at the Site are generally favorable for formation of iron oxides. Therefore, the treatability studies were initially focused on reagents (or mixtures of reagents) with the potential to increase the abundance and stability of iron, manganese, and/or aluminum oxides and hydroxides in the subsurface. Based on Site conditions and treatability studies previously completed for other sites, the following reagent and reagent mixes were initially selected for treatability testing:

- Aeration
- Ferrous sulfate (FeSO_4 ; FS)
- Ferric chloride (FeCl_3 ; FC)
- CleanER-10 (CleanER; injectable zero-valent iron)
- FerroBlack-Fe+ (FerroBlack; FB-Fe+; injectable iron sulfide)
- Potassium permanganate (KMnO_4 ; PM)
- KMnO_4 with pH adjusted to 9.5 by sodium hydroxide (NaOH)
- Barium chloride (BaCl_2)
- BaCl_2 , followed by sodium sulfate (Na_2SO_4); $\text{BaCl}_2 + \text{Na}_2\text{SO}_4$
- FeSO_4 , followed by KMnO_4 ; Fe-Mn- SO_4 LDH
- FeSO_4 , followed by KMnO_4 with pH adjusted to 9.5 by NaOH; Fe-Mn- SO_4 LDH (pH 9.5)
- FeCl_3 , followed by manganese chloride (MnCl_2), followed by KMnO_4 ; Fe-Mn-Cl LDH
- FeCl_3 , followed by MnCl_2 , followed by KMnO_4 with pH adjusted to 9.5 by NaOH; Fe-Mn-Cl LDH (pH 9.5)

Soluble iron reagents such as FeSO_4 and FeCl_3 are acidic and form iron oxides/hydroxides such as ferrihydrite ($\text{Fe}(\text{OH})_3$) when neutralized. Iron oxides/hydroxides can adsorb and/or coprecipitate

arsenic. Zero-valent iron, specifically CleanER, was tested because it oxidizes to form iron oxides/hydroxides over time that can remove arsenic (Biterna et al. 2007) and heavy metals (Moraci and Calabrò 2010).

FerroBlack is a proprietary amendment from Redox Solutions. The active ingredient in FerroBlack is a reactive iron sulfide, which immobilizes arsenic through adsorption at low arsenic concentrations and precipitation/mineralization of arsenic sulfides at higher arsenic concentrations (Niazi and Burton 2016).

Permanganate has been widely used for in situ chemical oxidation. Permanganate reacts with mineral components in the aquifer matrix to produce manganese oxides, which can adsorb and incorporate arsenic and/or lithium (Hou et al. 2017; Ooi et al. 1988; Yu et al. 2022).

Barium chloride was included in the screening batch tests because geochemical modeling indicated conditions were favorable for barium arsenate precipitation from groundwater. Increasing the dissolved barium concentration would, therefore, be expected to reduce arsenic concentrations.

Aeration was also included since Site groundwater generally contains high concentrations of dissolved iron (Section 3.1.2). Oxidation of dissolved iron by dissolved oxygen (DO) promotes iron oxide and hydroxide formation and COI removal.

The full list of treatments tested and reagent vendor sources is included in Table 1. Note that LDHs include a group of phases that can be formed from a range of metal cations (including iron, manganese, and aluminum) and anions besides hydroxide (including carbonate, chloride, and sulfate). The different potential forms are designated by the cations and anions in the reagents used to precipitate them (e.g., Fe-Mn-Cl LDH refers to the phase[s] formed by reacting FeCl_3 , MnCl_2 , and KMnO_4).

The effectiveness of these treatments on COI removal was screened and evaluated through a series of batch tests. Bulk chemical composition data (including Appendix III/IV parameters) of technical-grade reagents were not collected before treatability testing but will be tested prior to field pilot studies.

3 Sampling and Initial Characterization

Groundwater and aquifer soil samples were collected from the Site for treatability testing conducted at the Anchor QEA Environmental Geochemistry Laboratory (EGL) in Portland, Oregon.

3.1 Groundwater

3.1.1 Sample Collection

Groundwater samples were collected by Alabama Power Company with support from Anchor QEA from wells GSD-AP-MW-2, GSD-AP-MW-4, GSD-AP-MW-2VA, GSD-AP-MW-2VB, and GSD-AP-MW-21VC (Figure 1). Five gallons of groundwater were collected from GSD-AP-MW-2, GSD-AP-MW-4, GSD-AP-MW-2VA, and GSD-AP-MW-2VB on May 16, 2022, for the screening batch tests. Five gallons of groundwater were collected from GSD-AP-MW-2, GSD-AP-MW-4, GSD-AP-MW-21VC, and GSD-AP-MW-14 (upgradient groundwater) on June 6, 2023, for the FerroBlack batch tests, optimization batch tests, and column tests.

Prior to sampling, monitoring wells were purged until water quality parameters (pH, temperature, specific conductivity [SC], oxidation reduction potential [ORP], and DO) stabilized. Then, groundwater samples were collected in low-density polyethylene Cubitainers. Cubitainers were filled with zero headspace and packed in Mylar barrier bags containing oxygen-absorbent packets to minimize potential changes in redox conditions during transport to the EGL. Anaerobic conditions were maintained during sample handling at the EGL.

3.1.2 Sample Analysis and Results

Groundwater samples collected in the field were also sent directly to the Alabama Power Company Environmental Laboratory in Calera, Alabama, and Pace Analytical Services, LLC, and analyzed for major cations, anions, COIs, other Appendix III/IV parameters, and water quality parameters influencing the chemical behavior of the COIs (Table 2). Prior to commencing treatability testing at the EGL, groundwater samples in the received Cubitainers were subsampled and submitted to ALS Environmental in Kelso, Washington, for confirmatory analysis of COIs and dissolved iron and manganese concentrations (Table 2). Laboratory analytical reports are included in Appendix A. Water quality parameters including pH, ORP, and DO were measured at the EGL (Table 2). The dissolved arsenic concentrations in GSD-AP-MW-2 and GSD-AP-MW-4 as received at the EGL were lower than expected compared to historical data. Thus, groundwater samples used for batch and column testing were spiked with arsenic to ensure arsenic partitioning between groundwater and solids could be measured.

3.2 Aquifer Soils

3.2.1 Sample Collection

Aquifer soil samples were collected on February 14, 2022, from potential pilot test locations GSD-AP-PT-1 and GSD-AP-PT-2 at the Site (Figure 1). The aquifer soil samples were collected using sonic drilling technology from areas and depths where elevated concentrations of arsenic and lithium have been identified and injection treatment will be implemented. The samples were selected in the field, packaged to preserve field redox conditions (airtight containers packed in Mylar bags with oxygen-absorbent packets), and shipped on ice to the EGL. Upon arrival at the EGL, aquifer soil samples were inspected and checked against the chain of custody and then stored under refrigeration until further processing. Visible signs of oxidation were observed in the soil samples as received at the EGL.

3.2.2 Sample Analysis and Results

Geochemical characterization of aquifer soils was performed to support the design and interpretation of the treatability testing. Aquifer soil samples were composited and homogenized. (Due to visible signs of oxidation upon receipt at the EGL, the samples were no longer handled anaerobically.) The homogenized soil samples were subsampled and submitted to Apex Laboratories in Tigard, Oregon, for bulk chemical analyses, which include the COIs (arsenic and lithium), other Appendix IV parameters, iron, manganese, sulfide, and total organic carbon (Table 3). Extractable aluminum, iron, and manganese oxides and cation exchange capacity of aquifer soils were also measured (Tables 4 and 5) to characterize potential for intrinsic COI removal by soils and help with interpretation of batch test results.

Additional analyses included percent moisture content and grain size distribution (gravel, sand, silt, and clay; Table 6). Laboratory analytical reports are included in Appendix A. The surficial aquifer soil at the Site consisted mostly of gravel (61.4%) at GSD-AP-PT-1 and sand (71.1%) at GSD-AP-PT-2. Silt and clay accounted for 4.1% to 5.7% in both samples; thus, the surficial aquifer is hydraulically suitable for injection. Aquifer soil samples were paired with their respective groundwater samples based on their sampling location proximity. Those pairs were used throughout batch and column testing (Table 7). Arsenic concentrations ranged from 2.05 milligrams per kilogram (mg/kg) to 31.3 mg/kg, and lithium was below the reporting limit for both soil samples (Table 3). The concentrations of other Appendix IV constituents in the aquifer soils were very low or not detected; barium had a concentration of 94.3 mg/kg in GSD-AP-PT-1, a value approximately 14-fold higher than that in GSD-AP-PT-2 (Table 3). Bulk iron concentrations of aquifer soils range from 8,030 to 11,000 mg/kg (Table 3). Extractable iron oxides loosely correlate with bulk iron concentrations and account for approximately 7% of iron in soils (Tables 3 and 4), indicating some intrinsic capacity of soils to remove COIs such as arsenic and lithium.

4 Batch Tests

4.1 Methodology

A series of batch tests was performed to determine and rank the performance of the selected reagents in reducing the COI concentrations in Site groundwater. All batch tests were conducted with the following two configurations: 1) groundwater batch tests; and 2) groundwater-soil slurry batch tests. The slurry tests were included to assess the potential effect of the aquifer matrix on treatment effectiveness. In groundwater batch tests, reagents (or reagent mixes) were added to test containers filled with Site groundwater. In slurry batch tests, the paired aquifer soils were mixed with the Site groundwater (Table 7) to prepare slurries in test containers at a liquid-to-solid ratio of 10:1, then reagents were added to the test containers. Control samples containing untreated groundwater only, or groundwater plus aquifer soils for the slurry batch tests, were prepared for each groundwater to compare efficacy of the reagents. The performance of the reagents (or reagent mixes) was evaluated in terms of the COI removal efficiency relative to the groundwater-only control and the final COI concentrations compared to the respective groundwater protection standard (GWPS).

Batch tests were performed in the following two phases: 1) screening batch tests to assess and compare the effectiveness of all the reagents (or reagent mixes) to remove the target COIs present in each groundwater tested; and 2) optimization batch tests to improve performance of selected treatments retained from the screening batch tests by adjusting reagent composition, reagent dose, and/or pH. The lithium-containing groundwater, GSD-AP-MW-21VC, required a second phase of optimization testing for pH optimization. FerroBlack was tested alongside the optimization batch test samples due to a delay in receiving the reagent from the vendor.

Except for aeration, all the batch tests were set up and sampled in an anaerobic chamber under a nitrogen atmosphere to minimize exposure to air. The general procedure for the batch tests is described in the following steps:

1. Test containers were prepared in a controlled-atmosphere glove box with 200 milliliters (mL) of groundwater and 20 grams (dry weight) of aquifer soil for a liquid-to-solid ratio of 10:1. A second set of test containers was prepared with 200 mL of groundwater and no soil.
2. The initial arsenic concentrations in Site groundwater collected from GSD-AP-MW-2 and GSD-AP-MW-4 as received at the EGL were slightly lower than expected based on historical data (424 to 1,010 micrograms per liter [$\mu\text{g/L}$] in GSD-AP-MW-2 and 11 to 15 $\mu\text{g/L}$ in GSD-AP-MW-4); therefore, groundwater from these wells was spiked with arsenic prior to testing using an arsenic stock solution prepared from sodium arsenate heptahydrate ($\text{Na}_2\text{HAsO}_4 \cdot 7\text{H}_2\text{O}$). In the screening batch tests, arsenic was spiked to target concentrations of 750 $\mu\text{g/L}$ and 500 $\mu\text{g/L}$ for GSD-AP-MW-2 and GSD-AP-MW-4, respectively. In the

optimization batch tests, arsenic was spiked to a higher concentration of 5,000 µg/L for both groundwaters. Spiking of lithium was not necessary because the initial concentrations were consistent with historical data.

3. Reagents or reagent mixes were added to the test containers at predetermined doses based on groundwater chemistry and previous successful treatability studies at other sites. The treatments tested for the screening and optimization batch tests are presented in Tables 8 and 12, respectively. The test containers were sealed in Mylar bags with oxygen-absorbent packets, removed from the anaerobic chamber, and placed on a shaker table for 7 days. The aeration test containers were placed on a countertop with caps open for 7 days.
4. At the end of the reaction period, the test containers were returned to the anaerobic chamber for sampling. Supernatants were collected from the test containers using 0.45-micron polyethersulfone syringe filters and preserved with nitric acid. The filtered water samples were submitted to ALS Environmental and analyzed for dissolved COIs and select treatment reagent constituents by U.S. Environmental Protection Agency (USEPA) Method 200.8 (inductively coupled plasma mass spectrometry). Water quality parameters including pH, ORP, and SC were also measured at the time of collection.

4.2 Screening Batch Test Results

The results of the screening batch tests are summarized in Tables 9 through 11 and Figures 2 through 6, and the laboratory analytical reports are included in Appendix A. The treatments that lowered COI concentrations to less than the GWPS for each of the groundwaters tested in the groundwater-only and slurry batch tests are listed below:

- GSD-AP-MW-2 (COI: arsenic): FS, PM, Fe-Mn-SO₄ LDH, and Fe-Mn-Cl LDH
- GSD-AP-MW-4 (COI: arsenic): FS, CleanER, BaCl₂, PM, Fe-Mn-SO₄ LDH, and Fe-Mn-Cl LDH
- GSD-AP-MW-2VA (COI: lithium): no treatments were successful in both the slurry and groundwater-only tests. CleanER, PM (pH 9.5), Fe-Mn-SO₄ LDH (pH 9.5), and aeration were effective at lowering lithium concentrations below the GWPS in the groundwater-soil slurry test containers.
- GSD-AP-MW-2VB (COI: lithium): no treatments were successful in both the slurry and groundwater-only tests. Fe-Mn-Cl LDH (pH 9.5) was effective at lowering the lithium concentration below the GWPS in the groundwater-only test container.

4.3 Optimization Batch Test Results

In the screening batch tests, several treatments lowered arsenic concentrations to less than the GWPS in both groundwaters tested (Tables 9 and 11). Treatments including CleanER and those designed to produce LDH-type phases decreased lithium concentrations in groundwater but did not consistently achieve the GWPS. Therefore, the main objective of the optimization batch tests was to

identify LDH-type treatments that effectively removed lithium to less than the GWPS. The second objective, specific to the arsenic-contaminated groundwaters, was to test whether lower reagent doses could still effectively remove arsenic to less than the GWPS. The final objective was to maintain targeted pH buffering by replacing NaOH with sodium carbonate (Na_2CO_3) or sodium bicarbonate (NaHCO_3), which are safer to handle in the field.

The following treatments (tested at lower doses than in the screening batch test) were evaluated for the removal of arsenic in GSD-AP-MW-2 and GSD-AP-MW-4:

- FeSO_4 (FS)
- KMnO_4 (PM)
- Fe-Mn-SO₄ LDH

The following treatments were evaluated for the removal of lithium from GSD-AP-MW-21VC:

- Mn-Al-Cl-CO₃ LDH: MnCl_2 , followed by sodium aluminate (NaAlO_2) and KMnO_4 with Na_2CO_3
- MIs-Mn-Al-CO₃ LDH: molasses¹, followed by NaAlO_2 and KMnO_4 with Na_2CO_3
- CleanER-Mn-Al-CO₃ LDH: CleanER, followed by NaAlO_2 and KMnO_4 with Na_2CO_3
- FB-Mn-Al-CO₃ LDH: FerroBlack, followed by NaAlO_2 and KMnO_4 with Na_2CO_3
- MIs-Mn-Al-HCO₃ LDH (tested in Phase 2 of optimization testing): molasses and NaHCO_3 , followed by NaAlO_2 and KMnO_4

Reagents tested are summarized in Table 12. Results from the optimization batch tests are summarized in Figures 7 through 10, the data are provided in Table 13, and the laboratory analytical reports are included in Appendix A. Table 14 summarizes the performance of the treatments tested in the optimization batch tests to remove COIs from Site groundwater. The following treatments lowered COI concentrations to less than the GWPS for each of the groundwaters and slurries tested:

- GSD-AP-MW-2 (COI: arsenic): Fe-Mn-SO₄ LDH and PM (groundwater-soil slurry)
- GSD-AP-MW-4 (COI: arsenic): FS, PM, and Fe-Mn-SO₄ LDH
- GSD-AP-MW-21VC (COI: lithium): Mn-Al-Cl-CO₃ LDH, MIs-Mn-Al-CO₃ LDH, FB-Mn-Al-CO₃ LDH, and MIs-Mn-Al-HCO₃ LDH

Additional criteria used to evaluate the treatments included potential for secondary water quality effects such as residual dissolved concentrations of treatment reagents (e.g., manganese and iron). Residual manganese concentrations, in particular, were elevated in the groundwater treated by Mn-Al-Cl-CO₃ LDH, as manganese solubility generally increases below a pH of 7. The treatments without MnCl_2 had lower dissolved manganese concentrations.

¹ Molasses was added to reduce permanganate instead of MnCl_2 , which is acidic and can elevate residual dissolved manganese concentrations.

5 Column Tests

Column tests were conducted to simulate injection applications and to evaluate the COI removal performance of aquifer soils treated with selected reagents under flow conditions. Column tests simulate treatment under groundwater flow conditions better than batch tests because they provide information on removal efficiency, capacity, and stability. Column test results can also confirm whether selected reagents will inadvertently increase concentrations of Appendix III/IV constituents above the GWPS, for example, due to release from the aquifer matrix.

5.1 Methodology

A total of three column tests were performed; the three groundwater samples (GSD-AP-MW-2, GSD-AP-MW-4, and GSD-AP-MW-21VC) were used as the column influents, and three treated soil columns were prepared for the Site groundwater samples. A summary of the column test setup is provided in Table 15.

The initial arsenic concentrations in the Site groundwater samples collected for column testing were lower than expected based on historical data (Table 2). The groundwater samples in the influent reservoirs were, therefore, spiked with arsenic. An arsenic stock solution was prepared from $\text{Na}_2\text{HAsO}_4 \cdot 7\text{H}_2\text{O}$ and added to the influent reservoirs of GSD-AP-MW-2 and GSD-AP-MW-4 to produce initial influent concentrations of approximately 1,000 $\mu\text{g/L}$ and 2,000 $\mu\text{g/L}$, respectively. The spiked arsenic concentrations are higher than historical concentrations, which range up to 1,010 $\mu\text{g/L}$, in anticipation that, during the column tests, some arsenic would be removed from the aqueous phase due to oxidation and subsequent precipitation of dissolved iron in the groundwater in the column influent reservoirs.

The optimization batch test results showed that a single-solution treatment, PM, was effective at removing arsenic below the GWPS in the presence of Site soil. Two column tests were prepared to evaluate arsenic removal in GSD-AP-MW-2 and GSD-AP-MW-4. PM was prepared by mixing the reagent (KMnO_4) in deionized water to create a stock solution. The PM stock solution was mixed with the aquifer soils to produce PM-treated soils. The nominal dose of PM was determined by soil oxidant demand and dissolved iron concentrations in groundwater.

For the groundwater containing lithium, GSD-AP-MW-21VC, the MIs-Mn-Al- HCO_3 LDH treatment was most effective for lithium removal in the optimization batch tests and was carried forward for further evaluation in the column tests. The MIs-Mn-Al- HCO_3 LDH two-solution treatment was prepared by mixing KMnO_4 and NaAlO_2 in deionized water to create the first stock solution and then mixing molasses and NaHCO_3 to create a second stock solution. Each stock solution was added and mixed with the aquifer soils to produce MIs-Mn-Al- HCO_3 LDH-treated soils.

Bulk chemical composition data of technical-grade KMnO_4 , molasses, NaHCO_3 , and NaAlO_2 to characterize impurity levels were not collected prior to column testing but will be tested prior to field injection. Since other Appendix IV constituents in the aquifer soils were very low (Table 3), only dissolved concentrations of arsenic, lithium, iron, and manganese were analyzed.

The treated soils were packed into 22-centimeter (cm)-long, 4.2-cm-diameter polypropylene columns. The Site groundwaters containing the COIs were pumped in an upflow direction through the columns at a constant flow rate of approximately 0.85 mL per minute for 45 to 55 pore volumes (PVs) using a peristaltic pump with a multichannel pump head. Flow rates were regularly checked and adjusted as needed to maintain a constant flow rate. Table 16 provides a summary of the column test operating conditions. The laboratory column apparatus is shown in Figure 11, and a detailed schematic is provided in Figure 12.

The laboratory column tests were operated at a higher linear velocity (88.1 cm per day) than the groundwater flow conditions in the vicinity of the Site, which is estimated to be 8.2 cm per day (SCS 2023). As a result, the hydraulic residence time in the columns was shorter than the hydraulic residence time expected in the field, where longer residence times may be expected to result in greater extent of reaction and COI removal. The removal efficiency and capacity measured in the columns, therefore, likely provide conservative estimates of treatment performance in the field.

Column influent and effluent solutions were sampled periodically (two to three times a day for the duration of the column tests), and water quality parameters including pH, ORP, and SC were measured at the EGL. The cumulative flow volume was also recorded at the time of sampling and used to calculate the total number of PVs treated. Column influent and effluent samples were filtered using 0.45-micron polyethersulfone syringe filters and preserved with nitric acid. The samples were submitted to ALS Environmental for analysis of dissolved arsenic, lithium, iron, and manganese concentrations.

After treatment-phase column studies were complete, upgradient Site groundwater (GSD-AP-MW-14) was pumped through the columns to determine the stability/reversibility of treatment. The column flushing phase was run at a constant flow rate for approximately 23 to 25 PVs, and column influents and effluents were sampled at intervals. Samples were analyzed for dissolved COIs and constituents of the treatment reagents used (e.g., manganese). These samples were not analyzed for other Appendix III/IV constituents because they were not detected or were present at very low levels in Site soils used for the column tests (Table 3).

5.2 Treatment-Phase Column Test Results

Column treatment-phase test results are included in Table 17 and Appendix A. Influent and effluent concentrations of the COIs for the three Site groundwater samples are also shown in Figures 13

through 15. The cumulative COI mass uptake of the three treated soils in the columns is also plotted against the cumulative COI mass loading in Figures 16 and 17 for arsenic and lithium, respectively.

Arsenic concentrations in the influent reservoirs of GSD-AP-MW-2 and GSD-AP-MW-4 were not stable and decreased over time, despite spiking of dissolved arsenic to initial influent concentrations of approximately 1,000 and 2,000 µg/L, respectively (Figures 13 and 14). Although the influent reservoirs were purged with nitrogen (N₂) and kept in sealed Mylar bags with oxygen-absorbing packets during the column tests, orange-brown iron oxide precipitates were observed to form inside the influent reservoirs over time, likely due to ongoing slow iron oxidation under anaerobic conditions. The dissolved arsenic concentration in the GSD-AP-MW-2 influent reservoir dropped below the GWPS after approximately 38 PVs had been passed through the column (Figure 13). On the other hand, the dissolved arsenic concentration in the influent reservoir of GSD-AP-MW-4 only decreased from 2090 µg/L to 732 µg/L over the column test duration (Figure 14).

The effluent solutions from the two PM-treated columns contained dissolved arsenic concentrations lower than the corresponding influent solutions. The GSD-AP-MW-2 effluent remained well below the arsenic GWPS for the entire duration of the treatment phase of the column test (Figure 13). The GSD-AP-MW-4 effluent remained below the GWPS for approximately 30 PVs, then increased to 30 µg/L dissolved arsenic after 49 PVs treated (Figure 14). The PM treatment successfully removed >99% of the influent mass of arsenic loaded into each column. The arsenic uptake by the treated soils in the GSD-AP-MW-2 and GSD-AP-MW-4 columns was 3.42 and 12.6 mg/kg, respectively, and the uptake capacity was not exhausted at the end of the tests (Figure 16).

Dissolved lithium concentrations in the MIs-Mn-Al-HCO₃ LDH-treated column remained below the GWPS for the duration of the treatment phase of the column tests, a total of 52 PVs treated (Figure 15). The MIs-Mn-Al-HCO₃ LDH treatment successfully achieved 99% removal of the influent mass of lithium from the GSD-AP-MW-21VC column. The total lithium uptake by the treated soil during the GSD-AP-MW-21VC column test was 2.06 mg/kg, and uptake capacity was not exhausted (Figure 17).

6 COI Sequestration and Stability of Treatment

Mechanisms and stability of treatment were assessed by flushing the columns with upgradient groundwater and performing SSE on solids recovered from the columns at the end of the tests.

6.1 Flushing-Phase Column Tests to Assess Treatment Stability

Following completion of the treatment phase of the column tests using impacted groundwater, the column influents were switched to upgradient groundwater (GSD-AP-MW-14) to assess the reversibility of the COI removal by the treated soils. Upgradient groundwater was run through the columns for approximately 23 to 25 PVs. Column test results for the flushing phase are included in Table 18 and Appendix A.

During the flushing phase of the column tests, the measured dissolved arsenic concentrations in the effluents indicate the stability of the PM treatment was not reversible. Effluent concentrations of dissolved arsenic in both PM columns (GSD-AP-MW-2 and GSD-AP-MW-4) remained below the GWPS for the duration of the flushing phase of the column tests (Table 18).

In the GSD-AP-MW-21VC column treated with MIs-Mn-Al-HCO_3 LDH, lithium was detected above the GWPS in the effluent samples collected after 13 PVs flushed (Table 18). These effluent samples had a pH of 7.1, which was lower than values measured during the treatment phase of the column test (pH 8.3 to 10.3). The significant decrease in the pH of the flushing-phase effluent was due to the acidic pH (approximately 4) of the groundwater (GSD-AP-MW-14; Table 18) selected to represent upgradient groundwater for the flushing phase of the column test. The pH of this groundwater is not representative of groundwater conditions upgradient or in the vicinity of potential field pilot study locations. These results, therefore, overestimate the potential for lithium remobilization.

6.2 SSE on Post-Column Aquifer Soils and Untreated Soils

Following completion of the column tests, the treated aquifer soils were recovered from the columns and subjected to a five-step SSE procedure to help understand the COI uptake mechanisms as part of the long-term treatment stability (or reversibility) evaluation. SSE was also performed on untreated aquifer soils for comparison.

SSE determines the distribution of specific chemical constituents, including COIs, among different binding forms in the treated and untreated soils. SSE results provide insights into the nature of the precipitates, COI removal mechanisms and potential for remobilization, and long-term stability of the sequestered COIs. Specifically, SSE quantifies the concentrations of target constituents in five operationally defined fractions, F1 through F5, which are extracted from the soil sample by

increasingly chemically aggressive solutions. The fractions, extraction solutions used, and binding forms and phases targeted by each are summarized as follows:

Fraction No.	Fraction Name	Extraction Solution	Targeted Phases/Species
F1	Soluble	1 M magnesium chloride adjusted to pH 7	Dissolved and weakly sorbed species
F2	Exchangeable	1 M monosodium phosphate at pH 5	Strongly sorbed, e.g., on clay minerals and oxides
F3	Reducible	0.1 M hydroxylamine/hydrochloric acid adjusted to pH 2 with nitric acid	Poorly crystalline metal oxides such as iron and manganese oxides
F4	Strong acid/oxidizable	16 M nitric acid	Crystalline oxides
F5	Residual	Digestion by USEPA Method 3050B	Silicate and other recalcitrant phases in the aquifer soil matrix

SSE was performed on the three treated column test soils and their associated untreated soils after the completion of the column flushing test in accordance with EGL standard operating procedure modified after Tessier et al. (1979). First, the bottom 6 cm of treated soil in the column was recovered and thoroughly homogenized. Approximately 1 gram (dry weight) of the recovered post-treatment soil was weighed into a 50-mL centrifuge tube and extracted with the solutions in the sequence described above. The SSE results are summarized in Figures 18 through 21 and Table 19; the analytical data are included in Appendix A.

In the GSD-AP-MW-2 (GSD-AP-PT-1 with PM) column soil, arsenic was accumulated predominantly in F4 and F5 by comparison with the untreated soil (Figure 18), reflecting accumulation in manganese oxides and in recalcitrant phases. Manganese, a main component of the PM treatment, was extracted predominantly in F3 (reducible fraction), consistent with the formation of oxides containing manganese in an oxidized state (Figure 19). In contrast, arsenic was accumulated predominantly in F2 in the GSD-AP-MW-4 (GSD-AP-PT-2 with PM) column soil. The difference in arsenic partitioning observed in the two columns is likely explained by the twofold higher spiked concentration of arsenic in GSD-AP-MW-4 than in GSD-AP-MW-2. This higher spiked arsenic is more likely to partition to more labile fractions (e.g., F2, as opposed to F4 or F5). The higher spiking level in GSD-AP-MW-4 resulted in a higher total arsenic concentration accumulated in the GSD-AP-MW-4 column than in the in the GSD-AP-MW-2 column (Figure 18).

Lithium was predominantly accumulated in F2 and, to a lesser extent, in F3 through F5 in the GSD-AP-MW-21VC (GSD-AP-PT-1 with MIs-Mn-Al-HCO₃ LDH) column soil (Figure 20). The lithium concentration (0.4 mg/kg) in F1 was the same for the treated and untreated GSD-AP-PT-1 soils. Lithium in the F2 through F5 fractions is chemically bonded to, or incorporated into, metal oxides and hydroxides, such as iron and manganese oxides, and recalcitrant phases. Manganese, a main component of the MIs-Mn-Al-HCO₃ LDH treatment, was extracted predominantly in F3 (reducible

fraction), consistent with the formation of oxides and LDHs containing manganese in an oxidized state (Figure 19).

Iron was not added in either treatment but is present in the Site soils at concentrations ranging from 8,000 to 11,000 mg/kg (Table 3), as well as in dissolved form in Site groundwater (Table 2). Dissolved iron in Site groundwater is expected to react with the injection treatments and become a constituent of the precipitated solids. SSE resulted in similar overall concentrations of iron from the untreated and treated soils, with the majority of iron present in F5 (Figure 21 and Table 19), indicating the iron content in the precipitated solids was not detectable over the high iron content in the untreated Site soils. The GSD-AP-MW-21VC groundwater had the lowest iron concentration, and this iron was likely removed to a significant extent due to the acidic GSD-AP-MW-14 groundwater during the flushing phase of the column test.

7 Conclusions and Recommendations

Batch and column tests were performed to evaluate the effectiveness of select treatments in removing the COIs (i.e., arsenic and lithium) from Site groundwater. Performance criteria evaluated included the COI removal efficiency, treatment capacity, stability of sequestered COIs, and potential for unintended consequences such as elevated residual concentrations of reagent constituents in groundwater. Major conclusions of the treatability studies are as follows:

- The PM reagent performed well for arsenic removal in batch and column tests.
 - The GWPS was achieved for approximately 50 PVs with GSD-AP-MW-2 and 30 PVs with GSD-AP-MW-4, with >99% arsenic removal in both groundwaters.
- The MIs-Mn-Al-HCO₃ LDH reagent mix performed well for lithium removal in batch and column tests.
 - The GWPS was achieved for approximately 50 PVs with GSD-AP-MW-21VC groundwater with >99% lithium removal.
- After column tests with impacted groundwater were complete, upgradient Site groundwater was flushed through the columns to determine the reversibility of the treatments.
 - Effluent arsenic concentrations remained below the GWPS, indicating the PM treatment is not reversible under Site conditions.
 - Although effluent lithium concentrations were above the GWPS, this is likely due to the acidic groundwater (pH approximately 4) used for the flushing phase. This groundwater pH is not considered representative of upgradient groundwater in the vicinity of GSD-MW-21VC, where pH is circumneutral and expected to sustain treatment stability for lithium.
- Following completion of the column tests, the treated aquifer soils were recovered to evaluate the long-term stability of the treatments using a five-step SSE procedure.
 - SSE results indicate that arsenic removed from the groundwater by the PM treatment was sequestered predominantly in the F2 through F5 fractions and that arsenic partitioning within these fractions varied based on spiked arsenic concentrations in the column influent.
 - Lithium removed from the groundwater by the MIs-Mn-Al-HCO₃ LDH treatment was sequestered mainly in the F2 and F3 fractions, indicating stability of the treatment.
 - Manganese added to the soils by treatment accumulated predominantly in the F3 and F4 fractions, consistent with formation of manganese oxide and/or LDH phases as a result of treatment.

Recommendations and considerations based on the laboratory treatability studies are as follows:

- The single-solution PM treatment is recommended for field pilot testing at locations with arsenic as the sole COI.

- The two-solution $Mg-Mn-Al-HCO_3$ LDH treatment is recommended for field pilot testing at locations with lithium as the sole COI.
 - The pH of this treatment is buffered by $NaHCO_3$; during pilot testing, the pH should be monitored to ensure it remains in an optimal range for lithium removal and stability (i.e., pH approximately 8).
 - Yield and distribution of precipitates produced by the two-solution injection in the field may vary based on groundwater chemistry and method of injection. The need for further optimization of proportions and concentrations of treatment constituents should be evaluated as part of pre-design activities.
- The proportions and concentrations of the proposed treatments can be further tailored, if necessary, to account for groundwater conditions at field pilot test locations (e.g., if pilot testing is to be performed at a different location than that of the wells used for treatability testing).
- Following selection of pilot locations and prior to implementation of field pilot tests, groundwater chemistry data should be reviewed, particularly if a pilot test location is at a different location than that of the wells tested in this laboratory treatability study. If significant differences in groundwater chemistry are identified, confirmatory batch testing is recommended to check treatment performance and, if necessary, adjust the proposed injection treatment.

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Tables

Table 1
Treatments Tested and Reagent Vendor Sources

No.	Treatment	Abbreviation	Reagent Vendor	Notes
1	Aeration	Aeration	--	Passive aeration
2	Ferrous sulfate ¹	FS	Acros Organics	≥99% for analysis grade
3	Ferric chloride	FC	Acros Organics	99% for analysis grade
4	CleanER-10	CleanER	Höganäs Environment Solutions	Injectable zero-valent iron; D50: 7–8 µm; may no longer be commercially available by the vendor.
5	FerroBlack-Fe+	FB-Fe+	Redox Solutions	Injectable iron sulfide
6	Potassium permanganate ^{1,2}	PM	Fisher Chemical	ACS grade
7	Barium chloride	BaCl ₂	Sigma Aldrich	99.9% trace metals basis
8	Barium chloride, followed by sodium sulfate	BaCl ₂ + Na ₂ SO ₄	Sigma Aldrich (BaCl ₂) and Fisher Chemical (Na ₂ SO ₄)	99.9% trace metals basis (BaCl ₂) and ACS grade (Na ₂ SO ₄)
9	Ferrous sulfate, followed by potassium permanganate ^{1,2}	Fe-Mn-SO ₄ LDH	Acros Organics (FeSO ₄) and Fisher Chemical (KMnO ₄)	≥99% for analysis grade (FeSO ₄) and ACS grade (KMnO ₄)
10	Ferric chloride, followed by manganese chloride, followed by potassium permanganate ²	Fe-Mn-Cl LDH	Acros Organics (FeCl ₃), ChemProducts (MnCl ₂), and Fisher Chemical (KMnO ₄)	99% for analysis grade (FeCl ₃), ACS grade (KMnO ₄), and ACS grade (MnCl ₂)
11	FerroBlack-Fe+, followed by sodium aluminate and potassium permanganate with sodium carbonate	FB-Mn-Al-CO ₃ LDH	Redox Solutions (FB-Fe+), Spectrum Chemical (NaAlO ₂), Fisher Chemical (KMnO ₄), and LabChem (Na ₂ CO ₃)	Injectable iron sulfide (FB-Fe+), technical grade (NaAlO ₂), ACS grade (KMnO ₄), and ACS grade (Na ₂ CO ₃)
12	CleanER-10, followed by sodium aluminate and potassium permanganate with sodium carbonate	CleanER-Mn-Al-CO ₃ LDH	Höganäs Environment Solutions (CleanER), Spectrum Chemical (NaAlO ₂), Fisher Chemical (KMnO ₄), and LabChem (Na ₂ CO ₃)	Injectable zero-valent iron, D50: 7–+A18 µm (CleanER); technical grade (NaAlO ₂); ACS grade (KMnO ₄); and ACS grade (Na ₂ CO ₃)
13	Manganese chloride, followed by sodium aluminate and potassium permanganate with sodium carbonate	Mn-Al-Cl-CO ₃ LDH	ChemProducts (MnCl ₂), Spectrum Chemical (NaAlO ₂), Fisher Chemical (KMnO ₄), and LabChem (Na ₂ CO ₃)	ACS grade (MnCl ₂), technical grade (NaAlO ₂), ACS grade (KMnO ₄), and ACS grade (Na ₂ CO ₃)
14	Molasses, followed by sodium aluminate and potassium permanganate with sodium carbonate	Mls-Mn-Al-CO ₃ LDH	B&G Foods, Inc. (molasses), Spectrum Chemical (NaAlO ₂), Fisher Chemical (KMnO ₄), and LabChem (Na ₂ CO ₃)	Food grade (molasses), technical grade (NaAlO ₂), ACS grade (KMnO ₄), and ACS grade (Na ₂ CO ₃)
15	Molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate	Mls-Mn-Al-HCO ₃ LDH	B&G Foods, Inc. (molasses), Spectrum Chemical (NaAlO ₂), Fisher Chemical (KMnO ₄), and Chemproducts (NaHCO ₃)	Food grade (molasses), technical grade (NaAlO ₂), ACS grade (KMnO ₄), and purified powder (NaHCO ₃)

Notes:

1. Treatment was tested at both a high dose (screening batch tests) and low dose (optimization batch tests).

2. Treatment was tested at unaltered pH and at pH 9.5 (adjusted by sodium hydroxide) for lithium-containing groundwaters.

--: not applicable

µm: micrometer

ACS: American Chemical Society

AlK(SO₄)₂: aluminum potassium sulfate

FeCl₃: ferric chloride

FeSO₄: ferrous sulfate

KMnO₄: potassium permanganate

LDH: layered double hydroxide

MnCl₂: manganese chloride

Na₂CO₃: sodium carbonate

NaHCO₃: sodium bicarbonate

Table 2
Initial Groundwater Characterization Results

Parameter	Unit	GSD-AP-MW-2				GSD-AP-MW-2VA		GSD-AP-MW-2VB		GSD-AP-MW-4				GSD-AP-MW-21VC			GSD-AP-MW-14	
		05/16/2022	05/18/2022	06/06/2023	06/12/2023	05/16/2022	05/18/2022	05/16/2022	05/18/2022	05/16/2022	05/18/2022	06/06/2023	06/12/2023	05/16/2022	06/06/2023	06/12/2023	06/06/2023	06/12/2023
Arsenic	mg/L	0.569	0.403	0.652	0.317	0.00135	0.00106	0.000393	0.00035 J	0.0132	0.0098	0.013	0.00784	0.0014	0.000917	0.00073	0.0016	0.00127
Arsenic, filtered	mg/L	0.484	0.364	0.531	0.274	0.00115	0.00109	0.000444	0.00037 J	0.0121	0.00053	0.012	0.00045 J	0.00121	0.00143	0.00074	0.0017	0.00124
Lithium	mg/L	0.0271	0.0256	0.0258	0.0221	0.0612	0.0595	0.111	0.103	0.0071 U	0.00034	0.0071 U	0.00032	0.196	0.205	0.183	0.0071 U	0.00506
Lithium, filtered	mg/L	0.029	0.0251	0.0249	0.0215	0.0701	0.0592	0.121	0.101	0.0071 U	0.00034	0.0071 U	0.00027	0.215	0.196	0.188	0.0071 U	0.00512
Iron	mg/L	12.8	9.44	16.7	8.76	0.0985	0.048	0.0678	0.0208	52.2	44.3	53.8	43.4	0.396	0.0524	0.0359	0.0163 J	0.0045
Iron, filtered	mg/L	12.3	9.25	12.9	8.22	0.0507	0.0478	0.027 J	0.0207	50.6	30.8	51.5	33.6	0.0412	0.0434	0.0394	0.00812 U	0.0046
Manganese	mg/L	9.98	8.22	9.33	8.7	0.015	0.0118	0.0253	0.0206	1.96	1.85	2.81	2.6	0.00964	0.00708	0.00475	0.571	0.545
Manganese, filtered	mg/L	10.00	9.22	8.84	8.54	0.0153	0.0117	0.0255	0.0207	1.94	1.86	2.52	2.56	0.00668	0.00695	0.00691	0.552	0.539
pH	SU	6.16	6.66	6.63	6.24	8.1	8.12	8.48	8.33	6.61	6.57	6.74	6.09	8.31	8.41	--	3.82	4.36
Dissolved oxygen	mg/L	0.210	6.02	0.05	--	0.64	5.98	0.37	6.57	0.23	3.34	0.04	--	0.13	0.07	--	4.39	--
Oxidation reduction potential	mV	-7.2	109	-56.0	19.5	-90.4	121	-178	154	-93.5	44.9	-102	-8.7	-112	-192	--	458	134
Specific conductivity	µS/cm	420	407	381	355	512	523	905	902	443.5	357	494	357	1488	1632	--	301	267
Antimony	mg/L	0.00051 U	--	0.00071 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00071 U	--	0.000508 J	0.00071 U	--	0.00071 U	--
Antimony, filtered	mg/L	0.00051 U	--	0.00071 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00071 U	--	0.000872 J	0.00147	--	0.00071 U	--
Barium	mg/L	0.0974	--	0.115	--	0.132	--	0.322	--	0.23	--	0.254	--	0.435	0.433	--	0.0423	--
Barium, filtered	mg/L	0.0932	--	0.11	--	0.128	--	0.311	--	0.223	--	0.248	--	0.392	0.426	--	0.0402	--
Beryllium	mg/L	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	0.00041 U	--	0.00139	--
Beryllium, filtered	mg/L	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	--	0.00041 U	0.00041 U	--	0.00128	--
Boron	mg/L	0.381	--	0.367	--	0.556	--	0.622	--	0.342	--	0.415	--	0.548	0.569	--	0.03 U	--
Boron, filtered	mg/L	0.395	--	0.377	--	0.566	--	0.622	--	0.374	--	0.419	--	0.551	0.57	--	0.03 U	--
Cadmium	mg/L	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	0.00007 U	--	0.00062	--
Cadmium, filtered	mg/L	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	0.00007 U	--	0.000607	--
Calcium	mg/L	58.2	--	60.7	--	5.22	--	3.81	--	30.7	--	39.8	--	3.3	3.22	--	14.9	--
Calcium, filtered	mg/L	59.8	--	49.8	--	5.47	--	4.09	--	31.6	--	38.3	--	3.45	3.06	--	14.7	--
Chloride	mg/L	2.17	--	2.0	--	6.86	--	43.4	--	8.1	--	6.7	--	188.0	163.0	--	3.2	--
Chromium	mg/L	0.000342 J	--	0.000313 J	--	0.000288 J	--	0.000264 J	--	0.000227 J	--	0.000206 J	--	0.00104	0.000256 J	--	0.000838 J	--
Chromium, filtered	mg/L	0.000223 J	--	0.0002 U	--	0.000221 J	--	0.000262 J	--	0.000211 J	--	0.000205 J	--	0.000224 J	0.0002 U	--	0.000708 J	--
Cobalt	mg/L	0.0366	--	0.04	--	0.00007 U	--	0.00007 U	--	0.0289	--	0.0297	--	0.000193 J	0.00007 U	--	0.0432	--
Cobalt, filtered	mg/L	0.0352	--	0.0376	--	0.00007 U	--	0.00007 U	--	0.0279	--	0.0294	--	0.00007 U	0.00007 U	--	0.0411	--
Fluoride	mg/L	0.189	--	0.204	--	2.4	--	6.12	--	0.247	--	0.225	--	8.22	7.65	--	0.06 U	--
Lead	mg/L	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.000216	0.00007 U	--	0.00202	--
Lead, filtered	mg/L	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	0.00007 U	--	0.00208	--
Mercury	mg/L	0.0003 U	--	0.0003 U	--	0.0003 U	--	0.0003 U	--	0.0003 U	--	0.0003 U	--	0.0003 U	0.0003 U	--	0.0003 U	--
Mercury, filtered	mg/L	0.0003 U	--	0.0003 U	--	0.0003 U	--	0.0003 U	--	0.0003 U	--	0.0003 U	--	--	--	--	--	--
Molybdenum	mg/L	0.0201	--	0.0203	--	0.00357	--	0.000955	--	0.00122	--	0.00508 U	--	0.00194	0.00508 U	--	0.00508 U	--
Molybdenum, filtered	mg/L	0.0195	--	0.0196	--	0.00357	--	0.00105	--	0.00132	--	0.00508 U	--	0.00194	0.00508 U	--	0.00508 U	--
Radium 226 + radium 228	pCi/L	1.06	--	0.907	--	0.285	--	0.253	--	0.978	--	1.17	--	0.4	0.476	--	1.35	--
Selenium	mg/L	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	0.00051 U	--	0.0022	--
Selenium, filtered	mg/L	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	--	0.00051 U	0.00051 U	--	0.00231	--
Sulfate	mg/L	90.2	--	73.9	--	0.865 J	--	10.0	--	51.8	--	88.7	--	19.1	18.7	--	116	--
Thallium	mg/L	0.000414	--	0.000425	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	0.00007 U	--	0.00007 U	--
Thallium, filtered	mg/L	0.000396	--	0.000416	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	--	0.00007 U	0.00007 U	--	0.00007 U	--
Aluminum	mg/L	0.105	--	0.0565	--	0.0188	--	0.0755	--	0.00609 U	--	0.00914 U	--	0.666	0.0117 J	--	14.1	--
Aluminum, filtered	mg/L	0.00609 U	--	0.00914 U	--	0.00753 J	--	0.0178	--	0.00609 U	--	0.00914 U	--	0.0096 J	0.00914 U	--	13.1	--
Alkalinity	mg/L	101	--	121	--	301	--	447	--	102	--	99.9	--	635	564	--	109	--

Table 2
Initial Groundwater Characterization Results

Parameter	Unit	GSD-AP-MW-2				GSD-AP-MW-2VA		GSD-AP-MW-2VB		GSD-AP-MW-4				GSD-AP-MW-21VC			GSD-AP-MW-14	
		05/16/2022	05/18/2022	06/06/2023	06/12/2023	05/16/2022	05/18/2022	05/16/2022	05/18/2022	05/16/2022	05/18/2022	06/06/2023	06/12/2023	05/16/2022	06/06/2023	06/12/2023	06/06/2023	06/12/2023
Bicarbonate alkalinity	mg/L	99.9	--	121	--	293	--	423	--	101	--	99.9	--	610	547	--	109	--
Carbonate alkalinity	mg/L	0.985	--	0.5 U	--	8.3	--	23.4	--	1.19	--	0.5 U	--	25	17	--	0.5 U	--
Magnesium	mg/L	7.71	--	6.85	--	1.28	--	1.29	--	9.9	--	13.0	--	1.2	1.1	--	6.51	--
Magnesium, filtered	mg/L	7.88	--	6.85	--	1.35	--	1.37	--	10.1	--	12.4	--	1.11	1.03	--	6.20	--
Nitrate nitrite as N	mg/L as N	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	--	0.2 U	0.2 U	--	0.482	--
Potassium total	mg/L	7.36	--	7.98	--	0.682	--	1.07	--	2.46	--	2.73	--	1.21	1.11	--	0.398 J	--
Silica	mg/L	9.80	--	10.3	--	8.77	--	9.18	--	8.86	--	9.33	--	9.57	8.35	--	9.20	--
Silica, filtered	mg/L	10.2	--	10.1	--	9.44	--	9.74	--	9.29	--	9.14	--	8.54	8.17	--	8.95	--
Silicon	mg/L	4.58	--	4.83	--	4.10	--	4.29	--	4.14	--	4.36	--	4.47	3.9	--	4.30	--
Silicon, filtered	mg/L	4.75	--	4.72	--	4.41	--	4.55	--	4.34	--	4.27	--	3.99	3.82	--	4.18	--
Sodium	mg/L	3.54	--	3.26	--	130	--	224	--	14.4	--	14.7	--	392	391	--	2.78	--
Sodium, filtered	mg/L	3.70	--	3.29	--	138	--	236	--	15.2	--	14.3	--	391	390	--	2.65	--
Sulfide	mg/L	0	--	0	--	0	--	0	--	0	--	0	--	0	0	--	0	--
Total dissolved solids	mg/L	247	--	246	--	293	--	462	--	190	--	263	--	921	948	--	214	--
Total organic carbon	mg/L	1.47 J	--	1 U	--	1.03 J	--	2.40	--	1.63 J	--	1.69 J	--	1.82 J	1.75 J	--	1 U	--
Temperature	°C	17.7	--	18.9	--	21.3	--	20.6	--	18.2	--	18.9	--	18.5	20.3	--	18.0	--
Turbidity	NTU	6.16	--	6.88	--	0.64	--	1.22	--	5.40	--	7.79	--	7.63	1.67	--	2.69	--

Notes:

Samples were field filtered with a 0.45-micron filter at the time of collection and filtered again prior to analysis for dissolved constituents.

Results dated May 16, 2022, and June 6, 2023, are of field-collected samples sent directly to the analytical laboratories from the field.

Results dated May 18, 2022, are supplemental analyses performed on the groundwaters used in the initial screening batch tests (field collection date: May 16, 2022). Sample Delivery Group: K2205601 and K2205822; analytical lab reports included in Attachment A.

Results dated June 12, 2023, are supplemental analyses performed on the groundwaters used in the FerroBlack-Fe+ screening batch test, optimization batch tests, and column tests (field collection date: June 6, 2023). Sample Delivery Group: K2306988; the analytical lab report is included in Attachment A.

--: not measured

µS/cm: microsiemen per centimeter

J: reported value is an estimate because concentration is less than the reporting limit

mg/L: milligram per liter

mV: millivolt

NTU: nephelometric turbidity unit

pCi/L: picocurie per liter

SU: standard unit

U: indicates the compound was analyzed for but not detected (Value is set to method detection limit.)

Table 3
Bulk Chemistry Results of Aquifer Soils

Parameters	Unit	GSD-AP-PT-1	GSD-AP-PT-2	GSD-AP-PT-2 DUP
Depth interval	ft bgs	15.0-24.0	10.0-15.0	10.0-15.0
Arsenic, total	mg/kg	31.3	2.05	2.50
Lithium, total	mg/kg	5.71 J	2.88 U	3.11 U
Iron, total	mg/kg	11000	8030	8280
Manganese, total	mg/kg	2160	49.5	51.3
Antimony, total	mg/kg	0.596 U	0.576 U	0.612 U
Barium, total	mg/kg	94.3	6.87	6.72
Beryllium, total	mg/kg	0.516	0.363	0.343
Cadmium, total	mg/kg	0.119 U	0.115 U	0.124 U
Chromium, total	mg/kg	11.5	8.77	10
Lead, total	mg/kg	3.79	1.93	2.20
Mercury, total	mg/kg	0.0477 U	0.0461 U	0.0497 U
Molybdenum, total	mg/kg	4.33	0.576 U	0.621 U
Selenium, total	mg/kg	0.596 U	0.576 U	0.621 U
Thallium, total	mg/kg	0.119 U	0.115 U	0.124 U
Sulfide	mg/kg	1.14 U	1.16 U	1.17 U
Fluoride	mg/kg	3.85	0.559 U	0.562 U
Total organic carbon	mg/kg	1100	370	370

Notes:

All results are reported on a dry weight basis.

Bold indicates detected values.

The sample delivery group for corresponding data is A2D0978.

DUP: duplicate

ft bgs: foot below ground surface

J: indicates the result is an approximate value.

mg/kg: milligram per kilogram

U: indicates the compound was analyzed for but not detected (Value is set to instrument detection limit.)

Table 4
Extractable Aluminum, Iron, and Manganese Oxides in Aquifer Soils

Sample ID	Boring Location	Depth Interval (ft bgs)	Extractable Oxides (mg/kg)			Simultaneously Extractable Metals (mg/kg)	
			Aluminum ¹	Iron ¹	Manganese ²	Arsenic ¹	Lithium ¹
GSD-AP-PT-1	PT-1	15.0-24.0	222	805	1140	18.1	0.774
GSD-AP-PT-2	PT-2	10.0-15.0	96.4	528	19.7	0.683	0.3043 U
GSD-AP-PT-2 (DUP)	PT-2	10.0-15.0	108	564	17.3	0.700	0.3043 U

Notes:

Associated analytical laboratory reports: A2E0183 and A2E0495

Bold indicates detected values.

1. Determined by the acid ammonium oxalate method
2. Extracted by 0.1 molar hydroxylamine hydrochloride in 0.01 molar nitric acid

DUP: duplicate

ft bgs: foot below ground surface

mg/kg: milligram per kilogram

U: indicates compound analyzed but not detected above detection limit (Value is set to method detection limit.)

Table 5
Cation Exchange Capacity of Aquifer Soils

Sample Name	Boring Location	Depth Interval (ft bgs)	Major Exchangeable Cations (mEq/kg)				Simultaneously Extracted Ions (mEq/kg)		CEC (mEq/kg)
			Magnesium	Potassium	Sodium	Calcium	Arsenic	Lithium	
GSD-AP-PT-1	PT-1	15.0-24.0	5.12	0.429	0.259	55.0	0.00188	0.0128	60.9
GSD-AP-PT-2	PT-2	10.0-15.0	0.824	0.318	0.230	2.61	0.00198	0.00301 U	3.98
GSD-AP-PT-2 (DUP)	PT-2	10.0-15.0	0.824	0.322	0.229	2.61	0.00202	0.00310 U	3.99

Notes:

Associated analytical laboratory report: A2E0183

Bold indicates detected values.

CEC: cation exchange capacity (Value is calculated by summing all detected exchangeable cations [mEq/kg].)

DUP: duplicate

ft bgs: foot below ground surface

mEq/kg: milliequivalent per kilogram

U: indicates compound analyzed but not detected above detection limit (Value is set to method detection limit.)

Table 6
Moisture Content and Grain Size Distribution of Aquifer Soils

Sample ID	Depth Interval (ft bgs)	Moisture Content (%)	Gravel (%) (>2.00 mm)	Sand (%) (0.063–2.00 mm)	Silt (%) (0.005–0.063 mm)	Clay (%) (<0.005 mm)
GSD-AP-PT-1	15.0–24.0	10.1	61.4	34.5	3.5	0.6
GSD-AP-PT-2	10.0–15.0	13.1	23.2	71.1	4.2	1.5
GSD-AP-PT-2 (DUP)	10.0–15.0	13.0	28.2	66.2	4.3	1.3

Notes:

The clay fraction was measured using a hydrometer (ASTM International D 422).

Moisture content was measured in triplicate for each sample. The average value is reported.

DUP: duplicate

ft bgs: foot below ground surface

mm: millimeter

Table 7**Pairs of Groundwater and Aquifer Soils Used in the Treatability Studies**

Groundwater ID	Soil Sample ID	Soil Depth Interval (ft bgs)	COI(s) in Groundwater
GSD-AP-MW-2	GSD-AP-PT-1	15.0–24.0	Arsenic
GSD-AP-MW-2VA			Lithium
GSD-AP-MW-2VB			Lithium
GSD-AP-MW-4	GSD-AP-PT-2	10.0–15.0	Arsenic
GSD-AP-MW-21VC	GSD-AP-PT-1	15.0–24.0	Lithium

Notes:

COI: constituent of interest

ft bgs: foot below ground surface

Table 8
Treatments Tested in Screening Batch Tests

Treatment	Notes
Aeration	No reagents (Bottles passively aerated during the batch test.)
FS	Treatment tested in duplicate.
FC	--
CleanER-10	--
FB-Fe+	The dose was specified by the vendor (Redox Solutions). This treatment was tested separately from the initial screening batch test due to a delay in the treatment shipment to the laboratory.
BaCl ₂	--
BaCl ₂ + Na ₂ SO ₄	--
PM ¹	Also adjusted to pH 9.5 by adding a small volume of NaOH
Fe-Mn-SO ₄ LDH ¹	Also adjusted to pH 9.5 by adding a small volume of NaOH
Fe-Mn-Cl LDH ¹	Also adjusted to pH 9.5 by adding a small volume of NaOH

Notes:

1. Treatment was tested at unaltered pH for arsenic- and lithium-containing groundwaters and at pH 9.5 (adjusted by NaOH) for lithium-containing groundwaters GSD-AP-MW-2VA and GSD-AP-
 --: not applicable

Aeration: passively aerated

BaCl₂: barium chloride

BaCl₂ + Na₂SO₄: barium chloride, followed by sodium sulfate

FB-Fe+: FerroBlack-Fe+

FC: ferric chloride

Fe-Mn-Cl LDH: ferric chloride, followed by manganese chloride, followed by potassium permanganate

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

FeCl₃: ferric chloride

FeSO₄: ferrous sulfate

FS: ferrous sulfate

KMnO₄: potassium permanganate

LDH: layered double hydroxide

mL: milliliter

Na₂SO₄: sodium sulfate

NaOH: sodium hydroxide

PM: potassium permanganate

Table 9
Screening Batch Test Results

Groundwater ID	Test	Treatment	Dissolved Concentration (µg/L)		Water Quality Parameters			SDG
			Arsenic (GWPS: 10)	Lithium (GWPS: 40)	pH	ORP (mV)	SC (µS/cm)	
GSD-AP-MW-2	--	Initial (Untreated)	750	--	6.66	98.9	3.94	--
	Groundwater	Control	44.9	--	6.91	421	273	K2206860
		Aeration	43.9	--	7.74	369	273	K2206860
		FS	1.49	--	4.48	482	299	K2206860
		FS (DUP)	2.55	--	5.01	473	296	K2206860
		FC	174	--	2.37	423	305	K2206860
		CleanER-10	0.16	--	6.53	-88	268	K2206860
		BaCl ₂	45.3	--	6.50	508	301	K2206860
		BaCl ₂ + NaSO ₄	51.2	--	6.99	435	303	K2206860
		PM	1.80	--	6.64	666	295	K2206860
		Fe-Mn-SO ₄ LDH	0.18 J	--	2.87	689	300	K2206860
		Fe-Mn-Cl LDH	0.14 J	--	2.50	684	306	K2206860
	Slurry	Control	3.38	--	6.71	385	274	K2206858
		Aeration	5.89	--	7.28	352	271	K2206858
		FS	0.81	--	5.12	458	299	K2206858
		FS (DUP)	0.57	--	5.13	488	299	K2206858
		FC	1.17	--	3.28	501	305	K2206858
		CleanER-10	15.8	--	7.23	83.2	274	K2206858
		BaCl ₂	3.68	--	6.75	380	301	K2206858
		BaCl ₂ + NaSO ₄	3.34	--	7.17	385	303	K2206858
		PM	0.40 J	--	7.39	586	297	K2206858
		Fe-Mn-SO ₄ LDH	0.50 U	--	5.78	527	298	K2206858
Fe-Mn-Cl LDH		0.20 J	--	4.53	596	302	K2206858	
GSD-AP-MW-2VA	--	Initial (Untreated)	--	59.2	8.32	394	528	K2205601
	Groundwater	Control	--	60.8	7.69	-79.3	281	K2206853
		Aeration	--	61.2	8.67	444	283	K2206853
		FS	--	61.5	6.29	388	298	K2206853
		FS (DUP)	--	60.1	6.36	-34.9	298	K2206853
		FC	--	62.7	2.63	627	306	K2206853
		CleanER-10	--	57.7	8.36	487	282	K2206853
		BaCl ₂	--	67.6	7.81	547	304	K2206853
		PM	--	57.9	8.49	583	299	K2206853
		PM (pH 9.5)	--	54.3	9.26	416	297	K2206853
		Fe-Mn-SO ₄ LDH	--	58.9	3.37	670	297	K2206853
		Fe-Mn-SO ₄ LDH (pH 9.5)	--	57.9	9.17	301	300	K2206853
		Fe-Mn-Cl LDH	--	58.0	2.78	678	306	K2206853
		Fe-Mn-Cl LDH (pH 9.5)	--	58.8	9.21	283	303	K2206853
	Slurry	Control	--	36.2	7.49	374	283	K2206856
		Aeration	--	35.2	8.38	415	282	K2206856
		FS	--	55.4	5.84	402	302	K2206856
		FS (DUP)	--	56.8	6.23	421	300	K2206856
		FC	--	61.8	3.05	492	307	K2206856
		CleanER-10	--	34.9	7.84	352	282	K2206856
		BaCl ₂	--	57.7	7.43	482	304	K2206856
		PM	--	47.8	7.92	599	299	K2206856
PM (pH 9.5)		--	33.5	8.53	522	297	K2206856	
Fe-Mn-SO ₄ LDH		--	52.4	6.54	530	299	K2206856	
Fe-Mn-SO ₄ LDH (pH 9.5)	--	38.1	8.61	424	302	K2206856		
Fe-Mn-Cl LDH	--	55.8	5.71	541	303	K2206856		
Fe-Mn-Cl LDH (pH 9.5)	--	41.7	8.51	413	305	K2206856		

Table 9
Screening Batch Test Results

Groundwater ID	Test	Treatment	Dissolved Concentration (µg/L)		Water Quality Parameters			SDG
			Arsenic (GWPS: 10)	Lithium (GWPS: 40)	pH	ORP (mV)	SC (µS/cm)	
GSD-AP-MW-2VB	--	Initial (Untreated)	--	101	8.30	447	928	K2205601
	Groundwater	Control	--	102	7.53	-105	297	K2206862
		Aeration	--	100	8.03	529	297	K2206862
		FS	--	98.7	5.77	-84.4	304	K2206862
		FS (DUP)	--	103	5.80	-25.3	303	K2206862
		FC	--	98.9	2.22	418	308	K2206862
		CleanER-10	--	95.0	7.33	242	296	K2206862
		BaCl ₂	--	113	6.40	650	306	K2206862
		PM	--	101	7.78	594	305	K2206862
		PM (pH 9.5)	--	102	8.85	416	304	K2206862
		Fe-Mn-SO ₄ LDH	--	101	5.07	582	303	K2206862
		Fe-Mn-SO ₄ LDH (pH 9.5)	--	99.4	8.65	263	306	K2206862
		Fe-Mn-Cl LDH	--	100	2.32	761	307	K2206862
		Fe-Mn-Cl LDH (pH 9.5)	--	38.6	8.77	227	306	K2206862
	Slurry	Control	--	73.1	7.40	317	296	K2206863
		Aeration	--	68.9	8.17	354	296	K2206863
		FS	--	94.0	5.65	7.0	304	K2206863
		FS (DUP)	--	95.7	6.20	414	303	K2206863
		FC	--	103	4.02	189	307	K2206863
		CleanER-10	--	70.0	7.44	40	296	K2206863
		BaCl ₂	--	98.6	7.33	403	306	K2206863
		PM	--	77.3	7.63	542	304	K2206863
		PM (pH 9.5)	--	52.3	8.63	469	303	K2206863
		Fe-Mn-SO ₄ LDH	--	89.5	6.02	516	303	K2206863
Fe-Mn-SO ₄ LDH (pH 9.5)		--	62.0	8.51	386	305	K2206863	
Fe-Mn-Cl LDH	--	92.1	5.62	526	305	K2206863		
Fe-Mn-Cl LDH (pH 9.5)	--	67.2	8.40	351	305	K2206863		
GSD-AP-MW-4	--	Initial (Untreated)	500	--	6.73	-19.8	315	--
	Groundwater	Control	10.5	--	6.10	468	256	K2206851
		Aeration	11.1	--	6.70	525	253	K2206851
		FS	0.55	--	4.69	442	300	K2206851
		FS (DUP)	0.40 J	--	4.08	553	298	K2206851
		FC	421	--	2.52	626	309	K2206851
		CleanER-10	0.22 J	--	5.63	394	259	K2206851
		BaCl ₂	2.25	--	6.12	597	302	K2206851
		PM	1.00 J	--	6.38	648	298	K2206851
		Fe-Mn-SO ₄ LDH	0.10 J	--	2.94	823	302	K2206851
		Fe-Mn-Cl LDH	0.50	--	2.84	830	307	K2206851
	Slurry	Control	0.57	--	6.16	567	250	K2206849
		Aeration	0.88	--	6.80	582	244	K2206849
		FS	5.94	--	3.12	653	298	K2206849
		FS (DUP)	6.56	--	3.20	674	298	K2206849
		FC	12.2	--	2.76	773	308	K2206849
		CleanER-10	0.21 J	--	5.94	520	253	K2206849
		BaCl ₂	0.41 J	--	6.20	646	301	K2206849
		PM	0.30 J	--	6.47	703	296	K2206849
		Fe-Mn-SO ₄ LDH	8.12	--	2.81	829	298	K2206849
Fe-Mn-Cl LDH		9.61	--	2.57	811	305	K2206849	

Notes:

Reaction time was 7 days. Initial arsenic concentrations in groundwater are the spiked concentrations. Initial lithium concentrations are the concentrations upon receipt at the Anchor QEA Environmental Geochemistry Laboratory.

--: not applicable

µg/L: microgram per liter

µS/cm: microsiemen per centimeter

Aeration: passively aerated

BaCl₂: barium chloride

BaCl₂ + Na₂SO₄: barium chloride, followed by sodium sulfate

DUP: duplicate

FC: ferric chloride

Fe-Mn-Cl LDH: ferric chloride, followed by manganese chloride, followed by potassium permanganate

Fe-Mn-Cl LDH (pH 9.5): ferric chloride, followed by manganese chloride, followed by potassium permanganate, pH adjusted to 9.5

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

Fe-Mn-SO₄ LDH (pH 9.5): ferrous sulfate, followed by potassium permanganate, pH adjusted to 9.5

FS: ferrous sulfate

GWPS: groundwater protection standard

J: indicates the result is an estimated value

LDH: layered double hydroxide

ORP: oxidation reduction potential

PM: potassium permanganate

PM (pH 9.5): potassium permanganate, pH adjusted to 9.5

SC: specific conductivity

SDG: sample delivery group

U: indicates the compound was analyzed for but not detected (Value is set to instrument detection limit.)

Table 10
FerroBlack-Fe+ Screening Batch Test Results

Groundwater ID	Soil ID	Test	Treatment	Dissolved Concentration (µg/L)		pH	ORP (mV)	SC (µS/cm)	SDG
				Arsenic (GWPS: 10)	Lithium (GWPS: 40)				
GSD-AP-MW-2	--	--	Initial (Untreated)	5,000	--	6.24	19.5	355	--
	--	Groundwater	Control	949	--	7.98	-363	251	K2309075
	--		FB-Fe+	293	--	9.87	-549	287	K2309075
	GSD-AP-PT-1	Slurry	Control	50.0	--	7.89	-174	252	K2309075
	GSD-AP-PT-1		FB-Fe+	51.9	--	8.77	-426	286	K2309075
GSD-AP-MW-4	--	--	Initial (Untreated)	5,000	--	6.09	-8.7	357	--
	--	Groundwater	Control	162	--	7.34	187	234	K2309077
	--		FB-Fe+	504	--	8.91	-549	282	K2309077
	GSD-AP-PT-2	Slurry	Control	12.0	--	7.10	261	228	K2309077
	GSD-AP-PT-2		FB-Fe+	88.7	--	8.78	133	281	K2309077
GSD-AP-MW-21VC	--	--	Initial (Untreated)	--	188	8.41*	-192*	1632*	K2306988
	--	Groundwater	Control	--	209	8.94	-289	274	K2309073
	--		FB-Fe+	--	143	9.95	-349	281	K2309073
	GSD-AP-PT-1	Slurry	Control	--	165	9.11	-246	275	K2309073
	GSD-AP-PT-1		FB-Fe+	--	117	9.79	-319	281	K2309073

Notes:

Reaction time was 7 days. Arsenic was spiked in the groundwater prior to beginning the batch test; the spiked concentration is shown here.

Initial (untreated) lithium, and water quality values represent the groundwater upon receipt at EGL.

*: Values were measured in the field prior to sending the groundwater samples to the EGL.

--: not applicable

µg/L: microgram per liter

µS/cm: microsiemen per centimeter

EGL: Environmental Geochemistry Lab

FB-Fe+: FerroBlack-Fe+

GWPS: groundwater protection standard

mV: millivolt

ORP: oxidation reduction potential

SC: specific conductivity

SDG: sample delivery group

Table 11
Treatment Performance Summary: Screening Batch Tests

Treatment	GSD-AP-MW-2		GSD-AP-MW-2VA		GSD-AP-MW-2VB		GSD-AP-MW-4		GSD-AP-MW-21VC	
	Arsenic		Lithium		Lithium		Arsenic		Lithium	
	Groundwater Only	Slurry (Soil: PT-1)	Groundwater Only	Slurry (Soil: PT-1)	Groundwater Only	Slurry (Soil: PT-1)	Groundwater Only	Slurry (Soil: PT-2)	Groundwater Only	Slurry (Soil: PT-1)
Control	--		--		--		--		NT	NT
Aeration									NT	NT
FS									NT	NT
FC									NT	NT
CleanER									NT	NT
BaCl ₂									NT	NT
BaCl ₂ + Na ₂ SO ₄			NT	NT	NT	NT	NT	NT	NT	NT
PM									NT	NT
PM (pH 9.5)	NT	NT					NT	NT	NT	NT
Fe-Mn-SO ₄ LDH									NT	NT
Fe-Mn-SO ₄ LDH (pH 9.5)	NT	NT					NT	NT	NT	NT
Fe-Mn-Cl LDH									NT	NT
Fe-Mn-Cl LDH (pH 9.5)	NT	NT					NT	NT	NT	NT
Control ¹	--		NT	NT	NT	NT	--		--	
FB-Fe+ ¹			NT	NT	NT	NT				

Notes:

Green cells indicate the concentration was decreased to less than the GWPS.

Yellow cells indicate the concentration was decreased from the groundwater-only control concentration by more than 50%, but the GWPS was not reached.

Orange cells indicate the concentration was decreased from the groundwater-only control by less than 50%, and the GWPS was not reached.

Red cells indicate the concentration was increased or was the same as the groundwater-only control concentration, and the GWPS was not reached.

FS was tested in duplicate. The average of the results is shown here.

1. FB-Fe+ was tested in tandem with the Optimization Batch Test Phase 1 samples.

--: not applicable

BaCl₂: barium chloride

BaCl₂ + Na₂SO₄: barium chloride, followed by sodium sulfate

CleanER: CleanER-10

FB-Fe+: FerroBlack-Fe+

FC: ferric chloride

Fe-Mn-Cl LDH: ferric chloride, followed by manganese chloride, followed by potassium permanganate

Fe-Mn-Cl LDH (pH 9.5): ferric chloride, followed by manganese chloride, followed by potassium permanganate, pH adjusted to 9.5 with sodium hydroxide

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

Fe-Mn-SO₄ LDH (pH 9.5): ferrous sulfate, followed by potassium permanganate, pH adjusted to 9.5 with sodium hydroxide

FS: ferrous sulfate

GWPS: groundwater protection standard

LDH: layered double hydroxide

NT: not tested

PM: potassium permanganate

PM (9.5): potassium permanganate, pH adjusted to 9.5 with sodium hydroxide

Table 12
Treatments Tested in Optimization Batch Tests

Treatment	Notes
FS	Tested in Phase 1
PM	Tested in Phase 1
Fe-Mn-SO ₄ LDH	Tested in Phase 1
FB-Mn-Al-CO ₃ LDH ¹	Tested in Phase 1
CleanER-Mn-Al-CO ₃ LDH ¹	Tested in Phase 1
Mn-Al-Cl-CO ₃ LDH ¹	Tested in Phase 1
Mls-Mn-Al-CO ₃ LDH ¹	Tested in Phase 1
Mls-Mn-Al-HCO ₃ LDH ¹	Tested in Phase 2

Notes:

1. Treatment tested for GSD-AP-MW-21VC groundwater only.

CleanER-Mn-Al-CO₃ LDH: CleanER-10, followed by sodium aluminate and potassium permanganate with sodium carbonate

FB-Mn-Al-CO₃ LDH: FerroBlack-Fe+, followed by sodium aluminate and potassium permanganate with sodium carbonate

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

LDH: layered double hydroxide

Mls-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

Mls-Mn-Al LDH: molasses, followed by sodium aluminate and potassium permanganate with sodium carbonate

Mn-Al-Cl-CO₃ LDH: manganese chloride, followed by sodium aluminate and potassium permanganate with sodium carbonate

PM: potassium permanganate

Table 13
Optimization Batch Test Results

Groundwater ID	Test	Optimization Batch Test Phase	Treatment	Dissolved Concentration (µg/L)				pH	ORP (mV)	SC (µS/cm)	SDG
				Arsenic (GWPS: 10)	Lithium (GWPS: 40)	Iron	Manganese				
GDS-AP-MW-2	--	--	Initial (Untreated)	5000	--	8220	8540	6.24	19.5	355	--
	Groundwater	1	Control	949	--	3 J	8440	7.98	-363	251	K2309075
			FS	59.2	--	214000	9250	6.52	-486	274	K2309075
			FS DUP	83.8	--	214000	9260	6.75	-515	274	K2309075
			PM	32.4	--	5 J	11000	7.10	683	271	K2309075
			Fe-Mn-SO ₄ LDH	0.50 J	--	1990	10500	3.14	560	272	K2309075
	Slurry	1	Control	50.0	--	311	4950	7.89	-174	252	K2309075
			FS	14.6	--	108000	28000	6.41	-495	271	K2309075
			FS DUP	13.5	--	99100	31200	6.41	-510	273	K2309075
			PM	1.70 J	--	2 J	5850	7.48	579	270	K2309075
Fe-Mn-SO ₄ LDH			0.90 J	--	62.0	4100	6.34	-104	270	K2309075	
GDS-AP-MW-4	--	--	Initial (Untreated)	5000	--	33600	2560	6.09	-9	357	--
	Groundwater	1	Control	162	--	10.0	2150	7.34	187	234	K2309077
			FS	5.50	--	218000	2930	6.82	-184	267	K2309077
			FS DUP	8.40	--	235000	2990	6.75	-142	266	K2309077
			PM	6.20	--	4 J	7780	6.69	702	264	K2309077
			Fe-Mn-SO ₄ LDH	1.30 J	--	2810	10700	2.83	793	266	K2309077
	Slurry	1	Control	12.0	--	11.0	2390	7.10	261	228	K2309077
			FS	7.50	--	178000	4860	6.28	-120	266	K2309077
			FS DUP	7.00	--	185000	5080	6.13	-130	267	K2309077
			PM	3.20	--	3 J	860	6.49	709	264	K2309077
Fe-Mn-SO ₄ LDH			4.30	--	380	18400	3.45	708	262	K2309077	
GDS-AP-MW-21VC	--	--	Initial (Untreated)	--	188	39.4	6.91	8.41*	-192*	1632*	K2306988
	Groundwater	1	Control	--	209	27.0	7.30	8.94	-289	274	K2309073
			Mn-Al-Cl-CO ₃ LDH	--	1.90	2 U	138000	6.99	-307	280	K2309073
			Mn-Al-Cl-CO ₃ LDH DUP	--	2.10	2 U	141000	7.06	-284	282	K2309073
			Mls-Mn-Al-CO ₃ LDH	--	0.8 J	2 U	177	10.7	-520	280	K2309073
			CleanER-Mn-Al-CO ₃ LDH	--	41.9	2 U	65800	11.2	453	280	K2309073
			FB-Mn-Al-CO ₃ LDH	--	5.60	11.0	5.00	11.5	-549	281	K2309073
	Slurry	2	Control	--	185	4.20	4.88	8.71	526	1790	K2310397
			Mls-Mn-Al-HCO ₃ LDH	--	0.10 U	2.10	88.3	9.66	490	3870	K2310397
			Mls-Mn-Al-HCO ₃ LDH DUP	--	0.150	0.4 J	225	9.88	481	3940	K2310397
		1	Control	--	165	9 J	45.5	9.11	-246	275	K2309073
			Mn-Al-Cl-CO ₃ LDH	--	2.90	52.0	87000	7.32	-249	279	K2309073
			Mn-Al-Cl-CO ₃ LDH DUP	--	2.70	2 J	86500	7.30	-227	280	K2309073
Mls-Mn-Al-CO ₃ LDH			--	1.00	32.0	110	10.6	-549	278	K2309073	
2	CleanER-Mn-Al-CO ₃ LDH	--	10.7	2 U	37100	11.1	-549	279	K2309073		
	FB-Mn-Al-CO ₃ LDH	--	5.10	18.0	11.0	11.3	-399	281	K2309073		
1	Control	--	175	15.8	93.2	8.46	517	1690	K2310397		
	Mls-Mn-Al-HCO ₃ LDH	--	0.400	13.0	208	9.77	496	3610	K2310397		
	Mls-Mn-Al-HCO ₃ LDH DUP	--	0.170	15.0	190	9.82	492	3690	K2310397		

Notes:

Reaction time was 7 days. Arsenic was spiked in the groundwater prior to beginning the batch test; the spiked concentration is shown here.

Initial (untreated) lithium, and water quality values represent the groundwater upon receipt at EGL.

*: Values were measured in the field prior to sending the groundwater samples to the EGL.

--: not applicable

µg/L: microgram per liter

µS/cm: microsiemen per centimeter

CleanER-Mn-Al-CO₃ LDH: CleanER-10, followed by sodium aluminate and potassium permanganate with sodium carbonate

DUP: duplicate

FB-Mn-Al-CO₃ LDH: FerroBlack-Fe+, followed by sodium aluminate and potassium permanganate with sodium carbonate

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GWPS: groundwater protection standard

J: indicates the result is an estimated value

LDH: layered double hydroxide

Mls-Mn-Al-CO₃ LDH: molasses, followed by sodium aluminate and potassium permanganate with sodium carbonate

Mls-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

Mn-Al-Cl-CO₃ LDH: manganese chloride, followed by sodium aluminate and potassium permanganate with sodium carbonate

ORP: oxidation reduction potential

PM: potassium permanganate

SC: specific conductivity

SDG: sample delivery group

U: indicates the compound was analyzed for but not detected (Value is set to instrument detection limit.)

Table 14
Treatment Performance Summary: Optimization Batch Tests

Treatment	GSD-AP-MW-2		GSD-AP-MW-4		GSD-AP-MW-21VC	
	Arsenic		Arsenic		Lithium	
	Groundwater Only	Slurry (Soil: PT-1)	Groundwater Only	Slurry (Soil: PT-2)	Groundwater Only	Slurry (Soil: PT-1)
Control	--		--		--	
FS					NT	NT
PM					NT	NT
Fe-Mn-SO ₄ LDH					NT	NT
Mn-Al-Cl-CO ₃ LDH	NT	NT	NT	NT		
Mls-Mn-Al-CO ₃ LDH	NT	NT	NT	NT		
CleanER-Mn-Al-CO ₃ LDH	NT	NT	NT	NT		
FB-Mn-Al-CO ₃ LDH	NT	NT	NT	NT		
Control ¹	NT	NT	NT	NT	--	
Mls-Mn-Al-HCO ₃ LDH ¹	NT	NT	NT	NT		

Notes:

1. Treatment tested during Optimization Batch Test Phase 2.

Green cells indicate the concentration was decreased to less than the GWPS.

Yellow cells indicate the concentration was decreased from the corresponding groundwater-only control value by more than 50%, but the GWPS was not reached.

Orange cells indicate the concentration was decreased from the corresponding groundwater-only control value by less than 50%, and the GWPS was not reached.

Groundwater protection standards (GWPS) are 10 and 40 micrograms per liter for arsenic and lithium, respectively.

FS, Mn-Al-Cl-CO₃ LDH, and Mls-Mn-Al-HCO₃ LDH were tested in duplicate. The average of the results is shown here.

--: not applicable

CleanER-Mn-Al-CO₃ LDH: CleanER-10, followed by sodium aluminate and potassium permanganate with sodium carbonate

FB-Mn-Al-CO₃ LDH: FerroBlack-Fe+, followed by sodium aluminate and potassium permanganate with sodium carbonate

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GWPS: groundwater protection standard

LDH: layered double hydroxide

Mls-Mn-Al-CO₃ LDH: molasses, followed by sodium aluminate and potassium permanganate with sodium carbonate

Mls-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

Mn-Al-Cl-CO₃ LDH: manganese chloride, followed by sodium aluminate and potassium permanganate with sodium carbonate

NT: not tested

PM: potassium permanganate

Table 15
Column Test Setup

Column No.	Groundwater ID	Aquifer Soil ID (depth; feet)	Treatment	COI	Soil Added (dry weight; grams)	Reagent Added (dry weight; grams)			
						KMnO ₄	Sucrose ¹	Na ₂ Al ₂ O ₄ ·3H ₂ O	NaHCO ₃
1	GSD-AP-MW-2	GSD-AP-PT-1 (15.0–24.0)	PM	As	545	1.07	--	--	--
2	GSD-AP-MW-4	GSD-AP-PT-2 (10.0–15.0)	PM	As	553	0.797	--	--	--
3	GSD-AP-MW-21VC	GSD-AP-PT-1 (15.0–24.0)	Mls-Mn-Al-HCO ₃ LDH	Li	573	1.16	0.550	1.87	0.719

Notes:

1. Sucrose, as molasses

--: not applicable

As: arsenic

COI: constituent of interest

Li: lithium

KMnO₄: potassium permanganate

Mls-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

NaHCO₃: sodium bicarbonate

Na₂Al₂O₄·3H₂O: sodium aluminate trihydrate

PM: potassium permanganate

Table 16
Column Test Operating Conditions

Parameter	Value	Unit
Column media depth	22.0	cm
Column inner diameter	4.2	cm
Flow rate ¹	0.85	mL/min
Porosity	35	%
Hydraulic residence time ¹	2.1	hours
Superficial velocity ¹	88.1	cm/day
Test duration	5 (+ 2 flushing test)	days
Pore volumes treated	45–55	--

Notes:

1. Values are based on the average measured flow rates of all columns during the duration of the column experiment.

--: not applicable

cm: centimeter

cm/day: centimeter per day

mL/min: milliliter per minute

Table 17
Column Treatment Phase Test Results

Sample	Sampling Date and Time	Elapsed Time (days)	Flow Rate (mL/min)	Pore Volume	Dissolved Concentration (µg/L)				Water Quality Parameters		
					Arsenic	Lithium	Iron	Manganese	pH	(µS/cm)	ORP (mV)
Influent (GSD-AP-MW-2)	10/9/2023 11:20	0.104	--	--	1060	--	6890	8680	6.89	248	6.6
	10/9/2023 15:15	0.267	--	--	1050	--	6680	9060	6.83	266	3.0
	10/9/2023 18:45	0.413	--	--	1020	--	6730	8730	7.25	242	1.4
	10/10/2023 8:05	0.969	--	--	880	--	6420	8660	6.93	246	2.2
	10/10/2023 18:00	1.38	--	--	704	--	6160	8590	7.00	245	2.9
	10/11/2023 8:00	1.97	--	--	393	--	5420	8730	7.04	467	-1.0
	10/11/2023 18:00	2.38	--	--	278	--	5260	8550	6.92	399	15.8
	10/12/2023 7:10	2.93	--	--	64.1	--	4020	9090	7.01	426	4.7
	10/12/2023 17:50	3.38	--	--	11.1	--	3360	8510	6.96	415	13.1
	10/13/2023 7:20	3.94	--	--	0.80	--	2050	9600	6.91	435	3.6
10/13/2023 17:50	4.38	--	--	1.02	--	1440	9180	7.01	417	18.7	
Effluent (GSD-AP-MW-2, PT-1)	10/9/2023 10:30	0.069	0.889	0.833	1.54	--	5.70	523	7.44	284	216
	10/9/2023 14:00	0.215	0.863	2.53	1.64	--	0.3 U	145	7.51	280	106
	10/9/2023 17:56	0.379	0.917	4.56	--*	--	--*	--*	7.32	274	458
	10/10/2023 7:13	0.933	0.819	10.7	1.05	--	0.3 U	3390	7.31	277	153
	10/10/2023 17:10	1.35	0.832	15.3	0.96	--	0.3 U	5680	7.25	268	406
	10/11/2023 7:00	1.92	0.845	21.9	0.79	--	0.3 U	6330	7.32	520	408
	10/11/2023 17:10	2.35	0.860	26.8	0.88	--	0.3 U	6070	7.11	432	396
	10/12/2023 6:20	2.90	0.814	32.9	0.84	--	1.4 J	7150	6.73	415	498
	10/12/2023 17:00	3.34	0.820	37.8	0.88	--	1.3 J	6730	7.14	422	372
	10/13/2023 6:20	3.90	0.796	43.7	0.81	--	0.8 J	7610	6.93	420	496
10/13/2023 17:00	4.34	0.807	48.9	0.85	--	1.2 J	7120	7.08	393	376	
Influent (GSD-AP-MW-4)	10/9/2023 11:20	0.10	--	--	2090	--	3160	2500	6.79	239	38.0
	10/9/2023 15:15	0.27	--	--	2080	--	3160	2480	6.68	268	98.2
	10/9/2023 18:45	0.41	--	--	2040	--	3170	2530	6.73	232	67.5
	10/10/2023 8:05	0.97	--	--	1850	--	2760	2490	6.64	235	65.4
	10/10/2023 18:00	1.38	--	--	1700	--	2510	2440	6.76	255	52.4
	10/11/2023 8:00	1.97	--	--	1520	--	2110	2460	6.79	440	64.6
	10/11/2023 18:00	2.38	--	--	1390	--	1910	2420	6.80	421	72.0
	10/12/2023 7:10	2.93	--	--	1160	--	1320	2320	6.83	382	41.2
	10/12/2023 17:50	3.38	--	--	1020	--	1070	2300	6.78	380	46.8
	10/13/2023 7:20	3.94	--	--	839	--	704	2310	6.87	392	51.6
10/13/2023 17:50	4.38	--	--	732	--	516	2300	6.89	390	52.8	
Effluent (GSD-AP-MW-4, PT-2)	10/9/2023 10:30	0.07	0.889	0.833	0.3 J	--	1.1 J	19.9	7.03	263	254
	10/9/2023 14:00	0.22	0.548	1.91	0.17 J	--	7.40	58.5	7.10	243	148
	10/9/2023 17:56	0.38	0.847	3.78	0.19 J	--	23.8	270	7.02	236	380
	10/10/2023 7:13	0.93	0.841	10.1	2.0	--	0.6 J	1000	6.82	233	414
	10/10/2023 17:10	1.35	0.838	14.8	4.17	--	0.6 J	1130	6.97	233	445
	10/11/2023 7:00	1.92	0.879	21.6	7.86	--	28.6	1300	6.97	450	197
	10/11/2023 17:10	2.35	0.880	26.6	7.66	--	0.9 J	1150	6.92	360	270
	10/12/2023 6:20	2.90	0.840	32.8	12.2	--	1.0 J	1190	6.84	376	461
	10/12/2023 17:00	3.34	0.839	37.9	22.8	--	0.7 J	1320	6.93	377	396
	10/13/2023 6:20	3.90	0.796	43.8	27.1	--	0.7 J	1350	6.98	389	469
10/13/2023 17:00	4.34	0.825	49.1	30.5	--	0.9 J	1230	6.93	384	393	
Influent (GSD-AP-MW-21VC)	10/9/2023 11:20	0.104	--	--	--	215	24	12.8	8.60	308	18.7
	10/9/2023 15:15	0.267	--	--	--	216	22.7	4.55	8.58	307	319
	10/9/2023 18:45	0.413	--	--	--	215	23.8	4.93	8.53	310	-18.2
	10/10/2023 8:05	0.969	--	--	--	220	22.4	4.67	8.54	310	372
	10/10/2023 18:00	1.38	--	--	--	218	23.5	4.81	8.66	304	336
	10/11/2023 8:00	1.97	--	--	--	214	22.3	4.61	8.54	1440	105
	10/11/2023 18:00	2.38	--	--	--	216	22.0	4.54	8.57	1350	324
	10/12/2023 7:10	2.93	--	--	--	211	20.0	4.39	8.31	1060	15.0
	10/12/2023 17:50	3.38	--	--	--	208	20.4	4.47	8.45	1340	83.2
	10/13/2023 7:20	3.94	--	--	--	208	19.2	4.37	8.39	1140	64.1
10/13/2023 17:50	4.38	--	--	--	212	19.6	4.29	8.42	1310	56.6	
Effluent (GSD-AP-MW-21VC, PT-1)	10/9/2023 10:30	0.07	0.911	0.854	--	0.4	64.5	57.4	10.3	309	122
	10/9/2023 14:00	0.22	0.945	2.71	--	0.28	52.8	25.1	9.95	301	215
	10/9/2023 17:56	0.38	0.822	4.53	--	--*	--*	--*	9.66	242	290
	10/10/2023 7:13	0.93	0.891	11.2	--	0.27	7.90	18.6	9.05	309	381
	10/10/2023 17:10	1.35	0.861	16.0	--	0.23	3.20	19.1	9.01	302	336
	10/11/2023 7:00	1.92	0.917	23.1	--	0.21	6.20	30.7	8.86	1480	143
	10/11/2023 17:10	2.35	0.912	28.4	--	0.21	2.50	34.9	8.65	1330	209
	10/12/2023 6:20	2.90	0.888	34.9	--	0.11	4.50	44.3	8.44	1210	327
	10/12/2023 17:00	3.34	0.863	40.1	--	0.15	2 J	50.6	8.49	1360	324
	10/13/2023 6:20	3.90	0.857	46.5	--	1.22	2.90	61.3	8.36	1080	338
10/13/2023 17:00	4.34	0.835	51.9	--	20.2	1.1 J	69.9	8.32	1350	312	

Notes:
Associated analytical laboratory reports: K2311697 and K2311796
1. Flow rate was measured in effluent samples only.
--: not applicable
--*: data omitted from table due to internal laboratory error
µg/L: microgram per liter
µS/cm: microsiemen per centimeter
J: indicates the result is an estimated value
mg/L: milligram per liter
mL/min: milliliter per minute
mV: millivolt
ORP: oxidation reduction potential
SC: specific conductivity
U: indicates the compound was analyzed for but not detected (Value is set to instrument detection limit.)

Table 18
Column Flushing Phase Test Results

Sample	Treatment	Sampling Date and Time	Elapsed Time (days)	Flow Rate ¹ (mL/min)	Pore Volumes Flushed	Dissolved Concentration (µg/L)				Water Quality Parameters		
						Arsenic	Lithium	Iron	Manganese	pH	SC (µS/cm)	ORP (mV)
GSD-AP-MW-2 (PT-1) Effluent	PM	10/16/2023 16:00	0.09	0.933	1.14	0.65	--	0.8 J	8960	6.74	302	375
		10/17/2023 15:00	1.05	0.909	12.9	0.61	--	1.0 J	5190	5.88	262	529
		10/18/2023 14:18	2.05	0.854	24.4	0.71	--	1.1 J	4670	6.45	365	410
GSD-AP-MW-4 (PT-2) Effluent	PM	10/16/2023 16:00	0.09	0.874	1.07	7.73	--	0.5 J	2630	6.85	257	372
		10/17/2023 15:00	1.05	0.848	12.0	7.80	--	4.20	1910	5.14	230	553
		10/18/2023 14:18	2.05	0.814	23.0	6.22	--	1.9 J	1560	4.07	232	409
GSD-AP-MW-21VC (PT-1) Effluent	Mls-Mn-Al-HCO ₃	10/16/2023 16:00	0.09	0.957	1.17	--	2.21	3.10	34.6	8.05	789	343
		10/17/2023 15:00	1.05	0.934	13.2	--	102	0.3 U	910	7.15	348	370
		10/18/2023 14:18	2.05	0.874	25.1	--	73.4	0.3 J	12900	7.09	338	356
GSD-AP-MW-14 Influent	Control	10/16/2023 17:00	--	--	--	1.99	--	4.20	552	4.05	246	397
		10/17/2023 16:00	--	--	--	1.92	--	4.10	562	3.62	260	540
		10/18/2023 15:05	--	--	--	1.95	--	5.10	555	3.70	251	524

Notes:

1. Flow rate was measured in effluent samples only.

Associated sample analytical report: K2311985

--: not applicable

µg/L: microgram per liter

µS/cm: microsiemen per centimeter

J: indicates the result is an estimated value

mL/min: milliliter per minute

Mls-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

mV: millivolt

ORP: oxidation reduction potential

PM: potassium permanganate

SC: specific conductivity

U: indicates the compound was analyzed for but not detected (Value is set to instrument detection limit.)

Table 19
SSE Results

Groundwater ID	Soil ID	Treatment	Arsenic (mg/kg)					Lithium (mg/kg)					Iron (mg/kg)					Manganese (mg/kg)				
			F1	F2	F3	F4	F5	F1	F2	F3	F4	F5	F1	F2	F3	F4	F5	F1	F2	F3	F4	F5
GSD-AP-MW-2	PT-1	PM	0.312	14.6	1.06	7.98	6.01	NT	NT	NT	NT	1.71	6.99	69.9	129	1180	10600	15.7	36.7	139	19.0	41.7
GSD-AP-MW-4	PT-2	PM	0.882	24.0	1.09	2.71	3.54	NT	NT	NT	NT	0.77	0.79	77.5	99.2	555	8970	5.15	4.96	52.2	4.31	30.4
GSD-AP-MW-21VC	PT-1	Mls-Mn-Al-HCO ₃ LDH	NT	NT	NT	NT	4.56	0.41	1.03	0.22	0.18	2.07	1.74	23.0	83.8	775	7850	2.18	50.1	212	12.8	31.6
GSD-AP-MW-21VC	PT-1	Mls-Mn-Al-HCO ₃ LDH DUP	NT	NT	NT	NT	4.76	0.45	0.96	0.18	0.17	1.25	1.04	25.4	78.9	747	8420	9.33	48.1	182	12.1	42.7
--	PT-1	Untreated soil	0.441	13.2	0.984	0.289 J	2.61	0.41	0.06	0.06	0.116 U	1.12	1.38	76.1	140	890	11200	1.41	22.0	84.8	4.36	32.6
--	PT-2	Untreated soil	0.024 J	0.764	0.117	6.48	6.45	0.39	0.05	0.01	0.26	1.83	1.40	90.0	143	1160	10900	9.10	5.20	3.93	10.9	40.4

Notes:

All results are reported on a dry-weight basis.

Associated sample lab reports: K2312285 and K2312358

--: not applicable

F1: water soluble, dissolved and weakly sorbed (extracted by 1 M magnesium chloride to pH 7)

F2: exchangeable, strongly sorbed, e.g., on clay minerals and oxides (extracted by 1 M monosodium phosphate at pH 5)

F3: Reducible, e.g., poorly crystalline metal oxides such as iron and manganese oxides (extracted by 0.1 M hydroxylamine/hydrogen chloride adjusted to pH 2 with nitric acid)

F4: Oxidizable, e.g., crystalline oxides (extracted by 16 M nitric acid)

F5: Residual, e.g., silicate and other recalcitrant phases in the aquifer soil matrix (prepared by U.S. Environmental Protection Agency Method 3050B)

DUP: duplicate

J: indicates the result is an estimated value

LDH: layered double hydroxide

M: molar

mg/kg: milligram per kilogram

Mls-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

NT: not tested

PM: potassium permanganate

SSE: selective sequential extraction

U: indicates the compound was analyzed for but not detected (Value is set to instrument detection limit.)

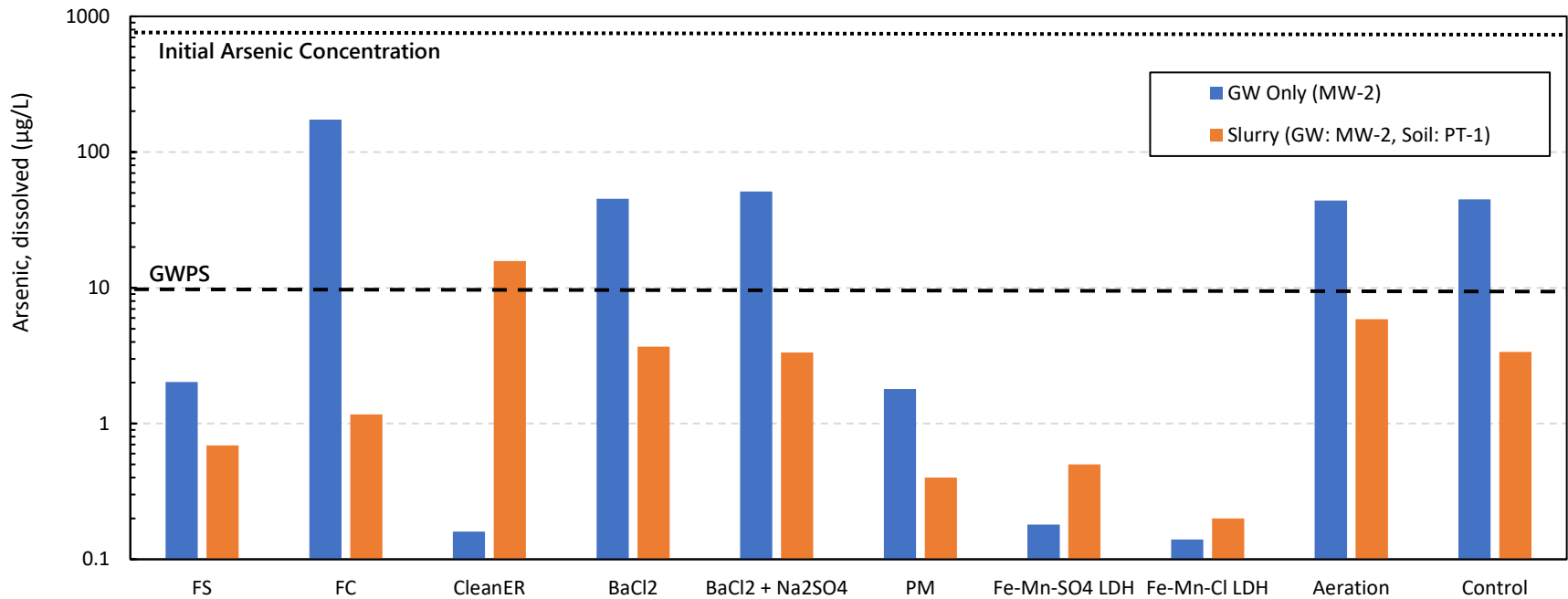
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Figure 1
Sampling Locations
 Laboratory Treatability Study Results
 Plant Gadsden



Notes:

FS was tested in duplicate. The average of the two results is shown here. Arsenic was spiked in the groundwater prior to beginning the batch test; the spiked concentration is shown as a dotted line.

µg/L: microgram per liter

BaCl₂: barium chloride

BaCl₂ + Na₂SO₄: barium chloride, followed by sodium sulfate

CleanER: CleanER-10

FC: ferric chloride

Fe-Mn-Cl LDH: ferric chloride, followed by manganese chloride, followed by potassium permanganate

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

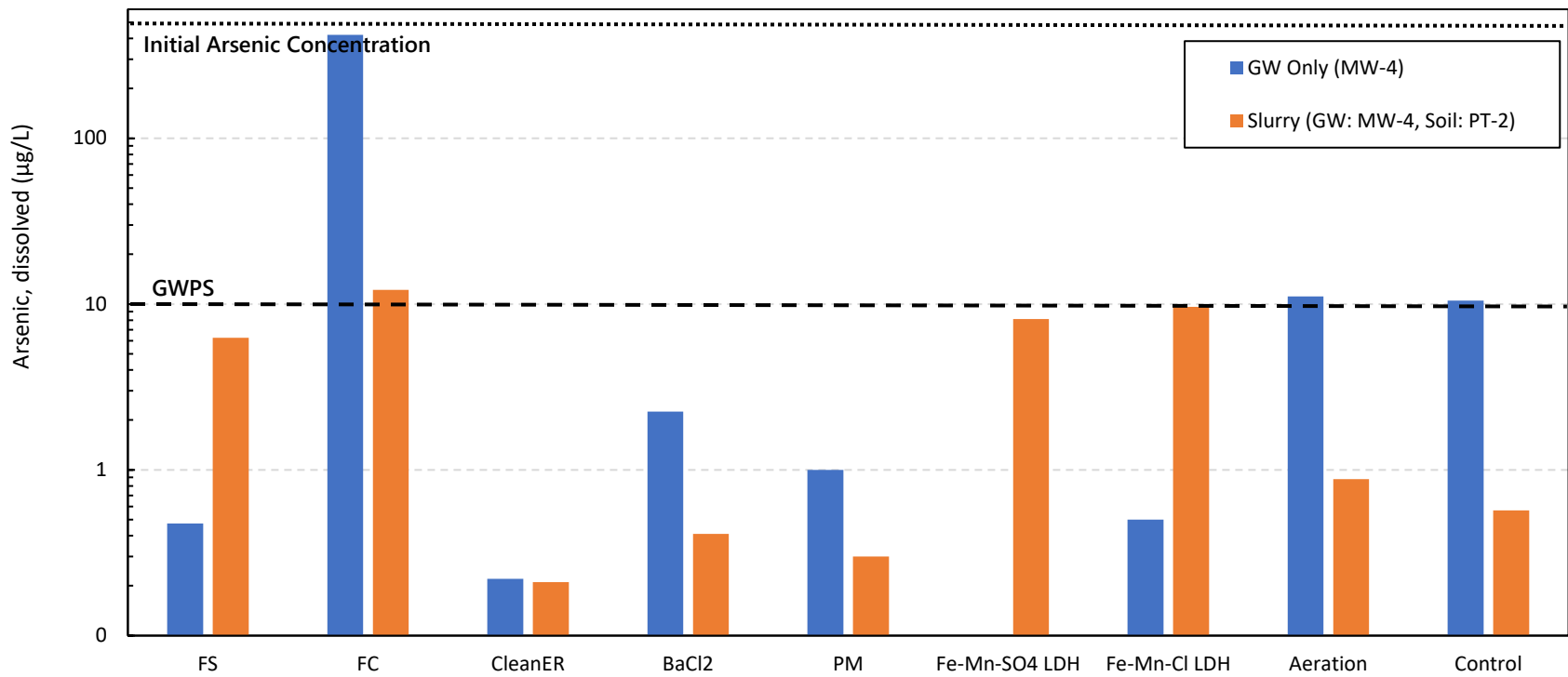
PM: potassium permanganate

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Figure 2
Screening Batch Test Results for GSD-AP-MW-2

Laboratory Treatability Study Results
Plant Gadsden



Notes:

FS was tested in duplicate. The average of the two results is shown here. Arsenic was spiked in the groundwater prior to beginning the batch test; the spiked concentration is shown as a dotted line.

µg/L: microgram per liter

BaCl2: barium chloride

CleanER: CleanER-10

FC: ferric chloride

Fe-Mn-Cl LDH: ferric chloride, followed by manganese chloride, followed by potassium permanganate

Fe-Mn-SO4 LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

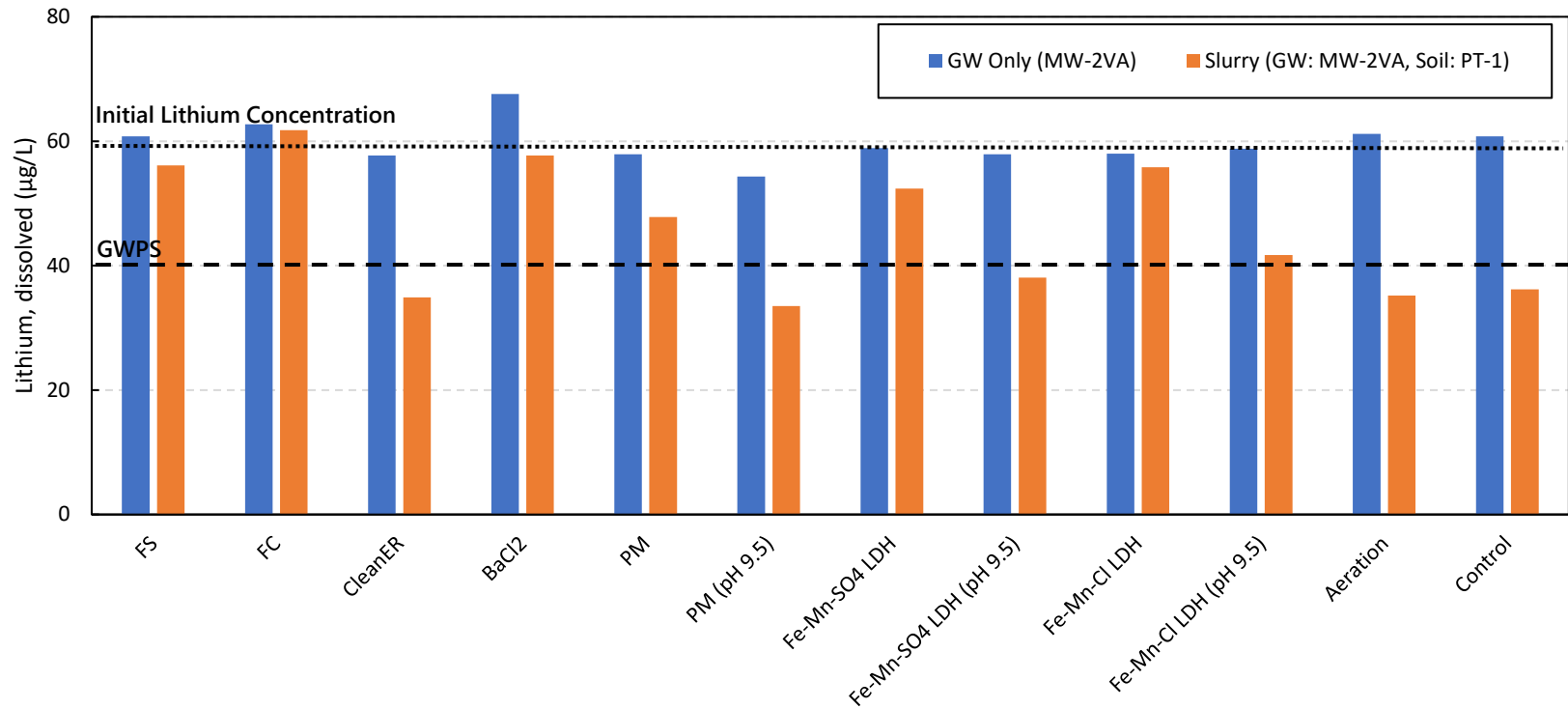
PM: potassium permanganate

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Figure 3
Screening Batch Test Results for GSD-AP-MW-4

Laboratory Treatability Study Results
Plant Gadsden



Notes:

FS was tested in duplicate. The average of the two results is shown here. The concentration of lithium upon receipt at EGL is shown as a dotted line.

µg/L: microgram per liter

BaCl₂: barium chloride

CleanER: CleanER-10

EGL: Environmental Geochemistry Laboratory

FC: ferric chloride

Fe-Mn-Cl LDH: ferric chloride, followed by manganese chloride, followed by potassium permanganate

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

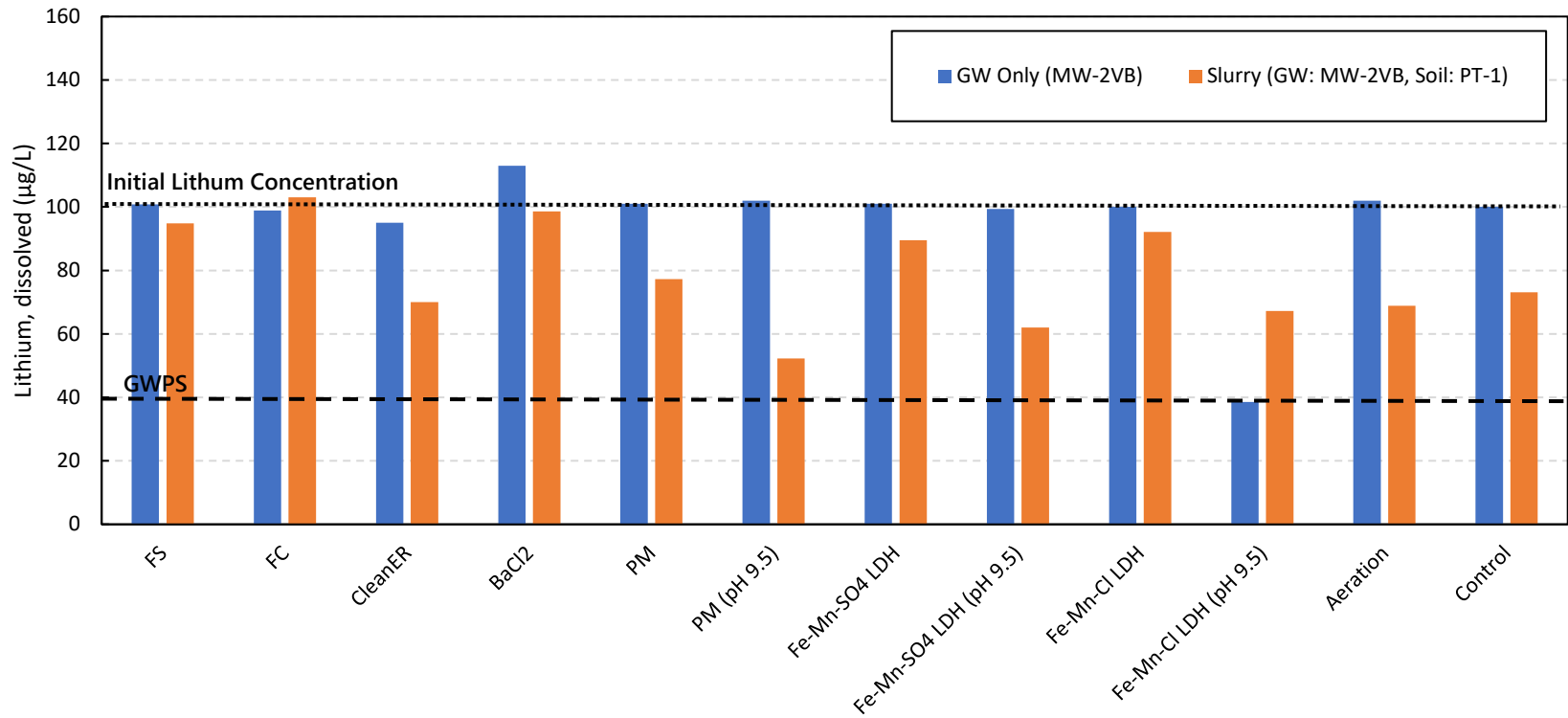
PM: potassium permanganate

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Figure 4
Screening Batch Test Results for GSD-AP-MW-2VA

Laboratory Treatability Study Results
Plant Gadsden



Notes:

FS was tested in duplicate. The average of the two results is shown here. The concentration of lithium upon receipt at EGL is shown as a dotted line.

µg/L: microgram per liter

BaCl₂: barium chloride

CleanER: CleanER-10

EGL: Environmental Geochemistry Laboratory

FC: ferric chloride

Fe-Mn-Cl LDH: ferric chloride, followed by manganese chloride, followed by potassium permanganate

Fe-Mn-SO₄ LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

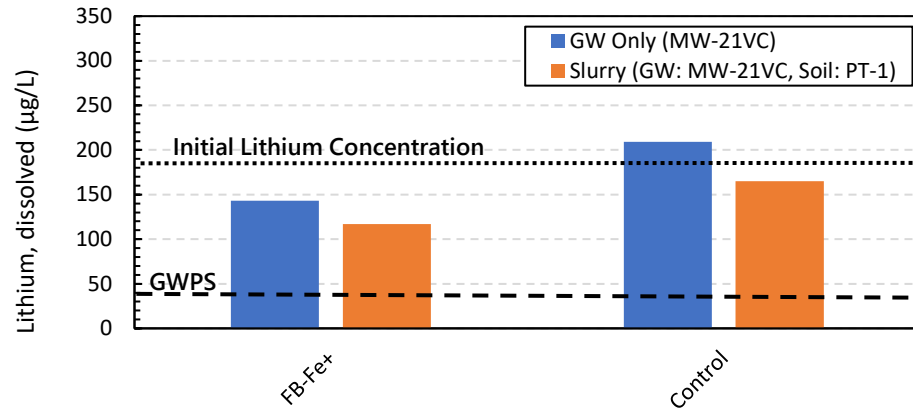
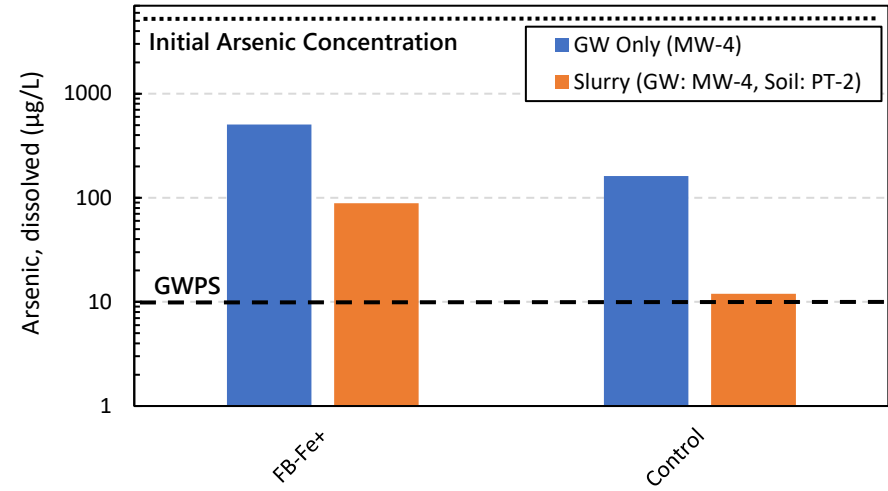
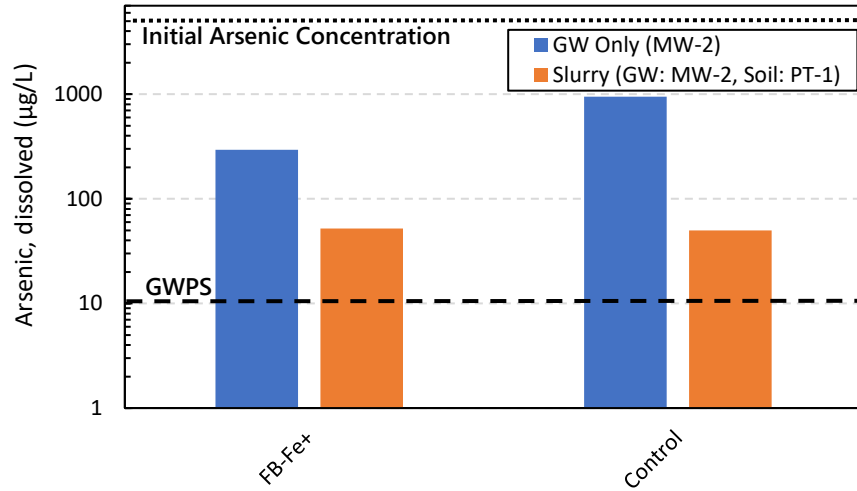
PM: potassium permanganate

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Figure 5
Screening Batch Test Results for GSD-AP-MW-2VB

Laboratory Treatability Study Results
Plant Gadsden



Notes:

FerroBlack testing was performed alongside the optimization batch tests. Arsenic was spiked in MW-2 and MW-4 groundwater prior to beginning the batch test; the spiked concentration is shown as a dotted line. In MW-21VC, the dotted line shows the lithium concentration in the groundwater upon receipt at EGL.

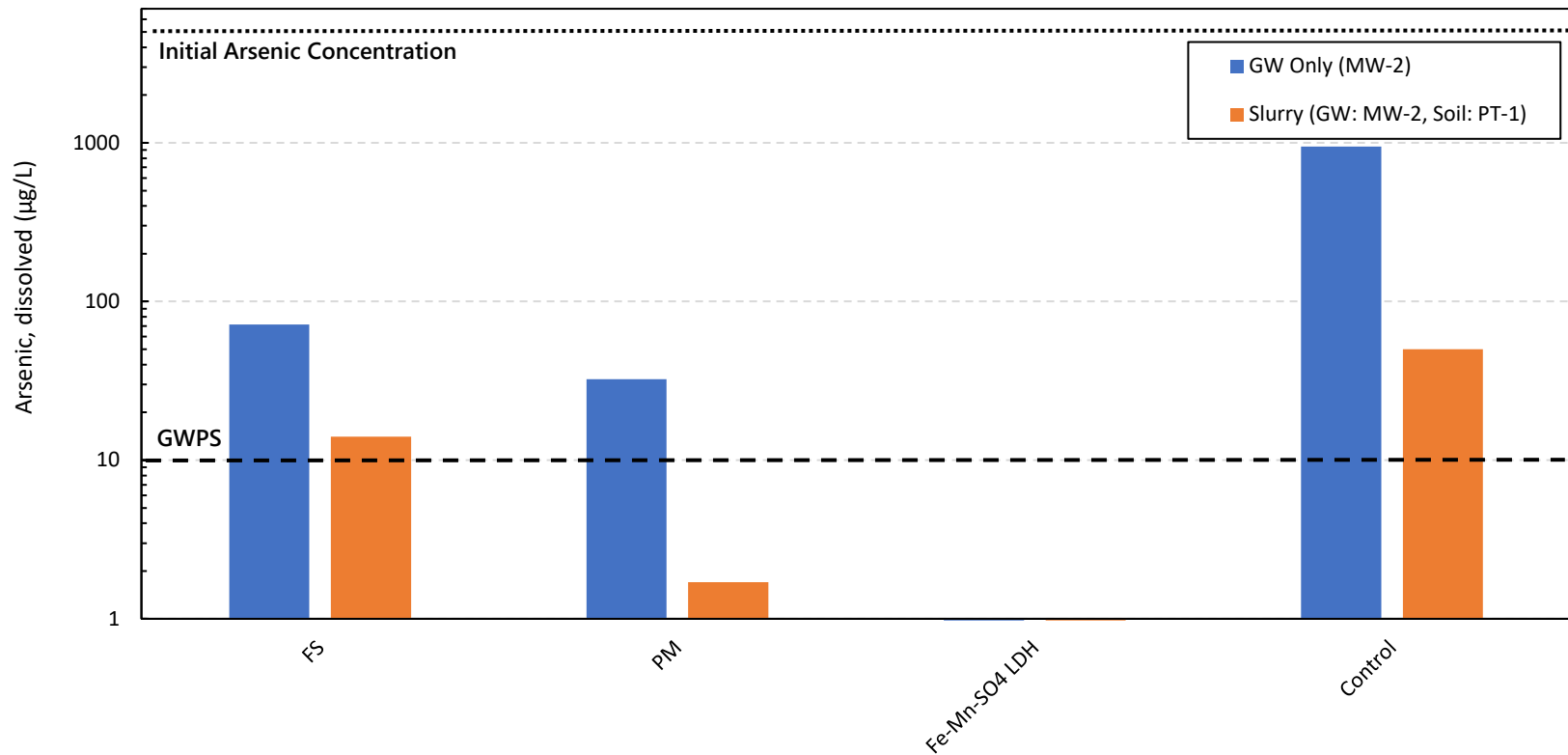
µg/L: microgram per liter

EGL: Environmental Geochemistry Laboratory

FB-Fe+: FerroBlack-Fe+

GW: groundwater

GWPS: groundwater protection standard



Notes:

All treatments shown on graph were tested as part of the optimization batch tests. Results not visible indicate that concentrations were either less than the detection limit or were detected at concentrations too low to be seen on the graph.

FS was tested in duplicate. The average of the two results is shown here. Arsenic was spiked in the groundwater prior to beginning the batch test; the spiked concentration is shown as a dotted line.

The optimization test evaluated lower doses of FS, PM, and Fe-Mn-SO4 LDH than those tested in the screening batch test.

µg/L: microgram per liter

Fe-Mn-SO4 LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

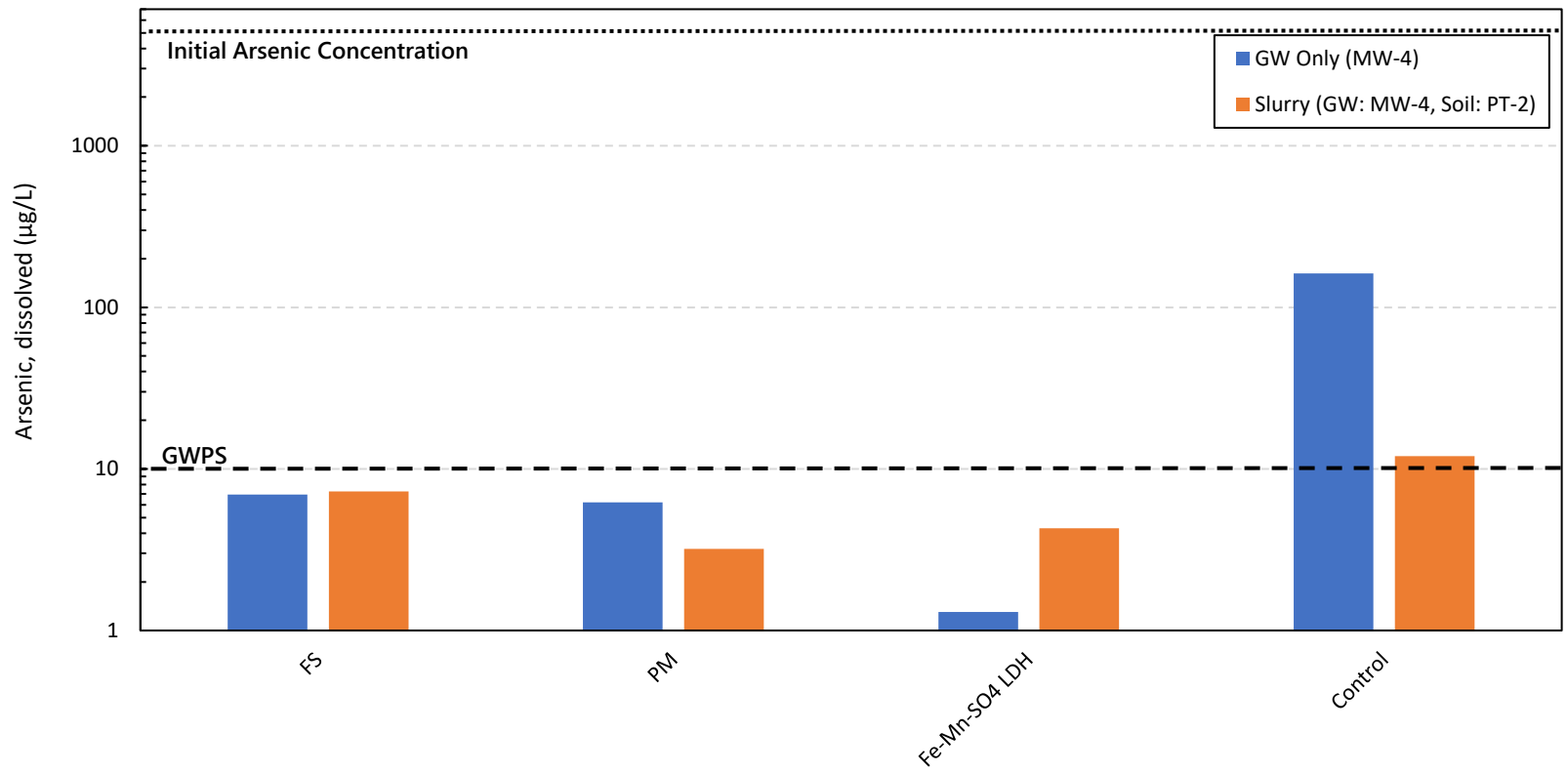
PM: potassium permanganate

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Figure 7
Optimization Batch Test Phase 1 Results for GSD-AP-MW-2

Laboratory Treatability Study Results
Plant Gadsden



Notes:

FS was tested in duplicate. The average of the two results is shown here. Arsenic was spiked in the groundwater prior to beginning the batch test; the spiked concentration is shown as a dotted line.

The optimization test evaluated lower doses of FS, PM, and Fe-Mn-SO4 LDH than those tested in the screening batch test.

µg/L: microgram per liter

Fe-Mn-SO4 LDH: ferrous sulfate, followed by potassium permanganate

FS: ferrous sulfate

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

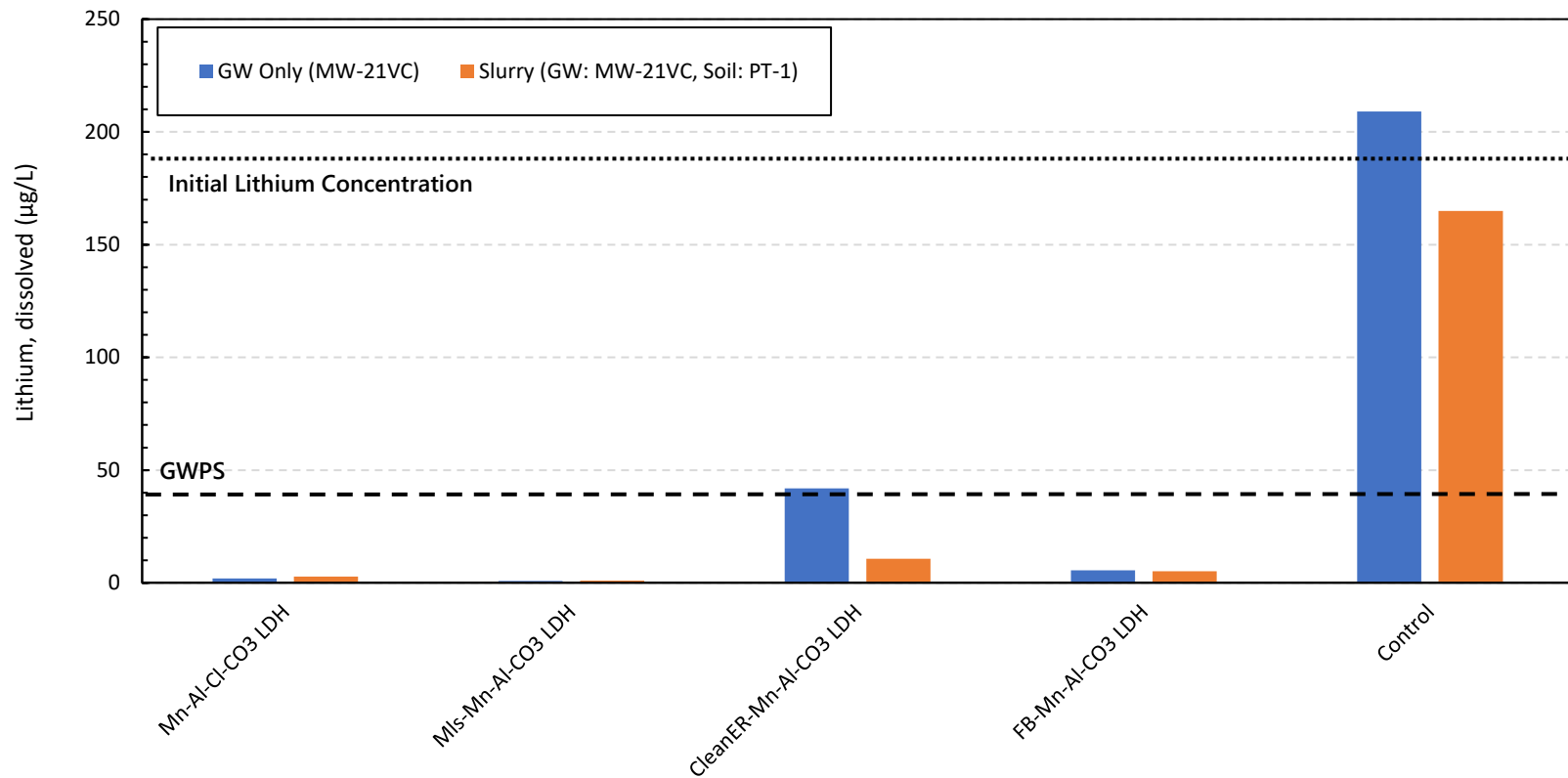
PM: potassium permanganate

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Figure 8
Optimization Batch Test Phase 1 Results for GSD-AP-MW-4

Laboratory Treatability Study Results
Plant Gadsden



Notes:

All treatments shown on graph were tested as part of the optimization batch tests. Results not visible indicate that concentrations were either less than the detection limit or were detected at concentrations too low to be seen on the graph.

Mn-Al-Cl-CO3 was tested in duplicate. The average of the two results is shown here. The concentration of lithium upon receipt at EGL is shown as a dotted line.

µg/L: microgram per liter

CleanER-Mn-Al-CO3 LDH: CleanER-10, followed by sodium aluminate and potassium permanganate with sodium carbonate

EGL: Environmental Geochemistry Laboratory

FB-Mn-Al-CO3 LDH: FerroBlack-Fe+, followed by sodium aluminate and potassium permanganate with sodium carbonate

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

Mls-Mn-Al-CO3 LDH: molasses, followed by sodium aluminate and potassium permanganate with sodium carbonate

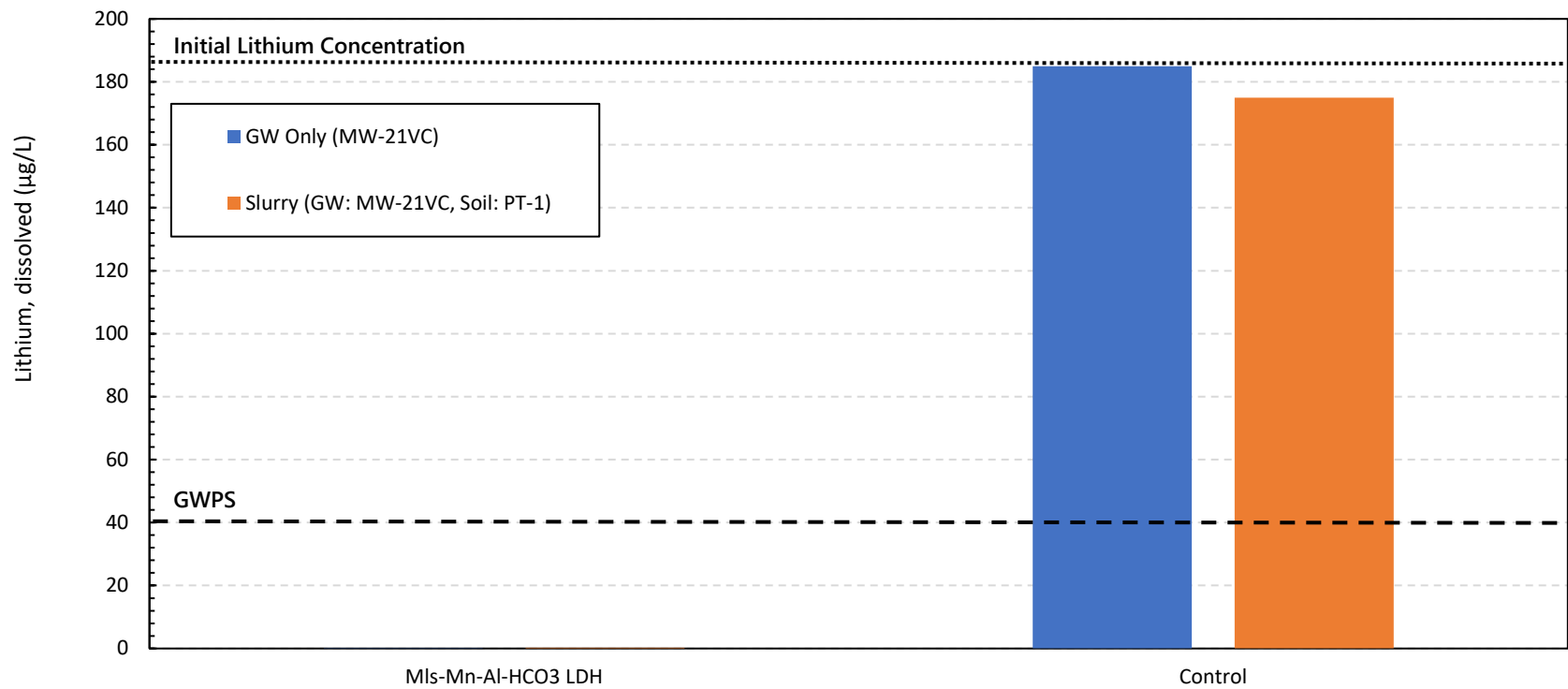
Mn-Al-Cl-CO3 LDH: manganese chloride, followed by sodium aluminate and potassium permanganate with sodium carbonate

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Figure 9
Optimization Batch Test Phase 1 Results for GSD-AP-MW-21VC

Laboratory Treatability Study Results
Plant Gadsden



Notes:

All treatments shown on graph were tested as part of the optimization batch tests. Results not visible indicate that concentrations were either less than the detection limit or were detected at concentrations too low to be seen on the graph.

MIs-Mn-Al-HCO3 LDH was tested in duplicate. The average of the two results is shown here. The concentration of lithium upon receipt at EGL is shown as a dotted line.

µg/L: microgram per liter

EGL: Environmental Geochemistry Laboratory

GW: groundwater

GWPS: groundwater protection standard

LDH: layered double hydroxide

MIs-Mn-Al-HCO3 LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

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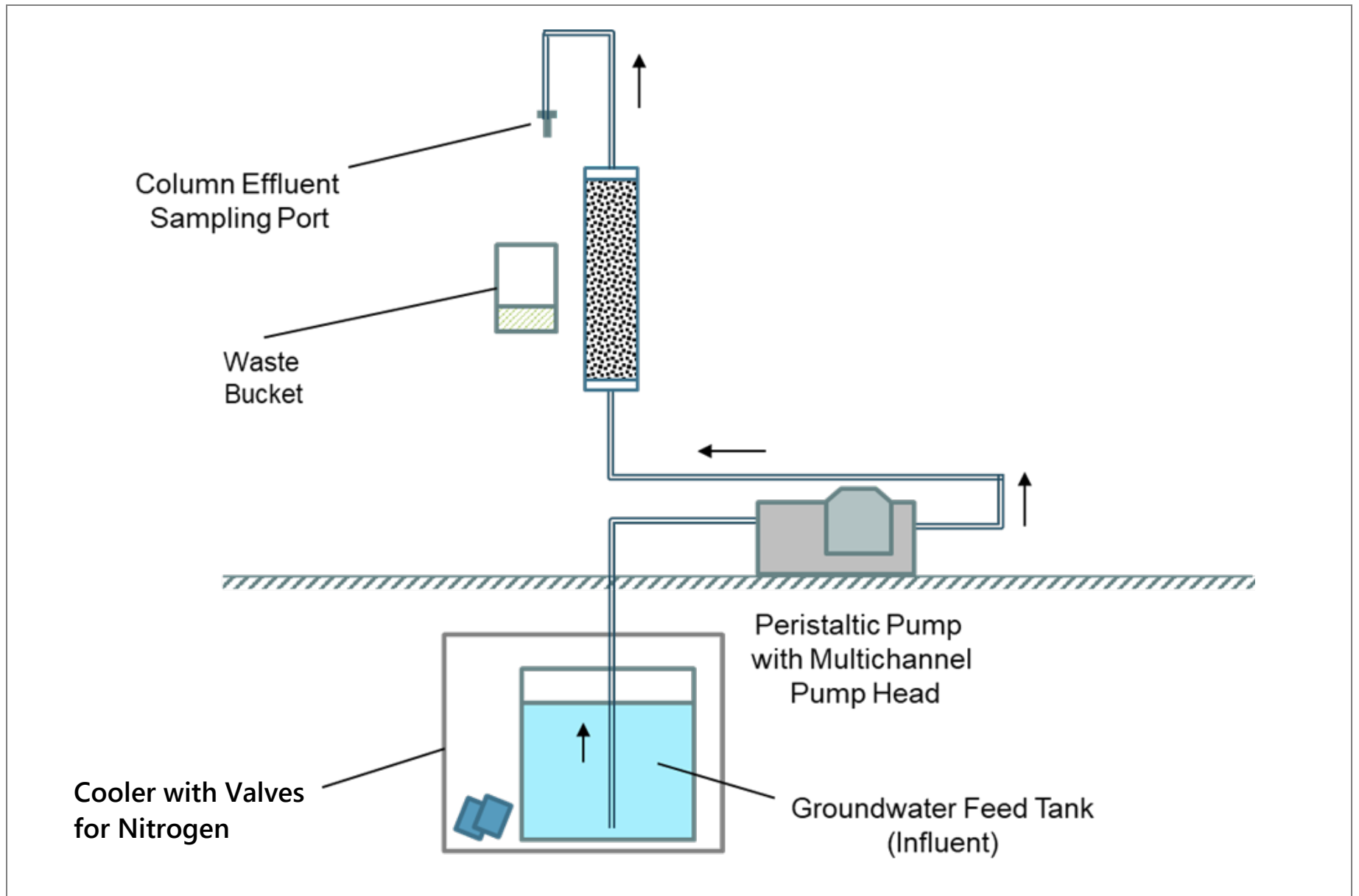


Figure 10
Optimization Batch Test Phase 2 Results for GSD-AP-MW-21VC

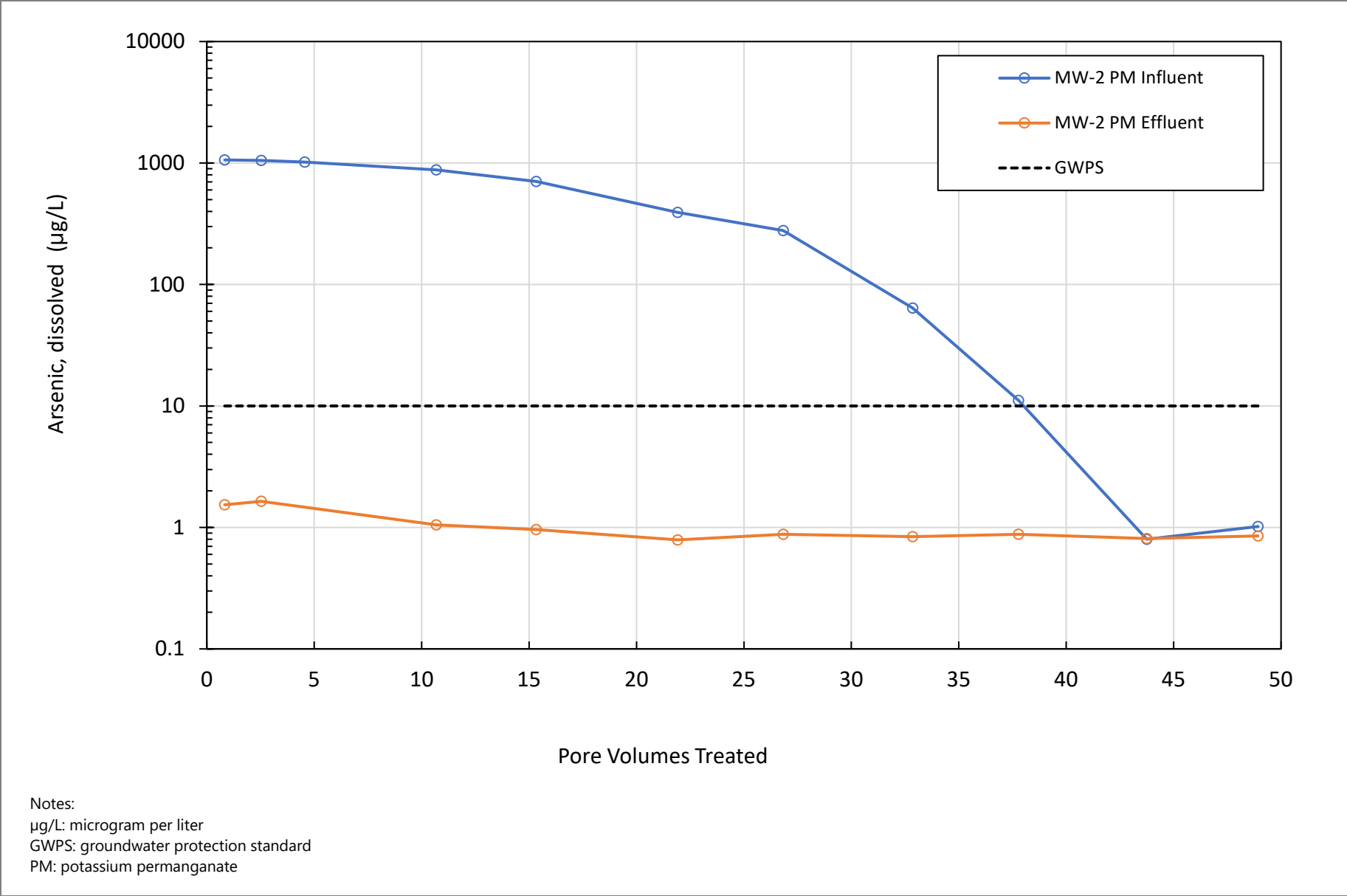
Laboratory Treatability Study Results
Plant Gadsden



Filepath: \\WCL-FS1\Mobile\Projects\Southern Company\Alabama Power ACMS - PRIVILEGED & CONFIDENTIAL\Treatability Studies\Reports\Gadsden\Figures



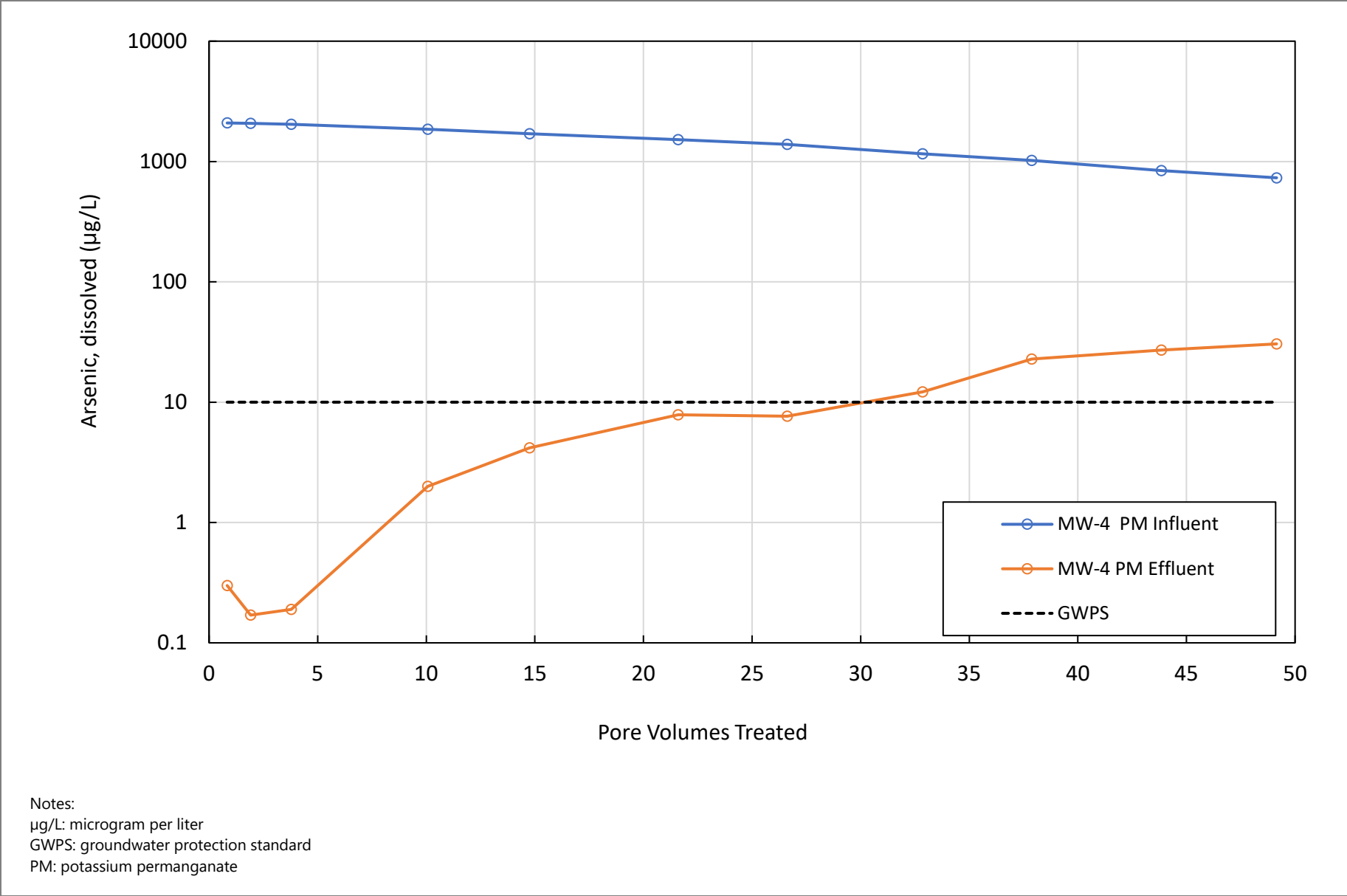
Filepath: \\Wcl-fs1\mobile\Projects\Southern Company\Alabama Power ACMS - PRIVILEGED & CONFIDENTIAL\Treatability Studies\Reports\Gadsden\Figures



Filepath: \\WCL-FS1\Mobile\Projects\Southern Company\Alabama Power ACMS - PRIVILEGED & CONFIDENTIAL\Treatability Studies\Reports\Gadsden\Figures



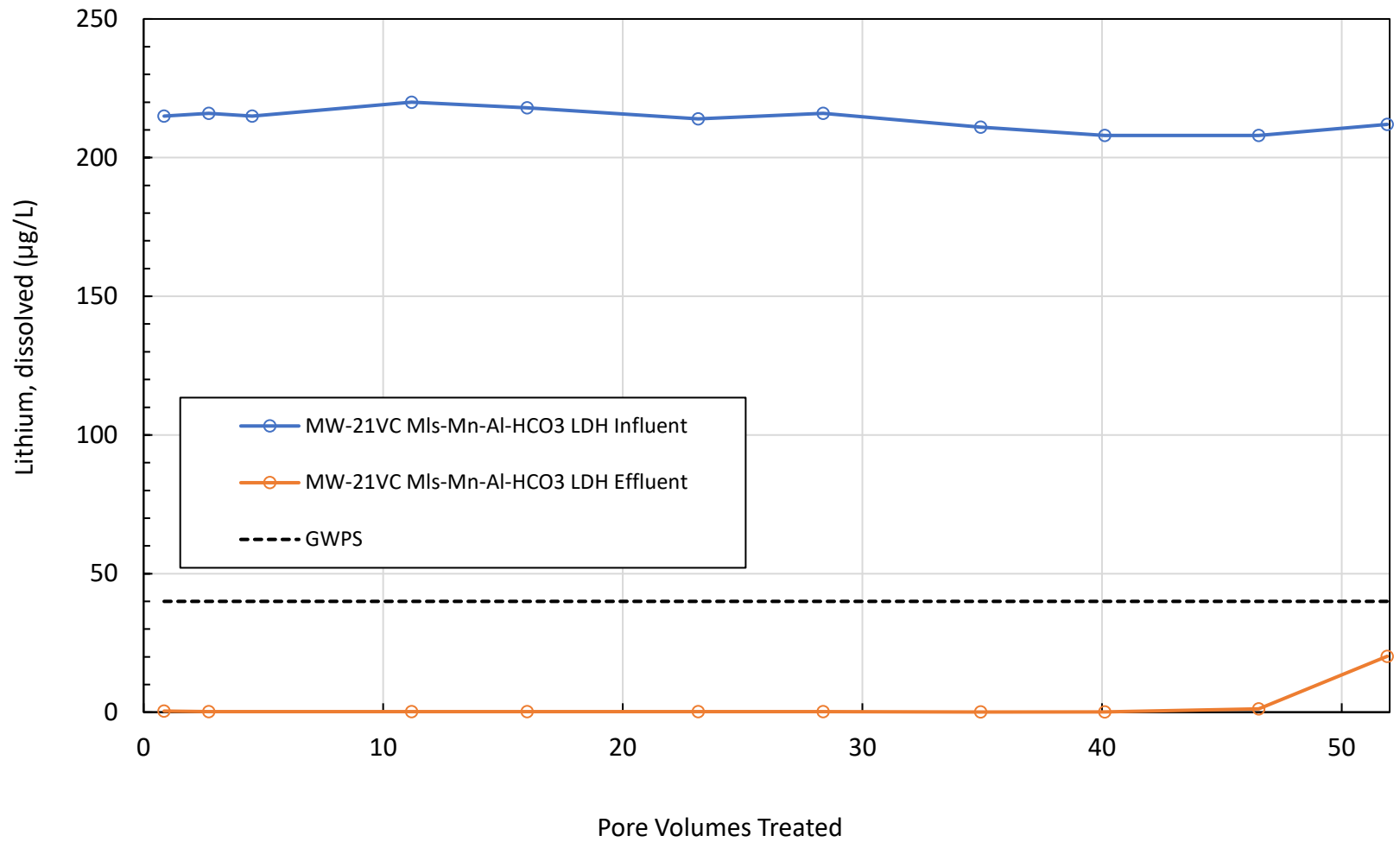
Figure 13
Column Breakthrough Curve for GSD-AP-MW-2
 Laboratory Treatability Study Results
 Plant Gadsden



Filepath: \\WCL-FS1\Mobile\Projects\Southern Company\Alabama Power ACMS - PRIVILEGED & CONFIDENTIAL\Treatability Studies\Reports\Gadsden\Figures



Figure 14
Column Breakthrough Curve for GSD-AP-MW-4
 Laboratory Treatability Study Results
 Plant Gadsden



Notes:

µg/L: microgram per liter

GWPS: groundwater protection standard

LDH: layered double hydroxide

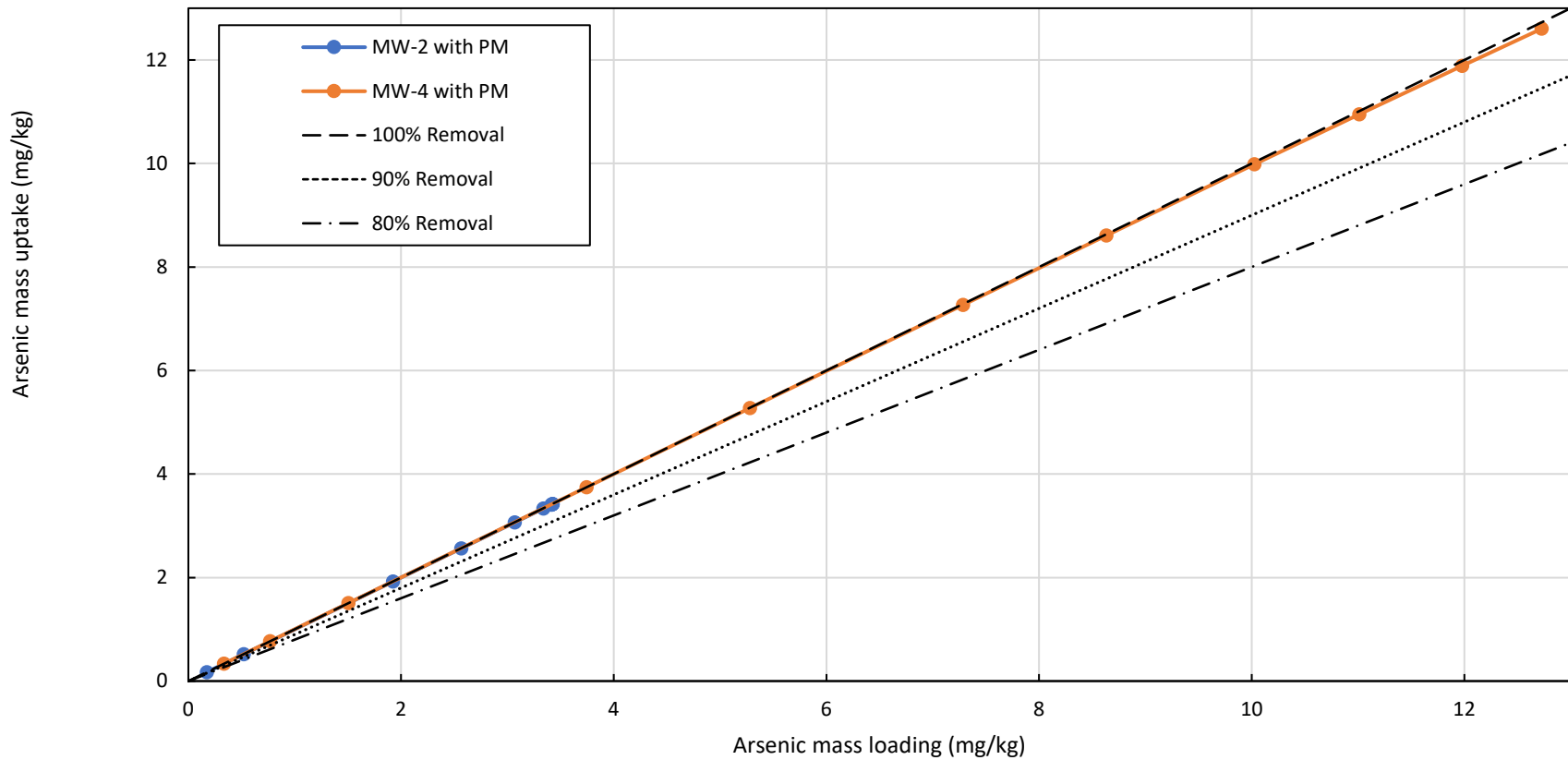
Mls-Mn-Al-HCO3: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

Filepath: \\WCL-FS1\Mobile\Projects\Southern Company\Alabama Power ACMS - PRIVILEGED & CONFIDENTIAL\Treatability Studies\Reports\Gadsden\Figures



Figure 15
Column Breakthrough Curve for GSD-AP-MW-21VC

Laboratory Treatability Study Results
Plant Gadsden



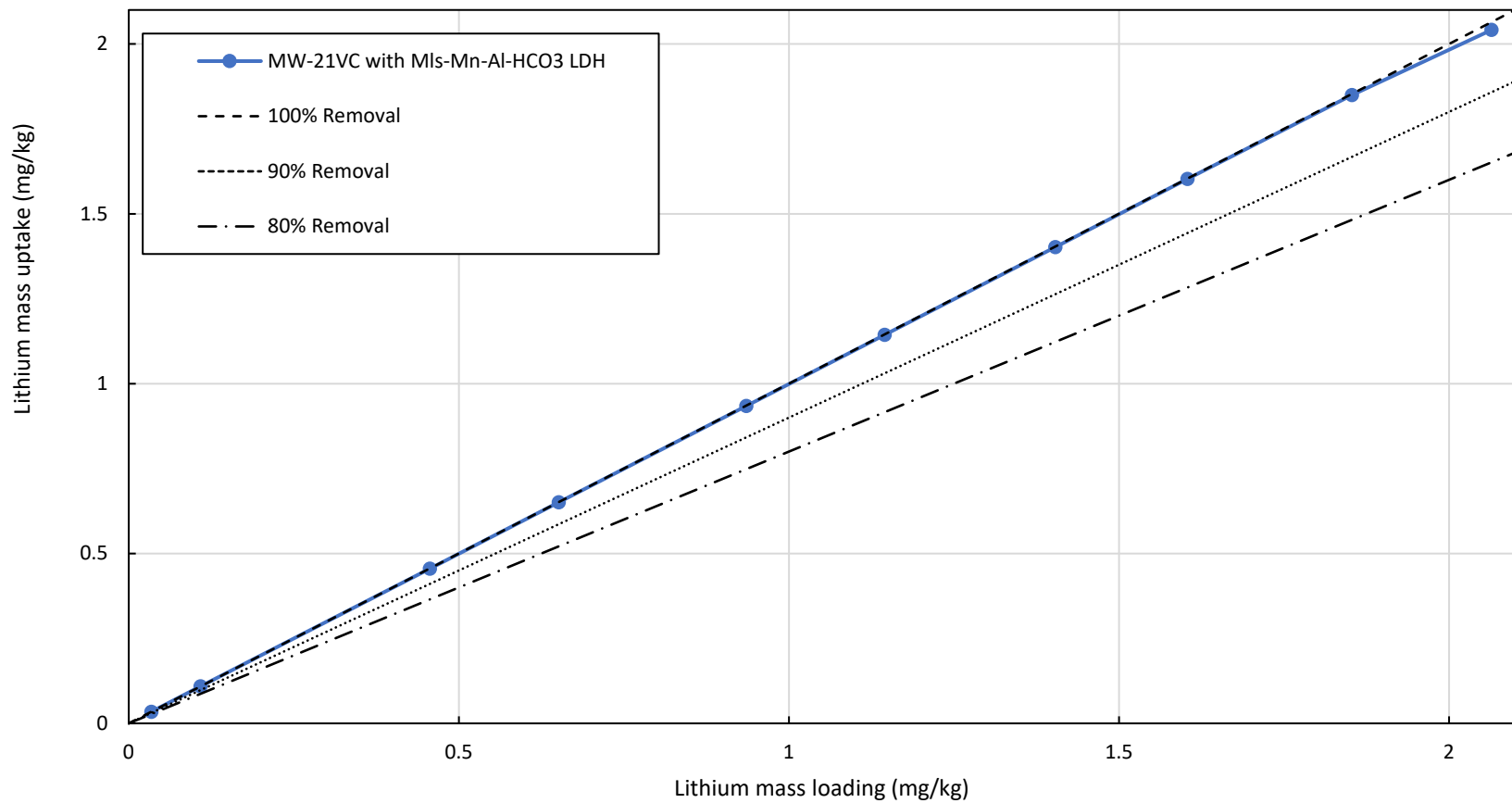
Notes:
 mg/kg: milligram per kilogram
 MW-2: GSD-AP-MW-2
 MW-4: GSD-AP-MW-4
 PM: potassium permanganate

Filepath: \\WCL-FS1\Mobile\Projects\Southern Company\Alabama Power ACMS - PRIVILEGED & CONFIDENTIAL\Treatability Studies\Reports\Gadsden\Figures



Figure 16
Arsenic Mass Uptake Versus Arsenic Mass Loading

Laboratory Treatability Study Results
 Plant Gadsden



Notes:

LDH: layered double hydroxide

mg/kg: milligram per kilogram

MIs-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

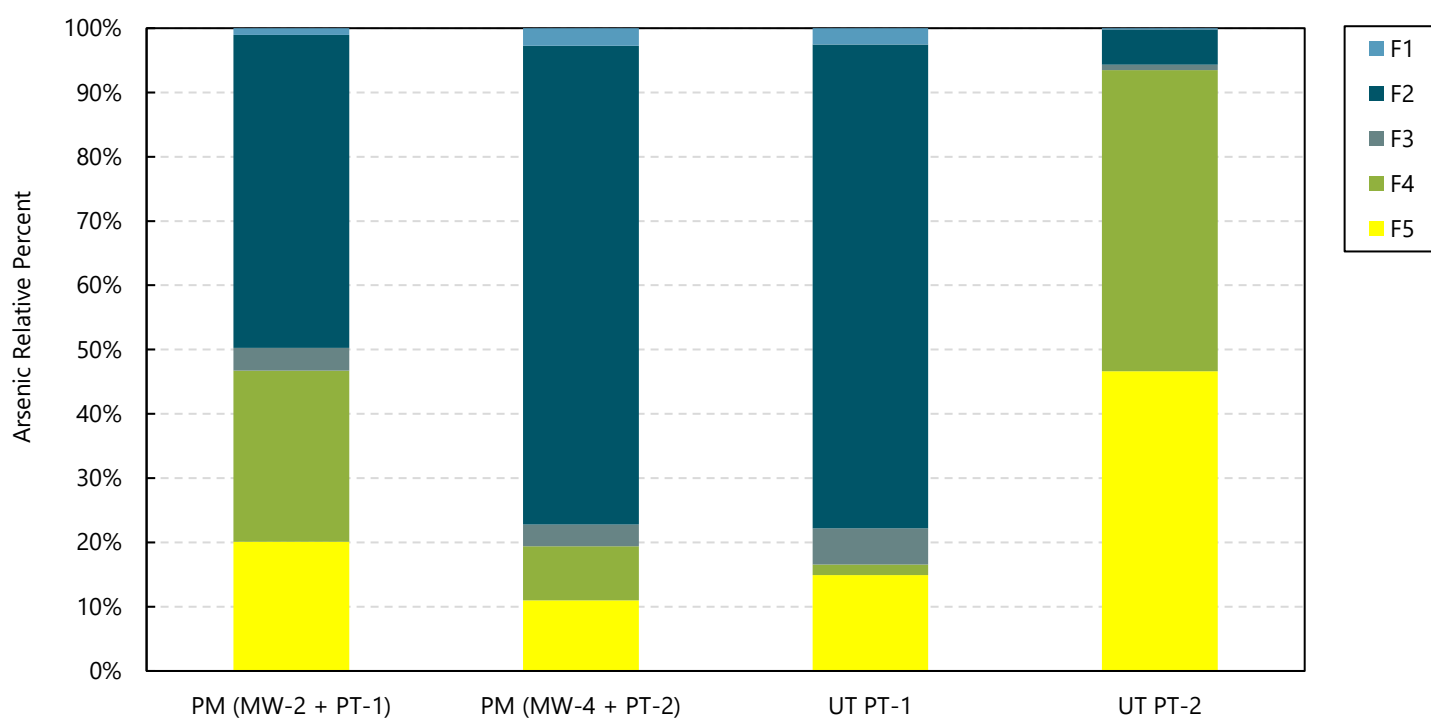
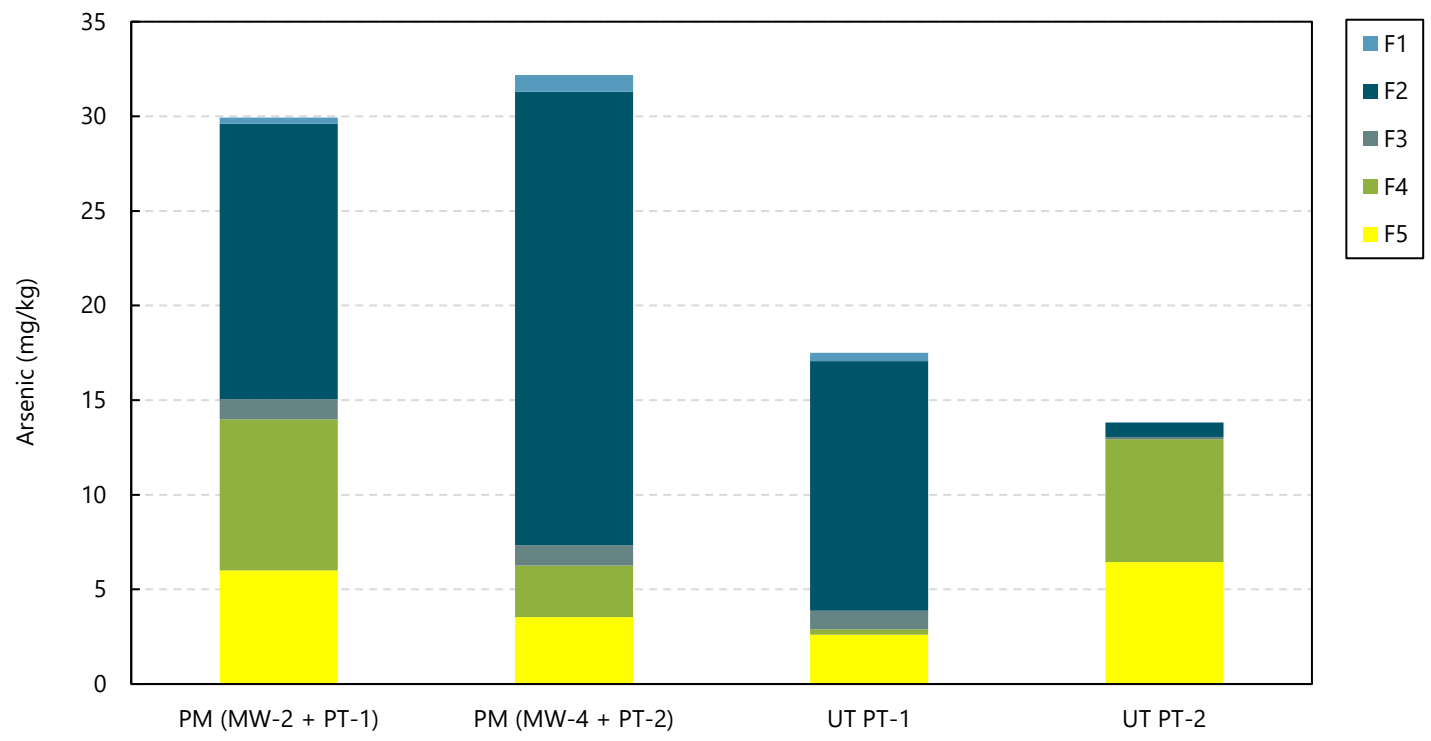
MW-21VC: GSD-AP-MW-21VC

Filepath: \\WCL-FS1\Mobile\Projects\Southern Company\Alabama Power ACMS - PRIVILEGED & CONFIDENTIAL\Treatability Studies\Reports\Gadsden\Figures



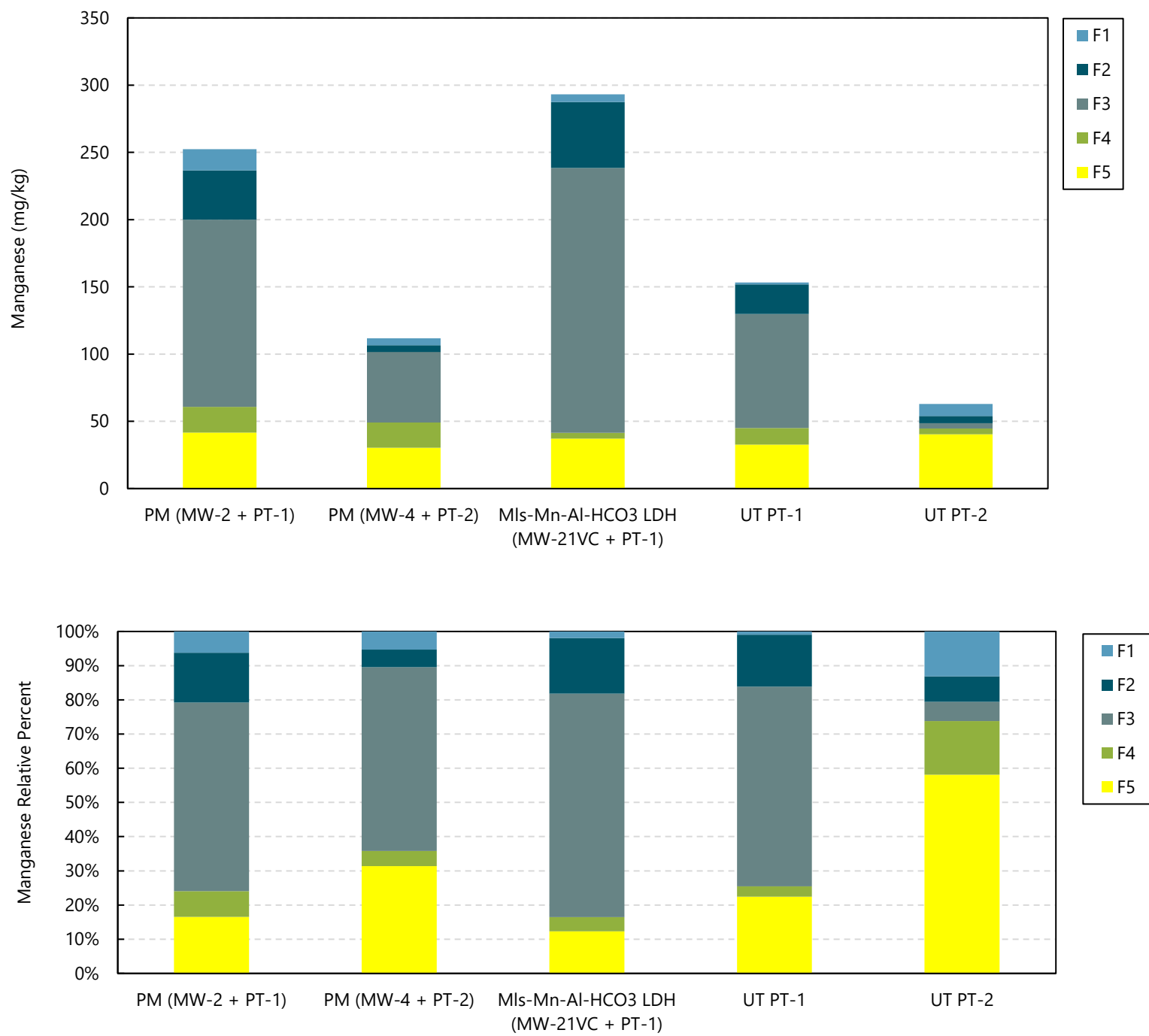
Figure 17
Lithium Mass Uptake Versus Lithium Mass Loading

Laboratory Treatability Study Results
Plant Gadsden



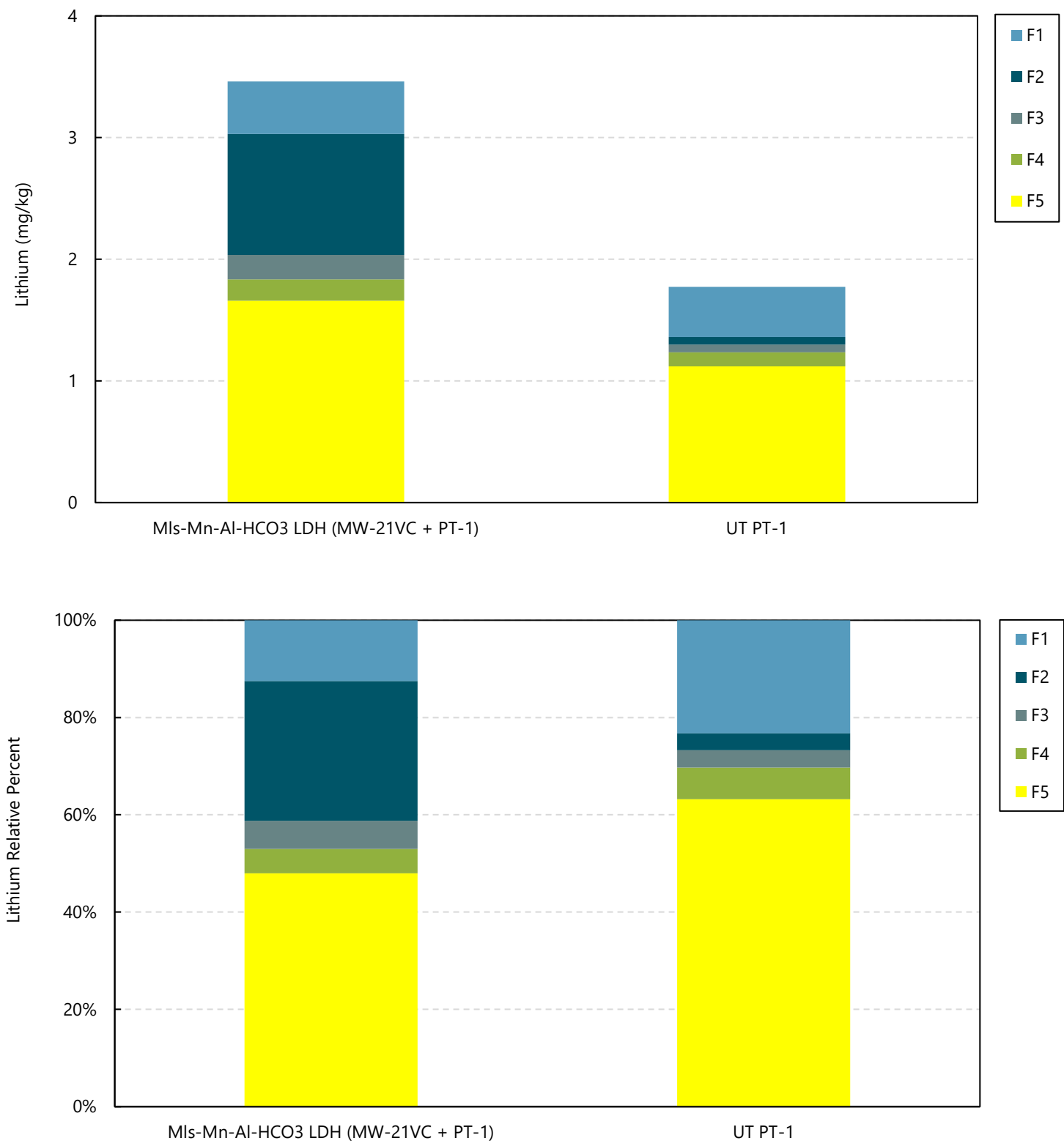
Notes:

- F1: water soluble, dissolved and weakly sorbed (extracted by 1 M magnesium chloride to pH 7)
- F2: exchangeable, strongly sorbed, e.g., on clay minerals and oxides (extracted by 1 M monosodium phosphate at pH 5)
- F3: reducible, e.g., poorly crystalline metal oxides such as iron and manganese oxides (extracted by 0.1 M hydroxylamine/hydrogen chloride adjusted to pH 2 with nitric acid)
- F4: oxidizable, e.g., crystalline oxides (extracted by 16 M nitric acid)
- F5: residual, e.g., silicate and other recalcitrant phases in the aquifer soil matrix (prepared by U.S. Environmental Protection Agency Method 3050B)
- M: molar
- mg/kg: milligram per kilogram
- MW-2: GSD-AP-MW-2
- MW-4: GSD-AP-MW-4
- PM: potassium permanganate
- SSE: selective sequential extraction
- UT: untreated soil



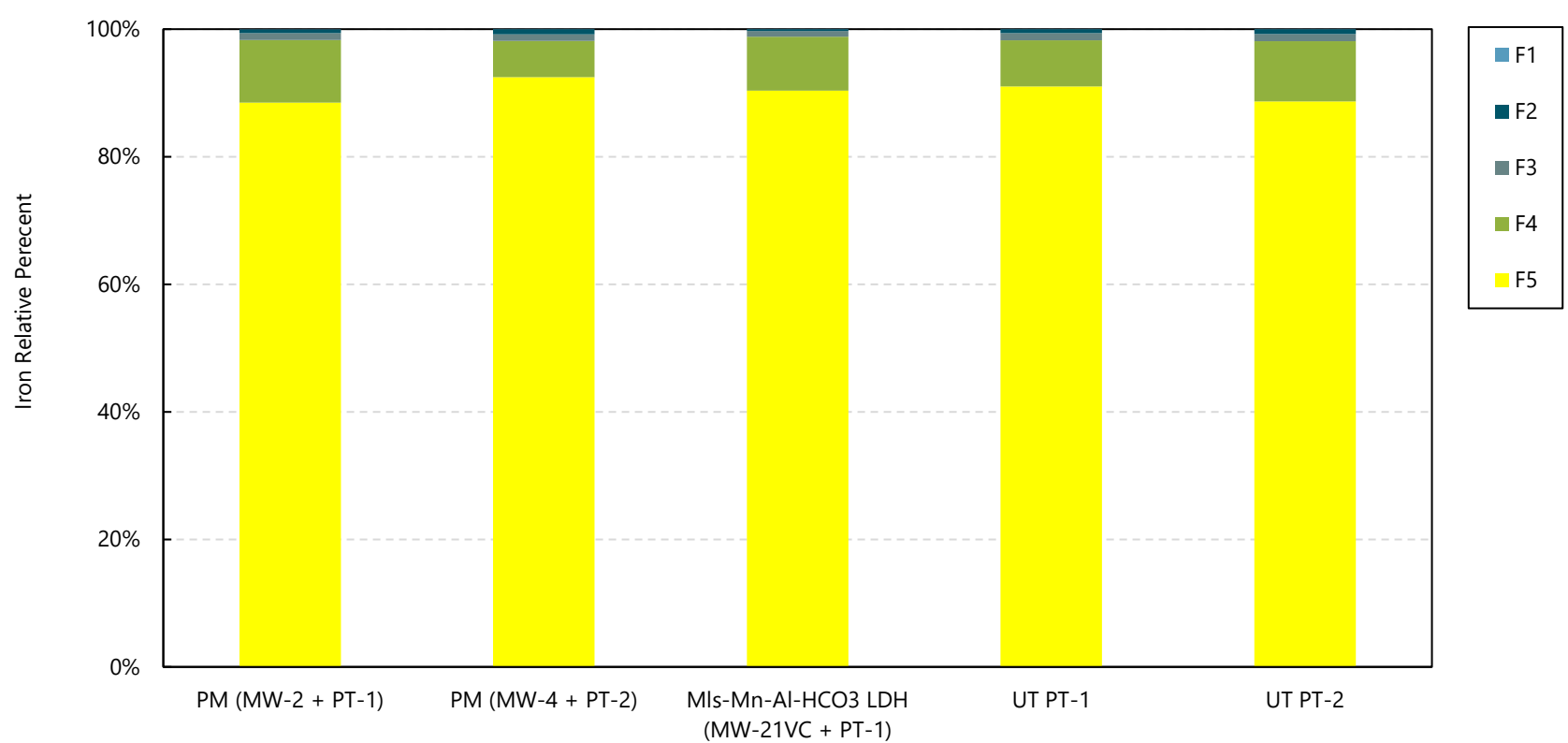
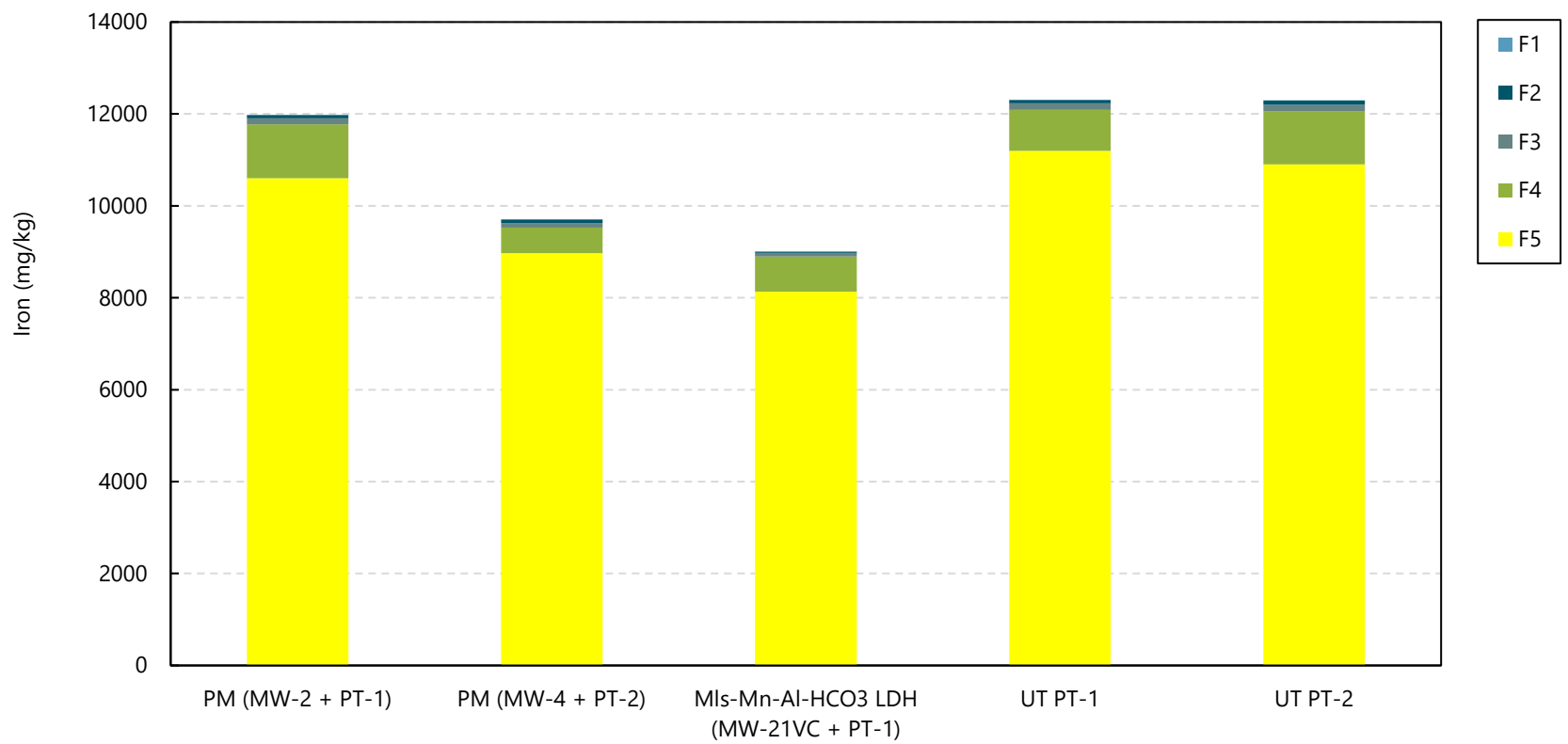
Notes:

MIs-Mn-Al-HCO₃ LDH (MW-21VC + PT-1) was tested in duplicate. The average of the two results is shown here.
 F1: water soluble, dissolved and weakly sorbed (extracted by 1 M magnesium chloride to pH 7)
 F2: exchangeable, strongly sorbed, e.g., on clay minerals and oxides (extracted by 1 M monosodium phosphate at pH 5)
 F3: reducible, e.g., poorly crystalline metal oxides such as iron and manganese oxides (extracted by 0.1 M hydroxylamine/hydrogen chloride adjusted to pH 2 with nitric acid)
 F4: oxidizable, e.g., crystalline oxides (extracted by 16 M nitric acid)
 F5: residual, e.g., silicate and other recalcitrant phases in the aquifer soil matrix (prepared by U.S. Environmental Protection Agency Method 3050B)
 LDH: layered double hydroxide
 M: molar
 MIs-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate
 mg/kg: milligram per kilogram
 MW-2: GSD-AP-MW-2
 MW-4: GSD-AP-MW-4
 MW-21VC: GSD-AP-MW-21VC
 PM: potassium permanganate
 SSE: selective sequential extraction
 UT: untreated soil



Notes:

MIs-Mn-Al-HCO3 LDH (MW-21VC + PT-1) was tested in duplicate. The average of the two results is shown here.
 F1: water soluble, dissolved and weakly sorbed (extracted by 1 M magnesium chloride to pH 7)
 F2: exchangeable, strongly sorbed, e.g., on clay minerals and oxides (extracted by 1 M monosodium phosphate at pH 5)
 F3: reducible, e.g., poorly crystalline metal oxides such as iron and manganese oxides (extracted by 0.1 M hydroxylamine/hydrogen chloride adjusted to pH 2 with nitric acid)
 F4: oxidizable, e.g., crystalline oxides (extracted by 16 M nitric acid)
 F5: residual, e.g., silicate and other recalcitrant phases in the aquifer soil matrix (prepared by U.S. Environmental Protection Agency Method 3050B)
 LDH: layered double hydroxide
 M: molar
 MIs-Mn-Al-HCO3 LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate
 mg/kg: milligram per kilogram
 MW-21VC: GSD-AP-MW-21VC
 SSE: selective sequential extraction
 UT: untreated soil



Notes:

MIs-Mn-Al-HCO₃ LDH (MW-21VC + PT-1) was tested in duplicate. The average of the two results is shown here.

F1: water soluble, dissolved and weakly sorbed (extracted by 1 M magnesium chloride to pH 7)

F2: exchangeable, strongly sorbed, e.g., on clay minerals and oxides (extracted by 1 M monosodium phosphate at pH 5)

F3: reducible, e.g., poorly crystalline metal oxides such as iron and manganese oxides (extracted by 0.1 M hydroxylamine/hydrogen chloride adjusted to pH 2 with nitric acid)

F4: oxidizable, e.g., crystalline oxides (extracted by 16 M nitric acid)

F5: residual, e.g., silicate and other recalcitrant phases in the aquifer soil matrix (prepared by U.S. Environmental Protection Agency Method 3050B)

LDH: layered double hydroxide

M: molar

MIs-Mn-Al-HCO₃ LDH: molasses and sodium bicarbonate, followed by sodium aluminate and potassium permanganate

mg/kg: milligram per kilogram

MW-21VC: GSD-AP-MW-21VC

PM: potassium permanganate

SSE: selective sequential extraction

UT: untreated soil

Appendix A

Laboratory Analytical Reports



May 31, 2022

Service Request No:K2205601

Modi Raduma
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Modi,

Enclosed are the results of the sample(s) submitted to our laboratory May 23, 2022
For your reference, these analyses have been assigned our service request number **K2205601**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2205601
Date Received: 05/23/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 05/23/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by  Date 05/31/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: APC-GSD-AP-MW-2-20220518	Lab ID: K2205601-001
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	364		0.5	2.5	ug/L	200.8
Iron, Dissolved	9250		2	10	ug/L	200.8
Manganese, Dissolved	9220		0.2	1.0	ug/L	200.8
Arsenic	403		0.5	2.5	ug/L	200.8
Iron	9440		2	10	ug/L	200.8
Manganese	8220		0.2	1.0	ug/L	200.8

CLIENT ID: APC-GSD-AP-MW-2VA-20220518	Lab ID: K2205601-002
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	47.8		0.3	2.0	ug/L	200.8
Lithium, Dissolved	59.2		0.10	0.10	ug/L	200.8
Manganese, Dissolved	11.7		0.04	0.20	ug/L	200.8
Iron	48.0		0.3	2.0	ug/L	200.8
Lithium	59.5		0.10	0.10	ug/L	200.8
Manganese	11.8		0.04	0.20	ug/L	200.8

CLIENT ID: APC-GSD-AP-MW-2VB-20220518	Lab ID: K2205601-003
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	20.7		0.3	2.0	ug/L	200.8
Lithium, Dissolved	101		0.10	0.10	ug/L	200.8
Manganese, Dissolved	20.7		0.04	0.20	ug/L	200.8
Iron	20.8		0.3	2.0	ug/L	200.8
Lithium	103		0.10	0.10	ug/L	200.8
Manganese	20.6		0.04	0.20	ug/L	200.8

CLIENT ID: APC-GSD-AP-MW-4-20220518	Lab ID: K2205601-004
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.53		0.09	0.50	ug/L	200.8
Iron, Dissolved	30800		2	10	ug/L	200.8
Manganese, Dissolved	1860		0.2	1.0	ug/L	200.8
Arsenic	9.80		0.09	0.50	ug/L	200.8
Iron	44300		2	10	ug/L	200.8
Manganese	1850		0.2	1.0	ug/L	200.8

CLIENT ID: APC-GSD-AP-MW-4-DUP-20220518	Lab ID: K2205601-005
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.55		0.09	0.50	ug/L	200.8
Iron, Dissolved	31000		2	10	ug/L	200.8
Manganese, Dissolved	1870		0.2	1.0	ug/L	200.8
Arsenic	9.74		0.09	0.50	ug/L	200.8
Iron	43100		2	10	ug/L	200.8
Manganese	1780		0.2	1.0	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2205601

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2205601-001	APC-GSD-AP-MW-2-20220518	5/18/2022	1115
K2205601-002	APC-GSD-AP-MW-2VA-20220518	5/18/2022	1125
K2205601-003	APC-GSD-AP-MW-2VB-20220518	5/18/2022	1135
K2205601-004	APC-GSD-AP-MW-4-20220518	5/18/2022	1145
K2205601-005	APC-GSD-AP-MW-4-DUP-20220518	5/18/2022	1146

Cooler Receipt and Preservation Form

Client Anchor OEA Service Request K22 05601
 Received: 5/23/22 Opened: 5/23/22 By: [Signature] Unloaded: 5/23/22 By: [Signature]

1. Samples were received via? **USPS** Cooler **Fed Ex** **UPS** **DHL** **PDX** Courier **Hand Delivered**
 2. Samples were received in: (circle) Cooler **Box** **Envelope** **Other** NA
 3. Were custody seals on coolers? **NA** **Y** N If yes, how many and where? _____
 If present, were custody seals intact? **Y** **N** If present, were they signed and dated? **Y** **N**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>2-8</u>		<u>IR01</u>					

4. Was a Temperature Blank present in cooler? **NA** Y **N** If yes, notate the temperature in the appropriate column above:

If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":

5. Were samples received within the method specified temperature ranges? **NA** Y **N**
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA **Y** **N**

If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**

6. Packing material: **Inserts** Baggies **Bubble Wrap** **Gel Packs** Wet Ice **Dry Ice** **Sleeves** _____
 7. Were custody papers properly filled out (ink, signed, etc.)? **NA** Y **N**
 8. Were samples received in good condition (unbroken) **NA** Y **N**
 9. Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** Y **N**
 10. Did all sample labels and tags agree with custody papers? **NA** Y **N**
 11. Were appropriate bottles/containers and volumes received for the tests indicated? **NA** Y **N**
 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **NA** Y **N**
 13. Were VOA vials received without headspace? Indicate in the table below. NA **Y** **N**
 14. Was C12/Res negative? NA **Y** **N**
 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA **Y** **N** Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

RUSH

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2205601

Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205601-001
Sample Matrix: Water

Date Collected: 05/18/22
Date Received: 05/23/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205601-002
Sample Matrix: Water

Date Collected: 05/18/22
Date Received: 05/23/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-2VB-20220518
Lab Code: K2205601-003
Sample Matrix: Water

Date Collected: 05/18/22
Date Received: 05/23/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-4-20220518
Lab Code: K2205601-004
Sample Matrix: Water

Date Collected: 05/18/22
Date Received: 05/23/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-4-DUP-20220518
Lab Code: K2205601-005
Sample Matrix: Water

Date Collected: 05/18/22
Date Received: 05/23/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN



Sample Results

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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205601-001

Service Request: K2205601
Date Collected: 05/18/22 11:15
Date Received: 05/23/22 12:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	364	ug/L	2.5	0.5	5	05/27/22 15:01	05/25/22	
Iron	200.8	9250	ug/L	10	2	5	05/27/22 15:01	05/25/22	
Manganese	200.8	9220	ug/L	1.0	0.2	5	05/27/22 15:01	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205601-001

Service Request: K2205601
Date Collected: 05/18/22 11:15
Date Received: 05/23/22 12:00
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	403	ug/L	2.5	0.5	5	05/27/22 14:48	05/25/22	
Iron	200.8	9440	ug/L	10	2	5	05/27/22 14:48	05/25/22	
Manganese	200.8	8220	ug/L	1.0	0.2	5	05/27/22 14:48	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22 11:25
Date Received: 05/23/22 12:00

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205601-002

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	47.8	ug/L	2.0	0.3	1	05/27/22 15:17	05/25/22	
Lithium	200.8	59.2	ug/L	0.10	0.10	1	05/27/22 15:17	05/25/22	
Manganese	200.8	11.7	ug/L	0.20	0.04	1	05/27/22 15:17	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22 11:25
Date Received: 05/23/22 12:00

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205601-002

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	48.0	ug/L	2.0	0.3	1	05/27/22 15:14	05/25/22	
Lithium	200.8	59.5	ug/L	0.10	0.10	1	05/27/22 15:14	05/25/22	
Manganese	200.8	11.8	ug/L	0.20	0.04	1	05/27/22 15:14	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22 11:35
Date Received: 05/23/22 12:00

Sample Name: APC-GSD-AP-MW-2VB-20220518
Lab Code: K2205601-003

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	20.7	ug/L	2.0	0.3	1	05/27/22 15:21	05/25/22	
Lithium	200.8	101	ug/L	0.10	0.10	1	05/27/22 15:21	05/25/22	
Manganese	200.8	20.7	ug/L	0.20	0.04	1	05/27/22 15:21	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22 11:35
Date Received: 05/23/22 12:00

Sample Name: APC-GSD-AP-MW-2VB-20220518
Lab Code: K2205601-003

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	20.8	ug/L	2.0	0.3	1	05/27/22 15:15	05/25/22	
Lithium	200.8	103	ug/L	0.10	0.10	1	05/27/22 15:15	05/25/22	
Manganese	200.8	20.6	ug/L	0.20	0.04	1	05/27/22 15:15	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-4-20220518
Lab Code: K2205601-004

Service Request: K2205601
Date Collected: 05/18/22 11:45
Date Received: 05/23/22 12:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.53	ug/L	0.50	0.09	1	05/27/22 15:29	05/25/22	
Iron	200.8	30800	ug/L	10	2	5	05/27/22 15:07	05/25/22	
Manganese	200.8	1860	ug/L	1.0	0.2	5	05/27/22 15:07	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-4-20220518
Lab Code: K2205601-004

Service Request: K2205601
Date Collected: 05/18/22 11:45
Date Received: 05/23/22 12:00
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	9.80	ug/L	0.50	0.09	1	05/27/22 15:26	05/25/22	
Iron	200.8	44300	ug/L	10	2	5	05/27/22 14:58	05/25/22	
Manganese	200.8	1850	ug/L	1.0	0.2	5	05/27/22 14:58	05/25/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22 11:46
Date Received: 05/23/22 12:00

Sample Name: APC-GSD-AP-MW-4-DUP-20220518
Lab Code: K2205601-005

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.55	ug/L	0.50	0.09	1	05/27/22 15:31	05/25/22	
Iron	200.8	31000	ug/L	10	2	5	05/27/22 15:08	05/25/22	
Manganese	200.8	1870	ug/L	1.0	0.2	5	05/27/22 15:08	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22 11:46
Date Received: 05/23/22 12:00

Sample Name: APC-GSD-AP-MW-4-DUP-20220518
Lab Code: K2205601-005

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	9.74	ug/L	0.50	0.09	1	05/27/22 15:28	05/25/22	
Iron	200.8	43100	ug/L	10	2	5	05/27/22 14:59	05/25/22	
Manganese	200.8	1780	ug/L	1.0	0.2	5	05/27/22 14:59	05/25/22	



QC Summary Forms

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ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2208566-01

Service Request: K2205601
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	05/27/22 14:45	05/25/22	
Iron	200.8	ND U	ug/L	2.0	0.3	1	05/27/22 14:45	05/25/22	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	05/27/22 14:45	05/25/22	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	05/27/22 14:45	05/25/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22
Date Received: 05/23/22
Date Analyzed: 05/27/22
Date Extracted: 05/25/22

Matrix Spike Summary
Total Metals

Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205601-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2208566-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	403	523	50.0	241 #	70-130
Iron	9440	11100	50	3328 #	70-130
Lithium	27.2	73.6	50.0	93	70-130
Manganese	8220	9710	25.0	5974 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Collected: 05/18/22
Date Received: 05/23/22
Date Analyzed: 05/27/22

Replicate Sample Summary

Total Metals

Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205601-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2208566-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205601
Date Analyzed: 05/27/22

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2208566-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	47.6	50.0	95	85-115
Iron	200.8	45.2	50.0	90	85-115
Lithium	200.8	48.4	50.0	97	85-115
Manganese	200.8	24.0	25.0	96	85-115



June 08, 2022

Service Request No:K2205822

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory May 27, 2022
For your reference, these analyses have been assigned our service request number **K2205822**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

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www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2205822
Date Received: 05/27/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Six water samples were received for analysis at ALS Environmental on 05/27/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 06/08/2022



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2205822

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2205822-001	APC-GSD-AP-MW-2-20220518	5/27/2022	0815
K2205822-002	APC-GSD-AP-MW-2VA-20220518	5/27/2022	0820
K2205822-003	APC-GSD-AP-MW-2VB-20220518	5/27/2022	0825
K2205822-004	APC-GSD-AP-MW-4-20220518	5/27/2022	0830
K2205822-005	APC-GSD-AP-MW-4-DUP-20220518	5/27/2022	0835
K2205822-006	APC-GSD-AP-MB	5/27/2022	0840

PM MH

Cooler Receipt and Preservation Form

Client Anchor Service Request K2205822
Received: 5/27/22 Opened: 5/27/22 By: JH Unloaded: 5/27/22 By: JH

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
<u>3.9</u>		<u>IR02</u>					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

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Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2205822

Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205822-001
Sample Matrix: Water

Date Collected: 05/27/22
Date Received: 05/27/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205822-002
Sample Matrix: Water

Date Collected: 05/27/22
Date Received: 05/27/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-2VB-20220518
Lab Code: K2205822-003
Sample Matrix: Water

Date Collected: 05/27/22
Date Received: 05/27/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-4-20220518
Lab Code: K2205822-004
Sample Matrix: Water

Date Collected: 05/27/22
Date Received: 05/27/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: APC-GSD-AP-MW-4-DUP-20220518
Lab Code: K2205822-005
Sample Matrix: Water

Date Collected: 05/27/22
Date Received: 05/27/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2205822

Sample Name: APC-GSD-AP-MB
Lab Code: K2205822-006
Sample Matrix: Water

Date Collected: 05/27/22
Date Received: 05/27/22

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN



Sample Results

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205822-001

Service Request: K2205822
Date Collected: 05/27/22 08:15
Date Received: 05/27/22 13:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	25.1	ug/L	0.50	0.50	5	06/07/22 09:41	06/02/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205822-001

Service Request: K2205822
Date Collected: 05/27/22 08:15
Date Received: 05/27/22 13:00
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	341	ug/L	2.5	0.5	5	06/07/22 08:53	06/02/22	
Lithium	200.8	25.6	ug/L	0.50	0.50	5	06/07/22 08:53	06/02/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22 08:20
Date Received: 05/27/22 13:00

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205822-002

Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	1.09	ug/L	0.50	0.09	1	06/07/22 09:42	06/02/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22 08:20
Date Received: 05/27/22 13:00

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205822-002

Basis: NA

Total Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	1.06	ug/L	0.50	0.09	1	06/07/22 09:26	06/02/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22 08:25
Date Received: 05/27/22 13:00

Sample Name: APC-GSD-AP-MW-2VB-20220518
Lab Code: K2205822-003

Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.37 J	ug/L	0.50	0.09	1	06/07/22 09:44	06/02/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22 08:25
Date Received: 05/27/22 13:00

Sample Name: APC-GSD-AP-MW-2VB-20220518
Lab Code: K2205822-003

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.35 J	ug/L	0.50	0.09	1	06/07/22 09:31	06/02/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-4-20220518
Lab Code: K2205822-004

Service Request: K2205822
Date Collected: 05/27/22 08:30
Date Received: 05/27/22 13:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	0.34	ug/L	0.10	0.10	1	06/07/22 09:46	06/02/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-4-20220518
Lab Code: K2205822-004

Service Request: K2205822
Date Collected: 05/27/22 08:30
Date Received: 05/27/22 13:00
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	8.29	ug/L	0.50	0.09	1	06/07/22 09:33	06/02/22	
Lithium	200.8	0.34	ug/L	0.10	0.10	1	06/07/22 09:33	06/02/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22 08:35
Date Received: 05/27/22 13:00

Sample Name: APC-GSD-AP-MW-4-DUP-20220518
Lab Code: K2205822-005

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	0.27	ug/L	0.10	0.10	1	06/07/22 09:48	06/02/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22 08:35
Date Received: 05/27/22 13:00

Sample Name: APC-GSD-AP-MW-4-DUP-20220518
Lab Code: K2205822-005

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.99	ug/L	0.50	0.09	1	06/07/22 09:35	06/02/22	
Lithium	200.8	0.27	ug/L	0.10	0.10	1	06/07/22 09:35	06/02/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MB
Lab Code: K2205822-006

Service Request: K2205822
Date Collected: 05/27/22 08:40
Date Received: 05/27/22 13:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	06/07/22 09:24	06/02/22	
Iron	200.8	0.5 J	ug/L	2.0	0.3	1	06/07/22 09:24	06/02/22	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	06/07/22 09:24	06/02/22	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	06/07/22 09:24	06/02/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: APC-GSD-AP-MB
Lab Code: K2205822-006

Service Request: K2205822
Date Collected: 05/27/22 08:40
Date Received: 05/27/22 13:00

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	06/07/22 09:22	06/02/22	
Iron	200.8	0.4 J	ug/L	2.0	0.3	1	06/07/22 09:22	06/02/22	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	06/07/22 09:22	06/02/22	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	06/07/22 09:22	06/02/22	



QC Summary Forms

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2209065-01

Service Request: K2205822
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	06/07/22 08:48	06/02/22	
Iron	200.8	ND U	ug/L	2.0	0.3	1	06/07/22 08:48	06/02/22	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	06/07/22 08:48	06/02/22	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	06/07/22 08:48	06/02/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22
Date Received: 05/27/22
Date Analyzed: 06/7/22
Date Extracted: 06/2/22

Matrix Spike Summary
Total Metals

Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205822-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2209065-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	341	425	50.0	167 #	70-130
Iron	9180	10200	50	2064 #	70-130
Lithium	25.6	77.5	50.0	104	70-130
Manganese	9710	10900	25.0	4717 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22
Date Received: 05/27/22
Date Analyzed: 06/7/22
Date Extracted: 06/2/22

Matrix Spike Summary
Total Metals

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205822-002
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2209065-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.06	49.7	50.0	97	70-130
Iron	54.1	100	50.0	92	70-130
Lithium	68.3	108	50.0	79	70-130
Manganese	11.9	36.3	25.0	98	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22
Date Received: 05/27/22
Date Analyzed: 06/07/22

Replicate Sample Summary

Total Metals

Sample Name: APC-GSD-AP-MW-2-20220518
Lab Code: K2205822-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2209065-03 Result			
Arsenic	200.8	2.5	0.5	341	344	343	<1	20
Iron	200.8	10	2	9180	9460	9320	3	20
Lithium	200.8	0.50	0.50	25.6	25.1	25.4	2	20
Manganese	200.8	1.0	0.2	9710	10000	9860	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Collected: 05/27/22
Date Received: 05/27/22
Date Analyzed: 06/07/22

Replicate Sample Summary

Total Metals

Sample Name: APC-GSD-AP-MW-2VA-20220518
Lab Code: K2205822-002

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2209065-05 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2205822
Date Analyzed: 06/07/22

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2209065-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	48.1	50.0	96	85-115
Iron	200.8	46.2	50.0	92	85-115
Lithium	200.8	45.7	50.0	91	85-115
Manganese	200.8	25.1	25.0	100	85-115



November 14, 2022

Service Request No:K2213117

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory November 07, 2022
For your reference, these analyses have been assigned our service request number **K2213117**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

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Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2213117
Date Received: 11/07/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Six water samples were received for analysis at ALS Environmental on 11/07/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 11/14/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: APC-GSD-AP-MW-2-20221103	Lab ID: K2213117-001
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	79.6		0.09	0.50	ug/L	200.8
Arsenic, Dissolved	12.3		0.09	0.50	ug/L	200.8
Iron	1650		0.3	2.0	ug/L	200.8
Iron, Dissolved	2.3		0.3	2.0	ug/L	200.8
Lithium	26.0		0.10	0.10	ug/L	200.8
Lithium, Dissolved	25.6		0.10	0.10	ug/L	200.8
Manganese	9330		0.8	4.0	ug/L	200.8
Manganese, Dissolved	9430		0.8	4.0	ug/L	200.8

CLIENT ID: APC-GSD-AP-MW-2VA-20221103	Lab ID: K2213117-002
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	1.22		0.09	0.50	ug/L	200.8
Arsenic, Dissolved	1.19		0.09	0.50	ug/L	200.8
Iron	35.7		0.3	2.0	ug/L	200.8
Iron, Dissolved	31.1		0.3	2.0	ug/L	200.8
Lithium	63.9		0.10	0.10	ug/L	200.8
Lithium, Dissolved	63.7		0.10	0.10	ug/L	200.8
Manganese	13.1		0.04	0.20	ug/L	200.8
Manganese, Dissolved	12.8		0.04	0.20	ug/L	200.8

CLIENT ID: APC-GSD-AP-MW-2VB-20221103	Lab ID: K2213117-003
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	0.31	J	0.09	0.50	ug/L	200.8
Arsenic, Dissolved	0.34	J	0.09	0.50	ug/L	200.8
Iron	16.4		0.3	2.0	ug/L	200.8
Iron, Dissolved	15.9		0.3	2.0	ug/L	200.8
Lithium	111		0.10	0.10	ug/L	200.8
Lithium, Dissolved	116		0.10	0.10	ug/L	200.8
Manganese	21.2		0.04	0.20	ug/L	200.8
Manganese, Dissolved	20.5		0.04	0.20	ug/L	200.8

CLIENT ID: APC-GSD-AP-MW-4-20221103	Lab ID: K2213117-004
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	6.45		0.09	0.50	ug/L	200.8
Iron	32800		0.3	2.0	ug/L	200.8
Iron, Dissolved	1.7	J	0.3	2.0	ug/L	200.8
Lithium	0.34		0.10	0.10	ug/L	200.8
Lithium, Dissolved	0.38		0.10	0.10	ug/L	200.8
Manganese	1870		0.04	0.20	ug/L	200.8
Manganese, Dissolved	1730		0.04	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: APC-GSD-AP-MW-4-DUP-20221103 **Lab ID: K2213117-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	7.69		0.09	0.50	ug/L	200.8
Iron	34500		0.3	2.0	ug/L	200.8
Iron, Dissolved	1.3	J	0.3	2.0	ug/L	200.8
Lithium	0.29		0.10	0.10	ug/L	200.8
Lithium, Dissolved	0.32		0.10	0.10	ug/L	200.8
Manganese	1810		0.04	0.20	ug/L	200.8
Manganese, Dissolved	1670		0.04	0.20	ug/L	200.8

CLIENT ID: APC-GSD-AP-MB-20221103 **Lab ID: K2213117-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron	4.0		0.3	2.0	ug/L	200.8
Iron, Dissolved	0.4	J	0.3	2.0	ug/L	200.8
Manganese	0.50		0.04	0.20	ug/L	200.8
Manganese, Dissolved	0.23		0.04	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04

Service Request:K2213117

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2213117-001	APC-GSD-AP-MW-2-20221103	11/3/2022	1100
K2213117-002	APC-GSD-AP-MW-2VA-20221103	11/3/2022	1105
K2213117-003	APC-GSD-AP-MW-2VB-20221103	11/3/2022	1110
K2213117-004	APC-GSD-AP-MW-4-20221103	11/3/2022	1115
K2213117-005	APC-GSD-AP-MW-4-DUP-20221103	11/3/2022	1120
K2213117-006	APC-GSD-AP-MB-20221103	11/3/2022	1125

Cooler Receipt and Preservation Form

Client ANCHOR Service Request K22 13117
 Received: 11/7/22 Opened: 11/7/22 By: VM Unloaded: 11/7/22 By: VM

- Samples were received via? **USPS** *Fed Ex* *UPS* *DHL* *PDX* **Courier** *Hand Delivered*
- Samples were received in: (circle) **Cooler** *Box* *Envelope* *Other* *NA*
- Were custody seals on coolers? *NA* *Y* **N** If yes, how many and where? _____
 If present, were custody seals intact? *Y* *N* If present, were they signed and dated? *Y* *N*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>5.4</u>		<u>IR01</u>					

- Was a Temperature Blank present in cooler? *NA* **Y** *N* If yes, notate the temperature in the appropriate column above:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- Were samples received within the method specified temperature ranges? *NA* **Y** *N*
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. **NA** *Y* *N*

If applicable, tissue samples were received: *Frozen* **Partially Thawed** *Thawed*

- Packing material: *Inserts* **Baggies** *Bubble Wrap* *Gel Packs* **Wet Ice** *Dry Ice* *Sleeves* _____
- Were custody papers properly filled out (ink, signed, etc.)? *NA* **Y** *N*
- Were samples received in good condition (unbroken) *NA* **Y** *N*
- Were all sample labels complete (ie, analysis, preservation, etc.)? *NA* **Y** *N*
- Did all sample labels and tags agree with custody papers? *NA* **Y** *N*
- Were appropriate bottles/containers and volumes received for the tests indicated? *NA* **Y** *N*
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below *NA* *Y* **N**
- Were VOA vials received without headspace? Indicate in the table below **NA** *Y* *N*
- Was C12/Res negative? **NA** *Y* *N*
- Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? **NA** *Y* *N* Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:
RUSH		

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
<u>APC-GSD-AP-MW-2VA-20221103</u>	<u>12.5ml</u>	<u>ASTZ</u>	<u>NA</u>	<u>NA</u>	<u>X</u>	<u>HNO3</u>	<u>0.5ml</u>	<u>REI-62-0</u>	<u>VM</u>	<u>1430</u>
<u>BY-AP-MW-B-20221104</u>	<u>" "</u>	<u>" "</u>	<u>" "</u>	<u>" "</u>	<u>X</u>	<u>HNO3</u>	<u>0.5ml</u>	<u>REI-62-0</u>	<u>VM</u>	<u>1430</u>
<u>BY-AP-MW-10-20221104</u>	<u>" "</u>	<u>" "</u>	<u>" "</u>	<u>" "</u>	<u>X</u>	<u>HNO3</u>	<u>0.5ml</u>	<u>REI-62-0</u>	<u>VM</u>	<u>1430</u>
<u>BY-AP-MW-24H-DUP-20221104</u>	<u>" "</u>	<u>" "</u>	<u>" "</u>	<u>" "</u>	<u>X</u>	<u>HNO3</u>	<u>0.5ml</u>	<u>REI-62-0</u>	<u>VM</u>	<u>1430</u>

Notes, Discrepancies, Resolutions: _____



Cooler Receipt and Preservation Form

Client ANCHOR

Service Request K22

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
BY-AP-MW-24H-20221104	125ML PLASTIC				X	HNO3	0.5ml	REI-62-0	NH	1430
BY-AP-MW-1-20221104	125ML PLASTIC				X	HNO3	0.5ml	REI-62-0	NH	1430

Notes, Discrepancies & Resolutions: SAMPLES "BY-AP-MW-24H-20221104" AND "BY-AP-MW-1-20221104" still did not pH properly after 0.5ml of HNO3 was added



Miscellaneous Forms

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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04

Service Request: K2213117

Sample Name: APC-GSD-AP-MW-2-20221103
Lab Code: K2213117-001
Sample Matrix: Water

Date Collected: 11/3/22
Date Received: 11/7/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: APC-GSD-AP-MW-2VA-20221103
Lab Code: K2213117-002
Sample Matrix: Water

Date Collected: 11/3/22
Date Received: 11/7/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: APC-GSD-AP-MW-2VB-20221103
Lab Code: K2213117-003
Sample Matrix: Water

Date Collected: 11/3/22
Date Received: 11/7/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: APC-GSD-AP-MW-4-20221103
Lab Code: K2213117-004
Sample Matrix: Water

Date Collected: 11/3/22
Date Received: 11/7/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: APC-GSD-AP-MW-4-DUP-20221103
Lab Code: K2213117-005
Sample Matrix: Water

Date Collected: 11/3/22
Date Received: 11/7/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04

Service Request: K2213117

Sample Name: APC-GSD-AP-MB-20221103
Lab Code: K2213117-006
Sample Matrix: Water

Date Collected: 11/3/22
Date Received: 11/7/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com



Metals

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www.alsglobal.com

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-2-20221103
Lab Code: K2213117-001

Service Request: K2213117
Date Collected: 11/03/22 11:00
Date Received: 11/07/22 13:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	12.3	ug/L	0.50	0.09	1	11/11/22 13:45	11/08/22	
Iron	200.8	2.3	ug/L	2.0	0.3	1	11/11/22 13:45	11/08/22	
Lithium	200.8	25.6	ug/L	0.10	0.10	1	11/11/22 13:45	11/08/22	
Manganese	200.8	9430	ug/L	4.0	0.8	20	11/11/22 14:13	11/08/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-2-20221103
Lab Code: K2213117-001

Service Request: K2213117
Date Collected: 11/03/22 11:00
Date Received: 11/07/22 13:00
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	79.6	ug/L	0.50	0.09	1	11/11/22 13:25	11/08/22	
Iron	200.8	1650	ug/L	2.0	0.3	1	11/11/22 13:25	11/08/22	
Lithium	200.8	26.0	ug/L	0.10	0.10	1	11/11/22 13:25	11/08/22	
Manganese	200.8	9330	ug/L	4.0	0.8	20	11/11/22 14:07	11/08/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22 11:05
Date Received: 11/07/22 13:00

Sample Name: APC-GSD-AP-MW-2VA-20221103
Lab Code: K2213117-002

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.19	ug/L	0.50	0.09	1	11/11/22 13:48	11/08/22	
Iron	200.8	31.1	ug/L	2.0	0.3	1	11/11/22 13:48	11/08/22	
Lithium	200.8	63.7	ug/L	0.10	0.10	1	11/11/22 13:48	11/08/22	
Manganese	200.8	12.8	ug/L	0.20	0.04	1	11/11/22 13:48	11/08/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22 11:05
Date Received: 11/07/22 13:00

Sample Name: APC-GSD-AP-MW-2VA-20221103
Lab Code: K2213117-002

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.22	ug/L	0.50	0.09	1	11/11/22 13:34	11/08/22	
Iron	200.8	35.7	ug/L	2.0	0.3	1	11/11/22 13:34	11/08/22	
Lithium	200.8	63.9	ug/L	0.10	0.10	1	11/11/22 13:34	11/08/22	
Manganese	200.8	13.1	ug/L	0.20	0.04	1	11/11/22 13:34	11/08/22	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22 11:10
Date Received: 11/07/22 13:00

Sample Name: APC-GSD-AP-MW-2VB-20221103
Lab Code: K2213117-003

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.34 J	ug/L	0.50	0.09	1	11/11/22 13:55	11/08/22	
Iron	200.8	15.9	ug/L	2.0	0.3	1	11/11/22 13:55	11/08/22	
Lithium	200.8	116	ug/L	0.10	0.10	1	11/11/22 13:55	11/08/22	
Manganese	200.8	20.5	ug/L	0.20	0.04	1	11/11/22 13:55	11/08/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22 11:10
Date Received: 11/07/22 13:00

Sample Name: APC-GSD-AP-MW-2VB-20221103
Lab Code: K2213117-003

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.31 J	ug/L	0.50	0.09	1	11/11/22 13:36	11/08/22	
Iron	200.8	16.4	ug/L	2.0	0.3	1	11/11/22 13:36	11/08/22	
Lithium	200.8	111	ug/L	0.10	0.10	1	11/11/22 13:36	11/08/22	
Manganese	200.8	21.2	ug/L	0.20	0.04	1	11/11/22 13:36	11/08/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-4-20221103
Lab Code: K2213117-004

Service Request: K2213117
Date Collected: 11/03/22 11:15
Date Received: 11/07/22 13:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/11/22 13:58	11/08/22	
Iron	200.8	1.7 J	ug/L	2.0	0.3	1	11/11/22 13:58	11/08/22	
Lithium	200.8	0.38	ug/L	0.10	0.10	1	11/11/22 13:58	11/08/22	
Manganese	200.8	1730	ug/L	0.20	0.04	1	11/11/22 13:58	11/08/22	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water
Sample Name: APC-GSD-AP-MW-4-20221103
Lab Code: K2213117-004

Service Request: K2213117
Date Collected: 11/03/22 11:15
Date Received: 11/07/22 13:00
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	6.45	ug/L	0.50	0.09	1	11/11/22 13:38	11/08/22	
Iron	200.8	32800	ug/L	2.0	0.3	1	11/11/22 13:38	11/08/22	
Lithium	200.8	0.34	ug/L	0.10	0.10	1	11/11/22 13:38	11/08/22	
Manganese	200.8	1870	ug/L	0.20	0.04	1	11/11/22 13:38	11/08/22	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22 11:20
Date Received: 11/07/22 13:00

Sample Name: APC-GSD-AP-MW-4-DUP-20221103
Lab Code: K2213117-005

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/11/22 14:00	11/08/22	
Iron	200.8	1.3 J	ug/L	2.0	0.3	1	11/11/22 14:00	11/08/22	
Lithium	200.8	0.32	ug/L	0.10	0.10	1	11/11/22 14:00	11/08/22	
Manganese	200.8	1670	ug/L	0.20	0.04	1	11/11/22 14:00	11/08/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22 11:20
Date Received: 11/07/22 13:00

Sample Name: APC-GSD-AP-MW-4-DUP-20221103
Lab Code: K2213117-005

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.69	ug/L	0.50	0.09	1	11/11/22 13:40	11/08/22	
Iron	200.8	34500	ug/L	2.0	0.3	1	11/11/22 13:40	11/08/22	
Lithium	200.8	0.29	ug/L	0.10	0.10	1	11/11/22 13:40	11/08/22	
Manganese	200.8	1810	ug/L	0.20	0.04	1	11/11/22 13:40	11/08/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water
Sample Name: APC-GSD-AP-MB-20221103
Lab Code: K2213117-006

Service Request: K2213117
Date Collected: 11/03/22 11:25
Date Received: 11/07/22 13:00

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/11/22 14:02	11/08/22	
Iron	200.8	0.4 J	ug/L	2.0	0.3	1	11/11/22 14:02	11/08/22	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	11/11/22 14:02	11/08/22	
Manganese	200.8	0.23	ug/L	0.20	0.04	1	11/11/22 14:02	11/08/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water
Sample Name: APC-GSD-AP-MB-20221103
Lab Code: K2213117-006

Service Request: K2213117
Date Collected: 11/03/22 11:25
Date Received: 11/07/22 13:00

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/11/22 13:43	11/08/22	
Iron	200.8	4.0	ug/L	2.0	0.3	1	11/11/22 13:43	11/08/22	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	11/11/22 13:43	11/08/22	
Manganese	200.8	0.50	ug/L	0.20	0.04	1	11/11/22 13:43	11/08/22	



QC Summary Forms

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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2219703-01

Service Request: K2213117
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/11/22 12:58	11/08/22	
Iron	200.8	ND U	ug/L	2.0	0.3	1	11/11/22 12:58	11/08/22	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	11/11/22 12:58	11/08/22	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	11/11/22 12:58	11/08/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22
Date Received: 11/07/22
Date Analyzed: 11/11/22
Date Extracted: 11/8/22

Matrix Spike Summary
Total Metals

Sample Name: APC-GSD-AP-MW-2-20221103
Lab Code: K2213117-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2219703-05

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	79.6	129	50.0	98	70-130
Iron	1650	1690	50.0	70 #	70-130
Lithium	26.0	74.5	50.0	97	70-130
Manganese	9330	9370	25.0	153 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Collected: 11/03/22
Date Received: 11/07/22
Date Analyzed: 11/11/22

Replicate Sample Summary

Total Metals

Sample Name: APC-GSD-AP-MW-2-20221103
Lab Code: K2213117-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2219703-06 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/221114-06.01 Task 04
Sample Matrix: Water

Service Request: K2213117
Date Analyzed: 11/11/22

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2219703-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.3	50.0	99	85-115
Iron	200.8	50.1	50.0	100	85-115
Lithium	200.8	50.8	50.0	102	85-115
Manganese	200.8	26.0	25.0	104	85-115



June 27, 2023

Service Request No:K2306988

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023 & 2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2023
For your reference, these analyses have been assigned our service request number **K2306988**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024
Sample Matrix: Water

Service Request: K2306988
Date Received: 06/20/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Four water samples were received for analysis at ALS Environmental on 06/20/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 06/27/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-AP-MW-4	Lab ID: K2306988-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	7.84		0.09	0.50	ug/L	200.8
Arsenic, Dissolved	0.45	J	0.09	0.50	ug/L	200.8
Iron	43400		0.3	2.0	ug/L	200.8
Iron, Dissolved	33600		0.3	2.0	ug/L	200.8
Lithium	0.32		0.10	0.10	ug/L	200.8
Lithium, Dissolved	0.27		0.10	0.10	ug/L	200.8
Manganese	2600		0.04	0.50	ug/L	200.8
Manganese, Dissolved	2560		0.04	0.50	ug/L	200.8

CLIENT ID: GSD-AP-MW-2	Lab ID: K2306988-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	317		0.09	0.50	ug/L	200.8
Arsenic, Dissolved	274		0.09	0.50	ug/L	200.8
Iron	8760		30	200	ug/L	200.8
Iron, Dissolved	8220		0.3	2.0	ug/L	200.8
Lithium	22.1		0.10	0.10	ug/L	200.8
Lithium, Dissolved	21.5		0.10	0.10	ug/L	200.8
Manganese	8700		4	50	ug/L	200.8
Manganese, Dissolved	8540		4	50	ug/L	200.8

CLIENT ID: GSD-AP-MW-21VC	Lab ID: K2306988-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	0.73		0.09	0.50	ug/L	200.8
Arsenic, Dissolved	0.74		0.09	0.50	ug/L	200.8
Iron	35.9		0.3	2.0	ug/L	200.8
Iron, Dissolved	39.4		0.3	2.0	ug/L	200.8
Lithium	183		0.10	0.10	ug/L	200.8
Lithium, Dissolved	188		0.50	0.50	ug/L	200.8
Manganese	4.75		0.04	0.50	ug/L	200.8
Manganese, Dissolved	6.91		0.04	0.50	ug/L	200.8

CLIENT ID: GSD-AP-MW-14	Lab ID: K2306988-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	1.27		0.09	0.50	ug/L	200.8
Arsenic, Dissolved	1.24		0.09	0.50	ug/L	200.8
Iron	4.5		0.3	2.0	ug/L	200.8
Iron, Dissolved	4.6		0.3	2.0	ug/L	200.8
Lithium	5.06		0.10	0.10	ug/L	200.8
Lithium, Dissolved	5.12		0.10	0.10	ug/L	200.8
Manganese	545		0.04	0.50	ug/L	200.8
Manganese, Dissolved	539		0.04	0.50	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08


Service Request:K2306988

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2306988-001	GSD-AP-MW-4	6/12/2023	1630
K2306988-002	GSD-AP-MW-2	6/12/2023	1640
K2306988-003	GSD-AP-MW-21VC	6/12/2023	1650
K2306988-004	GSD-AP-MW-14	6/12/2023	1700

42306988

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers	Parameters										 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 125 Portland OR 97219 Comments/Preservation							
Date:	6/15/2023					As, Li, Fe, Mn																	
Project Name:	Gadsden 2023 & 2024																						
Project Number:	221114-06.02 Task 08																						
Project Manager:	Masa Kanematsu																						
Phone Number:	503-972-5001 (backup number: 503-798-3456)																						
Shipment Method:	ALS Carrier																						
Line	Field Sample ID	Collection		Matrix	No. of Containers	As, Li, Fe, Mn														Comments/Preservation			
		Date	Time																				
1	GSD-AP-MW-4	6/12/2023	16:30	Water	2	X															One unfiltered bottle for total metals; one filtered for dissolved metals. All HNO3-Preserved.		
2	GSD-AP-MW-2	6/12/2023	16:40	Water	2	X																	
3	GSD-AP-MW-21VC	6/12/2023	16:50	Water	2	X																	
4	GSD-AP-MW-14	6/12/2023	17:00	Water	2	X																	
5																							
6																							
7																							
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17																							
18																							
19																							
20																							

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb.

Relinquished by: <i>William Williams</i>	Company: Anchor QEA
Signature/Print Name: <i>William W. Williams</i>	Date/Time: <i>6/15/2023 10:22</i>
Relinquished by:	Company:
Signature/Print Name:	Date/Time:

Received by: <i>Greg Rich</i>
Signature/Print Name: <i>Greg Rich 6/15/2023 10:22</i>
Received by: <i>Masa Kanematsu</i>
Signature/Print Name: <i>Masa Kanematsu 6/15/2023 10:05</i>

PM MH

Cooler Receipt and Preservation Form

Client Anchor Service Request K23 06988
Received: 6/20/23 Opened: 6/20/23 By: KM Unloaded: 6/20/23 By: KM

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
7.9	8.8	IP02					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed
- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N Underfilled Overfilled
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Test for metals, temp not an issue



Miscellaneous Forms

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Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2306988

Sample Name: GSD-AP-MW-4
Lab Code: K2306988-001
Sample Matrix: Water

Date Collected: 06/12/23
Date Received: 06/20/23

Analysis Method
200.8

Extracted/Digested By
ACOUCH

Analyzed By
JCHAN

Sample Name: GSD-AP-MW-2
Lab Code: K2306988-002
Sample Matrix: Water

Date Collected: 06/12/23
Date Received: 06/20/23

Analysis Method
200.8

Extracted/Digested By
ACOUCH

Analyzed By
JCHAN

Sample Name: GSD-AP-MW-21VC
Lab Code: K2306988-003
Sample Matrix: Water

Date Collected: 06/12/23
Date Received: 06/20/23

Analysis Method
200.8

Extracted/Digested By
ACOUCH

Analyzed By
JCHAN

Sample Name: GSD-AP-MW-14
Lab Code: K2306988-004
Sample Matrix: Water

Date Collected: 06/12/23
Date Received: 06/20/23

Analysis Method
200.8

Extracted/Digested By
ACOUCH

Analyzed By
JCHAN



Sample Results

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-4
Lab Code: K2306988-001

Service Request: K2306988
Date Collected: 06/12/23 16:30
Date Received: 06/20/23 12:05
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.45 J	ug/L	0.50	0.09	1	06/27/23 09:27	06/21/23	
Iron	200.8	33600	ug/L	2.0	0.3	1	06/27/23 09:27	06/21/23	
Lithium	200.8	0.27	ug/L	0.10	0.10	1	06/27/23 09:27	06/21/23	
Manganese	200.8	2560	ug/L	0.50	0.04	1	06/27/23 09:27	06/21/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-4
Lab Code: K2306988-001

Service Request: K2306988
Date Collected: 06/12/23 16:30
Date Received: 06/20/23 12:05
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.84	ug/L	0.50	0.09	1	06/27/23 09:20	06/21/23	
Iron	200.8	43400	ug/L	2.0	0.3	1	06/27/23 09:20	06/21/23	
Lithium	200.8	0.32	ug/L	0.10	0.10	1	06/27/23 09:20	06/21/23	
Manganese	200.8	2600	ug/L	0.50	0.04	1	06/27/23 09:20	06/21/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-2
Lab Code: K2306988-002

Service Request: K2306988
Date Collected: 06/12/23 16:40
Date Received: 06/20/23 12:05
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	274	ug/L	0.50	0.09	1	06/27/23 09:29	06/21/23	
Iron	200.8	8220	ug/L	2.0	0.3	1	06/27/23 09:29	06/21/23	
Lithium	200.8	21.5	ug/L	0.10	0.10	1	06/27/23 09:29	06/21/23	
Manganese	200.8	8540	ug/L	50	4	100	06/27/23 10:54	06/21/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-2
Lab Code: K2306988-002

Service Request: K2306988
Date Collected: 06/12/23 16:40
Date Received: 06/20/23 12:05
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	317	ug/L	0.50	0.09	1	06/27/23 09:21	06/21/23	
Iron	200.8	8760	ug/L	200	30	100	06/27/23 10:52	06/21/23	
Lithium	200.8	22.1	ug/L	0.10	0.10	1	06/27/23 09:21	06/21/23	
Manganese	200.8	8700	ug/L	50	4	100	06/27/23 10:52	06/21/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-21VC
Lab Code: K2306988-003

Service Request: K2306988
Date Collected: 06/12/23 16:50
Date Received: 06/20/23 12:05
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.74	ug/L	0.50	0.09	1	06/27/23 09:30	06/21/23	
Iron	200.8	39.4	ug/L	2.0	0.3	1	06/27/23 09:30	06/21/23	
Lithium	200.8	188	ug/L	0.50	0.50	5	06/27/23 10:56	06/21/23	
Manganese	200.8	6.91	ug/L	0.50	0.04	1	06/27/23 09:30	06/21/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-21VC
Lab Code: K2306988-003

Service Request: K2306988
Date Collected: 06/12/23 16:50
Date Received: 06/20/23 12:05
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.73	ug/L	0.50	0.09	1	06/27/23 09:10	06/21/23	
Iron	200.8	35.9	ug/L	2.0	0.3	1	06/27/23 09:10	06/21/23	
Lithium	200.8	183	ug/L	0.10	0.10	1	06/27/23 09:10	06/21/23	
Manganese	200.8	4.75	ug/L	0.50	0.04	1	06/27/23 09:10	06/21/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-14
Lab Code: K2306988-004

Service Request: K2306988
Date Collected: 06/12/23 17:00
Date Received: 06/20/23 12:05
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.24	ug/L	0.50	0.09	1	06/27/23 09:32	06/21/23	
Iron	200.8	4.6	ug/L	2.0	0.3	1	06/27/23 09:32	06/21/23	
Lithium	200.8	5.12	ug/L	0.10	0.10	1	06/27/23 09:32	06/21/23	
Manganese	200.8	539	ug/L	0.50	0.04	1	06/27/23 09:32	06/21/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-MW-14
Lab Code: K2306988-004

Service Request: K2306988
Date Collected: 06/12/23 17:00
Date Received: 06/20/23 12:05
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.27	ug/L	0.50	0.09	1	06/27/23 09:15	06/21/23	
Iron	200.8	4.5	ug/L	2.0	0.3	1	06/27/23 09:15	06/21/23	
Lithium	200.8	5.06	ug/L	0.10	0.10	1	06/27/23 09:15	06/21/23	
Manganese	200.8	545	ug/L	0.50	0.04	1	06/27/23 09:15	06/21/23	



QC Summary Forms

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2310954-01

Service Request: K2306988
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	06/27/23 09:07	06/21/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	06/27/23 09:07	06/21/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	06/27/23 09:07	06/21/23	
Manganese	200.8	0.14 J	ug/L	0.50	0.04	1	06/27/23 09:07	06/21/23	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2306988
Date Collected: 06/12/23
Date Received: 06/20/23
Date Analyzed: 06/27/23
Date Extracted: 06/21/23

Matrix Spike Summary
Total Metals

Sample Name: GSD-AP-MW-21VC
Lab Code: K2306988-003
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2310954-03

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.73	46.7	50.0	92	70-130
Iron	35.9	80.3	50.0	89	70-130
Lithium	183	221	50.0	76	70-130
Manganese	4.75	27.3	25.0	90	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2306988
Date Collected: 06/12/23
Date Received: 06/20/23
Date Analyzed: 06/27/23
Date Extracted: 06/21/23

Matrix Spike Summary
Total Metals

Sample Name: GSD-AP-MW-14
Lab Code: K2306988-004
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2310954-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.27	48.5	50.0	94	70-130
Iron	4.5	52.9	50.0	97	70-130
Lithium	5.06	51.7	50.0	93	70-130
Manganese	545	576	25.0	126 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2306988
Date Collected: 06/12/23
Date Received: 06/20/23
Date Analyzed: 06/27/23

Replicate Sample Summary

Total Metals

Sample Name: GSD-AP-MW-21VC
Lab Code: K2306988-003

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2310954-04 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2306988
Date Collected: 06/12/23
Date Received: 06/20/23
Date Analyzed: 06/27/23

Replicate Sample Summary

Total Metals

Sample Name: GSD-AP-MW-14
Lab Code: K2306988-004

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2310954-05 Result			
Arsenic	200.8	0.50	0.09	1.27	1.31	1.29	3	20
Iron	200.8	2.0	0.3	4.5	4.7	4.6	4	20
Lithium	200.8	0.10	0.10	5.06	4.99	5.03	1	20
Manganese	200.8	0.50	0.04	545	564	555	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2306988
Date Analyzed: 06/27/23

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2310954-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	48.2	50.0	96	85-115
Iron	200.8	48.7	50.0	97	85-115
Lithium	200.8	48.8	50.0	98	85-115
Manganese	200.8	24.4	25.0	97	85-115



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, July 6, 2022

Jessica Goin, PhD
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A2D0978 - Gadsden 2022 - 201114-01.02

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2D0978, which was received by the laboratory on 4/25/2022 at 12:45:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 3.6 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-01.02 Project Manager: Jessica Goin, PhD	Report ID: A2D0978 - 07 06 22 0828
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GSD-AP-PT-1	A2D0978-01	Soil	04/25/22 10:00	04/25/22 12:45
GSD-AP-PT-2-(10.0-15.0)	A2D0978-02	Soil	04/25/22 10:15	04/25/22 12:45
GSD-AP-PT-2-(10.0-15.0)-DUP	A2D0978-03	Soil	04/25/22 10:30	04/25/22 12:45

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-01.02 Project Manager: Jessica Goin, PhD	Report ID: A2D0978 - 07 06 22 0828
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-1 (A2D0978-01)				Matrix: Soil				
Batch: 22E0219								
Antimony	ND	0.596	1.19	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Arsenic	31.3	0.596	1.19	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Barium	94.3	0.596	1.19	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Beryllium	0.516	0.119	0.238	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Cadmium	ND	0.119	0.238	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Chromium	11.5	0.596	1.19	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Iron	11000	29.8	59.6	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Lead	3.79	0.119	0.238	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Manganese	2160	0.596	1.19	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Mercury	ND	0.0477	0.0953	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Molybdenum	4.33	0.596	1.19	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Selenium	ND	0.596	1.19	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Thallium	ND	0.119	0.238	mg/kg dry	10	05/10/22 04:31	EPA 6020B	
Lithium	5.71	2.98	5.96	mg/kg dry	10	05/12/22 12:27	EPA 6020B	J
GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)				Matrix: Soil				
Batch: 22E0219								
Antimony	ND	0.576	1.15	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Arsenic	2.05	0.576	1.15	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Barium	6.87	0.576	1.15	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Beryllium	0.363	0.115	0.230	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Cadmium	ND	0.115	0.230	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Chromium	8.77	0.576	1.15	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Iron	8030	28.8	57.6	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Lead	1.93	0.115	0.230	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Manganese	49.5	0.576	1.15	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Mercury	ND	0.0461	0.0921	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Molybdenum	ND	0.576	1.15	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Selenium	ND	0.576	1.15	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Thallium	ND	0.115	0.230	mg/kg dry	10	05/10/22 04:36	EPA 6020B	
Lithium	ND	2.88	5.76	mg/kg dry	10	05/12/22 12:32	EPA 6020B	
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)				Matrix: Soil				

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

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 503-718-2323
 ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-01.02 Project Manager: Jessica Goin, PhD	Report ID: A2D0978 - 07 06 22 0828
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)				Matrix: Soil				
Batch: 22E0219								
Antimony	ND	0.621	1.24	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Arsenic	2.50	0.621	1.24	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Barium	6.72	0.621	1.24	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Beryllium	0.343	0.124	0.248	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Cadmium	ND	0.124	0.248	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Chromium	10.0	0.621	1.24	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Iron	8280	31.1	62.1	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Lead	2.20	0.124	0.248	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Manganese	51.3	0.621	1.24	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Mercury	ND	0.0497	0.0994	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Molybdenum	ND	0.621	1.24	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Selenium	ND	0.621	1.24	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Thallium	ND	0.124	0.248	mg/kg dry	10	05/10/22 04:41	EPA 6020B	
Lithium	ND	3.11	6.21	mg/kg dry	10	05/12/22 12:37	EPA 6020B	

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-01.02 Project Manager: Jessica Goin, PhD	Report ID: A2D0978 - 07 06 22 0828
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ANALYTICAL SAMPLE RESULTS

Anions by Ion Chromatography - Low Level

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
GSD-AP-PT-1 (A2D0978-01)				Matrix: Soil					
Batch: 22D1129									
Fluoride	3.85	0.557	1.11	mg/kg dry	1	04/29/22 21:30	EPA 9056A LL		
GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)				Matrix: Soil					
Batch: 22D1129									
Fluoride	ND	0.559	1.12	mg/kg dry	1	04/29/22 21:51	EPA 9056A LL		
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)				Matrix: Soil					
Batch: 22D1129									
Fluoride	ND	0.562	1.12	mg/kg dry	1	04/29/22 22:13	EPA 9056A LL		

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-01.02 Project Manager: Jessica Goin, PhD	Report ID: A2D0978 - 07 06 22 0828
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ANALYTICAL SAMPLE RESULTS

Demand Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
GSD-AP-PT-1 (A2D0978-01RE1)				Matrix: Soil					
Batch: 22E0178									
Total Organic Carbon	1100	200	200	mg/kg	1	05/05/22 12:23	EPA 9060Amod	B-02, Q-42	
GSD-AP-PT-2-(10.0-15.0) (A2D0978-02RE2)				Matrix: Soil					
Batch: 22E0295									
Total Organic Carbon	370	200	200	mg/kg	1	05/09/22 12:59	EPA 9060Amod		
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03RE2)				Matrix: Soil					
Batch: 22E0295									
Total Organic Carbon	370	200	200	mg/kg	1	05/09/22 13:09	EPA 9060Amod		

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ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/RSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-1 (A2D0978-01)				Matrix: Soil		Batch: 22E0088		
Gravel (>2.00mm)	61.4	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 4.75 mm sieve (#4)	46.0	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 2.00 mm sieve (#10)	15.4	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Sand (0.063mm - 2.00mm)	34.5	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.85 mm sieve (#20)	8.44	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.425 mm sieve (#40)	10.6	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.250 mm sieve (#60)	11.5	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.150 mm sieve (#100)	2.36	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.106 mm sieve (#140)	0.76	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.075 mm sieve (#200)	0.56	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.063 mm sieve (#230)	0.28	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Silt (0.005mm < 0.063mm)	3.50	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Clay (< 0.005 mm)	0.60	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)				Matrix: Soil		Batch: 22E0088		
Gravel (>2.00mm)	23.2	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 4.75 mm sieve (#4)	12.7	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 2.00 mm sieve (#10)	10.6	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Sand (0.063mm - 2.00mm)	71.1	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.85 mm sieve (#20)	12.1	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.425 mm sieve (#40)	20.0	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.250 mm sieve (#60)	28.0	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.150 mm sieve (#100)	7.58	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.106 mm sieve (#140)	1.81	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.075 mm sieve (#200)	1.08	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.063 mm sieve (#230)	0.47	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Silt (0.005mm < 0.063mm)	4.20	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Clay (< 0.005 mm)	1.50	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)				Matrix: Soil		Batch: 22E0088		
Gravel (>2.00mm)	28.2	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 4.75 mm sieve (#4)	17.9	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 2.00 mm sieve (#10)	10.3	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01

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ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/RSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)				Matrix: Soil		Batch: 22E0088		
Sand (0.063mm - 2.00mm)	66.2	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.85 mm sieve (#20)	11.1	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.425 mm sieve (#40)	18.4	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.250 mm sieve (#60)	26.0	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.150 mm sieve (#100)	7.31	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.106 mm sieve (#140)	1.82	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.075 mm sieve (#200)	1.07	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
% Retained 0.063 mm sieve (#230)	0.47	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Silt (0.005mm < 0.063mm)	4.30	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01
Clay (< 0.005 mm)	1.30	0.01	0.01	% of Total	1	05/11/22 16:53	D422mod	GS-01

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight									
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
GSD-AP-PT-1 (A2D0978-01)				Matrix: Soil		Batch: 22D1035			
% Solids	88.9	1.00	1.00	%	1	04/28/22 10:27	EPA 8000D		
GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)				Matrix: Soil		Batch: 22D1035			
% Solids	89.4	1.00	1.00	%	1	04/28/22 10:27	EPA 8000D		
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)				Matrix: Soil		Batch: 22D1035			
% Solids	87.7	1.00	1.00	%	1	04/28/22 10:27	EPA 8000D		

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Analytical Resources, LLC

ANALYTICAL SAMPLE RESULTS (Subcontracted)

Wet Chemistry

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-1 (A2D0978-01)				Matrix: Soil		Batch: BKD0807		
Batch: BKD0807								
Total Solids, Sulfide	83.88	0.04	0.04	%	1	04/27/22 13:40	PSEP 1986	
Batch: BKD0823								
Sulfide	ND	1.14	1.14	mg/kg dry	1	04/29/22 11:15	SM 4500-S2 D-00	U
GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)				Matrix: Soil		Batch: BKD0807		
Batch: BKD0807								
Total Solids, Sulfide	77.47	0.04	0.04	%	1	04/27/22 13:40	PSEP 1986	
Batch: BKD0823								
Sulfide	ND	1.16	1.16	mg/kg dry	1	04/29/22 11:16	SM 4500-S2 D-00	U
GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)				Matrix: Soil		Batch: BKD0807		
Batch: BKD0807								
Total Solids, Sulfide	78.88	0.04	0.04	%	1	04/27/22 13:40	PSEP 1986	
Batch: BKD0823								
Sulfide	ND	1.17	1.17	mg/kg dry	1	04/29/22 11:17	SM 4500-S2 D-00	U

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0219 - EPA 3051A						Soil						
Blank (22E0219-BLK1)						Prepared: 05/06/22 09:00 Analyzed: 05/10/22 03:05						
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Beryllium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Iron	ND	24.0	48.1	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Manganese	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Molybdenum	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Thallium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Blank (22E0219-BLK2)						Prepared: 05/06/22 09:00 Analyzed: 05/12/22 11:52						
<u>EPA 6020B</u>												
Lithium	ND	2.40	4.81	mg/kg wet	10	---	---	---	---	---	---	
LCS (22E0219-BS1)						Prepared: 05/06/22 09:00 Analyzed: 05/10/22 03:10						
<u>EPA 6020B</u>												
Antimony	24.2	0.500	1.00	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Arsenic	47.7	0.500	1.00	mg/kg wet	10	50.0	---	95	80-120%	---	---	
Barium	48.9	0.500	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Beryllium	24.0	0.100	0.200	mg/kg wet	10	25.0	---	96	80-120%	---	---	
Cadmium	47.2	0.100	0.200	mg/kg wet	10	50.0	---	94	80-120%	---	---	
Chromium	46.7	0.500	1.00	mg/kg wet	10	50.0	---	93	80-120%	---	---	
Iron	2430	25.0	50.0	mg/kg wet	10	2500	---	97	80-120%	---	---	
Lead	45.5	0.100	0.200	mg/kg wet	10	50.0	---	91	80-120%	---	---	
Manganese	46.4	0.500	1.00	mg/kg wet	10	50.0	---	93	80-120%	---	---	
Mercury	0.880	0.0400	0.0800	mg/kg wet	10	1.00	---	88	80-120%	---	---	
Molybdenum	23.7	0.500	1.00	mg/kg wet	10	25.0	---	95	80-120%	---	---	
Selenium	22.2	0.500	1.00	mg/kg wet	10	25.0	---	89	80-120%	---	---	
Thallium	21.9	0.100	0.200	mg/kg wet	10	25.0	---	88	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0219 - EPA 3051A												
Soil												
LCS (22E0219-BS2)												
						Prepared: 05/06/22 09:00 Analyzed: 05/12/22 11:56						
EPA 6020B												
Lithium	415	2.50	5.00	mg/kg wet	10	400	---	104	80-120%	---	---	
Duplicate (22E0219-DUP1)												
						Prepared: 05/06/22 09:00 Analyzed: 05/10/22 03:20						
QC Source Sample: Non-SDG (A2D0953-01)												
Antimony	ND	0.648	1.30	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	4.51	0.648	1.30	mg/kg dry	10	---	5.05	---	---	11	20%	
Barium	173	0.648	1.30	mg/kg dry	10	---	206	---	---	17	20%	
Beryllium	0.580	0.130	0.259	mg/kg dry	10	---	0.659	---	---	13	20%	
Cadmium	0.438	0.130	0.259	mg/kg dry	10	---	0.388	---	---	12	20%	
Chromium	19.8	0.648	1.30	mg/kg dry	10	---	22.5	---	---	13	20%	
Iron	28400	32.4	64.8	mg/kg dry	10	---	34800	---	---	20	20%	
Lead	50.5	0.130	0.259	mg/kg dry	10	---	42.8	---	---	17	20%	
Manganese	599	0.648	1.30	mg/kg dry	10	---	756	---	---	23	20%	Q-04
Mercury	0.0660	0.0518	0.104	mg/kg dry	10	---	0.0749	---	---	13	20%	J
Molybdenum	ND	0.648	1.30	mg/kg dry	10	---	0.825	---	---	***	20%	
Selenium	ND	0.648	1.30	mg/kg dry	10	---	ND	---	---	---	20%	
Thallium	0.131	0.130	0.259	mg/kg dry	10	---	ND	---	---	---	20%	J
Duplicate (22E0219-DUP2)												
						Prepared: 05/06/22 09:00 Analyzed: 05/12/22 12:14						
QC Source Sample: Non-SDG (A2D0953-01)												
Lithium	8.35	3.24	6.48	mg/kg dry	10	---	8.19	---	---	2	20%	
Matrix Spike (22E0219-MS1)												
						Prepared: 05/06/22 09:00 Analyzed: 05/10/22 03:25						
QC Source Sample: Non-SDG (A2D0953-01)												
EPA 6020B												
Antimony	31.9	0.693	1.39	mg/kg dry	10	34.7	ND	92	75-125%	---	---	
Arsenic	73.3	0.693	1.39	mg/kg dry	10	69.3	5.05	98	75-125%	---	---	
Barium	245	0.693	1.39	mg/kg dry	10	69.3	206	57	75-125%	---	---	Q-04
Beryllium	33.7	0.139	0.277	mg/kg dry	10	34.7	0.659	95	75-125%	---	---	
Cadmium	68.6	0.139	0.277	mg/kg dry	10	69.3	0.388	98	75-125%	---	---	
Chromium	89.7	0.693	1.39	mg/kg dry	10	69.3	22.5	97	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0219 - EPA 3051A						Soil						
Matrix Spike (22E0219-MS1)						Prepared: 05/06/22 09:00 Analyzed: 05/10/22 03:25						
QC Source Sample: Non-SDG (A2D0953-01)												
Iron	33500	34.7	69.3	mg/kg dry	10	3470	34800	-37	75-125%	---	---	Q-04
Lead	112	0.139	0.277	mg/kg dry	10	69.3	42.8	99	75-125%	---	---	
Manganese	668	0.693	1.39	mg/kg dry	10	69.3	756	-127	75-125%	---	---	Q-04
Mercury	1.27	0.0555	0.111	mg/kg dry	10	1.39	0.0749	86	75-125%	---	---	
Molybdenum	33.9	0.693	1.39	mg/kg dry	10	34.7	0.825	95	75-125%	---	---	
Selenium	30.7	0.693	1.39	mg/kg dry	10	34.7	ND	89	75-125%	---	---	
Thallium	31.1	0.139	0.277	mg/kg dry	10	34.7	ND	90	75-125%	---	---	
Matrix Spike (22E0219-MS2)						Prepared: 05/06/22 09:00 Analyzed: 05/12/22 12:23						
QC Source Sample: Non-SDG (A2D0953-02)												
EPA 6020B												
Lithium	559	3.21	6.42	mg/kg dry	10	514	13.6	106	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by Ion Chromatography - Low Level

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D1129 - DI Leach						Soil						
Blank (22D1129-BLK1)			Prepared: 04/29/22 10:46 Analyzed: 04/29/22 20:47									
<u>EPA 9056A LL</u>												
Fluoride	ND	0.500	1.00	mg/kg wet	1	---	---	---	---	---	---	
LCS (22D1129-BS1)			Prepared: 04/29/22 10:46 Analyzed: 04/29/22 21:08									
<u>EPA 9056A LL</u>												
Fluoride	86.6	0.500	1.00	mg/kg wet	1	80.0	---	108	90-110%	---	---	
Duplicate (22D1129-DUP1)			Prepared: 04/29/22 10:46 Analyzed: 04/29/22 23:39									
<u>QC Source Sample: Non-SDG (A2D0996-03)</u>												
Fluoride	ND	0.590	1.18	mg/kg dry	1	---	ND	---	---	---	15%	
Matrix Spike (22D1129-MS1)			Prepared: 04/29/22 10:46 Analyzed: 04/30/22 00:01									
<u>QC Source Sample: Non-SDG (A2D0996-03)</u>												
<u>EPA 9056A LL</u>												
Fluoride	101	0.589	1.18	mg/kg dry	1	94.3	ND	107	80-120%	---	---	

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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-01.02 Project Manager: Jessica Goin, PhD	Report ID: A2D0978 - 07 06 22 0828
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QUALITY CONTROL (QC) SAMPLE RESULTS

Demand Parameters

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22D0961 - PSEP-5310B TOC						Soil						
Blank (22D0961-BLK1)			Prepared: 04/25/22 16:59 Analyzed: 05/04/22 19:44									
<u>EPA 9060Amod</u>												
Total Organic Carbon	ND	200	200	mg/kg	1	---	---	---	---	---	---	B-02
Blank (22D0961-BLK2)			Prepared: 04/25/22 16:59 Analyzed: 05/04/22 19:33									
<u>EPA 9060Amod</u>												
Total Organic Carbon	ND	200	200	mg/kg	1	---	---	---	---	---	---	A-01, PRO
LCS (22D0961-BS1)			Prepared: 04/25/22 16:59 Analyzed: 05/04/22 19:55									
<u>EPA 9060Amod</u>												
Total Organic Carbon	9700	200	200	mg/kg	1	10000	---	97	88-111%	---	---	
Duplicate (22D0961-DUP1)			Prepared: 04/25/22 16:59 Analyzed: 05/04/22 21:43									
<u>QC Source Sample: GSD-AP-PT-1 (A2D0978-01)</u>												
<u>EPA 9060Amod</u>												
Total Organic Carbon	1700	200	200	mg/kg	1	---	1000	---	---	48	27%	B-02, Q-04
Duplicate (22D0961-DUP2)			Prepared: 04/25/22 16:59 Analyzed: 05/04/22 21:54									
<u>QC Source Sample: GSD-AP-PT-1 (A2D0978-01)</u>												
<u>EPA 9060Amod</u>												
Total Organic Carbon	1700	200	200	mg/kg	1	---	1000	---	---	52	27%	B-02, Q-04

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QUALITY CONTROL (QC) SAMPLE RESULTS

Demand Parameters

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0178 - PSEP-5310B TOC						Soil						
Blank (22E0178-BLK1)			Prepared: 05/05/22 09:38 Analyzed: 05/05/22 12:02									
<u>EPA 9060Amod</u>												
Total Organic Carbon	ND	200	200	mg/kg	1	---	---	---	---	---	---	B-02
LCS (22E0178-BS1)			Prepared: 05/05/22 09:38 Analyzed: 05/05/22 12:13									
<u>EPA 9060Amod</u>												
Total Organic Carbon	9500	200	200	mg/kg	1	10000	---	95	88-111%	---	---	
Duplicate (22E0178-DUP1)			Prepared: 05/05/22 09:38 Analyzed: 05/05/22 12:34									
<u>QC Source Sample: GSD-AP-PT-1 (A2D0978-01RE1)</u>												
<u>EPA 9060Amod</u>												
Total Organic Carbon	2300	200	200	mg/kg	1	---	1100	---	---	67	27%	B-02, Q-04
Duplicate (22E0178-DUP2)			Prepared: 05/05/22 09:38 Analyzed: 05/05/22 12:45									
<u>QC Source Sample: GSD-AP-PT-1 (A2D0978-01RE1)</u>												
<u>EPA 9060Amod</u>												
Total Organic Carbon	2300	200	200	mg/kg	1	---	1100	---	---	69	27%	B-02, Q-04

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QUALITY CONTROL (QC) SAMPLE RESULTS

Demand Parameters

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0295 - PSEP-5310B TOC						Soil						
Blank (22E0295-BLK1)						Prepared: 05/09/22 10:29 Analyzed: 05/09/22 12:26						
<u>EPA 9060Amod</u>												
Total Organic Carbon	ND	200	200	mg/kg	1	---	---	---	---	---	---	
LCS (22E0295-BS1)						Prepared: 05/09/22 10:29 Analyzed: 05/09/22 12:37						
<u>EPA 9060Amod</u>												
Total Organic Carbon	10000	200	200	mg/kg	1	10000	---	102	88-111%	---	---	
LCS Dup (22E0295-BSD1)						Prepared: 05/09/22 10:29 Analyzed: 05/09/22 12:48						
<u>EPA 9060Amod</u>												
Total Organic Carbon	10000	200	200	mg/kg	1	10000	---	101	88-111%	1	27%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 22D1035 - Total Solids (Dry Weight)						Soil							
Duplicate (22D1035-DUP1)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0243-13)</u>													
% Solids	78.3	1.00	1.00	%	1	---	77.6	---	---	0.8	10%		
Duplicate (22D1035-DUP2)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0243-14)</u>													
% Solids	80.1	1.00	1.00	%	1	---	81.4	---	---	2	10%		
Duplicate (22D1035-DUP3)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0243-15)</u>													
% Solids	80.0	1.00	1.00	%	1	---	79.9	---	---	0.1	10%		
Duplicate (22D1035-DUP4)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0243-16)</u>													
% Solids	80.6	1.00	1.00	%	1	---	80.9	---	---	0.4	10%		
Duplicate (22D1035-DUP5)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0373-13)</u>													
% Solids	86.2	1.00	1.00	%	1	---	85.9	---	---	0.4	10%		
Duplicate (22D1035-DUP6)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0373-14)</u>													
% Solids	82.6	1.00	1.00	%	1	---	82.0	---	---	0.7	10%		
Duplicate (22D1035-DUP7)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0373-15)</u>													
% Solids	78.3	1.00	1.00	%	1	---	78.5	---	---	0.3	10%		
Duplicate (22D1035-DUP8)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0373-16)</u>													
% Solids	83.8	1.00	1.00	%	1	---	83.7	---	---	0.1	10%		

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 22D1035 - Total Solids (Dry Weight)						Soil							
Duplicate (22D1035-DUP9)			Prepared: 04/27/22 10:41 Analyzed: 04/28/22 10:27						H-01				
<u>QC Source Sample: Non-SDG (A2C0373-17)</u>													
% Solids	83.9	1.00	1.00	%	1	---	83.0	---	---	1	10%		
Duplicate (22D1035-DUPA)			Prepared: 04/27/22 20:21 Analyzed: 04/28/22 10:27										
<u>QC Source Sample: Non-SDG (A2D1073-01)</u>													
% Solids	92.0	1.00	1.00	%	1	---	90.7	---	---	1	10%		

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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QUALITY CONTROL (QC) SAMPLE RESULTS

Wet Chemistry

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch BKD0807 - No Prep Wet Chem						Solid						
Blank (BKD0807-BLK1)						Prepared: 04/27/22 13:35 Analyzed: 04/27/22 13:40						
<u>PSEP 1986</u>												
Total Solids, Sulfide	ND	0.04	0.04	%	1	---	---	---	---	---	---	U

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Analytical Resources, LLC

QUALITY CONTROL (QC) SAMPLE RESULTS

Wet Chemistry

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch BKD0823 - EPA 9030B						Solid						
Blank (BKD0823-BLK1)						Prepared: 04/28/22 08:54 Analyzed: 04/29/22 11:10						
<u>SM 4500-S2 D-00</u>												
Sulfide	ND	1.00	1.00	mg/kg wet	1	---	---	---	---	---	---	U
LCS (BKD0823-BS1)						Prepared: 04/28/22 08:54 Analyzed: 04/29/22 11:10						
<u>SM 4500-S2 D-00</u>												
Sulfide	144	20.0	20.0	mg/kg wet	20	159.43	---	90.6	75-125%	---	---	D

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SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22E0219</u>							
A2D0978-01	Soil	EPA 6020B	04/25/22 10:00	05/06/22 09:00	0.472g/50mL	0.5g/50mL	1.06
A2D0978-02	Soil	EPA 6020B	04/25/22 10:15	05/06/22 09:00	0.486g/50mL	0.5g/50mL	1.03
A2D0978-03	Soil	EPA 6020B	04/25/22 10:30	05/06/22 09:00	0.459g/50mL	0.5g/50mL	1.09

Anions by Ion Chromatography - Low Level

Prep: DI Leach

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22D1129</u>							
A2D0978-01	Soil	EPA 9056A LL	04/25/22 10:00	04/29/22 10:46	5.0435g/50mL	5g/50mL	0.99
A2D0978-02	Soil	EPA 9056A LL	04/25/22 10:15	04/29/22 10:46	5.0012g/50mL	5g/50mL	1.00
A2D0978-03	Soil	EPA 9056A LL	04/25/22 10:30	04/29/22 10:46	5.0774g/50mL	5g/50mL	0.99

Demand Parameters

Prep: PSEP-5310B TOC

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22E0178</u>							
A2D0978-01RE1	Soil	EPA 9060Amod	04/25/22 10:00	05/05/22 09:38			NA
<u>Batch: 22E0295</u>							
A2D0978-02RE2	Soil	EPA 9060Amod	04/25/22 10:15	05/09/22 10:29			NA
A2D0978-03RE2	Soil	EPA 9060Amod	04/25/22 10:30	05/09/22 10:29			NA

Grain Size by ASTM D 422m/RSET Parameters

Prep: ASTM D 421

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22E0088</u>							
A2D0978-01	Soil	D422mod	04/25/22 10:00	05/05/22 10:06			NA
A2D0978-02	Soil	D422mod	04/25/22 10:15	05/05/22 11:27			NA
A2D0978-03	Soil	D422mod	04/25/22 10:30	05/05/22 11:38			NA

Percent Dry Weight

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SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 22D1035</u>							
A2D0978-01	Soil	EPA 8000D	04/25/22 10:00	04/27/22 10:41			NA
A2D0978-02	Soil	EPA 8000D	04/25/22 10:15	04/27/22 10:41			NA
A2D0978-03	Soil	EPA 8000D	04/25/22 10:30	04/27/22 10:41			NA

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SAMPLE PREPARATION INFORMATION

Wet Chemistry

Prep: EPA 9030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: BKD0823</u>							
A2D0978-01	Soil	SM 4500-S2 D-00	04/25/22 10:00	04/28/22 08:54	5.249g/100mL	5g/100mL	0.95
A2D0978-02	Soil	SM 4500-S2 D-00	04/25/22 10:15	04/28/22 08:54	5.557g/100mL	5g/100mL	0.90
A2D0978-03	Soil	SM 4500-S2 D-00	04/25/22 10:30	04/28/22 08:54	5.429g/100mL	5g/100mL	0.92

Prep: No Prep Wet Chem

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: BKD0807</u>							
A2D0978-01	Soil	PSEP 1986	04/25/22 10:00	04/27/22 13:35	5g/5g	5g/5g	1.00
A2D0978-02	Soil	PSEP 1986	04/25/22 10:15	04/27/22 13:35	5g/5g	5g/5g	1.00
A2D0978-03	Soil	PSEP 1986	04/25/22 10:30	04/27/22 13:35	5g/5g	5g/5g	1.00

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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- A-01** Puck mill grind blank from batch 22D0539.
- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- GS-01** See detailed Particle Size Analysis results, accumulation curves, and Case Narratives at the end of this report.
- H-01** This sample was analyzed outside the recommended holding time.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- PRO** Sample has undergone sample processing prior to extraction and analysis.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)

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- D** The reported value is from a dilution
- U** This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Anchor QEA, LLC), Project (Gadsden 2022), and Report ID (A2D0978 - 07 06 22 0828)

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Signature of Darwin Thomas

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Anchor QEA, LLC), Project (Gadsden 2022), and Report ID (A2D0978 - 07 06 22 0828)

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table with 6 columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Handwritten signature of Darwin Thomas

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-01.02 Project Manager: Jessica Goin, PhD	Report ID: A2D0978 - 07 06 22 0828
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A2D0978

Chain of Custody Record & Laboratory Analysis Request		Test Parameters		Comments/Preservation
Company: Anchor QEA Date: 4/25/2022 Project Name: Gadsden Project Number: 201114-01.02 Project Manager: Jessica Goin (jgoin@anchorqea.com) Phone Number: 201114-03.02 Shipment Method: FedEx Samplers: Emily DeVore				
Line	Field Sample ID	Collection Date/Time	Matrix	
1	GSD-AP-PT-1	4/25/2022 10:00	Soil	
2	GSD-AP-PT-2-(10.0-15.0)	4/25/2022 10:15	Soil	
3	GSD-AP-PT-2-(10.0-15.0)-DUP	4/25/2022 10:30	Soil	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Relinquished By: <u>Emily DeVore</u> Signature/Printed Name: <u>Emily DeVore</u> Date/Time: <u>04/25/2022 13:20 PM</u>	Company: <u>Anchor QEA</u> Date/Time: _____ Signature/Printed Name: _____ Date/Time: _____
--	---

Received By: <u>[Signature]</u> Signature/Printed Name: _____ Date/Time: <u>4/25/22</u>	Company: <u>Apex</u> Date/Time: _____ Signature/Printed Name: _____ Date/Time: _____
---	---

Comments:

Apex Laboratories

Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219
Project: Gadsden 2022
Project Number: 201114-01.02
Project Manager: Jessica Goin, PhD
Report ID: A2D0978 - 07 06 22 0828

APEX LABS COOLER RECEIPT FORM

Client: Anchor QEA Element WO#: A2 D0978

Project/Project #: 4/25/22 AM Gadsden / 201114-01.02

Delivery Info:

Date/time received: 4/25/22 @ 12:45 By: AM
Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 4/25/22 @ 13:52 By: AM

Chain of Custody included? Yes No Custody seals? Yes No
Signed/dated by client? Yes No
Signed/dated by Apex? Yes No

Table with 7 columns: Cooler #1 to Cooler #7. Rows include Temperature (3.6), Received on ice (Y), Temp. blanks (Y), Ice type (Real), Condition (Good).

Cooler out of temp? (Y/N) Possible reason why:
Green dots applied to out of temperature samples? Yes/No
Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 4/25/22 @ 1430 By: HAS
All samples intact? Yes X No Comments:

Bottle labels/COCs agree? Yes No X Comments: GSD-AP-PT-2-(10.5-15.0)-DUP:
202 jar reads ID of GSD-AP-PT-1 and time of 1000 - matched by "DOP"
written on lid.
COC/container discrepancies form initiated? Yes No X

Containers/volumes received appropriate for analysis? Yes X No Comments:

Do VOA vials have visible headspace? Yes No NA X
Comments:

Water samples: pH checked: Yes No NA X pH appropriate? Yes No NA X
Comments:

Additional information:

Labeled by: HAS Witness: XHX Cooler Inspected by: HAS

Apex Laboratories
Darwin Thomas (Signature)

Darwin Thomas, Business Development Director

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Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A2D0978-01	Client Sample ID:	GSD-AP-PT-1	Batch Number:	22E0088
Data Entered by:	ID	Date:	05/11/22	Data Reviewed by:	JW
Sample Description:	Sandy GRAVEL with trace Silt and Clay		Max Particle Size:	Gravel	
Particle Shape:	Angular to Sub-rounded		Hardness	Hard and Durable	

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.889	556.552	545.66	0.38	543.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	12.641	262.702	250.06	250.06	46.0	54.0
10	2.00	6.338	89.955	83.62	333.68	15.4	38.6
Pan		5.286	215.941	210.66	544.33	38.6	

Hygroscopic Moisture Correction

Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
		0.9963	D0978-01	1.264	20.244	20.173

Hydrometer Analysis

Start Date/Time	5/5/2022	10:06	Dispersing Agent	NaPO ₃
Air Dry Sample Wt. for Hydrometer Test (g)	100.371		G _s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	38.6		Specific Gravity (G _s)	2.65
Dry Weight of Soil Tested (g)	100.00		Corrected Dry Weight of Soil Tested (g) (W)	258.93

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	17	20.1	10.15	3.9	13.3	0.01365	0.050	1.51
2	15.5	20.1	8.65	3.3	13.5	0.01365	0.035	1.29
4	14	20.1	7.15	2.8	13.8	0.01365	0.025	1.07
8	13	20.1	6.15	2.4	14	0.01365	0.018	0.92
15	12.5	20.1	5.65	2.2	14	0.01365	0.013	0.84
30	12	20.1	5.15	2.0	14.2	0.01365	0.009	0.77
60	11.5	20	4.62	1.8	14.2	0.01365	0.007	0.69
90	11	20	4.12	1.6	14.3	0.01365	0.005	0.61
120	10.5	19.9	3.59	1.4	14.3	0.01365	0.005	0.54
240	10	20	3.12	1.2	14.5	0.01365	0.003	0.47
360	9.5	20.1	2.65	1.0	14.5	0.01365	0.003	0.39
1440	9	20	2.12	0.8	14.7	0.01365	0.001	0.32

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.270	23.124	21.85	379.54	8.4	30.2
40	0.425	1.271	28.680	27.41	437.07	10.6	19.6
60	0.250	1.270	31.112	29.84	499.70	11.5	8.1
100	0.150	0.836	6.942	6.11	512.52	2.4	5.7
140	0.105	0.837	2.810	1.97	516.66	0.8	4.9
200	0.075	0.842	2.282	1.44	519.68	0.6	4.4
230	0.063	0.837	1.563	0.73	521.20	0.3	4.1

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: GSD-AP-PT-1 (A2D0978-01)

Grain Size Analysis Summary from Sieving and Hydrometer Testing	Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel			61.38
Retained on No. 4 sieve	4.75	54	46
Gravel, passing No. 4 sieve and retained on No. 10 sieve	2.00	38.62	15.38
Sand			34.51
Coarse sand, passing No. 10 sieve and retained on No. 20 sieve	0.8500	30.18	8.44
Medium sand, passing No. 20 sieve and retained on No. 40 sieve	0.4250	19.59	10.59
Medium sand, passing No. 40 sieve and retained on No. 60 sieve	0.2500	8.07	11.53
Medium sand, passing No. 60 sieve and retained on No. 100 sieve	0.1500	5.71	2.36
Fine sand, passing No. 100 sieve and retained on No. 140 sieve	0.1050	4.95	0.76
Fine sand, passing No. 140 sieve and retained on No. 200 sieve	0.0750	4.39	0.56
Fine sand, passing No. 200 sieve and retained on No. 230 sieve	0.0630	4.11	0.28
Silt and Clay (Measurements in the Clay fraction are noted)			4.11
Hydrometer Test	0.0498	1.51	2.6
Hydrometer Test	0.0355	1.29	0.22
Hydrometer Test	0.0254	1.07	0.22
Hydrometer Test	0.0181	0.92	0.15
Hydrometer Test	0.0132	0.84	0.07
Hydrometer Test	0.0094	0.77	0.07
Hydrometer Test	0.0066	0.69	0.08
Hydrometer Test	0.0054	0.61	0.07
Hydrometer Test Clay	0.0047	0.54	0.08
Hydrometer Test Clay	0.0034	0.47	0.07
Hydrometer Test Clay	0.0027	0.39	0.07
Hydrometer Test Clay	0.0014	0.32	0.08

Grain Size Summary	Percent of Total Sample
Gravel	61.4
Sand	34.5
Coarse sand	8.4
Medium sand	24.5
Fine sand	1.6
Silt	3.5
Clay	0.6

Case Narrative for Sample ID: GSD-AP-PT-1 (A2D0978-01)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

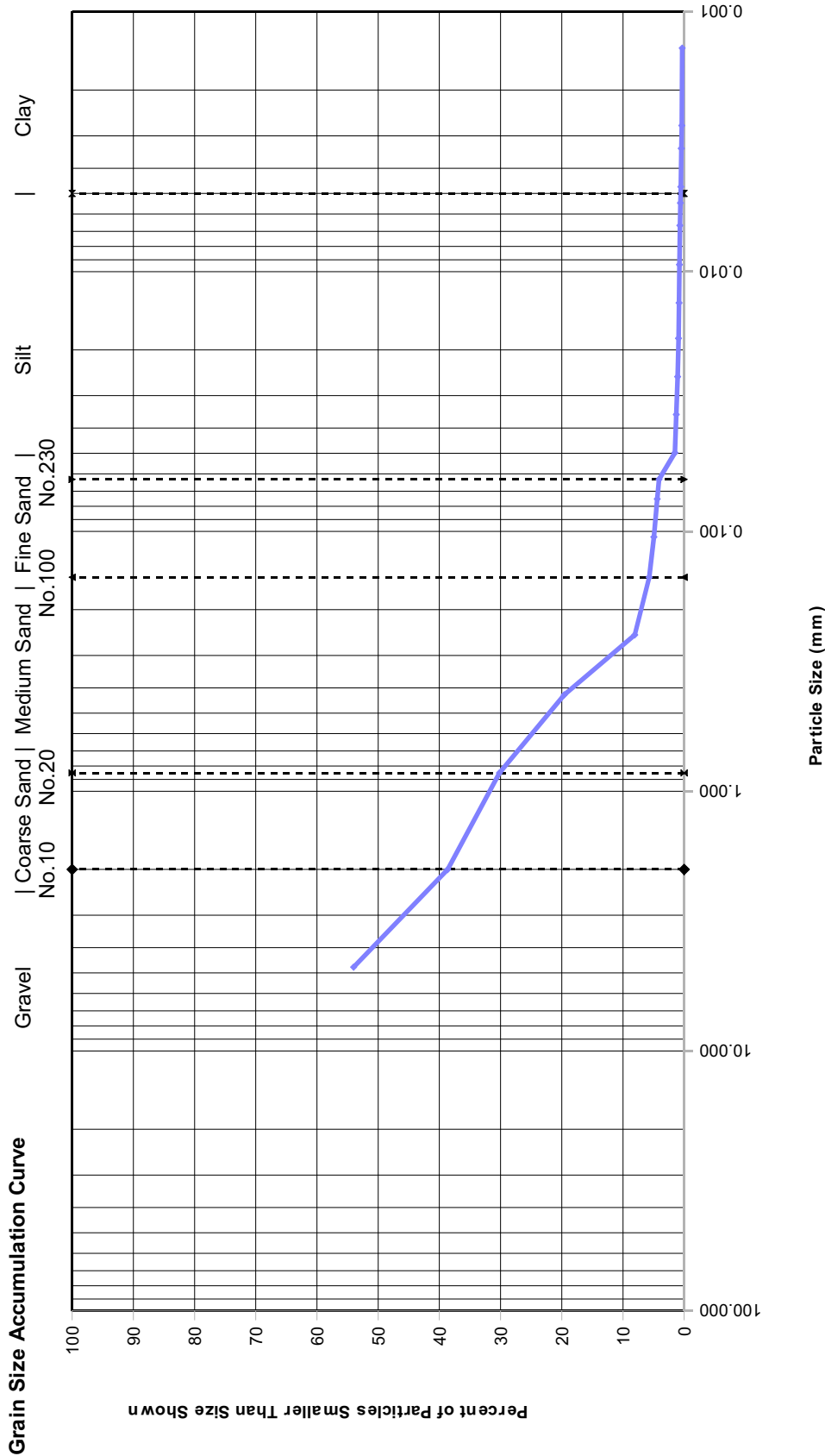
Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422 Modified



Sample ID: GSD-AP-PT-1 (A2D0978-01)		GRAVEL & SAND		SOIL DESCRIPTION	
Specific Gravity	2.65				
MAXIMUM PARTICLE SIZE	Gravel	HARDNESS	Hard and Durable		

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A2D0978-02	Client Sample ID:	GSD-AP-PT-2-(10.0-15.0)	Batch Number:	22E0088
Data Entered by:	ID	Date:	05/11/22	Data Reviewed by:	JW
Date:				Date:	05/12/22
Sample Description:	SAND with some Gravel and trace Silt and Clay		Max Particle Size:	Gravel	
Particle Shape:	Angular to Sub-rounded		Hardness	Hard and Durable	

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.890	538.247	527.36	0.19	526.3

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	6.376	73.096	66.72	66.72	12.7	87.3
10	2.00	6.357	61.989	55.63	122.35	10.6	76.8
Pan		10.892	415.711	404.82	527.17	76.8	

Hygroscopic Moisture Correction

Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
		0.9981	D0978-02	1.268	20.584	20.547

Hydrometer Analysis

Start Date/Time	5/5/2022	11:27	Dispersing Agent	NaPO ₃
Air Dry Sample Wt. for Hydrometer Test (g)	100.048		G _s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	76.8		Specific Gravity (G _s)	2.65
Dry Weight of Soil Tested (g)	99.86		Corrected Dry Weight of Soil Tested (g) (W)	130.10

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	13	20.4	7.03	5.4	14	0.01365	0.051	4.15
2	12	20.4	6.03	4.6	14.2	0.01365	0.036	3.56
4	11	20.4	5.03	3.9	14.3	0.01365	0.026	2.97
8	10.5	20.4	4.53	3.5	14.3	0.01365	0.018	2.67
15	10	20.4	4.03	3.1	14.5	0.01365	0.013	2.38
30	9.5	20.4	3.53	2.7	14.5	0.01365	0.009	2.08
60	9	20.2	2.99	2.3	14.7	0.01365	0.007	1.76
90	8.5	20	2.44	1.9	14.7	0.01365	0.006	1.44
120	8	20	1.94	1.5	14.8	0.01365	0.005	1.15
240	8	20.1	1.97	1.5	14.8	0.01365	0.003	1.16
360	8	20.1	1.97	1.5	14.8	0.01365	0.003	1.16
1440	8	20.3	2.01	1.5	14.8	0.01365	0.001	1.18

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.265	17.063	15.80	186.27	12.1	64.6
40	0.425	1.268	27.273	26.01	291.50	20.0	44.6
60	0.250	1.271	37.710	36.44	438.94	28.0	16.6
100	0.150	1.273	11.132	9.86	478.83	7.6	9.0
140	0.105	0.841	3.192	2.35	488.34	1.8	7.2
200	0.075	0.846	2.255	1.41	494.04	1.1	6.1
230	0.063	0.837	1.454	0.62	496.54	0.5	5.7

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)

Grain Size Analysis Summary from Sieving and Hydrometer Testing	Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel			23.25
Retained on No. 4 sieve	4.75	87.32	12.68
Gravel, passing No. 4 sieve and retained on No. 10 sieve	2.00	76.75	10.57
Sand			71.08
Coarse sand, passing No. 10 sieve and retained on No. 20 sieve	0.8500	64.61	12.14
Medium sand, passing No. 20 sieve and retained on No. 40 sieve	0.4250	44.62	19.99
Medium sand, passing No. 40 sieve and retained on No. 60 sieve	0.2500	16.61	28.01
Medium sand, passing No. 60 sieve and retained on No. 100 sieve	0.1500	9.04	7.58
Fine sand, passing No. 100 sieve and retained on No. 140 sieve	0.1050	7.23	1.81
Fine sand, passing No. 140 sieve and retained on No. 200 sieve	0.0750	6.15	1.08
Fine sand, passing No. 200 sieve and retained on No. 230 sieve	0.0630	5.67	0.47
Silt and Clay (Measurements in the Clay fraction are noted)			5.71
Hydrometer Test	0.0511	4.15	1.53
Hydrometer Test	0.0364	3.56	0.59
Hydrometer Test	0.0258	2.97	0.59
Hydrometer Test	0.0182	2.67	0.29
Hydrometer Test	0.0134	2.38	0.29
Hydrometer Test	0.0095	2.08	0.29
Hydrometer Test	0.0068	1.76	0.32
Hydrometer Test	0.0055	1.44	0.32
Hydrometer Test Clay	0.0048	1.15	0.29
Hydrometer Test Clay	0.0034	1.16	0
Hydrometer Test Clay	0.0028	1.16	0
Hydrometer Test Clay	0.0014	1.18	0

Grain Size Summary	Percent of Total Sample
Gravel	23.2
Sand	71.1
Coarse sand	12.1
Medium sand	55.6
Fine sand	3.4
Silt	4.2
Clay	1.5

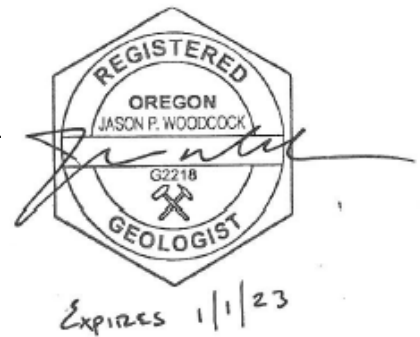
Case Narrative for Sample ID: GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)

This data is not to be used for engineering purposes.

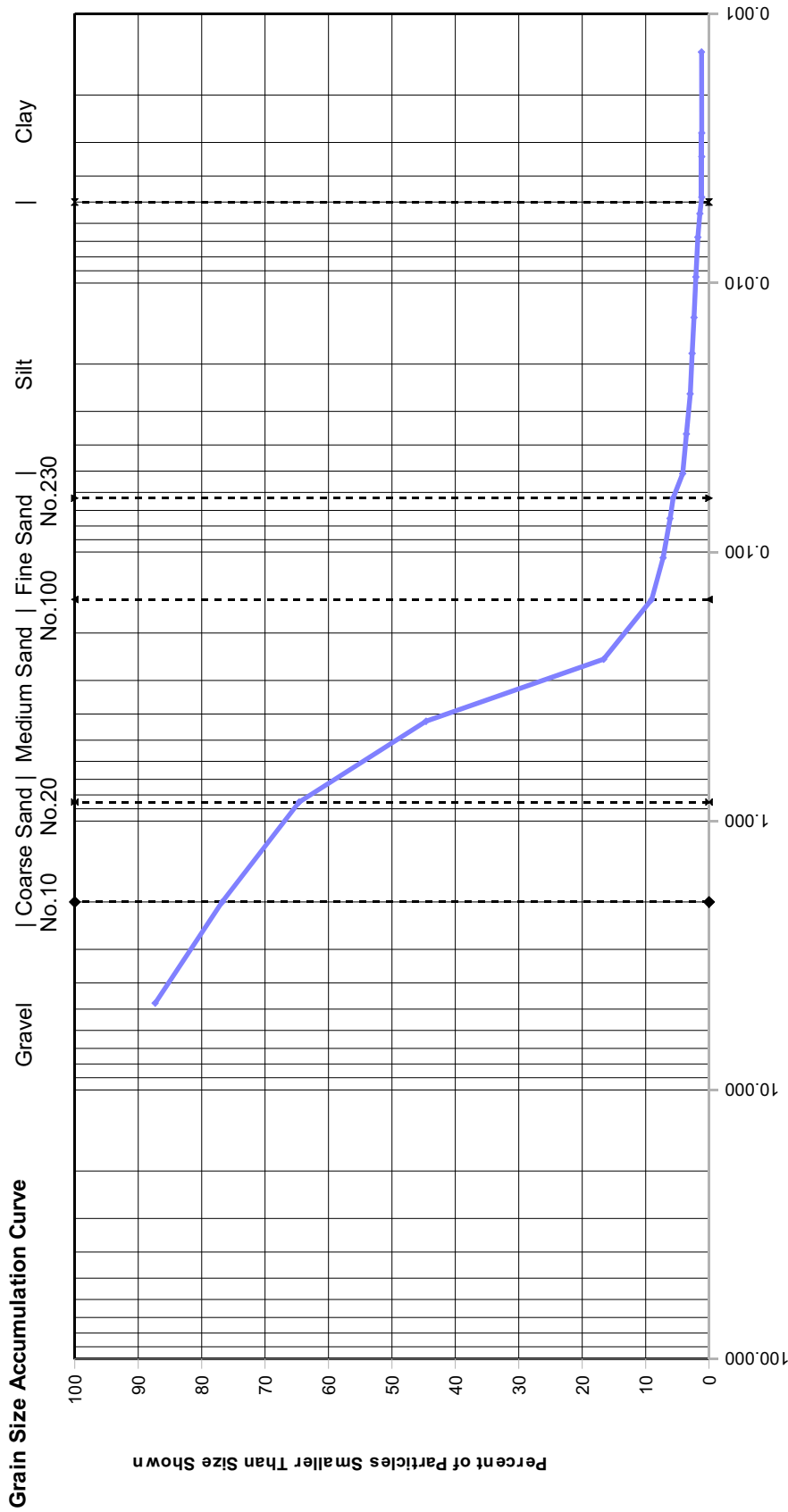
No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified



Particle Size (mm)

Sample ID: GSD-AP-PT-2-(10.0-15.0) (A2D0978-02)		GRAVEL & SAND		SOIL DESCRIPTION
Specific Gravity	2.65			
MAXIMUM PARTICLE SIZE	Gravel	HARDNESS	Hard and Durable	SAND with some Gravel and trace Silt and Clay

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A2D0978-03	Client Sample ID:	GSD-AP-PT-2-(10.0-15.0)-DUP	Batch Number:	22E0088
Data Entered by:	ID	Date:	05/11/22	Data Reviewed by:	JW
Date:				Date:	05/12/22
Sample Description:	SAND with some Gravel and trace Silt and Clay		Max Particle Size:	Gravel	
Particle Shape:	Angular to Sub-rounded		Hardness	Hard and Durable	

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.895	520.582	509.69	0.17	508.8

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	6.363	97.585	91.22	91.22	17.9	82.1
10	2.00	6.356	58.638	52.28	143.50	10.3	71.8
Pan		10.895	376.875	365.98	509.48	71.8	

Hygroscopic Moisture Correction

Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
		0.9983	D0989-03	1.274	20.550	20.517

Hydrometer Analysis

Start Date/Time	5/5/2022	11:38	Dispersing Agent	NaPO ₃
Air Dry Sample Wt. for Hydrometer Test (g)	100.057		G _s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	71.8		Specific Gravity (G _s)	2.65
Dry Weight of Soil Tested (g)	99.89		Corrected Dry Weight of Soil Tested (g) (W)	139.12

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	13	20.5	7.05	5.1	14	0.01348	0.050	3.64
2	12	20.5	6.05	4.3	14.2	0.01348	0.036	3.12
4	11	20.5	5.05	3.6	14.3	0.01348	0.025	2.61
8	10.5	20.5	4.55	3.3	14.3	0.01348	0.018	2.35
15	10	20.5	4.05	2.9	14.5	0.01348	0.013	2.09
30	9.5	20.4	3.53	2.5	14.5	0.01365	0.009	1.82
60	9	20.2	2.99	2.1	14.7	0.01365	0.007	1.54
90	8.5	20.1	2.47	1.8	14.7	0.01365	0.006	1.27
120	8	20	1.94	1.4	14.8	0.01365	0.005	1.00
240	8	20.2	1.99	1.4	14.8	0.01365	0.003	1.02
360	8	20.1	1.97	1.4	14.8	0.01365	0.003	1.01
1440	8	20.3	2.01	1.4	14.8	0.01365	0.001	1.04

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.264	16.741	15.48	200.11	11.1	60.7
40	0.425	1.264	26.900	25.64	293.88	18.4	42.2
60	0.250	1.272	37.478	36.21	426.31	26.0	16.2
100	0.150	1.272	11.447	10.18	463.53	7.3	8.9
140	0.105	0.841	3.367	2.53	472.77	1.8	7.1
200	0.075	0.834	2.326	1.49	478.23	1.1	6.0
230	0.063	0.846	1.504	0.66	480.64	0.5	5.5

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

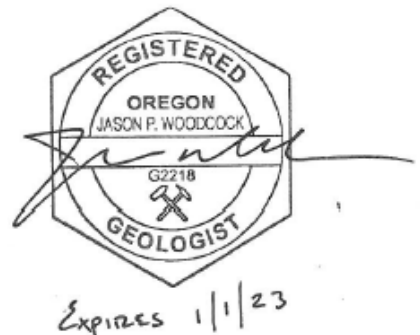
Sample ID: GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)

Grain Size Analysis Summary from Sieving and Hydrometer Testing	Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel			28.2
Retained on No. 4 sieve	4.75	82.07	17.93
Gravel, passing No. 4 sieve and retained on No. 10 sieve	2.00	71.8	10.28
Sand			66.25
Coarse sand, passing No. 10 sieve and retained on No. 20 sieve	0.8500	60.67	11.12
Medium sand, passing No. 20 sieve and retained on No. 40 sieve	0.4250	42.24	18.43
Medium sand, passing No. 40 sieve and retained on No. 60 sieve	0.2500	16.22	26.02
Medium sand, passing No. 60 sieve and retained on No. 100 sieve	0.1500	8.91	7.31
Fine sand, passing No. 100 sieve and retained on No. 140 sieve	0.1050	7.09	1.82
Fine sand, passing No. 140 sieve and retained on No. 200 sieve	0.0750	6.02	1.07
Fine sand, passing No. 200 sieve and retained on No. 230 sieve	0.0630	5.55	0.47
Silt and Clay (Measurements in the Clay fraction are noted)			5.58
Hydrometer Test	0.0504	3.64	1.91
Hydrometer Test	0.0359	3.12	0.52
Hydrometer Test	0.0255	2.61	0.52
Hydrometer Test	0.0180	2.35	0.26
Hydrometer Test	0.0133	2.09	0.26
Hydrometer Test	0.0095	1.82	0.27
Hydrometer Test	0.0068	1.54	0.28
Hydrometer Test	0.0055	1.27	0.27
Hydrometer Test Clay	0.0048	1	0.27
Hydrometer Test Clay	0.0034	1.02	0
Hydrometer Test Clay	0.0028	1.01	0
Hydrometer Test Clay	0.0014	1.04	0

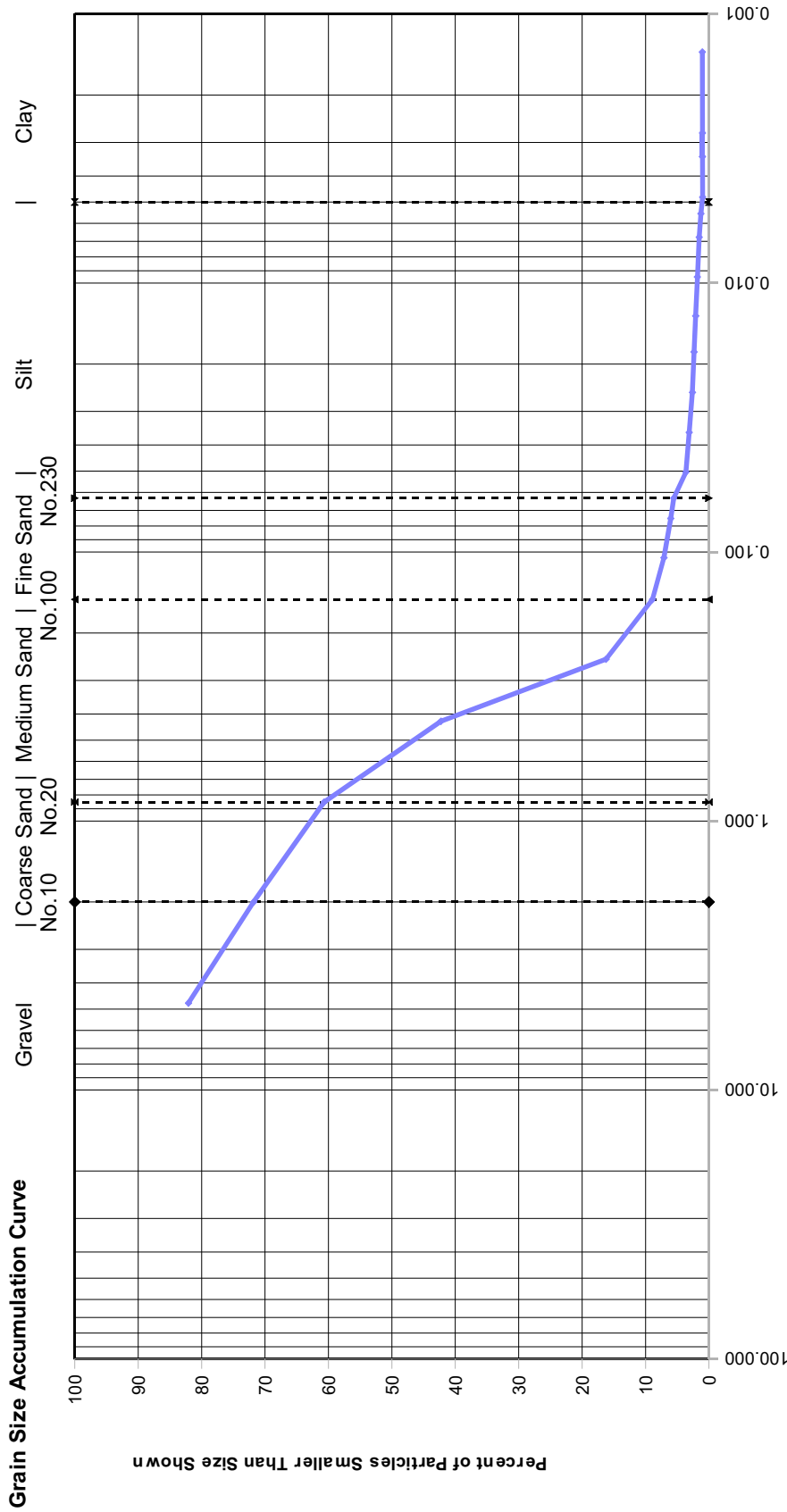
Grain Size Summary	Percent of Total Sample
Gravel	28.2
Sand	66.3
Coarse sand	11.1
Medium sand	51.8
Fine sand	3.4
Silt	4.3
Clay	1.3

Case Narrative for Sample ID: GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)

This data is not to be used for engineering purposes.
 No difficulty dispersing the fraction passing the No. 10 sieve.
 Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.
 The assumed specific gravity used in the calculations was 2.65.



Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified



Particle Size (mm)

Sample ID:	GSD-AP-PT-2-(10.0-15.0)-DUP (A2D0978-03)			
Specific Gravity	2.65	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
	Gravel	Angular to Sub-rounded	Hard and Durable	SAND with some Gravel and trace Silt and Clay



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Monday, June 20, 2022
Masakazu Kanematsu
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A2E0183 - Gadsden 2022 - 201114-03.02 Task 09

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2E0183, which was received by the laboratory on 5/5/2022 at 2:02:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	3.9 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0183 - 06 20 22 0524
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GSD-AP-PT-1-AAO	A2E0183-01	Water	04/27/22 15:30	05/05/22 14:02
GSD-AP-PT-2-(10.0-15.0)-AAO	A2E0183-02	Water	04/27/22 15:35	05/05/22 14:02
GSD-AP-PT-2-(10.0-15.0)-DUP-AAO	A2E0183-03	Water	04/27/22 15:40	05/05/22 14:02
GSD-AP-MB-AAO	A2E0183-04	Water	04/27/22 15:45	05/05/22 14:02
GSD-AP-PT-1-CEC	A2E0183-05	Water	04/28/22 09:00	05/05/22 14:02
GSD-AP-PT-2-(10.0-15.0)-CEC	A2E0183-06	Water	04/28/22 09:05	05/05/22 14:02
GSD-AP-PT-2-(10.0-15.0)-DUP-CEC	A2E0183-07	Water	04/28/22 09:10	05/05/22 14:02
GSD-AP-MB-CEC	A2E0183-08	Water	04/28/22 09:15	05/05/22 14:02

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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-1-AAO (A2E0183-01)				Matrix: Water				
Batch: 22E0536								
Aluminum	1740	25.0	50.0	ug/L	1	05/13/22 14:52	EPA 6020B (Diss)	
Arsenic	142	0.500	1.00	ug/L	1	05/13/22 14:52	EPA 6020B (Diss)	
Iron	6310	25.0	50.0	ug/L	1	05/13/22 14:52	EPA 6020B (Diss)	
Lithium	6.07	2.50	5.00	ug/L	1	05/16/22 12:32	EPA 6020B (Diss)	
GSD-AP-PT-2-(10.0-15.0)-AAO (A2E0183-02)				Matrix: Water				
Batch: 22E0536								
Aluminum	792	25.0	50.0	ug/L	1	05/13/22 14:57	EPA 6020B (Diss)	
Arsenic	5.61	0.500	1.00	ug/L	1	05/13/22 14:57	EPA 6020B (Diss)	
Iron	4340	25.0	50.0	ug/L	1	05/13/22 14:57	EPA 6020B (Diss)	
Lithium	ND	2.50	5.00	ug/L	1	05/16/22 12:37	EPA 6020B (Diss)	
GSD-AP-PT-2-(10.0-15.0)-DUP-AAO (A2E0183-03)				Matrix: Water				
Batch: 22E0536								
Aluminum	886	25.0	50.0	ug/L	1	05/13/22 15:02	EPA 6020B (Diss)	
Arsenic	5.75	0.500	1.00	ug/L	1	05/13/22 15:02	EPA 6020B (Diss)	
Iron	4630	25.0	50.0	ug/L	1	05/13/22 15:02	EPA 6020B (Diss)	
Lithium	ND	2.50	5.00	ug/L	1	05/16/22 12:41	EPA 6020B (Diss)	
GSD-AP-MB-AAO (A2E0183-04)				Matrix: Water				
Batch: 22E0536								
Aluminum	ND	25.0	50.0	ug/L	1	05/13/22 15:07	EPA 6020B (Diss)	
Arsenic	1.07	0.500	1.00	ug/L	1	05/13/22 15:07	EPA 6020B (Diss)	
Iron	159	25.0	50.0	ug/L	1	05/13/22 15:07	EPA 6020B (Diss)	
Lithium	ND	2.50	5.00	ug/L	1	05/16/22 12:46	EPA 6020B (Diss)	
GSD-AP-PT-1-CEC (A2E0183-05)				Matrix: Water				
Batch: 22E0536								
Arsenic	5.15	0.500	1.00	ug/L	1	05/13/22 15:12	EPA 6020B (Diss)	A-01
Magnesium	6830	75.0	150	ug/L	1	05/13/22 15:12	EPA 6020B (Diss)	A-01
Potassium	1840	50.0	100	ug/L	1	05/13/22 15:12	EPA 6020B (Diss)	A-01
Sodium	653	50.0	100	ug/L	1	05/13/22 15:12	EPA 6020B (Diss)	A-01
Lithium	9.78	2.50	5.00	ug/L	1	05/16/22 12:50	EPA 6020B (Diss)	A-03

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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0183 - 06 20 22 0524
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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-1-CEC (A2E0183-05RE1)				Matrix: Water				
Batch: 22E0536								
Calcium	121000	3000	6000	ug/L	10	05/13/22 20:12	EPA 6020B (Diss)	
GSD-AP-PT-2-(10.0-15.0)-CEC (A2E0183-06)				Matrix: Water				
Batch: 22E0536								
Arsenic	5.94	0.500	1.00	ug/L	1	05/13/22 18:46	EPA 6020B (Diss)	A-01, Q-42
Calcium	6270	300	600	ug/L	1	05/13/22 18:46	EPA 6020B (Diss)	A-01
Magnesium	1200	75.0	150	ug/L	1	05/13/22 18:46	EPA 6020B (Diss)	A-01
Potassium	1490	50.0	100	ug/L	1	05/13/22 18:46	EPA 6020B (Diss)	A-01
Sodium	634	50.0	100	ug/L	1	05/13/22 18:46	EPA 6020B (Diss)	A-01
Lithium	ND	2.50	5.00	ug/L	1	05/16/22 13:00	EPA 6020B (Diss)	A-03
GSD-AP-PT-2-(10.0-15.0)-DUP-CEC (A2E0183-07)				Matrix: Water				
Batch: 22E0536								
Arsenic	5.89	0.500	1.00	ug/L	1	05/13/22 18:56	EPA 6020B (Diss)	A-01
Calcium	6120	300	600	ug/L	1	05/13/22 18:56	EPA 6020B (Diss)	A-01
Magnesium	1170	75.0	150	ug/L	1	05/13/22 18:56	EPA 6020B (Diss)	A-01
Potassium	1470	50.0	100	ug/L	1	05/13/22 18:56	EPA 6020B (Diss)	A-01
Sodium	616	50.0	100	ug/L	1	05/13/22 18:56	EPA 6020B (Diss)	A-01
Lithium	ND	2.50	5.00	ug/L	1	05/16/22 13:04	EPA 6020B (Diss)	A-03
GSD-AP-MB-CEC (A2E0183-08)				Matrix: Water				
Batch: 22E0536								
Arsenic	ND	0.500	1.00	ug/L	1	05/13/22 19:01	EPA 6020B (Diss)	A-01
Calcium	ND	300	600	ug/L	1	05/13/22 19:01	EPA 6020B (Diss)	A-01
Magnesium	ND	75.0	150	ug/L	1	05/13/22 19:01	EPA 6020B (Diss)	A-01
Potassium	88.7	50.0	100	ug/L	1	05/13/22 19:01	EPA 6020B (Diss)	J, A-01
Sodium	128	50.0	100	ug/L	1	05/13/22 19:01	EPA 6020B (Diss)	A-01
Lithium	ND	2.50	5.00	ug/L	1	05/16/22 13:24	EPA 6020B (Diss)	A-03

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0536 - Matrix Matched Direct Inject						Water						
Blank (22E0536-BLK1)						Prepared: 05/13/22 10:38 Analyzed: 05/13/22 14:42						
<u>EPA 6020B (Diss)</u>												
Aluminum	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Calcium	ND	300	600	ug/L	1	---	---	---	---	---	---	
Iron	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	
Magnesium	ND	75.0	150	ug/L	1	---	---	---	---	---	---	
Potassium	ND	50.0	100	ug/L	1	---	---	---	---	---	---	
Sodium	ND	50.0	100	ug/L	1	---	---	---	---	---	---	
Blank (22E0536-BLK2)						Prepared: 05/13/22 10:38 Analyzed: 05/16/22 12:23						
<u>EPA 6020B (Diss)</u>												
Lithium	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
LCS (22E0536-BS1)						Prepared: 05/13/22 10:38 Analyzed: 05/13/22 14:47						
<u>EPA 6020B (Diss)</u>												
Aluminum	2430	25.0	50.0	ug/L	1	2780	---	87	80-120%	---	---	
Arsenic	50.8	0.500	1.00	ug/L	1	55.6	---	92	80-120%	---	---	
Calcium	2640	300	600	ug/L	1	2780	---	95	80-120%	---	---	
Iron	2510	25.0	50.0	ug/L	1	2780	---	90	80-120%	---	---	
Magnesium	2380	75.0	150	ug/L	1	2780	---	86	80-120%	---	---	
Potassium	2490	50.0	100	ug/L	1	2780	---	90	80-120%	---	---	
Sodium	2430	50.0	100	ug/L	1	2780	---	87	80-120%	---	---	
LCS (22E0536-BS2)						Prepared: 05/13/22 10:38 Analyzed: 05/16/22 12:28						
<u>EPA 6020B (Diss)</u>												
Lithium	448	2.50	5.00	ug/L	1	444	---	101	80-120%	---	---	
Duplicate (22E0536-DUP1)						Prepared: 05/13/22 10:38 Analyzed: 05/13/22 15:23						
<u>QC Source Sample: GSD-AP-PT-I-CEC (A2E0183-05)</u>												
<u>EPA 6020B (Diss)</u>												
Aluminum	ND	25.0	50.0	ug/L	1	---	ND	---	---	---	20%	A-01
Arsenic	4.87	0.500	1.00	ug/L	1	---	5.15	---	---	6	20%	A-01
Iron	35.8	25.0	50.0	ug/L	1	---	34.8	---	---	3	20%	A-01, J

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Darwin Thomas, Business Development Director



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ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0183 - 06 20 22 0524
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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0536 - Matrix Matched Direct Inject						Water						
Duplicate (22E0536-DUP1)						Prepared: 05/13/22 10:38 Analyzed: 05/13/22 15:23						
<u>QC Source Sample: GSD-AP-PT-1-CEC (A2E0183-05)</u>												
Magnesium	6730	75.0	150	ug/L	1	---	6830	---	---	2	20%	A-01
Potassium	1790	50.0	100	ug/L	1	---	1840	---	---	3	20%	A-01
Sodium	646	50.0	100	ug/L	1	---	653	---	---	1	20%	A-01
Duplicate (22E0536-DUP2)						Prepared: 05/13/22 10:38 Analyzed: 05/13/22 20:17						
<u>QC Source Sample: GSD-AP-PT-1-CEC (A2E0183-05RE1)</u>												
<u>EPA 6020B (Diss)</u>												
Calcium	127000	3000	6000	ug/L	10	---	121000	---	---	5	20%	Q-16
Duplicate (22E0536-DUP3)						Prepared: 05/13/22 10:38 Analyzed: 05/16/22 12:55						
<u>QC Source Sample: GSD-AP-PT-1-CEC (A2E0183-05)</u>												
<u>EPA 6020B (Diss)</u>												
Lithium	9.66	2.50	5.00	ug/L	1	---	9.78	---	---	1	20%	A-03
Matrix Spike (22E0536-MS1)						Prepared: 05/13/22 10:38 Analyzed: 05/13/22 18:51						
<u>QC Source Sample: GSD-AP-PT-2-(10.0-15.0)-CEC (A2E0183-06)</u>												
<u>EPA 6020B (Diss)</u>												
Aluminum	2490	25.0	50.0	ug/L	1	2780	ND	90	75-125%	---	---	A-01
Calcium	8650	300	600	ug/L	1	2780	6270	86	75-125%	---	---	A-01
Iron	2540	25.0	50.0	ug/L	1	2780	ND	92	75-125%	---	---	A-01
Magnesium	3620	75.0	150	ug/L	1	2780	1200	87	75-125%	---	---	A-01
Potassium	3990	50.0	100	ug/L	1	2780	1490	90	75-125%	---	---	A-01
Sodium	3070	50.0	100	ug/L	1	2780	634	88	75-125%	---	---	A-01
Matrix Spike (22E0536-MS2)						Prepared: 05/13/22 10:38 Analyzed: 05/16/22 13:18						
<u>QC Source Sample: GSD-AP-PT-2-(10.0-15.0)-DUP-CEC (A2E0183-07)</u>												
Lithium	434	2.50	5.00	ug/L	1	444	ND	98	75-125%	---	---	A-03
Matrix Spike (22E0536-MS3)						Prepared: 05/13/22 10:38 Analyzed: 05/16/22 16:15						
<u>QC Source Sample: GSD-AP-PT-2-(10.0-15.0)-CEC (A2E0183-06)</u>												
<u>EPA 6020B (Diss)</u>												

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--	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0536 - Matrix Matched Direct Inject						Water						
Matrix Spike (22E0536-MS3)						Prepared: 05/13/22 10:38 Analyzed: 05/16/22 16:15						
QC Source Sample: GSD-AP-PT-2-(10.0-15.0)-CEC (A2E0183-06)												
Arsenic	120	0.500	1.00	ug/L	1	55.6	5.94	206	75-125%	---	---	Q-02, Q-16

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--	---	---

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 22E0536</u>							
A2E0183-01	Water	EPA 6020B (Diss)	04/27/22 15:30	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-02	Water	EPA 6020B (Diss)	04/27/22 15:35	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-03	Water	EPA 6020B (Diss)	04/27/22 15:40	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-04	Water	EPA 6020B (Diss)	04/27/22 15:45	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-05	Water	EPA 6020B (Diss)	04/28/22 09:00	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-05RE1	Water	EPA 6020B (Diss)	04/28/22 09:00	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-06	Water	EPA 6020B (Diss)	04/28/22 09:05	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-07	Water	EPA 6020B (Diss)	04/28/22 09:10	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00
A2E0183-08	Water	EPA 6020B (Diss)	04/28/22 09:15	05/13/22 10:38	45mL/50mL	45mL/50mL	1.00

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gadsden 2022**

Project Number: **201114-03.02 Task 09**

Project Manager: **Masakazu Kanematsu**

Report ID:

A2E0183 - 06 20 22 0524

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- A-01** pH of 7. No change after preservation.
- A-03** pH of 7. No change after preservation.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0183 - 06 20 22 0524
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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Anchor QEA, LLC), Project (Gadsden 2022), and Report ID (A2E0183 - 06 20 22 0524)

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Signature of Darwin Thomas

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ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Anchor QEA, LLC), Project (Gadsden 2022), and Report ID (A2E0183 - 06 20 22 0524).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table with 6 columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation. Content: All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Signature of Darwin Thomas

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0183 - 06 20 22 0524
--	---	---

A2E0183

ANCHOR QEA

Jessica Goin
6720 SW Macadam Ave
Suite 125
Portland OR 97219

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019		Date: 5/5/2022					
Project Name: Gadsden		Project Number: 201114-03.02 Task 09					
Project Manager: Masa Kanematsu		Phone Number: 503-972-5001 (backup number: 971.334.8193)					
Shipment Method: Apex Carrier		No. of Containers					
Line	Field Sample ID	Collection		Matrix	Dissolved Ions (Na, Ca, Mg, K)	Dissolved Metals (Fe, Al)	Comments/Preservation
		Date	Time				
1	GSD-AP-PT-1-AAO	4/27/2022	4/27/22 15:30	Water	1	X	0.45um filtered. HNO3 preserved.
2	GSD-AP-PT-2-(10.0-15.0)-HAAO	4/27/2022	4/27/22 15:35	Water	1	X	0.45um filtered. HNO3 preserved.
3	GSD-AP-PT-2-(10.0-15.0)-DUP-AAO	4/27/2022	4/27/22 15:40	Water	1	X	0.45um filtered. HNO3 preserved.
4	GSD-AP-1B-AAO	4/27/2022	4/27/22 15:45	Water	1	X	0.45um filtered. HNO3 preserved.
5	GSD-AP-PT-1-CEC	4/28/2022	4/28/22 9:00	Water	1	X	0.45um filtered. HNO3 preserved.
6	GSD-AP-PT-2-(10.0-15.0)-CEC	4/28/2022	4/28/22 9:05	Water	1	X	0.45um filtered. HNO3 preserved.
7	GSD-AP-PT-2-(10.0-15.0)-DUP-CEC	4/28/2022	4/28/22 9:10	Water	1	X	0.45um filtered. HNO3 preserved.
8	GSD-AP-1B-CEC	4/28/2022	4/28/22 9:15	Water	1	X	0.45um filtered. HNO3 preserved.
9							
10							
11							
12							
13							
14							
15							
16							

Notes: Please Contact Masa if running > 10X dilution

Requisitioned by: Emma Nordlund	Company: Anchor QEA
Signature/Print Name: <i>Emma Nordlund</i>	Date/Time: 5/5/22 11:45
Requisitioned by:	Company:
Signature/Print Name:	Date/Time:

Received by: <i>Andy Marzban</i>	Signature/Print Name: Apex
Signature/Print Name: <i>Andy Marzban</i>	Date/Time: 5/5/22 14:02
Requisitioned by:	Company:
Signature/Print Name:	Date/Time:

Page 1 of 1

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

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Darwin Thomas

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0183 - 06 20 22 0524
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A2E0183

Revised

Chain of Custody Record & Laboratory Analysis Request										
Laboratory Number: 503-972-5019										
Date: 5/5/2022		Project Name: Gadsden		Project Number: 201114-03.02 Task 09		Project Manager: Masa Kanematsu		Phone Number: 503-972-5001 (backup number: 971.334.8193)		
Shipment Method: Apex Carrier										
Line	Field Sample ID	Collection		Matrix	No. of Containers	Dissovlved Metals (Ca, Mg, Na, K, As, Li)				Comments/Preservation
		Date	Time							
1	GSD-AP-PT-1-AAO	4/27/2022	15:30	Water	1	X				0.45um filtered. HNO3 preserved.
2	GSD-AP-PT-2(10.0-15.0)-AAO	4/27/2022	15:35	Water	1	X				0.45um filtered. HNO3 preserved.
3	GSD-AP-PT-2(10.0-15.0)-DUP-AAO	4/27/2022	15:40	Water	1	X				0.45um filtered. HNO3 preserved.
4	GSD-AP-MB-AAO	4/27/2022	15:45	Water	1	X				0.45um filtered. HNO3 preserved.
5	GSD-AP-PT-1-CEC	4/28/2022	9:00	Water	1	X				0.45um filtered. HNO3 preserved.
6	GSD-AP-PT-2(10.0-15.0)-CEC	4/28/2022	9:05	Water	1	X				0.45um filtered. HNO3 preserved.
7	GSD-AP-PT-2(10.0-15.0)-DUP-CEC	4/28/2022	9:10	Water	1	X				0.45um filtered. HNO3 preserved.
8	GSD-AP-MB-CEC	4/28/2022	9:15	Water	1	X				0.45um filtered. HNO3 preserved.
9										
10										
11										
12										
13										
14										
15										
16										

Parameters

--	--

Notes: Please Contact Mass if running > 10X dilution

Relinquished by: Emma Nordlund	Company: Anchor QEA
Signature/Print Name:	Date/Time:
Relinquished by:	Company:
Signature/Print Name:	Date/Time:

Received by:	Company:
Signature/Print Name:	Date/Time:
Received by:	Company:
Signature/Print Name:	Date/Time:

Distribution: A copy will be made for the laboratory and client. The Project file will remain the original.

Page 1 of 1

Apex Laboratories

Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0183 - 06 20 22 0524
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APEX LABS COOLER RECEIPT FORM

Client: Anchor QEA Element WO#: A2EQ83

Project/Project #: Gadsden / 20114-03.02 Task 09

Delivery Info:
 Date/time received: 5/5/22 @ 14:02 By: AM
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 5/5/22 @ 15:39 By: AM
 Chain of Custody included? Yes No Custody seals? Yes No
 Signed/dated by client? Yes No
 Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>3.9</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No
Sample Inspection: Date/time inspected: 5/5/22 @ 16:05 By: 2KAM
 All samples intact? Yes No Comments: _____

 Bottle labels/COCs agree? Yes No Comments: _____

 COC/container discrepancies form initiated? Yes No
 Containers/volumes received appropriate for analysis? Yes No Comments: _____

 Do VOA vials have visible headspace? Yes No NA
 Comments _____
 Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
 Comments: GSD-AP-PT-1-REC, GSD-AP-PT-2 (10.0-15.0)-REC, GSD-AP-PT-2 (10.0-15.0)-Dup-REC & GSD-AP-MB-REC arrived with a pH of 7.
Additional information: _____

 Labeled by: 2KAM Witness: DSS Cooler Inspected by: 2KAM

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Monday, June 20, 2022
Masakazu Kanematsu
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A2E0495 - Gadsden 2022 - 201114-03.02 Task 09

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A2E0495, which was received by the laboratory on 5/11/2022 at 11:32:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	2.5 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0495 - 06 20 22 0541
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GSD-AP-PT-1-ExtMn	A2E0495-01	Water	05/06/22 11:30	05/11/22 11:32
GSD-AP-PT-2-(10.0-15.0)-ExtMn	A2E0495-02	Water	05/06/22 11:35	05/11/22 11:32
GSD-AP-PT-2-(10.0-15.0)-DUP-ExtMn	A2E0495-03	Water	05/06/22 11:40	05/11/22 11:32
GSD-AP-MB-Mn	A2E0495-04	Water	05/06/22 11:45	05/11/22 11:32

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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0495 - 06 20 22 0541
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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GSD-AP-PT-1-ExtMn (A2E0495-01RE1)				Matrix: Water				
Batch: 22E0586								
Manganese	23400	5.00	10.0	ug/L	10	05/17/22 12:29	EPA 6020B (Diss)	
GSD-AP-PT-2-(10.0-15.0)-ExtMn (A2E0495-02)				Matrix: Water				
Batch: 22E0586								
Manganese	402	0.500	1.00	ug/L	1	05/16/22 20:17	EPA 6020B (Diss)	
GSD-AP-PT-2-(10.0-15.0)-DUP-ExtMn (A2E0495-03)				Matrix: Water				
Batch: 22E0586								
Manganese	361	0.500	1.00	ug/L	1	05/16/22 20:34	EPA 6020B (Diss)	
GSD-AP-MB-Mn (A2E0495-04)				Matrix: Water				
Batch: 22E0586								
Manganese	ND	0.500	1.00	ug/L	1	05/16/22 20:39	EPA 6020B (Diss)	

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ANALYTICAL REPORT

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Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0495 - 06 20 22 0541
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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 22E0586 - Matrix Matched Direct Inject						Water						
Blank (22E0586-BLK1)						Prepared: 05/16/22 11:31 Analyzed: 05/16/22 17:45						
<u>EPA 6020B (Diss)</u>												
Manganese	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
LCS (22E0586-BS1)						Prepared: 05/16/22 11:31 Analyzed: 05/16/22 17:51						
<u>EPA 6020B (Diss)</u>												
Manganese	50.7	0.500	1.00	ug/L	1	55.6	---	91	80-120%	---	---	
Duplicate (22E0586-DUP2)						Prepared: 05/16/22 11:31 Analyzed: 05/17/22 11:36						
<u>QC Source Sample: Non-SDG (A2E0189-11RE1)</u>												
Manganese	290	5.00	10.0	ug/L	10	---	287	---	---	1	20%	A-01, Q-16
Matrix Spike (22E0586-MS2)						Prepared: 05/16/22 11:31 Analyzed: 05/17/22 11:41						
<u>QC Source Sample: Non-SDG (A2E0189-11RE1)</u>												
<u>EPA 6020B (Diss)</u>												
Manganese	331	5.00	10.0	ug/L	10	55.6	287	80	75-125%	---	---	A-01, Q-16

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--	---	---

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 6020B (ICPMS)

<u>Prep: Matrix Matched Direct Inject</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 22E0586</u>							
A2E0495-01RE1	Water	EPA 6020B (Diss)	05/06/22 11:30	05/16/22 11:31	45mL/50mL	45mL/50mL	1.00
A2E0495-02	Water	EPA 6020B (Diss)	05/06/22 11:35	05/16/22 11:31	45mL/50mL	45mL/50mL	1.00
A2E0495-03	Water	EPA 6020B (Diss)	05/06/22 11:40	05/16/22 11:31	45mL/50mL	45mL/50mL	1.00
A2E0495-04	Water	EPA 6020B (Diss)	05/06/22 11:45	05/16/22 11:31	45mL/50mL	45mL/50mL	1.00

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- A-01 pH >2 after additional acid preservation.
- Q-16 Reanalysis of an original Batch QC sample.

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

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--	---	---

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Anchor QEA, LLC), Project (Gadsden 2022), and Report ID (A2E0495 - 06 20 22 0541)

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darwin Thomas

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Anchor QEA, LLC), Project (Gadsden 2022), and Report ID (A2E0495 - 06 20 22 0541).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table with 6 columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation. Content: All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Handwritten signature of Darwin Thomas

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0495 - 06 20 22 0541
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A2E0495

ANCHOR QEA
 Jessica Goin
 6720 SW Macadam Ave
 Suite 125
 Portland OR 97219

Line	Field Sample ID	Collection		Matrix	No. of Containers	Dissolved Metals (M)	Comments/Preservation
		Date	Time				
1	GSD-AP-PT-1-ExtMn	5/6/2022	5/6/22 11:30	Water	1	X	0.45um filtered. HNO3 preserved.
2	GSD-AP-PT-2-(10.0-15.0)-ExtMn	5/6/2022	5/6/22 11:35	Water	1	X	0.45um filtered. HNO3 preserved.
3	GSD-AP-PT-2-(10.0-15.0)-DUP-ExtMn	5/6/2022	5/6/22 11:40	Water	1	X	0.45um filtered. HNO3 preserved.
4	GSD-AP-MB-Mn	5/6/2022	5/6/22 11:45	Water	1	X	0.45um filtered. HNO3 preserved.
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

Relinquished by: Emma Nordlund Company: Anchor QEA

Signature/Print Name: *Emma Nordlund* Date/Time: 5/11/22 11:00 AM

Relinquished by: _____ Company: _____

Signature/Print Name: _____ Date/Time: _____

Received by: *Apex* Signature/Print Name: _____

Signature/Print Name: _____ Date/Time: 5/11/22 11:32

Received by: _____ Signature/Print Name: _____

Signature/Print Name: _____ Date/Time: _____

Page 1 of 1

Notes: Please Contact Masa (503-972-5001) if running > 10X dilution
Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Apex Laboratories

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC 6720 SW Macadam Ave. Suite 125 Portland, OR 97219	Project: Gadsden 2022 Project Number: 201114-03.02 Task 09 Project Manager: Masakazu Kanematsu	Report ID: A2E0495 - 06 20 22 0541
--	---	---

APEX LABS COOLER RECEIPT FORM

Client: Anchor QEA Element WO#: A2E0495

Project/Project #: Gadsden / 201114-03.02 Task 09

Delivery Info:
 Date/time received: 5-11-22 @ 11:32 By: AM
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other _____

Cooler Inspection Date/time inspected: 5-11-22 @ 12:15 By: AM

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>2.5</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes No

Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 5/13/22 @ 13:43 By: ZAM

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: ZAM Witness: [Signature] Cooler Inspected by: KS

Apex Laboratories

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Darwin Thomas, Business Development Director



July 11, 2022

Service Request No:K2206849

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206849**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206849
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Ten water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-SBT-MW-4-FS		Lab ID: K2206849-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	5.94		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-FC		Lab ID: K2206849-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	12.2		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-CER		Lab ID: K2206849-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.21	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-PM		Lab ID: K2206849-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.3	J	0.2	1.0	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-FS-PM		Lab ID: K2206849-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	8.12		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-FC-PM-MC		Lab ID: K2206849-006				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	9.61		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-BC		Lab ID: K2206849-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.41	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-AIR		Lab ID: K2206849-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.88		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-FS-DUP		Lab ID: K2206849-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	6.56		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-4-CTRL		Lab ID: K2206849-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.57		0.09	0.50	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2206849

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206849-001	GSD-SBT-MW-4-FS	6/17/2022	1100
K2206849-002	GSD-SBT-MW-4-FC	6/17/2022	1105
K2206849-003	GSD-SBT-MW-4-CER	6/17/2022	1110
K2206849-004	GSD-SBT-MW-4-PM	6/17/2022	1115
K2206849-005	GSD-SBT-MW-4-FS-PM	6/17/2022	1120
K2206849-006	GSD-SBT-MW-4-FC-PM-MC	6/17/2022	1125
K2206849-007	GSD-SBT-MW-4-BC	6/17/2022	1130
K2206849-008	GSD-SBT-MW-4-AIR	6/17/2022	1135
K2206849-009	GSD-SBT-MW-4-FS-DUP	6/17/2022	1140
K2206849-010	GSD-SBT-MW-4-CTRL	6/17/2022	1145

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K22 06849
 Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

1. Samples were received via? **USPS** **Fed Ex** **UPS** **DHL** **PDX** **Courier** **Hand Delivered**
 2. Samples were received in: (circle) **Cooler** **Box** **Envelope** **Other** **NA**
 3. Were custody seals on coolers? **NA** **Y** **N** If yes, how many and where? _____
 If present, were custody seals intact? **Y** **N** If present, were they signed and dated? **Y** **N**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>2.0</u>	<u>—</u>	<u>PRO1</u>					

4. Was a Temperature Blank present in cooler? **NA** **Y** **N** If yes, note the temperature in the appropriate column above:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 5. Were samples received within the method specified temperature ranges? **NA** **Y** **N**
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. **NA** **Y** **N**

If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**

6. Packing material: **Inserts** **Baggies** **Bubble Wrap** **Gel Packs** **Wet Ice** **Dry Ice** **Sleeves** _____
 7. Were custody papers properly filled out (ink, signed, etc.)? **NA** **Y** **N**
 8. Were samples received in good condition (unbroken) **NA** **Y** **N**
 9. Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** **Y** **N**
 10. Did all sample labels and tags agree with custody papers? **NA** **Y** **N**
 11. Were appropriate bottles/containers and volumes received for the tests indicated? **NA** **Y** **N**
 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **NA** **Y** **N**
 13. Were VOA vials received without headspace? Indicate in the table below. **NA** **Y** **N**
 14. Was C12/Res negative? **NA** **Y** **N**
 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? **NA** **Y** **N** Under filled Overfilled


Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

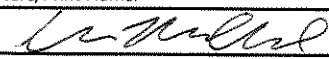
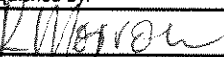
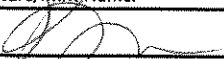
Notes, Discrepancies, Resolutions: _____

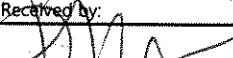
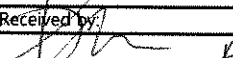
K2206849

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers	Parameters										 ANCHOR QEA Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219										
Date:	6/20/2022					As (dissolved)																				
Project Name:	Gadsden																									
Project Number:	201114-03.02 Task 09																									
Project Manager:	Masa Kanematsu																									
Phone Number:	503-972-5001 (backup number: 971.334.8193)																									
Shipment Method:	ALS Carrier																									
Line	Field Sample ID	Collection		Matrix	No. of Containers	As (dissolved)	Parameters														Comments/Preservation					
		Date	Time																							
1	GSD-SBT-MW-4-FS	6/17/2022	6/17/22 11:00	Water	1	X																			HNO3 preserved. Field Filtered.	
2	GSD-SBT-MW-4-FC	6/17/2022	6/17/22 11:05	Water	1	X																				HNO3 preserved. Field Filtered.
3	GSD-SBT-MW-4-CER	6/17/2022	6/17/22 11:10	Water	1	X																				HNO3 preserved. Field Filtered.
4	GSD-SBT-MW-4-PM	6/17/2022	6/17/22 11:15	Water	1	X																				HNO3 preserved. Field Filtered. KMnO4 added
5	GSD-SBT-MW-4-FS-PM	6/17/2022	6/17/22 11:20	Water	1	X																				HNO3 preserved. Field Filtered. KMnO4 added
6	GSD-SBT-MW-4-FC-PM-MC	6/17/2022	6/17/22 11:25	Water	1	X																				HNO3 preserved. Field Filtered. KMnO4 added
7	GSD-SBT-MW-4-BC	6/17/2022	6/17/22 11:30	Water	1	X																				HNO3 preserved. Field Filtered.
8	GSD-SBT-MW-4-AIR	6/17/2022	6/17/22 11:35	Water	1	X																				HNO3 preserved. Field Filtered.
9	GSD-SBT-MW-4-FS-DUP	6/17/2022	6/17/22 11:40	Water	1	X																				HNO3 preserved. Field Filtered.
10	GSD-SBT-MW-4-CTRL	6/17/2022	6/17/22 11:45	Water	1	X																				HNO3 preserved. Field Filtered.
11																										
12																										
13																										
14																										
15																										
16																										

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by:	Company:
Emma Nordlund	Anchor QEA
Signature/Print Name:	Date/Time:
	6/20/22 08:50
Relinquished by:	Company:
	Anchor QEA
Signature/Print Name:	Date/Time:
	6/20/22 12:10

Received by:	Date/Time:
	6/20/22 08:50
Signature/Print Name:	
Received by:	Date/Time:
	6/20/22 12:10
Signature/Print Name:	

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206849

Sample Name: GSD-SBT-MW-4-FS
Lab Code: K2206849-001
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-FC
Lab Code: K2206849-002
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-CER
Lab Code: K2206849-003
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-PM
Lab Code: K2206849-004
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-FS-PM
Lab Code: K2206849-005
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206849

Sample Name: GSD-SBT-MW-4-FC-PM-MC
Lab Code: K2206849-006
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-BC
Lab Code: K2206849-007
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-AIR
Lab Code: K2206849-008
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-FS-DUP
Lab Code: K2206849-009
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-4-CTRL
Lab Code: K2206849-010
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-FS
Lab Code: K2206849-001

Service Request: K2206849
Date Collected: 06/17/22 11:00
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	5.94	ug/L	0.50	0.09	1	07/08/22 14:13	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-FC
Lab Code: K2206849-002

Service Request: K2206849
Date Collected: 06/17/22 11:05
Date Received: 06/20/22 12:10

Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	12.2	ug/L	0.50	0.09	1	07/08/22 14:18	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-CER
Lab Code: K2206849-003

Service Request: K2206849
Date Collected: 06/17/22 11:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.21 J	ug/L	0.50	0.09	1	07/08/22 14:19	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-PM
Lab Code: K2206849-004

Service Request: K2206849
Date Collected: 06/17/22 11:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.3 J	ug/L	1.0	0.2	1	07/08/22 14:21	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-FS-PM
Lab Code: K2206849-005

Service Request: K2206849
Date Collected: 06/17/22 11:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	8.12	ug/L	0.50	0.09	1	07/08/22 14:22	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-FC-PM-MC
Lab Code: K2206849-006

Service Request: K2206849
Date Collected: 06/17/22 11:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	9.61	ug/L	0.50	0.09	1	07/08/22 14:24	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-BC
Lab Code: K2206849-007

Service Request: K2206849
Date Collected: 06/17/22 11:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.41 J	ug/L	0.50	0.09	1	07/08/22 14:28	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-AIR
Lab Code: K2206849-008

Service Request: K2206849
Date Collected: 06/17/22 11:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.88	ug/L	0.50	0.09	1	07/08/22 14:30	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-FS-DUP
Lab Code: K2206849-009

Service Request: K2206849
Date Collected: 06/17/22 11:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	6.56	ug/L	0.50	0.09	1	07/08/22 14:31	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-4-CTRL
Lab Code: K2206849-010

Service Request: K2206849
Date Collected: 06/17/22 11:45
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.57	ug/L	0.50	0.09	1	07/08/22 14:33	06/30/22	



QC Summary Forms

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210133-01

Service Request: K2206849
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/08/22 14:10	06/30/22	

ALS Group USA, Corp.
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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206849
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-SBT-MW-4-FS
Lab Code: K2206849-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210133-03

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Arsenic	5.94	54.7	50.0	98	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206849
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-SBT-MW-4-FS
Lab Code: K2206849-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2210133-04 Result, Average, RPD, RPD Limit. Row 1: Arsenic, 200.8, 0.50, 0.09, 5.94, 5.94, 5.94, <1, 20.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206849
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210133-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.5	50.0	99	85-115



July 11, 2022

Service Request No:K2206851

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206851**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
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Narrative Documents

ALS Environmental—Kelso Laboratory
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www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206851
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eleven water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-GBT-MW-4-FS		Lab ID: K2206851-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.55		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-4-FC		Lab ID: K2206851-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	421		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-4-CER		Lab ID: K2206851-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.22	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW--4-PM		Lab ID: K2206851-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.0	J	0.2	1.0	ug/L	200.8
CLIENT ID: GSD-GBT-MW--4-FS-PM		Lab ID: K2206851-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.10	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-4-BC		Lab ID: K2206851-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	2.25		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-4-AIR		Lab ID: K2206851-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	11.1		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-4-FS-DUP		Lab ID: K2206851-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.40	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-4-CTRL		Lab ID: K2206851-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	10.5		0.09	0.50	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09

Service Request:K2206851

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206851-001	GSD-GBT-MW-4-FS	6/17/2022	1010
K2206851-002	GSD-GBT-MW-4-FC	6/17/2022	1015
K2206851-003	GSD-GBT-MW-4-CER	6/17/2022	1020
K2206851-004	GSD-GBT-MW--4-PM	6/17/2022	1025
K2206851-005	GSD-GBT-MW--4-FS-PM	6/17/2022	1030
K2206851-006	GSD-GBT-MW-4-FC-PM-MC	6/17/2022	1035
K2206851-007	GSD-GBT-MW-4-BC	6/17/2022	1040
K2206851-008	GSD-GBT-MW-4-AIR	6/17/2022	1045
K2206851-009	GSD-GBT-MW-4-FS-DUP	6/17/2022	1050
K2206851-010	GSD-GBT-MW-4-CTRL	6/17/2022	1055
K2206851-011	GSD-GBT-MB	6/17/2022	1150

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K22 06851
 Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with 'X'	PM Notified If out of temp	Tracking Number NA	Filed
2.0	—	PRO1					

4. Was a Temperature Blank present in cooler? NA Y N If yes, note the temperature in the appropriate column above:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

6. Packing material: Inserts Buggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
14. Was C12/Res negative? NA Y N
15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled


Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

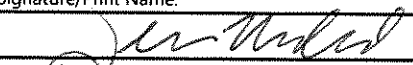
Notes, Discrepancies, Resolutions: _____


K2206851

Chain of Custody Record & Laboratory Analysis Request


Laboratory Number: 503-972-5019					No. of Containers	Parameters												 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219 Comments/Preservation							
Date:	6/20/2022					As (dissolved) As, Li (dissolved)																			
Project Name:	Gadsden																								
Project Number:	201114-03.02 Task 09																								
Project Manager:	Masa Kanematsu																								
Phone Number:	503-972-5001 (backup number: 971.334.8193)																								
Shipment Method:	ALS Carrier																								
Line	Field Sample ID	Collection		Matrix	No. of Containers																	Comments/Preservation			
		Date	Time																						
1	GSD-GBT-MW-4-FS	6/17/2022	6/17/22 10:10	Water	1	X																	HNO3 preserved. Field Filtered.		
2	GSD-GBT-MW-4-FC	6/17/2022	6/17/22 10:15	Water	1	X																	HNO3 preserved. Field Filtered.		
3	GSD-GBT-MW-4-CER	6/17/2022	6/17/22 10:20	Water	1	X																	HNO3 preserved. Field Filtered.		
4	GSD-GBT-MW-4-PM	6/17/2022	6/17/22 10:25	Water	1	X																	HNO3 preserved. Field Filtered. KMnO4 added		
5	GSD-GBT-MW-4-FS-PM	6/17/2022	6/17/22 10:30	Water	1	X																	HNO3 preserved. Field Filtered. KMnO4 added		
6	GSD-GBT-MW-4-FC-PM-MC	6/17/2022	6/17/22 10:35	Water	1	X																	HNO3 preserved. Field Filtered. KMnO4 added		
7	GSD-GBT-MW-4-BC	6/17/2022	6/17/22 10:40	Water	1	X																	HNO3 preserved. Field Filtered.		
8	GSD-GBT-MW-4-AIR	6/17/2022	6/17/22 10:45	Water	1	X																	HNO3 preserved. Field Filtered.		
9	GSD-GBT-MW-4-FS-DUP	6/17/2022	6/17/22 10:50	Water	1	X																	HNO3 preserved. Field Filtered.		
10	GSD-GBT-MW-4-CTRL	6/17/2022	6/17/22 10:55	Water	1	X																	HNO3 preserved. Field Filtered.		
11	GSD-GBT-MB	6/17/2022	6/17/22 11:50	Water	1		X																HNO3 preserved. Field Filtered.		
12																									
13																									
14																									
15																									
16																									

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by:	Company:
Emma Nordlund	Anchor QEA
Signature/Print Name:	Date/Time:
	6/20/22 08:50

Received by:
 ALS 6/20/22 0852
Signature/Print Name:

Relinquished by:	Company:
 Masa Kanematsu	ALS 6/20/22 1210
Signature/Print Name:	Date/Time:

Received by:
 ALS 6/20/22 12:10
Signature/Print Name:

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.



Miscellaneous Forms

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Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09

Service Request: K2206851

Sample Name: GSD-GBT-MW-4-FS
Lab Code: K2206851-001
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-4-FC
Lab Code: K2206851-002
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-4-CER
Lab Code: K2206851-003
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW--4-PM
Lab Code: K2206851-004
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW--4-FS-PM
Lab Code: K2206851-005
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09

Service Request: K2206851

Sample Name: GSD-GBT-MW-4-FC-PM-MC
Lab Code: K2206851-006
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-4-BC
Lab Code: K2206851-007
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-4-AIR
Lab Code: K2206851-008
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-4-FS-DUP
Lab Code: K2206851-009
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-4-CTRL
Lab Code: K2206851-010
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201111-03.02 Task 09

Service Request: K2206851

Sample Name: GSD-GBT-MB
Lab Code: K2206851-011
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-FS
Lab Code: K2206851-001

Service Request: K2206851
Date Collected: 06/17/22 10:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.55	ug/L	0.50	0.09	1	07/08/22 14:34	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-FC
Lab Code: K2206851-002

Service Request: K2206851
Date Collected: 06/17/22 10:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	421	ug/L	0.50	0.09	1	07/08/22 14:39	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-CER
Lab Code: K2206851-003

Service Request: K2206851
Date Collected: 06/17/22 10:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.22 J	ug/L	0.50	0.09	1	07/08/22 14:40	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW--4-PM
Lab Code: K2206851-004

Service Request: K2206851
Date Collected: 06/17/22 10:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	1.0 J	ug/L	1.0	0.2	1	07/08/22 14:41	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW--4-FS-PM
Lab Code: K2206851-005

Service Request: K2206851
Date Collected: 06/17/22 10:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.10 J	ug/L	0.50	0.09	1	07/08/22 14:46	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-FC-PM-MC
Lab Code: K2206851-006

Service Request: K2206851
Date Collected: 06/17/22 10:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/08/22 14:47	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-BC
Lab Code: K2206851-007

Service Request: K2206851
Date Collected: 06/17/22 10:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	2.25	ug/L	0.50	0.09	1	07/08/22 14:49	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-AIR
Lab Code: K2206851-008

Service Request: K2206851
Date Collected: 06/17/22 10:45
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	11.1	ug/L	0.50	0.09	1	07/08/22 14:50	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-FS-DUP
Lab Code: K2206851-009

Service Request: K2206851
Date Collected: 06/17/22 10:50
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.40 J	ug/L	0.50	0.09	1	07/08/22 14:52	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-4-CTRL
Lab Code: K2206851-010

Service Request: K2206851
Date Collected: 06/17/22 10:55
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	10.5	ug/L	0.50	0.09	1	07/08/22 14:53	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MB
Lab Code: K2206851-011

Service Request: K2206851
Date Collected: 06/17/22 11:50
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/08/22 15:01	06/30/22	
Lithium	200.8	ND U	ug/L	0.20	0.10	1	07/08/22 15:01	06/30/22	



QC Summary Forms

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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210133-01

Service Request: K2206851
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/08/22 14:10	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210228-01

Service Request: K2206851
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/08/22 14:58	06/30/22	
Lithium	200.8	ND U	ug/L	0.20	0.10	1	07/08/22 14:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water

Service Request: K2206851
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-GBT-MW-4-FS
Lab Code: K2206851-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210133-05

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Arsenic	0.55	50.8	50.0	100	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water

Service Request: K2206851
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-GBT-MB
Lab Code: K2206851-011
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210228-03

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	ND U	50.4	50.0	101	70-130
Lithium	ND U	48.6	50.0	97	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water

Service Request: K2206851
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-GBT-MW-4-FS
Lab Code: K2206851-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2210133-06 Result, Average, RPD, RPD Limit. Row 1: Arsenic, 200.8, 0.50, 0.09, 0.55, 0.54, 0.55, 2, 20.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water

Service Request: K2206851
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-GBT-MB
Lab Code: K2206851-011

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2210228-04 Result			
Arsenic	200.8	0.50	0.09	ND U	ND U	ND	-	20
Lithium	200.8	0.20	0.10	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water

Service Request: K2206851
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210133-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.5	50.0	99	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/20111-03.02 Task 09
Sample Matrix: Water

Service Request: K2206851
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210228-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.4	50.0	99	85-115
Lithium	200.8	48.4	50.0	97	85-115



July 11, 2022

Service Request No:K2206853

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206853**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206853
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Thirteen water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-GBT-MW-2VA-FS		Lab ID: K2206853-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	61.5		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-FC		Lab ID: K2206853-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	62.7		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-CER		Lab ID: K2206853-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	57.7		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-PM		Lab ID: K2206853-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	57.9		0.20	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-FS-PM		Lab ID: K2206853-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	58.9		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-FC-PM-MC		Lab ID: K2206853-006				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	58.0		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-BC		Lab ID: K2206853-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	67.6		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-AIR		Lab ID: K2206853-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	61.2		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-FS-DUP		Lab ID: K2206853-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	60.1		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-CTRL		Lab ID: K2206853-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	60.8		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-PM-pH-9.5		Lab ID: K2206853-011				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	54.3		0.20	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VA-FS-PM-pH-9.5		Lab ID: K2206853-012				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	57.9		0.10	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-GBT-MW-2VA-FC-PM-MC-pH-9.5		Lab ID: K2206853-013				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	58.8		0.10	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2206853

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206853-001	GSD-GBT-MW-2VA-FS	6/16/2022	0950
K2206853-002	GSD-GBT-MW-2VA-FC	6/16/2022	0955
K2206853-003	GSD-GBT-MW-2VA-CER	6/16/2022	1000
K2206853-004	GSD-GBT-MW-2VA-PM	6/16/2022	1005
K2206853-005	GSD-GBT-MW-2VA-FS-PM	6/16/2022	1010
K2206853-006	GSD-GBT-MW-2VA-FC-PM-MC	6/16/2022	1015
K2206853-007	GSD-GBT-MW-2VA-BC	6/16/2022	1020
K2206853-008	GSD-GBT-MW-2VA-AIR	6/16/2022	1025
K2206853-009	GSD-GBT-MW-2VA-FS-DUP	6/16/2022	1030
K2206853-010	GSD-GBT-MW-2VA-CTRL	6/16/2022	1035
K2206853-011	GSD-GBT-MW-2VA-PM-pH-9.5	6/16/2022	1040
K2206853-012	GSD-GBT-MW-2VA-FS-PM-pH-9.5	6/16/2022	1045
K2206853-013	GSD-GBT-MW-2VA-FC-PM-MC-pH-9.5	6/16/2022	1050

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K22 06853
Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicates with "X"	PM Notified if out of temp	Tracking Number NA	Filed
2.0	—	PRO1					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206853

Sample Name: GSD-GBT-MW-2VA-FS
Lab Code: K2206853-001
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-FC
Lab Code: K2206853-002
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-CER
Lab Code: K2206853-003
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-PM
Lab Code: K2206853-004
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-FS-PM
Lab Code: K2206853-005
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206853

Sample Name: GSD-GBT-MW-2VA-FC-PM-MC
Lab Code: K2206853-006
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-BC
Lab Code: K2206853-007
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-AIR
Lab Code: K2206853-008
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-FS-DUP
Lab Code: K2206853-009
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-CTRL
Lab Code: K2206853-010
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206853

Sample Name: GSD-GBT-MW-2VA-PM-pH-9.5
Lab Code: K2206853-011
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-FS-PM-pH-9.5
Lab Code: K2206853-012
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VA-FC-PM-MC-pH-9.5
Lab Code: K2206853-013
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
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Metals

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-FS
Lab Code: K2206853-001

Service Request: K2206853
Date Collected: 06/16/22 09:50
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	61.5	ug/L	0.20	0.10	1	07/08/22 15:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-FC
Lab Code: K2206853-002

Service Request: K2206853
Date Collected: 06/16/22 09:55
Date Received: 06/20/22 12:10

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	62.7	ug/L	0.20	0.10	1	07/08/22 16:02	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-CER
Lab Code: K2206853-003

Service Request: K2206853
Date Collected: 06/16/22 10:00
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	57.7	ug/L	0.20	0.10	1	07/08/22 16:04	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-PM
Lab Code: K2206853-004

Service Request: K2206853
Date Collected: 06/16/22 10:05
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	57.9	ug/L	0.40	0.20	1	07/08/22 16:05	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-FS-PM
Lab Code: K2206853-005

Service Request: K2206853
Date Collected: 06/16/22 10:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	58.9	ug/L	0.20	0.10	1	07/08/22 16:07	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-FC-PM-MC
Lab Code: K2206853-006

Service Request: K2206853
Date Collected: 06/16/22 10:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	58.0	ug/L	0.20	0.10	1	07/08/22 16:08	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-BC
Lab Code: K2206853-007

Service Request: K2206853
Date Collected: 06/16/22 10:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	67.6	ug/L	0.20	0.10	1	07/08/22 16:28	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-AIR
Lab Code: K2206853-008

Service Request: K2206853
Date Collected: 06/16/22 10:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	61.2	ug/L	0.20	0.10	1	07/08/22 16:30	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-FS-DUP
Lab Code: K2206853-009

Service Request: K2206853
Date Collected: 06/16/22 10:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	60.1	ug/L	0.20	0.10	1	07/08/22 16:31	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-CTRL
Lab Code: K2206853-010

Service Request: K2206853
Date Collected: 06/16/22 10:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	60.8	ug/L	0.20	0.10	1	07/08/22 16:33	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VA-PM-pH-9.5
Lab Code: K2206853-011

Service Request: K2206853
Date Collected: 06/16/22 10:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	54.3	ug/L	0.40	0.20	1	07/08/22 15:05	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206853
Date Collected: 06/16/22 10:45
Date Received: 06/20/22 12:10

Sample Name: GSD-GBT-MW-2VA-FS-PM-pH-9.5
Lab Code: K2206853-012

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	57.9	ug/L	0.20	0.10	1	07/08/22 15:07	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206853
Date Collected: 06/16/22 10:50
Date Received: 06/20/22 12:10

Sample Name: GSD-GBT-MW-2VA-FC-PM-MC-pH-9.5
Lab Code: K2206853-013

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	58.8	ug/L	0.20	0.10	1	07/08/22 15:08	06/30/22	



QC Summary Forms

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210150-01

Service Request: K2206853
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	0.13 J	ug/L	0.20	0.10	1	07/08/22 15:55	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210228-01

Service Request: K2206853
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	ND U	ug/L	0.20	0.10	1	07/08/22 14:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206853
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-GBT-MW-2VA-FS
Lab Code: K2206853-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210150-03

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Lithium	61.5	106	50.0	90	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206853
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-GBT-MW-2VA-FS
Lab Code: K2206853-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2210150-04 Result, Average, RPD, RPD Limit. Row 1: Lithium, 200.8, 0.20, 0.10, 61.5, 61.6, 61.6, <1, 20.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206853
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210150-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	47.4	50.0	95	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206853
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210228-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	48.4	50.0	97	85-115



July 11, 2022

Service Request No:K2206856

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206856**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206856
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Thirteen water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-SBT-MW-2VA-FS		Lab ID: K2206856-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	55.4		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-FC		Lab ID: K2206856-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	61.8		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-CER		Lab ID: K2206856-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	34.9		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-PM		Lab ID: K2206856-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	47.8		0.20	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-FS-PM		Lab ID: K2206856-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	52.4		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-FC-PM-MC		Lab ID: K2206856-006				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	55.8		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-BC		Lab ID: K2206856-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	57.7		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-AIR		Lab ID: K2206856-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	35.2		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-FS-DUP		Lab ID: K2206856-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	56.8		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-CTRL		Lab ID: K2206856-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	36.2		0.10	0.20	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-PM-pH-9.5		Lab ID: K2206856-011				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	33.5		0.20	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VA-FS-PM-pH-9.5		Lab ID: K2206856-012				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	38.1		0.10	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-SBT-MW-2VA-FC-PM-MC-pH-9.5		Lab ID: K2206856-013				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	41.7		0.10	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2206856

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206856-001	GSD-SBT-MW-2VA-FS	6/16/2022	1055
K2206856-002	GSD-SBT-MW-2VA-FC	6/16/2022	1100
K2206856-003	GSD-SBT-MW-2VA-CER	6/16/2022	1105
K2206856-004	GSD-SBT-MW-2VA-PM	6/16/2022	1110
K2206856-005	GSD-SBT-MW-2VA-FS-PM	6/16/2022	1115
K2206856-006	GSD-SBT-MW-2VA-FC-PM-MC	6/16/2022	1120
K2206856-007	GSD-SBT-MW-2VA-BC	6/16/2022	1125
K2206856-008	GSD-SBT-MW-2VA-AIR	6/16/2022	1130
K2206856-009	GSD-SBT-MW-2VA-FS-DUP	6/16/2022	1135
K2206856-010	GSD-SBT-MW-2VA-CTRL	6/16/2022	1140
K2206856-011	GSD-SBT-MW-2VA-PM-pH-9.5	6/16/2022	1145
K2206856-012	GSD-SBT-MW-2VA-FS-PM-pH-9.5	6/16/2022	1150
K2206856-013	GSD-SBT-MW-2VA-FC-PM-MC-pH-9.5	6/16/2022	1155

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K22 06856
Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with 'X'	PM Notified If out of temp	Tracking Number NA	Filed
2.0	—	PRO1					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed


- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:


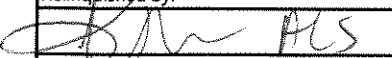
Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

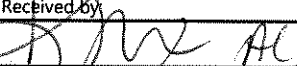
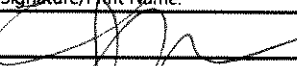

Notes, Discrepancies, Resolutions: _____

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers	Parameters										 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219					
Date:	6/20/2022					Li (dissolved)															
Project Name:	Gadsden																				
Project Number:	201114-03.02 Task 09																				
Project Manager:	Masa Kanematsu																				
Phone Number:	503-972-5001 (backup number: 971.334.8193)																				
Shipment Method:	ALS Carrier																				
Line	Field Sample ID	Collection		Matrix	No. of Containers	Li (dissolved)											Comments/Preservation				
		Date	Time																		
1	GSD-SBT-MW-2VA-FS	6/16/2022	6/16/22 10:55	Water	1	X													HNO3 preserved. Field Filtered.		
2	GSD-SBT-MW-2VA-FC	6/16/2022	6/16/22 11:00	Water	1	X													HNO3 preserved. Field Filtered.		
3	GSD-SBT-MW-2VA-CER	6/16/2022	6/16/22 11:05	Water	1	X													HNO3 preserved. Field Filtered.		
4	GSD-SBT-MW-2VA-PM	6/16/2022	6/16/22 11:10	Water	1	X													HNO3 preserved. Field Filtered. KMnO4 added		
5	GSD-SBT-MW-2VA-FS-PM	6/16/2022	6/16/22 11:15	Water	1	X													HNO3 preserved. Field Filtered. KMnO4 added		
6	GSD-SBT-MW-2VA-FC-PM-MC	6/16/2022	6/16/22 11:20	Water	1	X													HNO3 preserved. Field Filtered. KMnO4 added		
7	GSD-SBT-MW-2VA-BC	6/16/2022	6/16/22 11:25	Water	1	X													HNO3 preserved. Field Filtered.		
8	GSD-SBT-MW-2VA-AIR	6/16/2022	6/16/22 11:30	Water	1	X													HNO3 preserved. Field Filtered.		
9	GSD-SBT-MW-2VA-FS-DUP	6/16/2022	6/16/22 11:35	Water	1	X													HNO3 preserved. Field Filtered.		
10	GSD-SBT-MW-2VA-CTRL	6/16/2022	6/16/22 11:40	Water	1	X													HNO3 preserved. Field Filtered.		
11	GSD-SBT-MW-2VA-PM-pH-9.5	6/16/2022	6/16/22 11:45	Water	1	X													HNO3 preserved. Field Filtered. KMnO4 added		
12	GSD-SBT-MW-2VA-FS-PM-pH-9.5	6/16/2022	6/16/22 11:50	Water	1	X													HNO3 preserved. Field Filtered. KMnO4 added		
13	GSD-SBT-MW-2VA-FC-PM-MC-pH-9	6/16/2022	6/16/22 11:55	Water	1	X													HNO3 preserved. Field Filtered. KMnO4 added		
14																					
15																					
16																					

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by:	Company:
Emma Nordlund	Anchor QEA
Signature/Print Name:	Date/Time:
	6/20/22 08:50
Relinquished by:	Company:
	ALS
Signature/Print Name:	Date/Time:
	6/20/22 12:10

Received by:

Signature/Print Name:
ALS
Received by:

Signature/Print Name:
ALS
Received by:

Signature/Print Name:
ALS

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.



Miscellaneous Forms

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www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206856

Sample Name: GSD-SBT-MW-2VA-FS
Lab Code: K2206856-001
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-FC
Lab Code: K2206856-002
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-CER
Lab Code: K2206856-003
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-PM
Lab Code: K2206856-004
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-FS-PM
Lab Code: K2206856-005
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206856

Sample Name: GSD-SBT-MW-2VA-FC-PM-MC
Lab Code: K2206856-006
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-BC
Lab Code: K2206856-007
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-AIR
Lab Code: K2206856-008
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-FS-DUP
Lab Code: K2206856-009
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-CTRL
Lab Code: K2206856-010
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206856

Sample Name: GSD-SBT-MW-2VA-PM-pH-9.5
Lab Code: K2206856-011
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-FS-PM-pH-9.5
Lab Code: K2206856-012
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VA-FC-PM-MC-pH-9.5
Lab Code: K2206856-013
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-FS
Lab Code: K2206856-001

Service Request: K2206856
Date Collected: 06/16/22 10:55
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	55.4	ug/L	0.20	0.10	1	07/08/22 16:35	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-FC
Lab Code: K2206856-002

Service Request: K2206856
Date Collected: 06/16/22 11:00
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	61.8	ug/L	0.20	0.10	1	07/08/22 16:40	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-CER
Lab Code: K2206856-003

Service Request: K2206856
Date Collected: 06/16/22 11:05
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	34.9	ug/L	0.20	0.10	1	07/08/22 16:42	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-PM
Lab Code: K2206856-004

Service Request: K2206856
Date Collected: 06/16/22 11:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	47.8	ug/L	0.40	0.20	1	07/08/22 16:43	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-FS-PM
Lab Code: K2206856-005

Service Request: K2206856
Date Collected: 06/16/22 11:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	52.4	ug/L	0.20	0.10	1	07/08/22 16:57	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-FC-PM-MC
Lab Code: K2206856-006

Service Request: K2206856
Date Collected: 06/16/22 11:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	55.8	ug/L	0.20	0.10	1	07/08/22 16:59	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-BC
Lab Code: K2206856-007

Service Request: K2206856
Date Collected: 06/16/22 11:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	57.7	ug/L	0.20	0.10	1	07/08/22 17:00	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-AIR
Lab Code: K2206856-008

Service Request: K2206856
Date Collected: 06/16/22 11:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	35.2	ug/L	0.20	0.10	1	07/08/22 17:02	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-FS-DUP
Lab Code: K2206856-009

Service Request: K2206856
Date Collected: 06/16/22 11:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	56.8	ug/L	0.20	0.10	1	07/08/22 17:04	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-CTRL
Lab Code: K2206856-010

Service Request: K2206856
Date Collected: 06/16/22 11:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	36.2	ug/L	0.20	0.10	1	07/08/22 17:06	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-PM-pH-9.5
Lab Code: K2206856-011

Service Request: K2206856
Date Collected: 06/16/22 11:45
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	33.5	ug/L	0.40	0.20	1	07/08/22 15:10	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206856
Date Collected: 06/16/22 11:50
Date Received: 06/20/22 12:10

Sample Name: GSD-SBT-MW-2VA-FS-PM-pH-9.5
Lab Code: K2206856-012

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	38.1	ug/L	0.20	0.10	1	07/08/22 15:11	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VA-FC-PM-MC-pH-9.5
Lab Code: K2206856-013

Service Request: K2206856
Date Collected: 06/16/22 11:55
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	41.7	ug/L	0.20	0.10	1	07/08/22 15:22	06/30/22	



QC Summary Forms

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210150-01

Service Request: K2206856
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	0.13 J	ug/L	0.20	0.10	1	07/08/22 15:55	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210228-01

Service Request: K2206856
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	ND U	ug/L	0.20	0.10	1	07/08/22 14:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206856
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-SBT-MW-2VA-FS
Lab Code: K2206856-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210150-05

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Lithium	55.4	102	50.0	94	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206856
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-SBT-MW-2VA-FS
Lab Code: K2206856-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2210150-06 Result			
Lithium	200.8	0.20	0.10	55.4	56.3	55.9	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206856
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210150-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	47.4	50.0	95	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206856
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210228-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	48.4	50.0	97	85-115



July 11, 2022

Service Request No:K2206858

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206858**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206858
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eleven water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-SBT-MW-2-FS		Lab ID: K2206858-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.81		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-FC		Lab ID: K2206858-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.17		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-CER		Lab ID: K2206858-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	15.8		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-PM		Lab ID: K2206858-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.4	J	0.2	1.0	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-FC-PM-MC		Lab ID: K2206858-006				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.20	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-BC		Lab ID: K2206858-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	3.68		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-AIR		Lab ID: K2206858-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	5.89		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-FS-DUP		Lab ID: K2206858-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.57		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-CTRL		Lab ID: K2206858-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	3.38		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2-BC-NaSO4		Lab ID: K2206858-011				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	3.34		0.09	0.50	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2206858

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206858-001	GSD-SBT-MW-2-FS	6/16/2022	0855
K2206858-002	GSD-SBT-MW-2-FC	6/16/2022	0900
K2206858-003	GSD-SBT-MW-2-CER	6/16/2022	0905
K2206858-004	GSD-SBT-MW-2-PM	6/16/2022	0910
K2206858-005	GSD-SBT-MW-2-FS-PM	6/16/2022	0915
K2206858-006	GSD-SBT-MW-2-FC-PM-MC	6/16/2022	0920
K2206858-007	GSD-SBT-MW-2-BC	6/16/2022	0925
K2206858-008	GSD-SBT-MW-2-AIR	6/16/2022	0930
K2206858-009	GSD-SBT-MW-2-FS-DUP	6/16/2022	0935
K2206858-010	GSD-SBT-MW-2-CTRL	6/16/2022	0940
K2206858-011	GSD-SBT-MW-2-BC-NaSO4	6/16/2022	0945

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K22 06858
Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with 'X'	PM Notified If out of temp	Tracking Number NA	Filed
<u>2.0</u>	<u>---</u>	<u>PRO1</u>					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206858

Sample Name: GSD-SBT-MW-2-FS
Lab Code: K2206858-001
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-FC
Lab Code: K2206858-002
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-CER
Lab Code: K2206858-003
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-PM
Lab Code: K2206858-004
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-FS-PM
Lab Code: K2206858-005
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206858

Sample Name: GSD-SBT-MW-2-FC-PM-MC
Lab Code: K2206858-006
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-BC
Lab Code: K2206858-007
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-AIR
Lab Code: K2206858-008
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-FS-DUP
Lab Code: K2206858-009
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-SBT-MW-2-CTRL
Lab Code: K2206858-010
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206858

Sample Name: GSD-SBT-MW-2-BC-NaSO4
Lab Code: K2206858-011
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-FS
Lab Code: K2206858-001

Service Request: K2206858
Date Collected: 06/16/22 08:55
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.81	ug/L	0.50	0.09	1	07/05/22 11:55	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-FC
Lab Code: K2206858-002

Service Request: K2206858
Date Collected: 06/16/22 09:00
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	1.17	ug/L	0.50	0.09	1	07/05/22 11:59	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-CER
Lab Code: K2206858-003

Service Request: K2206858
Date Collected: 06/16/22 09:05
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	15.8	ug/L	0.50	0.09	1	07/05/22 12:00	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-PM
Lab Code: K2206858-004

Service Request: K2206858
Date Collected: 06/16/22 09:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.4 J	ug/L	1.0	0.2	1	07/05/22 12:35	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-FS-PM
Lab Code: K2206858-005

Service Request: K2206858
Date Collected: 06/16/22 09:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/05/22 12:01	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-FC-PM-MC
Lab Code: K2206858-006

Service Request: K2206858
Date Collected: 06/16/22 09:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.20 J	ug/L	0.50	0.09	1	07/05/22 12:03	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-BC
Lab Code: K2206858-007

Service Request: K2206858
Date Collected: 06/16/22 09:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	3.68	ug/L	0.50	0.09	1	07/05/22 12:04	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-AIR
Lab Code: K2206858-008

Service Request: K2206858
Date Collected: 06/16/22 09:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	5.89	ug/L	0.50	0.09	1	07/05/22 12:08	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-FS-DUP
Lab Code: K2206858-009

Service Request: K2206858
Date Collected: 06/16/22 09:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.57	ug/L	0.50	0.09	1	07/05/22 12:09	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-CTRL
Lab Code: K2206858-010

Service Request: K2206858
Date Collected: 06/16/22 09:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	3.38	ug/L	0.50	0.09	1	07/05/22 12:11	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2-BC-NaSO4
Lab Code: K2206858-011

Service Request: K2206858
Date Collected: 06/16/22 09:45
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	3.34	ug/L	0.50	0.09	1	07/08/22 15:24	06/30/22	



QC Summary Forms

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Metals

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1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210148-01

Service Request: K2206858
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/05/22 11:52	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210228-01

Service Request: K2206858
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/08/22 14:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206858
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/5/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-SBT-MW-2-FS
Lab Code: K2206858-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210148-03

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Arsenic	0.81	50.7	50.0	100	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206858
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-SBT-MW-2-BC-NaSO4
Lab Code: K2206858-011
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210228-05

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Arsenic	3.34	51.7	50.0	97	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206858
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/05/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-SBT-MW-2-FS
Lab Code: K2206858-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2210148-04 Result			
Arsenic	200.8	0.50	0.09	0.81	0.82	0.82	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206858
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-SBT-MW-2-BC-NaSO4
Lab Code: K2206858-011

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2210228-06 Result			
Arsenic	200.8	0.50	0.09	3.34	3.44	3.39	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206858
Date Analyzed: 07/05/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210148-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	52.4	50.0	105	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206858
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210228-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.4	50.0	99	85-115



July 11, 2022

Service Request No:K2206860

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206860**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206860
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eleven water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-GBT-MW-2-FS		Lab ID: K2206860-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.49		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-FC		Lab ID: K2206860-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	174		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-CER		Lab ID: K2206860-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.16	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-PM		Lab ID: K2206860-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.8		0.2	1.0	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-FS-PM		Lab ID: K2206860-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.18	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-FC-PM-MC		Lab ID: K2206860-006				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.14	J	0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-BC		Lab ID: K2206860-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	45.3		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-AIR		Lab ID: K2206860-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	43.9		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-FS-DUP		Lab ID: K2206860-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	2.55		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-CTRL		Lab ID: K2206860-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	44.9		0.09	0.50	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2-BC-NaSO4		Lab ID: K2206860-011				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	51.2		0.09	0.50	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2206860

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206860-001	GSD-GBT-MW-2-FS	6/16/2022	0800
K2206860-002	GSD-GBT-MW-2-FC	6/16/2022	0805
K2206860-003	GSD-GBT-MW-2-CER	6/16/2022	0810
K2206860-004	GSD-GBT-MW-2-PM	6/16/2022	0815
K2206860-005	GSD-GBT-MW-2-FS-PM	6/16/2022	0820
K2206860-006	GSD-GBT-MW-2-FC-PM-MC	6/16/2022	0825
K2206860-007	GSD-GBT-MW-2-BC	6/16/2022	0830
K2206860-008	GSD-GBT-MW-2-AIR	6/16/2022	0835
K2206860-009	GSD-GBT-MW-2-FS-DUP	6/16/2022	0840
K2206860-010	GSD-GBT-MW-2-CTRL	6/16/2022	0845
K2206860-011	GSD-GBT-MW-2-BC-NaSO4	6/16/2022	0850

PM MH

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K22 06860
Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with 'X'	PM Notified if out of temp	Tracking Number NA	Filed
<u>2.0</u>	<u>—</u>	<u>PRO1</u>					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, note the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; note in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, note the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled


Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

K2206860

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers	Parameters														 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219 Comments/Preservation							
Date:	6/20/2022					As (dissolved)																					
Project Name:	Gadsden																										
Project Number:	201114-03.02 Task 09																										
Project Manager:	Masa Kanematsu																										
Phone Number:	503-972-5001 (backup number: 971.334.8193)																										
Shipment Method:	ALS Carrier																										
Line	Field Sample ID	Collection		Matrix																							
		Date	Time																								
1	GSD-GBT-MW-2-FS	6/16/2022	6/16/22 8:00	Water	1	X																					HNO3 preserved. Field Filtered.
2	GSD-GBT-MW-2-FC	6/16/2022	6/16/22 8:05	Water	1	X																					HNO3 preserved. Field Filtered.
3	GSD-GBT-MW-2-CER	6/16/2022	6/16/22 8:10	Water	1	X																					HNO3 preserved. Field Filtered.
4	GSD-GBT-MW-2-PM	6/16/2022	6/16/22 8:15	Water	1	X																					HNO3 preserved. Field Filtered. KMnO4 added
5	GSD-GBT-MW-2-FS-PM	6/16/2022	6/16/22 8:20	Water	1	X																					HNO3 preserved. Field Filtered. KMnO4 added
6	GSD-GBT-MW-2-FC-PM-MC	6/16/2022	6/16/22 8:25	Water	1	X																					HNO3 preserved. Field Filtered. KMnO4 added
7	GSD-GBT-MW-2-BC	6/16/2022	6/16/22 8:30	Water	1	X																					HNO3 preserved. Field Filtered.
8	GSD-GBT-MW-2-AIR	6/16/2022	6/16/22 8:35	Water	1	X																					HNO3 preserved. Field Filtered.
9	GSD-GBT-MW-2-FS-DUP	6/16/2022	6/16/22 8:40	Water	1	X																					HNO3 preserved. Field Filtered.
10	GSD-GBT-MW-2-CTRL	6/16/2022	6/16/22 8:45	Water	1	X																					HNO3 preserved. Field Filtered.
11	GSD-GBT-MW-2-BC-NaSO4	6/16/2022	6/16/22 8:50	Water	1	X																					
12																											
13																											
14																											
15																											
16																											

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium

Relinquished by:	Company:
Emma Nordlund	Anchor QEA
Signature/Print Name:	Date/Time:
<i>[Signature]</i>	6/20/22 08:50

Received by:	Signature/Print Name:
<i>[Signature]</i>	<i>Kimono ALS 6/20/22 08:50</i>

Relinquished by:	Company:
<i>[Signature]</i>	ALS
Signature/Print Name:	Date/Time:
<i>[Signature]</i>	6/20/22 12:10

Received by:	Signature/Print Name:
<i>[Signature]</i>	<i>ALS 6/20/22 12:10</i>

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.



Miscellaneous Forms

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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206860

Sample Name: GSD-GBT-MW-2-FS
Lab Code: K2206860-001
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-FC
Lab Code: K2206860-002
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-CER
Lab Code: K2206860-003
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-PM
Lab Code: K2206860-004
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-FS-PM
Lab Code: K2206860-005
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206860

Sample Name: GSD-GBT-MW-2-FC-PM-MC
Lab Code: K2206860-006
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-BC
Lab Code: K2206860-007
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-AIR
Lab Code: K2206860-008
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-FS-DUP
Lab Code: K2206860-009
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

Sample Name: GSD-GBT-MW-2-CTRL
Lab Code: K2206860-010
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
KLINN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206860

Sample Name: GSD-GBT-MW-2-BC-NaSO4
Lab Code: K2206860-011
Sample Matrix: Water

Date Collected: 06/16/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-FS
Lab Code: K2206860-001

Service Request: K2206860
Date Collected: 06/16/22 08:00
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	1.49	ug/L	0.50	0.09	1	07/05/22 12:12	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-FC
Lab Code: K2206860-002

Service Request: K2206860
Date Collected: 06/16/22 08:05
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	174	ug/L	0.50	0.09	1	07/05/22 12:16	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-CER
Lab Code: K2206860-003

Service Request: K2206860
Date Collected: 06/16/22 08:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.16 J	ug/L	0.50	0.09	1	07/05/22 12:17	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-PM
Lab Code: K2206860-004

Service Request: K2206860
Date Collected: 06/16/22 08:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	1.8	ug/L	1.0	0.2	1	07/05/22 12:37	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-FS-PM
Lab Code: K2206860-005

Service Request: K2206860
Date Collected: 06/16/22 08:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.18 J	ug/L	0.50	0.09	1	07/05/22 12:18	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-FC-PM-MC
Lab Code: K2206860-006

Service Request: K2206860
Date Collected: 06/16/22 08:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	0.14 J	ug/L	0.50	0.09	1	07/05/22 12:20	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-BC
Lab Code: K2206860-007

Service Request: K2206860
Date Collected: 06/16/22 08:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	45.3	ug/L	0.50	0.09	1	07/05/22 12:24	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-AIR
Lab Code: K2206860-008

Service Request: K2206860
Date Collected: 06/16/22 08:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	43.9	ug/L	0.50	0.09	1	07/05/22 12:25	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-FS-DUP
Lab Code: K2206860-009

Service Request: K2206860
Date Collected: 06/16/22 08:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	2.55	ug/L	0.50	0.09	1	07/05/22 12:26	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-CTRL
Lab Code: K2206860-010

Service Request: K2206860
Date Collected: 06/16/22 08:45
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	44.9	ug/L	0.50	0.09	1	07/05/22 12:27	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2-BC-NaSO4
Lab Code: K2206860-011

Service Request: K2206860
Date Collected: 06/16/22 08:50
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	51.2	ug/L	0.50	0.09	1	07/08/22 15:28	06/30/22	



QC Summary Forms

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ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210148-01

Service Request: K2206860
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/05/22 11:52	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210228-01

Service Request: K2206860
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	07/08/22 14:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206860
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/5/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-GBT-MW-2-FS
Lab Code: K2206860-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210148-05

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Arsenic	1.49	52.6	50.0	102	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206860
Date Collected: 06/16/22
Date Received: 06/20/22
Date Analyzed: 07/05/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-GBT-MW-2-FS
Lab Code: K2206860-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2210148-06 Result			
Arsenic	200.8	0.50	0.09	1.49	1.63	1.56	9	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206860
Date Analyzed: 07/05/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210148-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	52.4	50.0	105	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206860
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210228-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.4	50.0	99	85-115



July 11, 2022

Service Request No:K2206862

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206862**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
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Narrative Documents

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www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206862
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Thirteen water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-GBT-MW-2VB-FS		Lab ID: K2206862-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	98.7		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-FC		Lab ID: K2206862-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	98.9		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-CER		Lab ID: K2206862-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	95.0		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-PM		Lab ID: K2206862-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	101		0.20	0.80	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-FS-PM		Lab ID: K2206862-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	101		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-FC-PM-MC		Lab ID: K2206862-006				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	100		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-BC		Lab ID: K2206862-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	113		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-AIR		Lab ID: K2206862-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	102		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-FS-DUP		Lab ID: K2206862-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	103		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-CTRL		Lab ID: K2206862-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	100		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-PM-pH-9.5		Lab ID: K2206862-011				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	102		0.20	0.40	ug/L	200.8
CLIENT ID: GSD-GBT-MW-2VB-FS-PM-pH-9.5		Lab ID: K2206862-012				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	99.4		0.10	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-GBT-MW-2VB-FC-PM-MC-pH-9.5		Lab ID: K2206862-013				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	38.6		0.10	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request:K2206862

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206862-001	GSD-GBT-MW-2VB-FS	6/17/2022	0800
K2206862-002	GSD-GBT-MW-2VB-FC	6/17/2022	0805
K2206862-003	GSD-GBT-MW-2VB-CER	6/17/2022	0810
K2206862-004	GSD-GBT-MW-2VB-PM	6/17/2022	0815
K2206862-005	GSD-GBT-MW-2VB-FS-PM	6/17/2022	0820
K2206862-006	GSD-GBT-MW-2VB-FC-PM-MC	6/17/2022	0825
K2206862-007	GSD-GBT-MW-2VB-BC	6/17/2022	0830
K2206862-008	GSD-GBT-MW-2VB-AIR	6/17/2022	0835
K2206862-009	GSD-GBT-MW-2VB-FS-DUP	6/17/2022	0840
K2206862-010	GSD-GBT-MW-2VB-CTRL	6/17/2022	0845
K2206862-011	GSD-GBT-MW-2VB-PM-pH-9.5	6/17/2022	0850
K2206862-012	GSD-GBT-MW-2VB-FS-PM-pH-9.5	6/17/2022	0855
K2206862-013	GSD-GBT-MW-2VB-FC-PM-MC-pH-9.5	6/17/2022	0900

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K22 06862
Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
<u>2.0</u>	<u>—</u>	<u>PRO1</u>					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, note the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled


Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

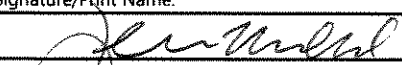
K220686Z

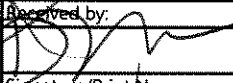
Chain of Custody Record & Laboratory Analysis Request


Laboratory Number: 503-972-5019					Parameters												 ANCHOR QEA Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219			
Date:	6/20/2022																			
Project Name:	Gadsden																			
Project Number:	201114-03.02 Task 09																			
Project Manager:	Masa Kanematsu																			
Phone Number:	503-972-5001 (backup number: 971.334.8193)																			
Shipment Method:	ALS Carrier				No. of Containers	Li (dissolved)														
Line	Field Sample ID	Collection		Matrix																
		Date	Time																	
1	GSD-GBT-MW-2VB-FS	6/17/2022	6/17/22 8:00	Water			1	X												
2	GSD-GBT-MW-2VB-FC	6/17/2022	6/17/22 8:05	Water			1	X												
3	GSD-GBT-MW-2VB-CER	6/17/2022	6/17/22 8:10	Water			1	X												
4	GSD-GBT-MW-2VB-PM	6/17/2022	6/17/22 8:15	Water			1	X												
5	GSD-GBT-MW-2VB-FS-PM	6/17/2022	6/17/22 8:20	Water	1	X														
6	GSD-GBT-MW-2VB-FC-PM-MC	6/17/2022	6/17/22 8:25	Water	1	X														
7	GSD-GBT-MW-2VB-BC	6/17/2022	6/17/22 8:30	Water	1	X														
8	GSD-GBT-MW-2VB-AIR	6/17/2022	6/17/22 8:35	Water	1	X														
9	GSD-GBT-MW-2VB-FS-DUP	6/17/2022	6/17/22 8:40	Water	1	X														
10	GSD-GBT-MW-2VB-CTRL	6/17/2022	6/17/22 8:45	Water	1	X														
11	GSD-GBT-MW-2VB-PM-pH-9.5	6/17/2022	6/17/22 8:50	Water	1	X														
12	GSD-GBT-MW-2VB-FS-PM-pH-9.5	6/17/2022	6/17/22 8:55	Water	1	X														
13	GSD-GBT-MW-2VB-FC-PM-MC-pH-9	6/17/2022	6/17/22 9:00	Water	1	X														
14																				
15																				
16																				

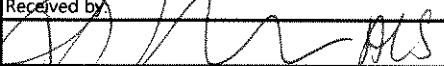
Comments/Preservation

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by:	Company:
Emma Nordlund	Anchor QEA
Signature/Print Name:	Date/Time:
	6/20/22 08:50

Received by:	
	ALS 6/20/22 08:50
Signature/Print Name:	

Relinquished by:	Company:
	ALS 6/20/22 12:10
Signature/Print Name:	Date/Time:

Received by:	
	ALS 6/20/22 12:10
Signature/Print Name:	

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206862

Sample Name: GSD-GBT-MW-2VB-FS
Lab Code: K2206862-001
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-FC
Lab Code: K2206862-002
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-CER
Lab Code: K2206862-003
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-PM
Lab Code: K2206862-004
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-FS-PM
Lab Code: K2206862-005
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206862

Sample Name: GSD-GBT-MW-2VB-FC-PM-MC
Lab Code: K2206862-006
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-BC
Lab Code: K2206862-007
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-AIR
Lab Code: K2206862-008
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-FS-DUP
Lab Code: K2206862-009
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-CTRL
Lab Code: K2206862-010
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206862

Sample Name: GSD-GBT-MW-2VB-PM-pH-9.5
Lab Code: K2206862-011
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-FS-PM-pH-9.5
Lab Code: K2206862-012
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-GBT-MW-2VB-FC-PM-MC-pH-9.5
Lab Code: K2206862-013
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-FS
Lab Code: K2206862-001

Service Request: K2206862
Date Collected: 06/17/22 08:00
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	98.7	ug/L	0.40	0.10	1	07/08/22 17:20	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-FC
Lab Code: K2206862-002

Service Request: K2206862
Date Collected: 06/17/22 08:05
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	98.9	ug/L	0.40	0.10	1	07/08/22 17:25	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-CER
Lab Code: K2206862-003

Service Request: K2206862
Date Collected: 06/17/22 08:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	95.0	ug/L	0.40	0.10	1	07/08/22 17:27	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-PM
Lab Code: K2206862-004

Service Request: K2206862
Date Collected: 06/17/22 08:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	101	ug/L	0.80	0.20	1	07/08/22 17:29	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-FS-PM
Lab Code: K2206862-005

Service Request: K2206862
Date Collected: 06/17/22 08:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	101	ug/L	0.40	0.10	1	07/08/22 17:31	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-FC-PM-MC
Lab Code: K2206862-006

Service Request: K2206862
Date Collected: 06/17/22 08:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	100	ug/L	0.40	0.10	1	07/08/22 17:32	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-BC
Lab Code: K2206862-007

Service Request: K2206862
Date Collected: 06/17/22 08:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	113	ug/L	0.40	0.10	1	07/08/22 17:59	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-AIR
Lab Code: K2206862-008

Service Request: K2206862
Date Collected: 06/17/22 08:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	102	ug/L	0.40	0.10	1	07/08/22 18:01	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-FS-DUP
Lab Code: K2206862-009

Service Request: K2206862
Date Collected: 06/17/22 08:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	103	ug/L	0.40	0.10	1	07/08/22 18:03	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-CTRL
Lab Code: K2206862-010

Service Request: K2206862
Date Collected: 06/17/22 08:45
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	100	ug/L	0.40	0.10	1	07/08/22 18:05	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-PM-pH-9.5
Lab Code: K2206862-011

Service Request: K2206862
Date Collected: 06/17/22 08:50
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	102	ug/L	0.40	0.20	1	07/08/22 15:30	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206862
Date Collected: 06/17/22 08:55
Date Received: 06/20/22 12:10

Sample Name: GSD-GBT-MW-2VB-FS-PM-pH-9.5
Lab Code: K2206862-012

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	99.4	ug/L	0.20	0.10	1	07/08/22 15:31	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-GBT-MW-2VB-FC-PM-MC-pH-9.5
Lab Code: K2206862-013

Service Request: K2206862
Date Collected: 06/17/22 09:00
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	38.6	ug/L	0.20	0.10	1	07/08/22 15:33	06/30/22	



QC Summary Forms

ALS Environmental—Kelso Laboratory
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Metals

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1317 South 13th Avenue, Kelso, WA 98626
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210151-01

Service Request: K2206862
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	0.15 J	ug/L	0.40	0.10	1	07/08/22 17:17	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210228-01

Service Request: K2206862
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	ND U	ug/L	0.20	0.10	1	07/08/22 14:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206862
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-GBT-MW-2VB-FS
Lab Code: K2206862-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210151-03

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Lithium	98.7	149	50.0	100	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206862
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-GBT-MW-2VB-FS
Lab Code: K2206862-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2210151-04 Result			
Lithium	200.8	0.40	0.10	98.7	99.1	98.9	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206862
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210151-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	49.2	50.0	98	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206862
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210228-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	48.4	50.0	97	85-115



July 11, 2022

Service Request No:K2206863

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory June 20, 2022
For your reference, these analyses have been assigned our service request number **K2206863**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden
Sample Matrix: Water

Service Request: K2206863
Date Received: 06/20/2022

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Thirteen water samples were received for analysis at ALS Environmental on 06/20/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 07/11/2022



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-SBT-MW-2VB-FS		Lab ID: K2206863-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	94.0		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-FC		Lab ID: K2206863-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	103		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-CER		Lab ID: K2206863-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	70.0		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-PM		Lab ID: K2206863-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	77.3		0.20	0.80	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-FS-PM		Lab ID: K2206863-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	89.5		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-FC-PM-MC		Lab ID: K2206863-006				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	92.1		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-BC		Lab ID: K2206863-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	98.6		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-AIR		Lab ID: K2206863-008				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	68.9		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-FS-DUP		Lab ID: K2206863-009				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	95.7		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-CTRL		Lab ID: K2206863-010				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	73.1		0.10	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-PM-pH-9.5		Lab ID: K2206863-011				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	52.3		0.20	0.40	ug/L	200.8
CLIENT ID: GSD-SBT-MW-2VB-FS-PM-pH-9.5		Lab ID: K2206863-012				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	62.0		0.10	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-SBT-MW-2VB-FC-PM-MC-pH-9.5		Lab ID: K2206863-013				
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	67.2		0.10	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09


Service Request:K2206863

SAMPLE CROSS-REFERENCE



<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2206863-001	GSD-SBT-MW-2VB-FS	6/17/2022	0905
K2206863-002	GSD-SBT-MW-2VB-FC	6/17/2022	0910
K2206863-003	GSD-SBT-MW-2VB-CER	6/17/2022	0915
K2206863-004	GSD-SBT-MW-2VB-PM	6/17/2022	0920
K2206863-005	GSD-SBT-MW-2VB-FS-PM	6/17/2022	0925
K2206863-006	GSD-SBT-MW-2VB-FC-PM-MC	6/17/2022	0930
K2206863-007	GSD-SBT-MW-2VB-BC	6/17/2022	0935
K2206863-008	GSD-SBT-MW-2VB-AIR	6/17/2022	0940
K2206863-009	GSD-SBT-MW-2VB-FS-DUP	6/17/2022	0945
K2206863-010	GSD-SBT-MW-2VB-CTRL	6/17/2022	0950
K2206863-011	GSD-SBT-MW-2VB-PM-pH-9.5	6/17/2022	0955
K2206863-012	GSD-SBT-MW-2VB-FS-PM-pH-9.5	6/17/2022	1000
K2206863-013	GSD-SBT-MW-2VB-FC-PM-MC-pH-9.5	6/17/2022	1005


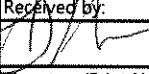
K2206863

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers	Parameters										 Jessica Goin 6720 SW Macadam Ave Suite 125 Portland OR 97219								
Date:	6/20/2022					Li (dissolved)																		
Project Name:	Gadsden																							
Project Number:	201114-03.02 Task 09																							
Project Manager:	Masa Kanematsu																							
Phone Number:	503-972-5001 (backup number: 971.334.8193)																							
Shipment Method:	ALS Carrier																							
Line	Field Sample ID	Collection		Matrix	No. of Containers	Li (dissolved)	Parameters										Comments/Preservation							
		Date	Time																					
1	GSD-SBT-MW-2VB-FS	6/17/2022	6/17/22 9:05	Water	1	X																	HNO3 preserved. Field Filtered.	
2	GSD-SBT-MW-2VB-FC	6/17/2022	6/17/22 9:10	Water	1	X																		HNO3 preserved. Field Filtered.
3	GSD-SBT-MW-2VB-CER	6/17/2022	6/17/22 9:15	Water	1	X																		HNO3 preserved. Field Filtered.
4	GSD-SBT-MW-2VB-PM	6/17/2022	6/17/22 9:20	Water	1	X																		HNO3 preserved. Field Filtered. KMnO4 added
5	GSD-SBT-MW-2VB-FS-PM	6/17/2022	6/17/22 9:25	Water	1	X																		HNO3 preserved. Field Filtered. KMnO4 added
6	GSD-SBT-MW-2VB-FC-PM-MC	6/17/2022	6/17/22 9:30	Water	1	X																		HNO3 preserved. Field Filtered. KMnO4 added
7	GSD-SBT-MW-2VB-BC	6/17/2022	6/17/22 9:35	Water	1	X																		HNO3 preserved. Field Filtered.
8	GSD-SBT-MW-2VB-AIR	6/17/2022	6/17/22 9:40	Water	1	X																		HNO3 preserved. Field Filtered.
9	GSD-SBT-MW-2VB-FS-DUP	6/17/2022	6/17/22 9:45	Water	1	X																		HNO3 preserved. Field Filtered.
10	GSD-SBT-MW-2VB-CTRL	6/17/2022	6/17/22 9:50	Water	1	X																		HNO3 preserved. Field Filtered.
11	GSD-SBT-MW-2VB-PM-pH-9.5	6/17/2022	6/17/22 9:55	Water	1	X																		HNO3 preserved. Field Filtered. KMnO4 added
12	GSD-SBT-MW-2VB-FS-PM-pH-9.5	6/17/2022	6/17/22 10:00	Water	1	X																		HNO3 preserved. Field Filtered. KMnO4 added
13	GSD-SBT-MW-2VB-FC-PM-MC-pH-9	6/17/2022	6/17/22 10:05	Water	1	X																		HNO3 preserved. Field Filtered. KMnO4 added
14																								
15																								
16																								

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by:	Company:
Emma Nordlund	Anchor QEA
Signature/Print Name:	Date/Time:
	6/20/22 08:50
Relinquished by:	Company:
 ALS	6/20/22
Signature/Print Name:	Date/Time:
	12:10

Received by:
 ALS 6/20/22 08:50
Signature/Print Name:
Received by:
 ALS 6/20/22 12:10
Signature/Print Name:

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Cooler Receipt and Preservation Form

Client Anchor WEA Service Request K22 06863
 Received: 6/20/22 Opened: 6/20/22 By: [Signature] Unloaded: 6/20/22 By: [Signature]

1. Samples were received via? **USPS** **Fed Ex** **UPS** **DHL** **PDX** **Courier** **Hand Delivered**
 2. Samples were received in: (circle) **Cooler** **Box** **Envelope** **Other** **NA**
 3. Were custody seals on coolers? **NA** **Y** **N** If yes, how many and where? _____
 If present, were custody seals intact? **Y** **N** If present, were they signed and dated? **Y** **N**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp. Indicate with 'X'	PM Notified If out of temp	Tracking Number NA	Filed
<u>2.0</u>	<u>—</u>	<u>PRO1</u>					

4. Was a Temperature Blank present in cooler? **NA** **Y** **N** If yes, notate the temperature in the appropriate column above:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 5. Were samples received within the method specified temperature ranges? **NA** **Y** **N**
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. **NA** **Y** **N**

If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**

6. Packing material: **Inserts** **Baggies** **Bubble Wrap** **Gel Packs** **Wet Ice** **Dry Ice** **Sleeves** _____
 7. Were custody papers properly filled out (ink, signed, etc.)? **NA** **Y** **N**
 8. Were samples received in good condition (unbroken) **NA** **Y** **N**
 9. Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** **Y** **N**
 10. Did all sample labels and tags agree with custody papers? **NA** **Y** **N**
 11. Were appropriate bottles/containers and volumes received for the tests indicated? **NA** **Y** **N**
 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **NA** **Y** **N**
 13. Were VOA vials received without headspace? Indicate in the table below. **NA** **Y** **N**
 14. Was C12/Res negative? **NA** **Y** **N**
 15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? **NA** **Y** **N** Under filled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206863

Sample Name: GSD-SBT-MW-2VB-FS
Lab Code: K2206863-001
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-FC
Lab Code: K2206863-002
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-CER
Lab Code: K2206863-003
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-PM
Lab Code: K2206863-004
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-FS-PM
Lab Code: K2206863-005
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206863

Sample Name: GSD-SBT-MW-2VB-FC-PM-MC
Lab Code: K2206863-006
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-BC
Lab Code: K2206863-007
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-AIR
Lab Code: K2206863-008
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-FS-DUP
Lab Code: K2206863-009
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-CTRL
Lab Code: K2206863-010
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09

Service Request: K2206863

Sample Name: GSD-SBT-MW-2VB-PM-pH-9.5
Lab Code: K2206863-011
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-FS-PM-pH-9.5
Lab Code: K2206863-012
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-SBT-MW-2VB-FC-PM-MC-pH-9.5
Lab Code: K2206863-013
Sample Matrix: Water

Date Collected: 06/17/22
Date Received: 06/20/22

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-FS
Lab Code: K2206863-001

Service Request: K2206863
Date Collected: 06/17/22 09:05
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	94.0	ug/L	0.40	0.10	1	07/08/22 18:06	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-FC
Lab Code: K2206863-002

Service Request: K2206863
Date Collected: 06/17/22 09:10
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	103	ug/L	0.40	0.10	1	07/08/22 18:11	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-CER
Lab Code: K2206863-003

Service Request: K2206863
Date Collected: 06/17/22 09:15
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	70.0	ug/L	0.40	0.10	1	07/08/22 18:13	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-PM
Lab Code: K2206863-004

Service Request: K2206863
Date Collected: 06/17/22 09:20
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	77.3	ug/L	0.80	0.20	1	07/08/22 18:15	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-FS-PM
Lab Code: K2206863-005

Service Request: K2206863
Date Collected: 06/17/22 09:25
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	89.5	ug/L	0.40	0.10	1	07/08/22 18:20	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-FC-PM-MC
Lab Code: K2206863-006

Service Request: K2206863
Date Collected: 06/17/22 09:30
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	92.1	ug/L	0.40	0.10	1	07/08/22 18:22	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-BC
Lab Code: K2206863-007

Service Request: K2206863
Date Collected: 06/17/22 09:35
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	98.6	ug/L	0.40	0.10	1	07/08/22 18:24	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-AIR
Lab Code: K2206863-008

Service Request: K2206863
Date Collected: 06/17/22 09:40
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	68.9	ug/L	0.40	0.10	1	07/08/22 18:25	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-FS-DUP
Lab Code: K2206863-009

Service Request: K2206863
Date Collected: 06/17/22 09:45
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	95.7	ug/L	0.40	0.10	1	07/08/22 18:27	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-CTRL
Lab Code: K2206863-010

Service Request: K2206863
Date Collected: 06/17/22 09:50
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	73.1	ug/L	0.40	0.10	1	07/08/22 18:29	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: GSD-SBT-MW-2VB-PM-pH-9.5
Lab Code: K2206863-011

Service Request: K2206863
Date Collected: 06/17/22 09:55
Date Received: 06/20/22 12:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	52.3	ug/L	0.40	0.20	1	07/08/22 15:34	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206863
Date Collected: 06/17/22 10:00
Date Received: 06/20/22 12:10

Sample Name: GSD-SBT-MW-2VB-FS-PM-pH-9.5
Lab Code: K2206863-012

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	62.0	ug/L	0.20	0.10	1	07/08/22 15:36	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206863
Date Collected: 06/17/22 10:05
Date Received: 06/20/22 12:10

Sample Name: GSD-SBT-MW-2VB-FC-PM-MC-pH-9.5
Lab Code: K2206863-013

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	67.2	ug/L	0.20	0.10	1	07/08/22 15:50	06/30/22	



QC Summary Forms

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210151-01

Service Request: K2206863
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	0.15 J	ug/L	0.40	0.10	1	07/08/22 17:17	06/30/22	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2210228-01

Service Request: K2206863
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Lithium	200.8	ND U	ug/L	0.20	0.10	1	07/08/22 14:58	06/30/22	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206863
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/8/22
Date Extracted: 06/30/22

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-SBT-MW-2VB-FS
Lab Code: K2206863-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2210151-05

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Lithium	94.0	142	50.0	95	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206863
Date Collected: 06/17/22
Date Received: 06/20/22
Date Analyzed: 07/08/22

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-SBT-MW-2VB-FS
Lab Code: K2206863-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2210151-06 Result, Average, RPD, RPD Limit. Row 1: Lithium, 200.8, 0.40, 0.10, 94.0, 97.5, 95.8, 4, 20.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206863

Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L

Basis:NA

Lab Control Sample

KQ2210151-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	49.2	50.0	98	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden/201114-03.02 Task 09
Sample Matrix: Water

Service Request: K2206863
Date Analyzed: 07/08/22

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2210228-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Lithium	200.8	48.4	50.0	97	85-115



August 31, 2023

Service Request No:K2309073

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023-2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory August 11, 2023
For your reference, these analyses have been assigned our service request number **K2309073**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

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Client: Anchor QEA, LLC
Project: Gadsden 2023-2024
Sample Matrix: Water

Service Request: K2309073
Date Received: 08/11/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Fourteen water samples were received for analysis at ALS Environmental on 08/11/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 08/31/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-OGBT-MW-21VC-FB-LP-SC	Lab ID: K2309073-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	11		2	10	ug/L	200.8
Lithium, Dissolved	5.6		0.5	1.0	ug/L	200.8
Manganese, Dissolved	5.0		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-21VC-FB	Lab ID: K2309073-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	11		2	10	ug/L	200.8
Lithium, Dissolved	143		0.5	1.0	ug/L	200.8
Manganese, Dissolved	3.7		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-21VC-CTRL	Lab ID: K2309073-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	27		2	10	ug/L	200.8
Lithium, Dissolved	209		0.5	1.0	ug/L	200.8
Manganese, Dissolved	7.3		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-21VC-Mn-LP-SC	Lab ID: K2309073-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	52		2	10	ug/L	200.8
Lithium, Dissolved	2.9		0.5	1.0	ug/L	200.8
Manganese, Dissolved	87000		4	60	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-21VC-Mn-LP-SC-DUP	Lab ID: K2309073-009
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	2	J	2	10	ug/L	200.8
Lithium, Dissolved	2.7		0.5	1.0	ug/L	200.8
Manganese, Dissolved	86500		4	60	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-21VC-Mo-LP-SC	Lab ID: K2309073-010
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	32		2	10	ug/L	200.8
Lithium, Dissolved	1.0		0.5	1.0	ug/L	200.8
Manganese, Dissolved	110		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-21VC-FB-LP-SC	Lab ID: K2309073-012
---	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	18		2	10	ug/L	200.8
Lithium, Dissolved	5.1		0.5	1.0	ug/L	200.8
Manganese, Dissolved	11.0		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-21VC-FB	Lab ID: K2309073-013
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	7	J	2	10	ug/L	200.8
Lithium, Dissolved	117		0.5	1.0	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-OSBT-MW-21VC-FB	Lab ID: K2309073-013
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Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	39.9		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-21VC-CTRL	Lab ID: K2309073-014
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	9	J	2	10	ug/L	200.8
Lithium, Dissolved	165		0.5	1.0	ug/L	200.8
Manganese, Dissolved	45.5		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-21VC-Mn-LP-SC	Lab ID: K2309073-001
---	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	1.9		0.5	1.0	ug/L	200.8
Manganese, Dissolved	138000		4	60	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-21VC-Mn-LP-SC-DUP	Lab ID: K2309073-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	2.1		0.5	1.0	ug/L	200.8
Manganese, Dissolved	141000		4	60	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-21VC-Mo-LP-SC	Lab ID: K2309073-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	0.8	J	0.5	1.0	ug/L	200.8
Manganese, Dissolved	177		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-21VC-CER-LP-SC	Lab ID: K2309073-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	41.9		0.5	1.0	ug/L	200.8
Manganese, Dissolved	65800		4	60	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-21VC-CER-LP-SC	Lab ID: K2309073-011
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Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	10.7		0.5	1.0	ug/L	200.8
Manganese, Dissolved	37100		0.2	3.0	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request:K2309073

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2309073-001	GSD-OGBT-MW-21VC-Mn-LP-SC	8/9/2023	0800
K2309073-002	GSD-OGBT-MW-21VC-Mn-LP-SC-DUP	8/9/2023	0805
K2309073-003	GSD-OGBT-MW-21VC-Mo-LP-SC	8/9/2023	0810
K2309073-004	GSD-OGBT-MW-21VC-CER-LP-SC	8/9/2023	0815
K2309073-005	GSD-OGBT-MW-21VC-FB-LP-SC	8/9/2023	0820
K2309073-006	GSD-OGBT-MW-21VC-FB	8/9/2023	0825
K2309073-007	GSD-OGBT-MW-21VC-CTRL	8/9/2023	0830
K2309073-008	GSD-OSBT-MW-21VC-Mn-LP-SC	8/9/2023	0835
K2309073-009	GSD-OSBT-MW-21VC-Mn-LP-SC-DUP	8/9/2023	0840
K2309073-010	GSD-OSBT-MW-21VC-Mo-LP-SC	8/9/2023	0845
K2309073-011	GSD-OSBT-MW-21VC-CER-LP-SC	8/9/2023	0850
K2309073-012	GSD-OSBT-MW-21VC-FB-LP-SC	8/9/2023	0855
K2309073-013	GSD-OSBT-MW-21VC-FB	8/9/2023	0900
K2309073-014	GSD-OSBT-MW-21VC-CTRL	8/9/2023	0905

Chain of Custody Record & Laboratory Analysis Request

12309073


Laboratory Number: 503-972-5019					No. of Containers	Parameters										Comments/Preservation		
Date:		Collection				Matrix	Dissolved As, Fe, Mn	Dissolved Li, Fe, Mn	Dissolved As, Li, Fe, Mn									
EN 8/10/2023 - 8/11/23		Date	Time															
Project Name:		Gadsden 2023-2024																
Project Number:		221114-06.02 Task 08																
Project Manager:		Masa Kanematsu																
Phone Number:		503-972-5001																
Shipment Method:		ALS Courier																
Line	Field Sample ID	Date	Time	Matrix	No. of Containers	Dissolved As, Fe, Mn	Dissolved Li, Fe, Mn	Dissolved As, Li, Fe, Mn										
1	GSD-OGBT-MW-21VC-Mn-LP-SC	8/9/2023	8:00	Water	1		X											
2	GSD-OGBT-MW-21VC-Mn-LP-SC-DUP	8/9/2023	8:05	Water	1		X											
3	GSD-OGBT-MW-21VC-Mo-LP-SC	8/9/2023	8:10	Water	1		X											
4	GSD-OGBT-MW-21VC-CER-LP-SC	8/9/2023	8:15	Water	1		X											
5	GSD-OGBT-MW-21VC-FB-LP-SC	8/9/2023	8:20	Water	1		X											
6	GSD-OGBT-MW-21VC-FB	8/9/2023	8:25	Water	1		X											
7	GSD-OGBT-MW-21VC-CTRL	8/9/2023	8:30	Water	1		X											
8	GSD-OSBT-MW-21VC-Mn-LP-SC	8/9/2023	8:35	Water	1		X											
9	GSD-OSBT-MW-21VC-Mn-LP-SC-DUP	8/9/2023	8:40	Water	1		X											
10	GSD-OSBT-MW-21VC-Mo-LP-SC	8/9/2023	8:45	Water	1		X											
11	GSD-OSBT-MW-21VC-CER-LP-SC	8/9/2023	8:50	Water	1		X											
12	GSD-OSBT-MW-21VC-FB-LP-SC	8/9/2023	8:55	Water	1		X											
13	GSD-OSBT-MW-21VC-FB	8/9/2023	9:00	Water	1		X											
14	GSD-OSBT-MW-21VC-CTRL	8/9/2023	9:05	Water	1		X											
15																		
16																		
17																		
18																		
19																		
20																		

Masa Kanematsu
 6720 S Macadam Ave
 Suite 300

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by: <i>Emma Nordlund</i>	Company: Anchor QEA
Signature/Print Name: <i>[Signature]</i>	Date/Time: 8/11/23 9:15
Relinquished by: <i>Daniel Swartz</i>	Company: ALS
Signature/Print Name: <i>[Signature]</i>	Date/Time: 8/11/23 12:45

Received by: <i>Daniel Swartz</i>
Signature/Print Name: 8-11-23 4:50
Received by: <i>[Signature]</i>
Signature/Print Name: 8/11/23 12:45

PM Mark

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K23 09073
Received: 8/11/23 Opened: 8-11-23 By: DS Unloaded: 8/11/23 By: DS

- 1. Samples were received via? **USPS** **Fed Ex** **UPS** **DHL** **PDX** **Courier** **Hand Delivered**
- 2. Samples were received in: (circle) **Cooler** **Box** **Envelope** **Other** **NA**
- 3. Were custody seals on coolers? **NA** **Y** **(N)** If yes, how many and where? _____
If present, were custody seals intact? **Y** **(N)** If present, were they signed and dated? **Y** **(N)**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>9.0</u>	<u>5.4</u>	<u>IR02</u>					

- 4. Was a Temperature Blank present in cooler? **NA** **(Y)** **N** If yes, note the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? **NA** **(Y)** **N**
If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. **(NA)** **Y** **N**
- If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**
- 6. Packing material: **Inserts** **(Baggies)** **Bubble Wrap** **Gel Packs** **(Wet Ice)** **Dry Ice** **Sleeves** _____
- 7. Were custody papers properly filled out (ink, signed, etc.)? **NA** **(Y)** **N**
- 8. Were samples received in good condition (unbroken) **NA** **(Y)** **N**
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** **(Y)** **N**
- 10. Did all sample labels and tags agree with custody papers? **NA** **(Y)** **N**
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? **NA** **(Y)** **N**
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **(NA)** **Y** **N**
- 13. Were VOA vials received without headspace? Indicate in the table below. **(NA)** **Y** **N**
- 14. Was C12/Res negative? **(NA)** **Y** **N**
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM **(NA)** **Y** **N**
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? **(NA)** **Y** **N** Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: DIC not PH due to limited volume



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2309073

Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC
Lab Code: K2309073-001
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC-DUP
Lab Code: K2309073-002
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-21VC-Mo-LP-SC
Lab Code: K2309073-003
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-21VC-CER-LP-SC
Lab Code: K2309073-004
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-21VC-FB-LP-SC
Lab Code: K2309073-005
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2309073

Sample Name: GSD-OGBT-MW-21VC-FB
Lab Code: K2309073-006
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-21VC-CTRL
Lab Code: K2309073-007
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-21VC-Mn-LP-SC
Lab Code: K2309073-008
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-21VC-Mn-LP-SC-DUP
Lab Code: K2309073-009
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-21VC-Mo-LP-SC
Lab Code: K2309073-010
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2309073

Sample Name: GSD-OSBT-MW-21VC-CER-LP-SC
Lab Code: K2309073-011
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-21VC-FB-LP-SC
Lab Code: K2309073-012
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-21VC-FB
Lab Code: K2309073-013
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-21VC-CTRL
Lab Code: K2309073-014
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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Metals

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC
Lab Code: K2309073-001

Service Request: K2309073
Date Collected: 08/09/23 08:00
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	10	2	5	08/31/23 14:29	08/16/23	
Lithium	200.8	1.9	ug/L	1.0	0.5	5	08/31/23 14:29	08/16/23	
Manganese	200.8	138000	ug/L	60	4	100	08/31/23 15:32	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC-DUP
Lab Code: K2309073-002

Service Request: K2309073
Date Collected: 08/09/23 08:05
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	10	2	5	08/31/23 14:33	08/16/23	
Lithium	200.8	2.1	ug/L	1.0	0.5	5	08/31/23 14:33	08/16/23	
Manganese	200.8	141000	ug/L	60	4	100	08/31/23 15:36	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-21VC-Mo-LP-SC
Lab Code: K2309073-003

Service Request: K2309073
Date Collected: 08/09/23 08:10
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	10	2	5	08/31/23 14:38	08/16/23	
Lithium	200.8	0.8 J	ug/L	1.0	0.5	5	08/31/23 14:38	08/16/23	
Manganese	200.8	177	ug/L	3.0	0.2	5	08/31/23 14:38	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-21VC-CER-LP-SC
Lab Code: K2309073-004

Service Request: K2309073
Date Collected: 08/09/23 08:15
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	10	2	5	08/31/23 14:40	08/16/23	
Lithium	200.8	41.9	ug/L	1.0	0.5	5	08/31/23 14:40	08/16/23	
Manganese	200.8	65800	ug/L	60	4	100	08/31/23 15:41	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-21VC-FB-LP-SC
Lab Code: K2309073-005

Service Request: K2309073
Date Collected: 08/09/23 08:20
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	11	ug/L	10	2	5	08/31/23 15:01	08/16/23	
Lithium	200.8	5.6	ug/L	1.0	0.5	5	08/31/23 15:01	08/16/23	
Manganese	200.8	5.0	ug/L	3.0	0.2	5	08/31/23 15:01	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-21VC-FB
Lab Code: K2309073-006

Service Request: K2309073
Date Collected: 08/09/23 08:25
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	11	ug/L	10	2	5	08/31/23 15:03	08/16/23	
Lithium	200.8	143	ug/L	1.0	0.5	5	08/31/23 15:03	08/16/23	
Manganese	200.8	3.7	ug/L	3.0	0.2	5	08/31/23 15:03	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-21VC-CTRL
Lab Code: K2309073-007

Service Request: K2309073
Date Collected: 08/09/23 08:30
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	27	ug/L	10	2	5	08/31/23 15:04	08/16/23	
Lithium	200.8	209	ug/L	1.0	0.5	5	08/31/23 15:04	08/16/23	
Manganese	200.8	7.3	ug/L	3.0	0.2	5	08/31/23 15:04	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-21VC-Mn-LP-SC
Lab Code: K2309073-008

Service Request: K2309073
Date Collected: 08/09/23 08:35
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	52	ug/L	10	2	5	08/31/23 15:06	08/16/23	
Lithium	200.8	2.9	ug/L	1.0	0.5	5	08/31/23 15:06	08/16/23	
Manganese	200.8	87000	ug/L	60	4	100	08/31/23 15:43	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-21VC-Mn-LP-SC-DUP
Lab Code: K2309073-009

Service Request: K2309073
Date Collected: 08/09/23 08:40
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	2 J	ug/L	10	2	5	08/31/23 15:08	08/16/23	
Lithium	200.8	2.7	ug/L	1.0	0.5	5	08/31/23 15:08	08/16/23	
Manganese	200.8	86500	ug/L	60	4	100	08/31/23 15:45	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-21VC-Mo-LP-SC
Lab Code: K2309073-010

Service Request: K2309073
Date Collected: 08/09/23 08:45
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	32	ug/L	10	2	5	08/31/23 15:09	08/16/23	
Lithium	200.8	1.0	ug/L	1.0	0.5	5	08/31/23 15:09	08/16/23	
Manganese	200.8	110	ug/L	3.0	0.2	5	08/31/23 15:09	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-21VC-CER-LP-SC
Lab Code: K2309073-011

Service Request: K2309073
Date Collected: 08/09/23 08:50
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	10	2	5	08/31/23 15:11	08/16/23	
Lithium	200.8	10.7	ug/L	1.0	0.5	5	08/31/23 15:11	08/16/23	
Manganese	200.8	37100	ug/L	3.0	0.2	5	08/31/23 15:11	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-21VC-FB-LP-SC
Lab Code: K2309073-012

Service Request: K2309073
Date Collected: 08/09/23 08:55
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	18	ug/L	10	2	5	08/31/23 15:12	08/16/23	
Lithium	200.8	5.1	ug/L	1.0	0.5	5	08/31/23 15:12	08/16/23	
Manganese	200.8	11.0	ug/L	3.0	0.2	5	08/31/23 15:12	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-21VC-FB
Lab Code: K2309073-013

Service Request: K2309073
Date Collected: 08/09/23 09:00
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	7 J	ug/L	10	2	5	08/31/23 15:14	08/16/23	
Lithium	200.8	117	ug/L	1.0	0.5	5	08/31/23 15:14	08/16/23	
Manganese	200.8	39.9	ug/L	3.0	0.2	5	08/31/23 15:14	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-21VC-CTRL
Lab Code: K2309073-014

Service Request: K2309073
Date Collected: 08/09/23 09:05
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	9 J	ug/L	10	2	5	08/31/23 15:16	08/16/23	
Lithium	200.8	165	ug/L	1.0	0.5	5	08/31/23 15:16	08/16/23	
Manganese	200.8	45.5	ug/L	3.0	0.2	5	08/31/23 15:16	08/16/23	



QC Summary Forms

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ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2314202-01

Service Request: K2309073
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	0.5 J	ug/L	2.0	0.3	1	08/31/23 14:25	08/16/23	
Lithium	200.8	ND U	ug/L	0.20	0.10	1	08/31/23 14:25	08/16/23	
Manganese	200.8	0.05 J	ug/L	0.60	0.04	1	08/31/23 14:25	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309073
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23
Date Extracted: 08/16/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC
Lab Code: K2309073-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2314202-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	ND U	53	50	106	70-130
Lithium	1.9	55.8	50.0	108	70-130
Manganese	138000	138000	25	-976 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309073
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23
Date Extracted: 08/16/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC-DUP
Lab Code: K2309073-002
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2314202-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	ND U	51	50	101	70-130
Lithium	2.1	54.2	50.0	104	70-130
Manganese	141000	140000	25	-4942 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309073
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC
Lab Code: K2309073-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2314202-03 Result, Average, RPD, RPD Limit. Rows include Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309073
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-21VC-Mn-LP-SC-DUP
Lab Code: K2309073-002

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2314202-05 Result			
Iron	200.8	10	2	ND U	ND U	ND	-	20
Lithium	200.8	1.0	0.5	2.1	2.4	2.3	13	20
Manganese	200.8	60	4	141000	142000	142000	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309073
Date Analyzed: 08/31/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2314202-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	200.8	51.5	50.0	103	85-115
Lithium	200.8	53.5	50.0	107	85-115
Manganese	200.8	25.3	25.0	101	85-115



August 31, 2023

Service Request No:K2309075

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023-2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory August 11, 2023
For your reference, these analyses have been assigned our service request number **K2309075**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
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Client: Anchor QEA, LLC
Project: Gadsden 2023-2024
Sample Matrix: Water

Service Request: K2309075
Date Received: 08/11/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Thirteen water samples were received for analysis at ALS Environmental on 08/11/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 08/31/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-OGBT-MW-2-FS	Lab ID: K2309075-001
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	59.2		0.5	2.5	ug/L	200.8
Iron, Dissolved	214000		2	10	ug/L	200.8
Manganese, Dissolved	9250		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-2-FS-DUP	Lab ID: K2309075-002
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	83.8		0.5	2.5	ug/L	200.8
Iron, Dissolved	214000		2	10	ug/L	200.8
Manganese, Dissolved	9260		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-2-PM	Lab ID: K2309075-003
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	32.4		0.5	2.5	ug/L	200.8
Iron, Dissolved	5	J	2	10	ug/L	200.8
Manganese, Dissolved	11000		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-2-FS-PM	Lab ID: K2309075-004
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.5	J	0.5	2.5	ug/L	200.8
Iron, Dissolved	1990		2	10	ug/L	200.8
Manganese, Dissolved	10500		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-2-FB	Lab ID: K2309075-005
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	293		0.5	2.5	ug/L	200.8
Iron, Dissolved	113		2	10	ug/L	200.8
Manganese, Dissolved	7.8		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-2-CTRL	Lab ID: K2309075-006
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	949		0.5	2.5	ug/L	200.8
Iron, Dissolved	3	J	2	10	ug/L	200.8
Manganese, Dissolved	8440		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-2-FS	Lab ID: K2309075-007
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	14.6		0.5	2.5	ug/L	200.8
Iron, Dissolved	108000		2	10	ug/L	200.8
Manganese, Dissolved	28000		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-2-FS-DUP	Lab ID: K2309075-008
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	13.5		0.5	2.5	ug/L	200.8
Iron, Dissolved	99100		2	10	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-OSBT-MW-2-FS-DUP	Lab ID: K2309075-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	31200		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-2-PM	Lab ID: K2309075-009
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.7	J	0.5	2.5	ug/L	200.8
Iron, Dissolved	2	J	2	10	ug/L	200.8
Manganese, Dissolved	5850		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-2-FS-PM	Lab ID: K2309075-010
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.9	J	0.5	2.5	ug/L	200.8
Iron, Dissolved	62		2	10	ug/L	200.8
Manganese, Dissolved	4100		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-2-FB	Lab ID: K2309075-011
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	51.9		0.5	2.5	ug/L	200.8
Iron, Dissolved	68		2	10	ug/L	200.8
Manganese, Dissolved	78.3		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-2-CTRL	Lab ID: K2309075-012
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	50.0		0.5	2.5	ug/L	200.8
Iron, Dissolved	311		2	10	ug/L	200.8
Manganese, Dissolved	4950		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-OBT-MW-2-Spiked-As	Lab ID: K2309075-013
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	4790		0.5	2.5	ug/L	200.8
Iron, Dissolved	5190		2	10	ug/L	200.8
Manganese, Dissolved	8860		0.2	1.0	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08

Service Request:K2309075

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2309075-001	GSD-OGBT-MW-2-FS	8/9/2023	0910
K2309075-002	GSD-OGBT-MW-2-FS-DUP	8/9/2023	0915
K2309075-003	GSD-OGBT-MW-2-PM	8/9/2023	0920
K2309075-004	GSD-OGBT-MW-2-FS-PM	8/9/2023	0925
K2309075-005	GSD-OGBT-MW-2-FB	8/9/2023	0930
K2309075-006	GSD-OGBT-MW-2-CTRL	8/9/2023	0935
K2309075-007	GSD-OSBT-MW-2-FS	8/9/2023	0940
K2309075-008	GSD-OSBT-MW-2-FS-DUP	8/9/2023	0945
K2309075-009	GSD-OSBT-MW-2-PM	8/9/2023	0950
K2309075-010	GSD-OSBT-MW-2-FS-PM	8/9/2023	0955
K2309075-011	GSD-OSBT-MW-2-FB	8/9/2023	1000
K2309075-012	GSD-OSBT-MW-2-CTRL	8/9/2023	1005
K2309075-013	GSD-OBT-MW-2-Spiked-As	8/2/2023	1215

PM Mack

Cooler Receipt and Preservation Form

Client Anchor QEA

Service Request K23 09075

Received: 8/11/23

Opened: 8-11-23

By: DS

Unloaded: 8/11/23

By: DS

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>9.0</u>	<u>5.4</u>	<u>DR02</u>					

4. Was a Temperature Blank present in cooler? NA Y N If yes, note the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":

5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____

- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: DIC not PH due to limited volume



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08

Service Request: K2309075

Sample Name: GSD-OGBT-MW-2-FS
Lab Code: K2309075-001
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-2-FS-DUP
Lab Code: K2309075-002
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-2-PM
Lab Code: K2309075-003
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-2-FS-PM
Lab Code: K2309075-004
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-2-FB
Lab Code: K2309075-005
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08

Service Request: K2309075

Sample Name: GSD-OGBT-MW-2-CTRL
Lab Code: K2309075-006
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-2-FS
Lab Code: K2309075-007
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-2-FS-DUP
Lab Code: K2309075-008
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-2-PM
Lab Code: K2309075-009
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-2-FS-PM
Lab Code: K2309075-010
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08

Service Request: K2309075

Sample Name: GSD-OSBT-MW-2-FB
Lab Code: K2309075-011
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-2-CTRL
Lab Code: K2309075-012
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OBT-MW-2-Spiked-As
Lab Code: K2309075-013
Sample Matrix: Water

Date Collected: 08/2/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-2-FS
Lab Code: K2309075-001

Service Request: K2309075
Date Collected: 08/09/23 09:10
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	59.2	ug/L	2.5	0.5	5	08/31/23 12:38	08/16/23	
Iron	200.8	214000	ug/L	10	2	5	08/31/23 12:38	08/16/23	
Manganese	200.8	9250	ug/L	1.0	0.2	5	08/31/23 12:38	08/16/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-2-FS-DUP
Lab Code: K2309075-002

Service Request: K2309075
Date Collected: 08/09/23 09:15
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	83.8	ug/L	2.5	0.5	5	08/31/23 12:42	08/16/23	
Iron	200.8	214000	ug/L	10	2	5	08/31/23 12:42	08/16/23	
Manganese	200.8	9260	ug/L	1.0	0.2	5	08/31/23 12:42	08/16/23	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-2-PM
Lab Code: K2309075-003

Service Request: K2309075
Date Collected: 08/09/23 09:20
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	32.4	ug/L	2.5	0.5	5	08/31/23 12:46	08/16/23	
Iron	200.8	5 J	ug/L	10	2	5	08/31/23 12:46	08/16/23	
Manganese	200.8	11000	ug/L	1.0	0.2	5	08/31/23 12:46	08/16/23	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-2-FS-PM
Lab Code: K2309075-004

Service Request: K2309075
Date Collected: 08/09/23 09:25
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.5 J	ug/L	2.5	0.5	5	08/31/23 12:47	08/16/23	
Iron	200.8	1990	ug/L	10	2	5	08/31/23 12:47	08/16/23	
Manganese	200.8	10500	ug/L	1.0	0.2	5	08/31/23 12:47	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-2-FB
Lab Code: K2309075-005

Service Request: K2309075
Date Collected: 08/09/23 09:30
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	293	ug/L	2.5	0.5	5	08/31/23 12:52	08/16/23	
Iron	200.8	113	ug/L	10	2	5	08/31/23 12:52	08/16/23	
Manganese	200.8	7.8	ug/L	1.0	0.2	5	08/31/23 12:52	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-2-CTRL
Lab Code: K2309075-006

Service Request: K2309075
Date Collected: 08/09/23 09:35
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	949	ug/L	2.5	0.5	5	08/31/23 12:53	08/16/23	
Iron	200.8	3 J	ug/L	10	2	5	08/31/23 12:53	08/16/23	
Manganese	200.8	8440	ug/L	1.0	0.2	5	08/31/23 12:53	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-2-FS
Lab Code: K2309075-007

Service Request: K2309075
Date Collected: 08/09/23 09:40
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	14.6	ug/L	2.5	0.5	5	08/31/23 12:54	08/16/23	
Iron	200.8	108000	ug/L	10	2	5	08/31/23 12:54	08/16/23	
Manganese	200.8	28000	ug/L	1.0	0.2	5	08/31/23 12:54	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-2-FS-DUP
Lab Code: K2309075-008

Service Request: K2309075
Date Collected: 08/09/23 09:45
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	13.5	ug/L	2.5	0.5	5	08/31/23 12:56	08/16/23	
Iron	200.8	99100	ug/L	10	2	5	08/31/23 12:56	08/16/23	
Manganese	200.8	31200	ug/L	1.0	0.2	5	08/31/23 12:56	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-2-PM
Lab Code: K2309075-009

Service Request: K2309075
Date Collected: 08/09/23 09:50
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.7 J	ug/L	2.5	0.5	5	08/31/23 12:57	08/16/23	
Iron	200.8	2 J	ug/L	10	2	5	08/31/23 12:57	08/16/23	
Manganese	200.8	5850	ug/L	1.0	0.2	5	08/31/23 12:57	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-2-FS-PM
Lab Code: K2309075-010

Service Request: K2309075
Date Collected: 08/09/23 09:55
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.9 J	ug/L	2.5	0.5	5	08/31/23 12:59	08/16/23	
Iron	200.8	62	ug/L	10	2	5	08/31/23 12:59	08/16/23	
Manganese	200.8	4100	ug/L	1.0	0.2	5	08/31/23 12:59	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-2-FB
Lab Code: K2309075-011

Service Request: K2309075
Date Collected: 08/09/23 10:00
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	51.9	ug/L	2.5	0.5	5	08/31/23 13:00	08/16/23	
Iron	200.8	68	ug/L	10	2	5	08/31/23 13:00	08/16/23	
Manganese	200.8	78.3	ug/L	1.0	0.2	5	08/31/23 13:00	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-2-CTRL
Lab Code: K2309075-012

Service Request: K2309075
Date Collected: 08/09/23 10:05
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	50.0	ug/L	2.5	0.5	5	08/31/23 13:01	08/16/23	
Iron	200.8	311	ug/L	10	2	5	08/31/23 13:01	08/16/23	
Manganese	200.8	4950	ug/L	1.0	0.2	5	08/31/23 13:01	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OBT-MW-2-Spiked-As
Lab Code: K2309075-013

Service Request: K2309075
Date Collected: 08/02/23 12:15
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	4790	ug/L	2.5	0.5	5	08/31/23 13:03	08/16/23	
Iron	200.8	5190	ug/L	10	2	5	08/31/23 13:03	08/16/23	
Manganese	200.8	8860	ug/L	1.0	0.2	5	08/31/23 13:03	08/16/23	



QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2314150-01

Service Request: K2309075
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	08/31/23 12:35	08/16/23	
Iron	200.8	0.6 J	ug/L	2.0	0.3	1	08/31/23 12:35	08/16/23	
Manganese	200.8	0.07 J	ug/L	0.20	0.04	1	08/31/23 12:35	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309075
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23
Date Extracted: 08/16/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-2-FS
Lab Code: K2309075-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2314150-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	59.2	105	50.0	92	70-130
Iron	214000	213000	50	-2556 #	70-130
Manganese	9250	9340	25.0	375 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309075
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23
Date Extracted: 08/16/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-2-FS-DUP
Lab Code: K2309075-002
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2314150-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	83.8	131	50.0	94	70-130
Iron	214000	213000	50	-2228 #	70-130
Manganese	9260	9140	25.0	-485 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309075
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-2-FS
Lab Code: K2309075-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2314150-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309075
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-2-FS-DUP
Lab Code: K2309075-002

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2314150-05 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/231114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309075
Date Analyzed: 08/31/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2314150-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.3	50.0	99	85-115
Iron	200.8	52.1	50.0	104	85-115
Manganese	200.8	25.7	25.0	103	85-115



August 31, 2023

Service Request No:K2309077

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023-2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory August 11, 2023
For your reference, these analyses have been assigned our service request number **K2309077**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden 2023-2024
Sample Matrix: Water

Service Request: K2309077
Date Received: 08/11/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Fourteen water samples were received for analysis at ALS Environmental on 08/11/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 08/31/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-OGBT-MW-4-FS	Lab ID: K2309077-001
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	5.5		0.5	2.5	ug/L	200.8
Iron, Dissolved	218000		2	10	ug/L	200.8
Manganese, Dissolved	2930		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-4-FS-DUP	Lab ID: K2309077-002
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	8.4		0.5	2.5	ug/L	200.8
Iron, Dissolved	235000		30	200	ug/L	200.8
Manganese, Dissolved	2990		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-4-PM	Lab ID: K2309077-003
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	6.2		0.5	2.5	ug/L	200.8
Iron, Dissolved	4	J	2	10	ug/L	200.8
Manganese, Dissolved	7780		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-4-FS-PM	Lab ID: K2309077-004
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.3	J	0.5	2.5	ug/L	200.8
Iron, Dissolved	2810		2	10	ug/L	200.8
Manganese, Dissolved	10700		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-4-FB	Lab ID: K2309077-005
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	504		0.5	2.5	ug/L	200.8
Iron, Dissolved	3	J	2	10	ug/L	200.8
Manganese, Dissolved	26.4		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OGBT-MW-4-CTRL	Lab ID: K2309077-006
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	162		0.5	2.5	ug/L	200.8
Iron, Dissolved	10		2	10	ug/L	200.8
Manganese, Dissolved	2150		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-4-FS	Lab ID: K2309077-007
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	7.5		0.5	2.5	ug/L	200.8
Iron, Dissolved	178000		2	10	ug/L	200.8
Manganese, Dissolved	4860		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-4-FS-DUP	Lab ID: K2309077-008
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	7.0		0.5	2.5	ug/L	200.8
Iron, Dissolved	185000		2	10	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-OSBT-MW-4-FS-DUP	Lab ID: K2309077-008
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	5080		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-4-PM	Lab ID: K2309077-009
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	3.2		0.5	2.5	ug/L	200.8
Iron, Dissolved	3	J	2	10	ug/L	200.8
Manganese, Dissolved	860		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-4-FS-PM	Lab ID: K2309077-010
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	4.3		0.5	2.5	ug/L	200.8
Iron, Dissolved	380		2	10	ug/L	200.8
Manganese, Dissolved	18400		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-4-FB	Lab ID: K2309077-011
------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	88.7		0.5	2.5	ug/L	200.8
Iron, Dissolved	25		2	10	ug/L	200.8
Manganese, Dissolved	26.5		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OSBT-MW-4-CTRL	Lab ID: K2309077-012
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	12.0		0.5	2.5	ug/L	200.8
Iron, Dissolved	11		2	10	ug/L	200.8
Manganese, Dissolved	2390		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OBT-MW-4-Spiked-As	Lab ID: K2309077-013
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	5170		0.5	2.5	ug/L	200.8
Iron, Dissolved	19400		2	10	ug/L	200.8
Manganese, Dissolved	2500		0.2	3.0	ug/L	200.8

CLIENT ID: GSD-OBT-MB	Lab ID: K2309077-014
------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	0.5	J	0.5	1.0	ug/L	200.8
Manganese, Dissolved	0.5	J	0.2	3.0	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request:K2309077

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2309077-001	GSD-OGBT-MW-4-FS	8/9/2023	1010
K2309077-002	GSD-OGBT-MW-4-FS-DUP	8/9/2023	1015
K2309077-003	GSD-OGBT-MW-4-PM	8/9/2023	1020
K2309077-004	GSD-OGBT-MW-4-FS-PM	8/9/2023	1025
K2309077-005	GSD-OGBT-MW-4-FB	8/9/2023	1030
K2309077-006	GSD-OGBT-MW-4-CTRL	8/9/2023	1035
K2309077-007	GSD-OSBT-MW-4-FS	8/9/2023	1040
K2309077-008	GSD-OSBT-MW-4-FS-DUP	8/9/2023	1045
K2309077-009	GSD-OSBT-MW-4-PM	8/9/2023	1050
K2309077-010	GSD-OSBT-MW-4-FS-PM	8/9/2023	1055
K2309077-011	GSD-OSBT-MW-4-FB	8/9/2023	1100
K2309077-012	GSD-OSBT-MW-4-CTRL	8/9/2023	1105
K2309077-013	GSD-OBT-MW-4-Spiked-As	8/2/2023	1220
K2309077-014	GSD-OBT-MB	8/9/2023	1110

Chain of Custody Record & Laboratory Analysis Request

12309077

Laboratory Number: 503-972-5019					Parameters										ANCHOR QEA Masa Kanematsu 6720 S Macadam Ave Suite 300 Comments/Preservation									
Date:	EN -8/10/2023- 8/11/23				No. of Containers	Dissolved As, Fe, Mn	Dissolved Li, Fe, Mn	Dissolved As, Li, Fe, Mn																
Project Name:	Gadsden 2023-2024																							
Project Number:	221114-06.02 Task 08																							
Project Manager:	Masa Kanematsu																							
Phone Number:	503-972-5001																							
Shipment Method:	ALS Courier																							
Line	Field Sample ID	Collection		Matrix																				
		Date	Time																					
1	GSD-OGBT-MW-4-FS	8/9/2023	10:10	Water	1	X																		
2	GSD-OGBT-MW-4-FS-DUP	8/9/2023	10:15	Water	1	X																		
3	GSD-OGBT-MW-4-PM	8/9/2023	10:20	Water	1	X																		
4	GSD-OGBT-MW-4-FS-PM	8/9/2023	10:25	Water	1	X																		
5	GSD-OGBT-MW-4-FB	8/9/2023	10:30	Water	1	X																		
6	GSD-OGBT-MW-4-CTRL	8/9/2023	10:35	Water	1	X																		
7	GSD-OSBT-MW-4-FS	8/9/2023	10:40	Water	1	X																		
8	GSD-OSBT-MW-4-FS-DUP	8/9/2023	10:45	Water	1	X																		
9	GSD-OSBT-MW-4-PM	8/9/2023	10:50	Water	1	X																		
10	GSD-OSBT-MW-4-FS-PM	8/9/2023	10:55	Water	1	X																		
11	GSD-OSBT-MW-4-FB	8/9/2023	11:00	Water	1	X																		
12	GSD-OSBT-MW-4-CTRL	8/9/2023	11:05	Water	1	X																		
13	GSD-OBT-MW-4-Spiked-As	8/2/2023	12:20	Water	1	X																		Approx. 5 mg/L Arsenic.
14	GSD-OBT-MB	8/9/2023	11:10	Water	1																			
15																								
16																								
17																								
18																								
19																								
20																								

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by: <i>Emma Nordlund</i>	Company: Anchor QEA
Signature/Print Name: <i>Emma Nordlund</i>	Date/Time: 8/11/23 9:15
Relinquished by: <i>Daniel Swartz</i>	Company: ALS
Signature/Print Name: <i>Daniel Swartz</i>	Date/Time: 8-11-23 1245

Received by: <i>Daniel Swartz Devin 8/11/23</i>
Signature/Print Name: <i>8-11-23 09150</i>
Received by: <i>Fran Alaci 8/11/23 RVS</i>
Signature/Print Name:

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

PM Mack

Cooler Receipt and Preservation Form

Client Anchor QEA Service Request K23 09077
Received: 8/11/23 Opened: 8-11-23 By: DS Unloaded: 8/11/23 By: DS

1. Samples were received via? **USPS** **Fed Ex** **UPS** **DHL** **PDX** **Courier** **Hand Delivered**
2. Samples were received in: (circle) **Cooler** **Box** **Envelope** **Other** **NA**
3. Were custody seals on coolers? **NA** **Y** **(N)** If yes, how many and where? _____
- If present, were custody seals intact? **Y** **(N)** If present, were they signed and dated? **Y** **(N)**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
9.0	5.4	DR02					

4. Was a Temperature Blank present in cooler? **NA** **(Y)** **N** If yes, note the temperature in the appropriate column above:

If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":

5. Were samples received within the method specified temperature ranges? **NA** **(Y)** **N**

If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. **(NA)** **Y** **N**

If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**

6. Packing material: **Inserts** **(Baggies)** **Bubble Wrap** **Gel Packs** **(Wet Ice)** **Dry Ice** **Sleeves**

7. Were custody papers properly filled out (ink, signed, etc.)? **NA** **(Y)** **N**

8. Were samples received in good condition (unbroken) **NA** **(Y)** **N**

9. Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** **(Y)** **N**

10. Did all sample labels and tags agree with custody papers? **NA** **(Y)** **N**

11. Were appropriate bottles/containers and volumes received for the tests indicated? **NA** **(Y)** **N**

12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **(NA)** **Y** **N**

13. Were VOA vials received without headspace? Indicate in the table below. **(NA)** **Y** **N**

14. Was C12/Res negative? **(NA)** **Y** **N**

15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM **(NA)** **Y** **N**

16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? **(NA)** **Y** **N** Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: DIC not PH due to limited volume



Miscellaneous Forms

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Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2309077

Sample Name: GSD-OGBT-MW-4-FS
Lab Code: K2309077-001
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-4-FS-DUP
Lab Code: K2309077-002
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-4-PM
Lab Code: K2309077-003
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-4-FS-PM
Lab Code: K2309077-004
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OGBT-MW-4-FB
Lab Code: K2309077-005
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2309077

Sample Name: GSD-OGBT-MW-4-CTRL
Lab Code: K2309077-006
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-4-FS
Lab Code: K2309077-007
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-4-FS-DUP
Lab Code: K2309077-008
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-4-PM
Lab Code: K2309077-009
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-4-FS-PM
Lab Code: K2309077-010
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

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dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2309077

Sample Name: GSD-OSBT-MW-4-FB
Lab Code: K2309077-011
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OSBT-MW-4-CTRL
Lab Code: K2309077-012
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OBT-MW-4-Spiked-As
Lab Code: K2309077-013
Sample Matrix: Water

Date Collected: 08/2/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-OBT-MB
Lab Code: K2309077-014
Sample Matrix: Water

Date Collected: 08/9/23
Date Received: 08/11/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

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Metals

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-4-FS
Lab Code: K2309077-001

Service Request: K2309077
Date Collected: 08/09/23 10:10
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	5.5	ug/L	2.5	0.5	5	08/31/23 15:53	08/16/23	
Iron	200.8	218000	ug/L	10	2	5	08/31/23 15:53	08/16/23	
Manganese	200.8	2930	ug/L	3.0	0.2	5	08/31/23 15:53	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-4-FS-DUP
Lab Code: K2309077-002

Service Request: K2309077
Date Collected: 08/09/23 10:15
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	8.4	ug/L	2.5	0.5	5	08/31/23 15:57	08/16/23	
Iron	200.8	235000	ug/L	200	30	100	08/31/23 16:28	08/16/23	
Manganese	200.8	2990	ug/L	3.0	0.2	5	08/31/23 15:57	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-4-PM
Lab Code: K2309077-003

Service Request: K2309077
Date Collected: 08/09/23 10:20
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	6.2	ug/L	2.5	0.5	5	08/31/23 16:02	08/16/23	
Iron	200.8	4 J	ug/L	10	2	5	08/31/23 16:02	08/16/23	
Manganese	200.8	7780	ug/L	3.0	0.2	5	08/31/23 16:02	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-4-FS-PM
Lab Code: K2309077-004

Service Request: K2309077
Date Collected: 08/09/23 10:25
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.3 J	ug/L	2.5	0.5	5	08/31/23 16:04	08/16/23	
Iron	200.8	2810	ug/L	10	2	5	08/31/23 16:04	08/16/23	
Manganese	200.8	10700	ug/L	3.0	0.2	5	08/31/23 16:04	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-4-FB
Lab Code: K2309077-005

Service Request: K2309077
Date Collected: 08/09/23 10:30
Date Received: 08/11/23 12:45

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	504	ug/L	2.5	0.5	5	08/31/23 16:09	08/16/23	
Iron	200.8	3 J	ug/L	10	2	5	08/31/23 16:09	08/16/23	
Manganese	200.8	26.4	ug/L	3.0	0.2	5	08/31/23 16:09	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT-MW-4-CTRL
Lab Code: K2309077-006

Service Request: K2309077
Date Collected: 08/09/23 10:35
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	162	ug/L	2.5	0.5	5	08/31/23 16:10	08/16/23	
Iron	200.8	10	ug/L	10	2	5	08/31/23 16:10	08/16/23	
Manganese	200.8	2150	ug/L	3.0	0.2	5	08/31/23 16:10	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-4-FS
Lab Code: K2309077-007

Service Request: K2309077
Date Collected: 08/09/23 10:40
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.5	ug/L	2.5	0.5	5	08/31/23 16:12	08/16/23	
Iron	200.8	178000	ug/L	10	2	5	08/31/23 16:12	08/16/23	
Manganese	200.8	4860	ug/L	3.0	0.2	5	08/31/23 16:12	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-4-FS-DUP
Lab Code: K2309077-008

Service Request: K2309077
Date Collected: 08/09/23 10:45
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.0	ug/L	2.5	0.5	5	08/31/23 16:14	08/16/23	
Iron	200.8	185000	ug/L	10	2	5	08/31/23 16:14	08/16/23	
Manganese	200.8	5080	ug/L	3.0	0.2	5	08/31/23 16:14	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-4-PM
Lab Code: K2309077-009

Service Request: K2309077
Date Collected: 08/09/23 10:50
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	3.2	ug/L	2.5	0.5	5	08/31/23 16:15	08/16/23	
Iron	200.8	3 J	ug/L	10	2	5	08/31/23 16:15	08/16/23	
Manganese	200.8	860	ug/L	3.0	0.2	5	08/31/23 16:15	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-4-FS-PM
Lab Code: K2309077-010

Service Request: K2309077
Date Collected: 08/09/23 10:55
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	4.3	ug/L	2.5	0.5	5	08/31/23 16:17	08/16/23	
Iron	200.8	380	ug/L	10	2	5	08/31/23 16:17	08/16/23	
Manganese	200.8	18400	ug/L	3.0	0.2	5	08/31/23 16:17	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-4-FB
Lab Code: K2309077-011

Service Request: K2309077
Date Collected: 08/09/23 11:00
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	88.7	ug/L	2.5	0.5	5	08/31/23 16:18	08/16/23	
Iron	200.8	25	ug/L	10	2	5	08/31/23 16:18	08/16/23	
Manganese	200.8	26.5	ug/L	3.0	0.2	5	08/31/23 16:18	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT-MW-4-CTRL
Lab Code: K2309077-012

Service Request: K2309077
Date Collected: 08/09/23 11:05
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	12.0	ug/L	2.5	0.5	5	08/31/23 16:20	08/16/23	
Iron	200.8	11	ug/L	10	2	5	08/31/23 16:20	08/16/23	
Manganese	200.8	2390	ug/L	3.0	0.2	5	08/31/23 16:20	08/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OBT-MW-4-Spiked-As
Lab Code: K2309077-013

Service Request: K2309077
Date Collected: 08/02/23 12:20
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	5170	ug/L	2.5	0.5	5	08/31/23 16:22	08/16/23	
Iron	200.8	19400	ug/L	10	2	5	08/31/23 16:22	08/16/23	
Manganese	200.8	2500	ug/L	3.0	0.2	5	08/31/23 16:22	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OBT-MB
Lab Code: K2309077-014

Service Request: K2309077
Date Collected: 08/09/23 11:10
Date Received: 08/11/23 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	2.5	0.5	5	08/31/23 16:23	08/16/23	
Iron	200.8	ND U	ug/L	10	2	5	08/31/23 16:23	08/16/23	
Lithium	200.8	0.5 J	ug/L	1.0	0.5	5	08/31/23 16:23	08/16/23	
Manganese	200.8	0.5 J	ug/L	3.0	0.2	5	08/31/23 16:23	08/16/23	



QC Summary Forms

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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2314204-01

Service Request: K2309077
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	08/31/23 15:49	08/16/23	
Iron	200.8	0.4 J	ug/L	2.0	0.3	1	08/31/23 15:49	08/16/23	
Lithium	200.8	ND U	ug/L	0.20	0.10	1	08/31/23 15:49	08/16/23	
Manganese	200.8	0.32 J	ug/L	0.60	0.04	1	08/31/23 15:49	08/16/23	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309077
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23
Date Extracted: 08/16/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-4-FS
Lab Code: K2309077-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2314204-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	5.5	56.6	50.0	102	70-130
Iron	218000	218000	50	-1318 #	70-130
Lithium	0.7 J	54.8	50.0	108	70-130
Manganese	2930	2970	25.0	161 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309077
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23
Date Extracted: 08/16/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-4-FS-DUP
Lab Code: K2309077-002
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2314204-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	8.4	56.5	50.0	96	70-130
Iron	235000	231000	50	-7523 #	70-130
Lithium	0.7 J	53.8	50.0	106	70-130
Manganese	2990	2940	25.0	-192 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309077
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-4-FS
Lab Code: K2309077-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2314204-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309077
Date Collected: 08/09/23
Date Received: 08/11/23
Date Analyzed: 08/31/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-OGBT-MW-4-FS-DUP
Lab Code: K2309077-002

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2314204-05 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2309077
Date Analyzed: 08/31/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2314204-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.8	50.0	100	85-115
Iron	200.8	51.6	50.0	103	85-115
Lithium	200.8	54.0	50.0	108	85-115
Manganese	200.8	25.8	25.0	103	85-115



September 27, 2023

Service Request No:K2310397

Gillian Williams
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023-2024

Dear Gillian,

Enclosed are the results of the sample(s) submitted to our laboratory September 15, 2023
For your reference, these analyses have been assigned our service request number **K2310397**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
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Client: Anchor QEA, LLC
Project: Gadsden 2023-2024
Sample Matrix: Water

Service Request: K2310397
Date Received: 09/15/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Seven water samples were received for analysis at ALS Environmental on 09/15/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 09/27/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-OGBT2-MW-21VC-Mo-SBC-LP	Lab ID: K2310397-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	2.1		0.3	2.0	ug/L	200.8
Manganese, Dissolved	88.3		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-OGBT2-MW-21VC-Mo-SBC-LP_DUP	Lab ID: K2310397-002
---	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	0.4	J	0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.15		0.10	0.10	ug/L	200.8
Manganese, Dissolved	225		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-OGBT2-MW-21VC-CTRL	Lab ID: K2310397-003
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	4.2		0.3	2.0	ug/L	200.8
Lithium, Dissolved	185		0.10	0.10	ug/L	200.8
Manganese, Dissolved	4.88		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-OSBT2-MW-21VC-Mo-SBC-LP	Lab ID: K2310397-004
---	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	13.0		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.40		0.10	0.10	ug/L	200.8
Manganese, Dissolved	208		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-OSBT2-MW-21VC-Mo-SBC-LP_DUP	Lab ID: K2310397-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	15.0		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.17		0.10	0.10	ug/L	200.8
Manganese, Dissolved	190		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-OSBT2-MW-21VC-CTRL	Lab ID: K2310397-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	15.8		0.3	2.0	ug/L	200.8
Lithium, Dissolved	175		0.10	0.10	ug/L	200.8
Manganese, Dissolved	93.2		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-OBT2-MB	Lab ID: K2310397-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	0.5	J	0.3	2.0	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08


Service Request:K2310397

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2310397-001	GSD-OGBT2-MW-21VC-Mo-SBC-LP	9/15/2023	0800
K2310397-002	GSD-OGBT2-MW-21VC-Mo-SBC-LP_DUP	9/15/2023	0830
K2310397-003	GSD-OGBT2-MW-21VC-CTRL	9/15/2023	0845
K2310397-004	GSD-OSBT2-MW-21VC-Mo-SBC-LP	9/15/2023	0900
K2310397-005	GSD-OSBT2-MW-21VC-Mo-SBC-LP_DUP	9/15/2023	0930
K2310397-006	GSD-OSBT2-MW-21VC-CTRL	9/15/2023	0945
K2310397-007	GSD-OBT2-MB	9/15/2023	1000

K2310397

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers	Dissolved Li, Fe, Mn											 Masa Kanematsu 6720 S Macadam Ave Suite 300					
Date:	9/15/2023																					
Project Name:	Gadsden 2023-2024																					
Project Number:	221114-06.02 Task 08																					
Project Manager:	Masa Kanematsu																					
Phone Number:	503-972-5001																					
Shipment Method:	ALS Courier																					
Line	Field Sample ID	Collection		Matrix																	Comments/Preservation	
		Date	Time																			
1	GSD-OGBT2-MW-21VC-Mo-SBC-LP	9/15/2023	8:00	Water	1	X																HNO3-preserved. 0.45 um-filtered.
2	GSD-OGBT2-MW-21VC-Mo-SBC-LP_DUP	9/15/2023	8:30	Water	1	X																HNO3-preserved. 0.45 um-filtered.
3	GSD-OGBT2-MW-21VC-CTRL	9/15/2023	8:45	Water	1	X																HNO3-preserved. 0.45 um-filtered.
4	GSD-OSBT2-MW-21VC-Mo-SBC-LP	9/15/2023	9:00	Water	1	X																HNO3-preserved. 0.45 um-filtered.
5	GSD-OSBT2-MW-21VC-Mo-SBC-LP_DUP	9/15/2023	9:30	Water	1	X																HNO3-preserved. 0.45 um-filtered.
6	GSD-OSBT2-MW-21VC-CTRL	9/15/2023	9:45	Water	1	X																HNO3-preserved. 0.45 um-filtered.
7	GSD-OBT2-MB	9/15/2023	10:00	Water	1	X																HNO3-preserved. 0.45 um-filtered.
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb. Some samples may have residual purple color associated with potassium permanganate (KMnO4). If those samples need to be diluted in order to not damage the ICP-MS, please do so and let Masa know the dilution factor.

Relinquished by: SUMANT AVASAROLA Company: Anchor QEA
 Signature/Print Name: [Signature] Date/Time: 09/15/23

Relinquished by: Greg Rich Company: ALS
 Signature/Print Name: [Signature] Date/Time: 9-15-23 1440

Received by: Greg Rich
 Signature/Print Name: [Signature] 9-15-23 1135

Received by: [Signature] ALS
 Signature/Print Name: Monelyn Molo 9/15/23 1440

Cooler Receipt and Preservation Form

Client Anchor Service Request K23 10397

Received: 9/15/23 Opened: 9/15/23 By: KM Unloaded: 9/15/23 By: KM

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>1.7</u>		<u>LABOR</u>					

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:

If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":

5. Were samples received within the method specified temperature ranges? NA Y N

If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N

If applicable, tissue samples were received: **Frozen Partially Thawed Thawed**

6. Packing material: **Inserts Raggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves**

7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N

8. Were samples received in good condition (unbroken) NA Y N

9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N

10. Did all sample labels and tags agree with custody papers? NA Y N

11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N

12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N

13. Were VOA vials received without headspace? Indicate in the table below. NA Y N

14. Was C12/Res negative? NA Y N

15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N

16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Dilute pH due to limited volume



Miscellaneous Forms

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Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2310397

Sample Name: GSD-OGBT2-MW-21VC-Mo-SBC-LP
Lab Code: K2310397-001
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

Sample Name: GSD-OGBT2-MW-21VC-Mo-SBC-
Lab Code: K2310397-002
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

Sample Name: GSD-OGBT2-MW-21VC-CTRL
Lab Code: K2310397-003
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

Sample Name: GSD-OGBT2-MW-21VC-CTRL
Lab Code: K2310397-003.R01
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

Sample Name: GSD-OSBT2-MW-21VC-Mo-SBC-LP
Lab Code: K2310397-004
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08

Service Request: K2310397

Sample Name: GSD-OSBT2-MW-21VC-Mo-SBC-
Lab Code: K2310397-005
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

Sample Name: GSD-OSBT2-MW-21VC-CTRL
Lab Code: K2310397-006
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

Sample Name: GSD-OBT2-MB
Lab Code: K2310397-007
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN

Sample Name: GSD-OBT2-MB
Lab Code: K2310397-007.R01
Sample Matrix: Water

Date Collected: 09/15/23
Date Received: 09/15/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
JCHAN



Sample Results

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT2-MW-21VC-Mo-SBC-LP
Lab Code: K2310397-001

Service Request: K2310397
Date Collected: 09/15/23 08:00
Date Received: 09/15/23 14:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	2.1	ug/L	2.0	0.3	1	09/27/23 06:54	09/26/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	09/27/23 06:54	09/26/23	
Manganese	200.8	88.3	ug/L	0.20	0.04	1	09/27/23 06:54	09/26/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT2-MW-21VC-Mo-SBC-LP_DUP
Lab Code: K2310397-002

Service Request: K2310397
Date Collected: 09/15/23 08:30
Date Received: 09/15/23 14:40

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	0.4 J	ug/L	2.0	0.3	1	09/27/23 06:58	09/26/23	
Lithium	200.8	0.15	ug/L	0.10	0.10	1	09/27/23 06:58	09/26/23	
Manganese	200.8	225	ug/L	0.20	0.04	1	09/27/23 06:58	09/26/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OGBT2-MW-21VC-CTRL
Lab Code: K2310397-003

Service Request: K2310397
Date Collected: 09/15/23 08:45
Date Received: 09/15/23 14:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	4.2	ug/L	2.0	0.3	1	09/27/23 07:34	09/26/23	
Lithium	200.8	185	ug/L	0.10	0.10	1	09/27/23 07:34	09/26/23	
Manganese	200.8	4.88	ug/L	0.20	0.04	1	09/27/23 07:34	09/26/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT2-MW-21VC-Mo-SBC-LP
Lab Code: K2310397-004

Service Request: K2310397
Date Collected: 09/15/23 09:00
Date Received: 09/15/23 14:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	13.0	ug/L	2.0	0.3	1	09/27/23 07:01	09/26/23	
Lithium	200.8	0.40	ug/L	0.10	0.10	1	09/27/23 07:01	09/26/23	
Manganese	200.8	208	ug/L	0.20	0.04	1	09/27/23 07:01	09/26/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT2-MW-21VC-Mo-SBC-LP_DUP
Lab Code: K2310397-005

Service Request: K2310397
Date Collected: 09/15/23 09:30
Date Received: 09/15/23 14:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	15.0	ug/L	2.0	0.3	1	09/27/23 07:03	09/26/23	
Lithium	200.8	0.17	ug/L	0.10	0.10	1	09/27/23 07:03	09/26/23	
Manganese	200.8	190	ug/L	0.20	0.04	1	09/27/23 07:03	09/26/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OSBT2-MW-21VC-CTRL
Lab Code: K2310397-006

Service Request: K2310397
Date Collected: 09/15/23 09:45
Date Received: 09/15/23 14:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	15.8	ug/L	2.0	0.3	1	09/27/23 07:04	09/26/23	
Lithium	200.8	175	ug/L	0.10	0.10	1	09/27/23 07:04	09/26/23	
Manganese	200.8	93.2	ug/L	0.20	0.04	1	09/27/23 07:04	09/26/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-OBT2-MB
Lab Code: K2310397-007

Service Request: K2310397
Date Collected: 09/15/23 10:00
Date Received: 09/15/23 14:40
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	0.5 J	ug/L	2.0	0.3	1	09/27/23 07:33	09/26/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	09/27/23 07:33	09/26/23	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	09/27/23 07:33	09/26/23	



QC Summary Forms

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2316891-01

Service Request: K2310397
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	2.0	0.3	1	09/27/23 06:51	09/26/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	09/27/23 06:51	09/26/23	
Manganese	200.8	0.05 J	ug/L	0.20	0.04	1	09/27/23 06:51	09/26/23	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2310397
Date Collected: 09/15/23
Date Received: 09/15/23
Date Analyzed: 09/27/23
Date Extracted: 09/26/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-OGBT2-MW-21VC-Mo-SBC-LP
Lab Code: K2310397-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2316891-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Iron	2.1	47.5	50.0	91	70-130
Lithium	ND U	60.6	50.0	121	70-130
Manganese	88.3	118	25.0	118	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2310397
Date Collected: 09/15/23
Date Received: 09/15/23
Date Analyzed: 09/27/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-OGBT2-MW-21VC-Mo-SBC-LP
Lab Code: K2310397-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2316891-03 Result, Average, RPD, RPD Limit. Rows include Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023-2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2310397
Date Analyzed: 09/27/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2316891-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Iron	200.8	48.4	50.0	97	85-115
Lithium	200.8	52.8	50.0	106	85-115
Manganese	200.8	25.5	25.0	102	85-115



November 07, 2023

Revised Service Request No:K2311697.01

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023 & 2024

Dear Masa,

Enclosed is the revised report for the sample(s) submitted to our laboratory October 12, 2023
For your reference, these analyses have been assigned our service request number **K2311697**.

The report was revised to correct the results for three samples.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental

REVISED

11:31 am, Nov 07, 2023



Narrative Documents

ALS Environmental—Kelso Laboratory
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Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024
Sample Matrix: Water

Service Request: K2311697
Date Received: 10/12/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Forty two water samples were received for analysis at ALS Environmental on 10/12/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Noel D. O'Connell

Approved by _____

Date 11/07/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-2-INF-1	Lab ID: K2311697-015
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1060		0.09	0.50	ug/L	200.8
Iron, Dissolved	6890		0.3	2.0	ug/L	200.8
Manganese, Dissolved	8680		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-2	Lab ID: K2311697-016
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1050		0.09	0.50	ug/L	200.8
Iron, Dissolved	6680		0.3	2.0	ug/L	200.8
Manganese, Dissolved	9060		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-3	Lab ID: K2311697-017
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1020		0.09	0.50	ug/L	200.8
Iron, Dissolved	6730		0.3	2.0	ug/L	200.8
Manganese, Dissolved	8730		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-4	Lab ID: K2311697-018
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	880		0.09	0.50	ug/L	200.8
Iron, Dissolved	6420		0.3	2.0	ug/L	200.8
Manganese, Dissolved	8660		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-5	Lab ID: K2311697-019
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	704		0.09	0.50	ug/L	200.8
Iron, Dissolved	6160		0.3	2.0	ug/L	200.8
Manganese, Dissolved	8590		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-6	Lab ID: K2311697-020
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	393		0.09	0.50	ug/L	200.8
Iron, Dissolved	5420		0.3	2.0	ug/L	200.8
Manganese, Dissolved	8730		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-7	Lab ID: K2311697-021
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	278		0.09	0.50	ug/L	200.8
Iron, Dissolved	5260		0.3	2.0	ug/L	200.8
Manganese, Dissolved	8550		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-1	Lab ID: K2311697-022
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.54		0.09	0.50	ug/L	200.8
Iron, Dissolved	5.7		0.3	2.0	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-2-PM-1	Lab ID: K2311697-022
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	523		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-2	Lab ID: K2311697-023
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.64		0.09	0.50	ug/L	200.8
Manganese, Dissolved	145		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-3	Lab ID: K2311697-024
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	126		0.09	0.50	ug/L	200.8
Iron, Dissolved	128		0.3	2.0	ug/L	200.8
Manganese, Dissolved	61.3		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-4	Lab ID: K2311697-025
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.05		0.09	0.50	ug/L	200.8
Manganese, Dissolved	3390		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-5	Lab ID: K2311697-026
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.96		0.09	0.50	ug/L	200.8
Manganese, Dissolved	5680		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-6	Lab ID: K2311697-027
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.79		0.09	0.50	ug/L	200.8
Manganese, Dissolved	6330		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-7	Lab ID: K2311697-028
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.88		0.09	0.50	ug/L	200.8
Manganese, Dissolved	6070		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-1	Lab ID: K2311697-029
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	2090		0.09	0.50	ug/L	200.8
Iron, Dissolved	3160		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2500		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-2	Lab ID: K2311697-030
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	2080		0.09	0.50	ug/L	200.8
Iron, Dissolved	3160		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2480		0.04	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-4-INF-3	Lab ID: K2311697-031
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	2040		0.09	0.50	ug/L	200.8
Iron, Dissolved	3170		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2530		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-4	Lab ID: K2311697-032
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1850		0.09	0.50	ug/L	200.8
Iron, Dissolved	2760		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2490		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-5	Lab ID: K2311697-033
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1700		0.09	0.50	ug/L	200.8
Iron, Dissolved	2510		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2440		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-6	Lab ID: K2311697-034
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1520		0.09	0.50	ug/L	200.8
Iron, Dissolved	2110		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2460		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-7	Lab ID: K2311697-035
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1390		0.09	0.50	ug/L	200.8
Iron, Dissolved	1910		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2420		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-1	Lab ID: K2311697-036
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.30	J	0.09	0.50	ug/L	200.8
Iron, Dissolved	1.1	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	19.9		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-2	Lab ID: K2311697-037
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.17	J	0.09	0.50	ug/L	200.8
Iron, Dissolved	7.4		0.3	2.0	ug/L	200.8
Manganese, Dissolved	58.5		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-3	Lab ID: K2311697-038
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.19	J	0.09	0.50	ug/L	200.8
Iron, Dissolved	23.8		0.3	2.0	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-4-PM-3	Lab ID: K2311697-038
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	270		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-4	Lab ID: K2311697-039
-------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	2.00		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.7	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1000		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-5	Lab ID: K2311697-040
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	4.17		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.6	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1130		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-6	Lab ID: K2311697-041
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	7.86		0.09	0.50	ug/L	200.8
Iron, Dissolved	28.6		0.3	2.0	ug/L	200.8
Manganese, Dissolved	1300		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-7	Lab ID: K2311697-042
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	7.66		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.9	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1150		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-1	Lab ID: K2311697-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	24.0		0.3	2.0	ug/L	200.8
Lithium, Dissolved	215		0.10	0.20	ug/L	200.8
Manganese, Dissolved	12.8		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-2	Lab ID: K2311697-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	22.7		0.3	2.0	ug/L	200.8
Lithium, Dissolved	216		0.10	0.20	ug/L	200.8
Manganese, Dissolved	4.55		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-3	Lab ID: K2311697-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	23.8		0.3	2.0	ug/L	200.8
Lithium, Dissolved	215		0.10	0.20	ug/L	200.8
Manganese, Dissolved	4.93		0.04	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-21VC-INF-4	Lab ID: K2311697-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	22.4		0.3	2.0	ug/L	200.8
Lithium, Dissolved	220		0.10	0.20	ug/L	200.8
Manganese, Dissolved	4.67		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-5	Lab ID: K2311697-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	23.5		0.3	2.0	ug/L	200.8
Lithium, Dissolved	218		0.10	0.20	ug/L	200.8
Manganese, Dissolved	4.81		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-6	Lab ID: K2311697-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	22.3		0.3	2.0	ug/L	200.8
Lithium, Dissolved	214		0.10	0.20	ug/L	200.8
Manganese, Dissolved	4.61		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-7	Lab ID: K2311697-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	22.0		0.3	2.0	ug/L	200.8
Lithium, Dissolved	216		0.10	0.20	ug/L	200.8
Manganese, Dissolved	4.54		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-1	Lab ID: K2311697-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	64.5		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.40		0.10	0.20	ug/L	200.8
Manganese, Dissolved	57.4		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-2	Lab ID: K2311697-009
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	52.8		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.28		0.10	0.20	ug/L	200.8
Manganese, Dissolved	25.1		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-4	Lab ID: K2311697-011
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	7.9		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.27		0.10	0.20	ug/L	200.8
Manganese, Dissolved	18.6		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-5	Lab ID: K2311697-012
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	3.2		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.23		0.10	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-5				Lab ID: K2311697-012		
Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	19.1		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-6				Lab ID: K2311697-013		
Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	6.2		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.21		0.10	0.20	ug/L	200.8
Manganese, Dissolved	30.7		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-7				Lab ID: K2311697-014		
Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	2.5		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.21		0.10	0.20	ug/L	200.8
Manganese, Dissolved	34.9		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-3				Lab ID: K2311697-010		
Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	18.0		0.10	0.20	ug/L	200.8
Manganese, Dissolved	185		0.04	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08


Service Request:K2311697

SAMPLE CROSS-REFERENCE




<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2311697-001	GSD-COL-MW-21VC-INF-1	10/9/2023	1130
K2311697-002	GSD-COL-MW-21VC-INF-2	10/9/2023	1510
K2311697-003	GSD-COL-MW-21VC-INF-3	10/9/2023	1710
K2311697-004	GSD-COL-MW-21VC-INF-4	10/10/2023	0815
K2311697-005	GSD-COL-MW-21VC-INF-5	10/10/2023	1810
K2311697-006	GSD-COL-MW-21VC-INF-6	10/11/2023	0815
K2311697-007	GSD-COL-MW-21VC-INF-7	10/11/2023	1800
K2311697-008	GSD-COL-MW-21VC-MOL-SBC-LP-1	10/9/2023	1040
K2311697-009	GSD-COL-MW-21VC-MOL-SBC-LP-2	10/9/2023	1410
K2311697-010	GSD-COL-MW-21VC-MOL-SBC-LP-3	10/9/2023	1810
K2311697-011	GSD-COL-MW-21VC-MOL-SBC-LP-4	10/10/2023	0725
K2311697-012	GSD-COL-MW-21VC-MOL-SBC-LP-5	10/10/2023	1710
K2311697-013	GSD-COL-MW-21VC-MOL-SBC-LP-6	10/11/2023	0725
K2311697-014	GSD-COL-MW-21VC-MOL-SBC-LP-7	10/11/2023	1710
K2311697-015	GSD-COL-MW-2-INF-1	10/9/2023	1140
K2311697-016	GSD-COL-MW-2-INF-2	10/9/2023	1500
K2311697-017	GSD-COL-MW-2-INF-3	10/9/2023	1700
K2311697-018	GSD-COL-MW-2-INF-4	10/10/2023	0805
K2311697-019	GSD-COL-MW-2-INF-5	10/10/2023	1800
K2311697-020	GSD-COL-MW-2-INF-6	10/11/2023	0805
K2311697-021	GSD-COL-MW-2-INF-7	10/11/2023	1800
K2311697-022	GSD-COL-MW-2-PM-1	10/9/2023	1030
K2311697-023	GSD-COL-MW-2-PM-2	10/9/2023	1400
K2311697-024	GSD-COL-MW-2-PM-3	10/9/2023	1800
K2311697-025	GSD-COL-MW-2-PM-4	10/10/2023	0810
K2311697-026	GSD-COL-MW-2-PM-5	10/10/2023	1700
K2311697-027	GSD-COL-MW-2-PM-6	10/11/2023	0715
K2311697-028	GSD-COL-MW-2-PM-7	10/11/2023	1700
K2311697-029	GSD-COL-MW-4-INF-1	10/9/2023	1135
K2311697-030	GSD-COL-MW-4-INF-2	10/9/2023	1505
K2311697-031	GSD-COL-MW-4-INF-3	10/9/2023	1705
K2311697-032	GSD-COL-MW-4-INF-4	10/10/2023	0720
K2311697-033	GSD-COL-MW-4-INF-5	10/10/2023	1805
K2311697-034	GSD-COL-MW-4-INF-6	10/11/2023	0810
K2311697-035	GSD-COL-MW-4-INF-7	10/11/2023	1755
K2311697-036	GSD-COL-MW-4-PM-1	10/9/2023	1035
K2311697-037	GSD-COL-MW-4-PM-2	10/9/2023	1405
K2311697-038	GSD-COL-MW-4-PM-3	10/9/2023	1805
K2311697-039	GSD-COL-MW-4-PM-4	10/10/2023	0715
K2311697-040	GSD-COL-MW-4-PM-5	10/10/2023	1705
K2311697-041	GSD-COL-MW-4-PM-6	10/11/2023	0720
K2311697-042	GSD-COL-MW-4-PM-7	10/11/2023	1705

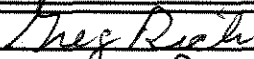
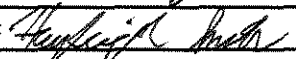
Chain of Custody Record & Laboratory Analysis Request

K2311697

Laboratory Number: 503-972-5019					No. of Containers	Parameters										 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219					
Date:		10/12/2023																			
Project Name:		Gadsden 2023 & 2024																			
Project Number:		221114-06.02 Task 08																			
Project Manager:		Masa Kanematsu																			
Phone Number:		503-972-5001 (backup number: 503-798-3456)																			
Shipment Method:		ALS Carrier																			
Line	Field Sample ID	Collection		Matrix	No. of Containers	As, Fe, Mn	Li, Fe, Mn														Comments/Preservation
		Date	Time																		
1	GSD-COL-MW-21VC-INF-1	10/9/2023	11:30	Water	1		X													HNO3-Preserved bottles	
2	GSD-COL-MW-21VC-INF-2	10/9/2023	15:10	Water	1		X													HNO3-Preserved bottles	
3	GSD-COL-MW-21VC-INF-3	10/9/2023	17:10	Water	1		X													HNO3-Preserved bottles	
4	GSD-COL-MW-21VC-INF-4	10/10/2023	8:15	Water	1		X													HNO3-Preserved bottles	
5	GSD-COL-MW-21VC-INF-5	10/10/2023	18:10	Water	1		X													HNO3-Preserved bottles	
6	GSD-COL-MW-21VC-INF-6	10/11/2023	8:15	Water	1		X													HNO3-Preserved bottles	
7	GSD-COL-MW-21VC-INF-7	10/11/2023	18:00	Water	1		X													HNO3-Preserved bottles	
8	GSD-COL-MW-21VC-MOL-SBC-LP-1	10/9/2023	10:40	Water	1		X													HNO3-Preserved bottles	
9	GSD-COL-MW-21VC-MOL-SBC-LP-2	10/9/2023	14:10	Water	1		X													HNO3-Preserved bottles	
10	GSD-COL-MW-21VC-MOL-SBC-LP-3	10/9/2023	18:10	Water	1		X													HNO3-Preserved bottles	
11	GSD-COL-MW-21VC-MOL-SBC-LP-4	10/10/2023	7:25	Water	1		X													HNO3-Preserved bottles	
12	GSD-COL-MW-21VC-MOL-SBC-LP-5	10/10/2023	17:10	Water	1		X													HNO3-Preserved bottles	
13	GSD-COL-MW-21VC-MOL-SBC-LP-6	10/11/2023	7:25	Water	1		X													HNO3-Preserved bottles	
14	GSD-COL-MW-21VC-MOL-SBC-LP-7	10/11/2023	17:10	Water	1		X													HNO3-Preserved bottles	
15	GSD-COL-MW-2-INF-1	10/9/2023	11:40	Water	1	X														HNO3-Preserved bottles	
16	GSD-COL-MW-2-INF-2	10/9/2023	15:00	Water	1	X														HNO3-Preserved bottles	
17	GSD-COL-MW-2-INF-3	10/9/2023	17:00	Water	1	X														HNO3-Preserved bottles	
18	GSD-COL-MW-2-INF-4	10/10/2023	8:05	Water	1	X														HNO3-Preserved bottles	
19	GSD-COL-MW-2-INF-5	10/10/2023	18:00	Water	1	X														HNO3-Preserved bottles	
20	GSD-COL-MW-2-INF-6	10/11/2023	8:05	Water	1	X														HNO3-Preserved bottles	

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb.


Relinquished by: Sumant Avasarala	Company: Anchor QEA	1220
Signature/Print Name: 	Date/Time: 10/12/23	10:32am
Relinquished by: 	Company: ALS	
Signature/Print Name: 	Date/Time: 10-12-23	1415

Received by: 	
Signature/Print Name: Greg Rich	10-12-23 1220PM
Received by: 	
Signature/Print Name: Hayleigh Smith	10/12/23 1415



Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.



Chain of Custody Record & Laboratory Analysis Request

12311697

Laboratory Number: 503-972-5019					Parameters										 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219						
Date:	10/12/2023				No. of Containers	As, Fe, Mn	Li, Fe, Mn														
Project Name:	Gadsden 2023 & 2024																				
Project Number:	221114-06.02 Task 08																				
Project Manager:	Masa Kanematsu																				
Phone Number:	503-972-5001 (backup number: 503-798-3456)																				
Shipment Method:	ALS Carrier																				
Line	Field Sample ID	Collection		Matrix	No. of Containers	As, Fe, Mn	Li, Fe, Mn													Comments/Preservation	
		Date	Time																		
21	GSD-COL-MW-2-INF-7	10/11/2023	18:00	Water	1	X														HNO3-Preserved bottles	
22	GSD-COL-MW-2-PM-1	10/9/2023	10:30	Water	1	X															HNO3-Preserved bottles
23	GSD-COL-MW-2-PM-2	10/9/2023	14:00	Water	1	X															HNO3-Preserved bottles
24	GSD-COL-MW-2-PM-3	10/9/2023	18:00	Water	1	X															HNO3-Preserved bottles
25	GSD-COL-MW-2-PM-4	10/10/2023	8:10	Water	1	X															HNO3-Preserved bottles
26	GSD-COL-MW-2-PM-5	10/10/2023	17:00	Water	1	X															HNO3-Preserved bottles
27	GSD-COL-MW-2-PM-6	10/11/2023	7:15	Water	1	X															HNO3-Preserved bottles
28	GSD-COL-MW-2-PM-7	10/11/2023	17:00	Water	1	X															HNO3-Preserved bottles
29	GSD-COL-MW-4-INF-1	10/9/2023	11:35	Water	1	X															HNO3-Preserved bottles
30	GSD-COL-MW-4-INF-2	10/9/2023	15:05	Water	1	X															HNO3-Preserved bottles
31	GSD-COL-MW-4-INF-3	10/9/2023	17:05	Water	1	X															HNO3-Preserved bottles
32	GSD-COL-MW-4-INF-4	10/10/2023	7:20	Water	1	X															HNO3-Preserved bottles
33	GSD-COL-MW-4-INF-5	10/10/2023	18:05	Water	1	X															HNO3-Preserved bottles
34	GSD-COL-MW-4-INF-6	10/11/2023	8:10	Water	1	X															HNO3-Preserved bottles
35	GSD-COL-MW-4-INF-7	10/11/2023	17:55	Water	1	X															HNO3-Preserved bottles
36	GSD-COL-MW-4-PM-1	10/9/2023	10:35	Water	1	X															HNO3-Preserved bottles
37	GSD-COL-MW-4-PM-2	10/9/2023	14:05	Water	1	X															HNO3-Preserved bottles
38	GSD-COL-MW-4-PM-3	10/9/2023	18:05	Water	1	X															HNO3-Preserved bottles
39	GSD-COL-MW-4-PM-4	10/10/2023	7:15	Water	1	X															HNO3-Preserved bottles
40	GSD-COL-MW-4-PM-5	10/10/2023	17:05	Water	1	X															HNO3-Preserved bottles

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb.

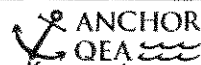
Relinquished by: Sumant Avasarala	Company: Anchor QEA	1220
Signature/Print Name: 	Date/Time: 10/12/23	10:32am
Relinquished by: 	Company: ALS	
Signature/Print Name: Greg Rich	Date/Time: 10-12-23	1415

Received by: 	
Signature/Print Name: Greg Rich	10-12-23 1220PM
Received by: 	10/12/23 1415
Signature/Print Name: Hayleigh Smith	

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Chain of Custody Record & Laboratory Analysis Request

12311697

Laboratory Number: 503-972-5019					Parameters										 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219						
Date:	10/12/2023																				
Project Name:	Gadsden 2023 & 2024																				
Project Number:	221114-06.02 Task 08																				
Project Manager:	Masa Kanematsu																				
Phone Number:	503-972-5001 (backup number: 503-798-3456)																				
Shipment Method:	ALS Carrier				No. of Containers	As, Fe, Mn	Li, Fe, Mn											Comments/Preservation			
Line	Field Sample ID	Collection		Matrix																	
		Date	Time																		
41	GSD-COL-MW-4-PM-6	10/11/2023	7:20	Water	1	X														HNO3-Preserved bottles	
42	GSD-COL-MW-4-PM-7	10/11/2023	17:05	Water	1	X															HNO3-Preserved bottles

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb.

Relinquished by: Sumant Avasarala	Company: Anchor QEA	1220
Signature/Print Name: <i>As</i>	Date/Time: 10/12/23	10:32 am
Relinquished by: <i>Greg Rich</i>	Company: ALS	
Signature/Print Name: <i>Greg Rich</i>	Date/Time: 10-12-23	1415

Received by: <i>Greg Rich</i>	
Signature/Print Name: <i>Greg Rich</i>	10-12-23 1220 pm
Received by: <i>Hughes</i>	10/12/23 1415
Signature/Print Name: <i>Hayleigh Smith</i>	

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

PM Wack

Cooler Receipt and Preservation Form

Client: Anchor Service Request K23 11697
Received: 10/12/23 Opened: 10/12/23 By: HS Unloaded: 10/12/23 By: HS

Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
Samples were received in: (circle) Cooler Box Envelope Other NA
Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
3.5		<u>IR06</u>	<u>1 of 3</u>				
2.8			<u>2 of 3</u>				
1.9			<u>3 of 3</u>				

Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N

applicable, tissue samples were received: Frozen Partially Thawed Thawed
Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
Were custody papers properly filled out (ink, signed, etc.)? NA Y N
Were samples received in good condition (unbroken) NA Y N
Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
1. Did all sample labels and tags agree with custody papers? NA Y N
1. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
2. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
3. Were VOA vials received without headspace? Indicate in the table below. NA Y N
4. Was C12/Res negative? NA Y N
5. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
5. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Did not pH due to limited volume



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-21VC-INF-1
Lab Code: K2311697-001
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-INF-2
Lab Code: K2311697-002
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-INF-3
Lab Code: K2311697-003
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-INF-4
Lab Code: K2311697-004
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-INF-5
Lab Code: K2311697-005
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-21VC-INF-6
Lab Code: K2311697-006
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-INF-7
Lab Code: K2311697-007
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-1
Lab Code: K2311697-008
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-2
Lab Code: K2311697-009
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-3
Lab Code: K2311697-010
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-4
Lab Code: K2311697-011
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-5
Lab Code: K2311697-012
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-6
Lab Code: K2311697-013
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-7
Lab Code: K2311697-014
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-INF-1
Lab Code: K2311697-015
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-2-INF-2
Lab Code: K2311697-016
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-INF-3
Lab Code: K2311697-017
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-INF-4
Lab Code: K2311697-018
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-INF-5
Lab Code: K2311697-019
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-INF-6
Lab Code: K2311697-020
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-2-INF-7
Lab Code: K2311697-021
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-PM-1
Lab Code: K2311697-022
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-PM-2
Lab Code: K2311697-023
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-PM-3
Lab Code: K2311697-024
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-PM-4
Lab Code: K2311697-025
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
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Analyzed By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-2-PM-5
Lab Code: K2311697-026
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-PM-6
Lab Code: K2311697-027
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-PM-7
Lab Code: K2311697-028
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-INF-1
Lab Code: K2311697-029
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-INF-2
Lab Code: K2311697-030
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
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Analyzed By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-4-INF-3
Lab Code: K2311697-031
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-INF-4
Lab Code: K2311697-032
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-INF-5
Lab Code: K2311697-033
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-INF-6
Lab Code: K2311697-034
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-INF-7
Lab Code: K2311697-035
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
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Analyzed By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-4-PM-1
Lab Code: K2311697-036
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-PM-2
Lab Code: K2311697-037
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-PM-3
Lab Code: K2311697-038
Sample Matrix: Water

Date Collected: 10/9/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-PM-4
Lab Code: K2311697-039
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-PM-5
Lab Code: K2311697-040
Sample Matrix: Water

Date Collected: 10/10/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311697

Sample Name: GSD-COL-MW-4-PM-6
Lab Code: K2311697-041
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-PM-6
Lab Code: K2311697-041.R01
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-PM-7
Lab Code: K2311697-042
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-PM-7
Lab Code: K2311697-042.R01
Sample Matrix: Water

Date Collected: 10/11/23
Date Received: 10/12/23

Analysis Method
200.8

Extracted/Digested By
SSOLADEY

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-1
Lab Code: K2311697-001

Service Request: K2311697
Date Collected: 10/09/23 11:30
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	24.0	ug/L	2.0	0.3	1	10/24/23 12:18	10/20/23	
Lithium	200.8	215	ug/L	0.20	0.10	1	10/24/23 12:18	10/20/23	
Manganese	200.8	12.8	ug/L	0.20	0.04	1	10/24/23 12:18	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-2
Lab Code: K2311697-002

Service Request: K2311697
Date Collected: 10/09/23 15:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	22.7	ug/L	2.0	0.3	1	10/24/23 12:24	10/20/23	
Lithium	200.8	216	ug/L	0.20	0.10	1	10/24/23 12:24	10/20/23	
Manganese	200.8	4.55	ug/L	0.20	0.04	1	10/24/23 12:24	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-3
Lab Code: K2311697-003

Service Request: K2311697
Date Collected: 10/09/23 17:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	23.8	ug/L	2.0	0.3	1	10/24/23 12:29	10/20/23	
Lithium	200.8	215	ug/L	0.20	0.10	1	10/24/23 12:29	10/20/23	
Manganese	200.8	4.93	ug/L	0.20	0.04	1	10/24/23 12:29	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-4
Lab Code: K2311697-004

Service Request: K2311697
Date Collected: 10/10/23 08:15
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	22.4	ug/L	2.0	0.3	1	10/24/23 12:31	10/20/23	
Lithium	200.8	220	ug/L	0.20	0.10	1	10/24/23 12:31	10/20/23	
Manganese	200.8	4.67	ug/L	0.20	0.04	1	10/24/23 12:31	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-5
Lab Code: K2311697-005

Service Request: K2311697
Date Collected: 10/10/23 18:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	23.5	ug/L	2.0	0.3	1	10/24/23 13:06	10/20/23	
Lithium	200.8	218	ug/L	0.20	0.10	1	10/24/23 13:06	10/20/23	
Manganese	200.8	4.81	ug/L	0.20	0.04	1	10/24/23 13:06	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-6
Lab Code: K2311697-006

Service Request: K2311697
Date Collected: 10/11/23 08:15
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	22.3	ug/L	2.0	0.3	1	10/24/23 13:08	10/20/23	
Lithium	200.8	214	ug/L	0.20	0.10	1	10/24/23 13:08	10/20/23	
Manganese	200.8	4.61	ug/L	0.20	0.04	1	10/24/23 13:08	10/20/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-7
Lab Code: K2311697-007

Service Request: K2311697
Date Collected: 10/11/23 18:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	22.0	ug/L	2.0	0.3	1	10/24/23 13:09	10/20/23	
Lithium	200.8	216	ug/L	0.20	0.10	1	10/24/23 13:09	10/20/23	
Manganese	200.8	4.54	ug/L	0.20	0.04	1	10/24/23 13:09	10/20/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-1
Lab Code: K2311697-008

Service Request: K2311697
Date Collected: 10/09/23 10:40
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	64.5	ug/L	2.0	0.3	1	10/24/23 13:11	10/20/23	
Lithium	200.8	0.40	ug/L	0.20	0.10	1	10/24/23 13:11	10/20/23	
Manganese	200.8	57.4	ug/L	0.20	0.04	1	10/24/23 13:11	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-2
Lab Code: K2311697-009

Service Request: K2311697
Date Collected: 10/09/23 14:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	52.8	ug/L	2.0	0.3	1	10/24/23 13:13	10/20/23	
Lithium	200.8	0.28	ug/L	0.20	0.10	1	10/24/23 13:13	10/20/23	
Manganese	200.8	25.1	ug/L	0.20	0.04	1	10/24/23 13:13	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-3
Lab Code: K2311697-010

Service Request: K2311697
Date Collected: 10/09/23 18:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 13:15	10/20/23	
Lithium	200.8	18.0	ug/L	0.20	0.10	1	10/24/23 13:15	10/20/23	
Manganese	200.8	185	ug/L	0.20	0.04	1	10/24/23 13:15	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-4
Lab Code: K2311697-011

Service Request: K2311697
Date Collected: 10/10/23 07:25
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	7.9	ug/L	2.0	0.3	1	10/24/23 13:17	10/20/23	
Lithium	200.8	0.27	ug/L	0.20	0.10	1	10/24/23 13:17	10/20/23	
Manganese	200.8	18.6	ug/L	0.20	0.04	1	10/24/23 13:17	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-5
Lab Code: K2311697-012

Service Request: K2311697
Date Collected: 10/10/23 17:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	3.2	ug/L	2.0	0.3	1	10/24/23 13:19	10/20/23	
Lithium	200.8	0.23	ug/L	0.20	0.10	1	10/24/23 13:19	10/20/23	
Manganese	200.8	19.1	ug/L	0.20	0.04	1	10/24/23 13:19	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-6
Lab Code: K2311697-013

Service Request: K2311697
Date Collected: 10/11/23 07:25
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	6.2	ug/L	2.0	0.3	1	10/24/23 13:21	10/20/23	
Lithium	200.8	0.21	ug/L	0.20	0.10	1	10/24/23 13:21	10/20/23	
Manganese	200.8	30.7	ug/L	0.20	0.04	1	10/24/23 13:21	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-7
Lab Code: K2311697-014

Service Request: K2311697
Date Collected: 10/11/23 17:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	2.5	ug/L	2.0	0.3	1	10/24/23 13:23	10/20/23	
Lithium	200.8	0.21	ug/L	0.20	0.10	1	10/24/23 13:23	10/20/23	
Manganese	200.8	34.9	ug/L	0.20	0.04	1	10/24/23 13:23	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-1
Lab Code: K2311697-015

Service Request: K2311697
Date Collected: 10/09/23 11:40
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1060	ug/L	0.50	0.09	1	10/24/23 13:34	10/20/23	
Iron	200.8	6890	ug/L	2.0	0.3	1	10/24/23 13:34	10/20/23	
Manganese	200.8	8680	ug/L	2.0	0.4	10	10/24/23 13:48	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-2
Lab Code: K2311697-016

Service Request: K2311697
Date Collected: 10/09/23 15:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1050	ug/L	0.50	0.09	1	10/24/23 13:36	10/20/23	
Iron	200.8	6680	ug/L	2.0	0.3	1	10/24/23 13:36	10/20/23	
Manganese	200.8	9060	ug/L	2.0	0.4	10	10/24/23 13:50	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-3
Lab Code: K2311697-017

Service Request: K2311697
Date Collected: 10/09/23 17:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1020	ug/L	0.50	0.09	1	10/24/23 13:38	10/20/23	
Iron	200.8	6730	ug/L	2.0	0.3	1	10/24/23 13:38	10/20/23	
Manganese	200.8	8730	ug/L	2.0	0.4	10	10/24/23 13:52	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-4
Lab Code: K2311697-018

Service Request: K2311697
Date Collected: 10/10/23 08:05
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	880	ug/L	0.50	0.09	1	10/24/23 13:40	10/20/23	
Iron	200.8	6420	ug/L	2.0	0.3	1	10/24/23 13:40	10/20/23	
Manganese	200.8	8660	ug/L	2.0	0.4	10	10/24/23 13:54	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-5
Lab Code: K2311697-019

Service Request: K2311697
Date Collected: 10/10/23 18:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	704	ug/L	0.50	0.09	1	10/24/23 13:42	10/20/23	
Iron	200.8	6160	ug/L	2.0	0.3	1	10/24/23 13:42	10/20/23	
Manganese	200.8	8590	ug/L	2.0	0.4	10	10/24/23 13:59	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-6
Lab Code: K2311697-020

Service Request: K2311697
Date Collected: 10/11/23 08:05
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	393	ug/L	0.50	0.09	1	10/24/23 13:44	10/20/23	
Iron	200.8	5420	ug/L	2.0	0.3	1	10/24/23 13:44	10/20/23	
Manganese	200.8	8730	ug/L	2.0	0.4	10	10/24/23 14:01	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-7
Lab Code: K2311697-021

Service Request: K2311697
Date Collected: 10/11/23 18:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	278	ug/L	0.50	0.09	1	10/24/23 14:10	10/20/23	
Iron	200.8	5260	ug/L	2.0	0.3	1	10/24/23 14:10	10/20/23	
Manganese	200.8	8550	ug/L	2.0	0.4	10	10/24/23 15:05	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-1
Lab Code: K2311697-022

Service Request: K2311697
Date Collected: 10/09/23 10:30
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.54	ug/L	0.50	0.09	1	10/24/23 14:16	10/20/23	
Iron	200.8	5.7	ug/L	2.0	0.3	1	10/24/23 14:16	10/20/23	
Manganese	200.8	523	ug/L	0.20	0.04	1	10/24/23 14:16	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-2
Lab Code: K2311697-023

Service Request: K2311697
Date Collected: 10/09/23 14:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.64	ug/L	0.50	0.09	1	10/24/23 14:18	10/20/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 14:18	10/20/23	
Manganese	200.8	145	ug/L	0.20	0.04	1	10/24/23 14:18	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-3
Lab Code: K2311697-024

Service Request: K2311697
Date Collected: 10/09/23 18:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	126	ug/L	0.50	0.09	1	10/24/23 14:20	10/20/23	
Iron	200.8	128	ug/L	2.0	0.3	1	10/24/23 14:20	10/20/23	
Manganese	200.8	61.3	ug/L	0.20	0.04	1	10/24/23 14:20	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-4
Lab Code: K2311697-025

Service Request: K2311697
Date Collected: 10/10/23 08:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.05	ug/L	0.50	0.09	1	10/24/23 15:01	10/20/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 15:01	10/20/23	
Manganese	200.8	3390	ug/L	0.20	0.04	1	10/24/23 15:01	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-5
Lab Code: K2311697-026

Service Request: K2311697
Date Collected: 10/10/23 17:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.96	ug/L	0.50	0.09	1	10/24/23 14:23	10/20/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 14:23	10/20/23	
Manganese	200.8	5680	ug/L	0.20	0.04	1	10/24/23 14:23	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-6
Lab Code: K2311697-027

Service Request: K2311697
Date Collected: 10/11/23 07:15
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.79	ug/L	0.50	0.09	1	10/24/23 14:29	10/20/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 14:29	10/20/23	
Manganese	200.8	6330	ug/L	0.20	0.04	1	10/24/23 14:29	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-7
Lab Code: K2311697-028

Service Request: K2311697
Date Collected: 10/11/23 17:00
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.88	ug/L	0.50	0.09	1	10/24/23 14:31	10/20/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 14:31	10/20/23	
Manganese	200.8	6070	ug/L	0.20	0.04	1	10/24/23 14:31	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-1
Lab Code: K2311697-029

Service Request: K2311697
Date Collected: 10/09/23 11:35
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	2090	ug/L	0.50	0.09	1	10/24/23 14:33	10/20/23	
Iron	200.8	3160	ug/L	2.0	0.3	1	10/24/23 14:33	10/20/23	
Manganese	200.8	2500	ug/L	0.20	0.04	1	10/24/23 14:33	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-2
Lab Code: K2311697-030

Service Request: K2311697
Date Collected: 10/09/23 15:05
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	2080	ug/L	0.50	0.09	1	10/24/23 14:35	10/20/23	
Iron	200.8	3160	ug/L	2.0	0.3	1	10/24/23 14:35	10/20/23	
Manganese	200.8	2480	ug/L	0.20	0.04	1	10/24/23 14:35	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-3
Lab Code: K2311697-031

Service Request: K2311697
Date Collected: 10/09/23 17:05
Date Received: 10/12/23 14:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	2040	ug/L	0.50	0.09	1	10/24/23 14:40	10/20/23	
Iron	200.8	3170	ug/L	2.0	0.3	1	10/24/23 14:40	10/20/23	
Manganese	200.8	2530	ug/L	0.20	0.04	1	10/24/23 14:40	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-4
Lab Code: K2311697-032

Service Request: K2311697
Date Collected: 10/10/23 07:20
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1850	ug/L	0.50	0.09	1	10/24/23 14:22	10/20/23	
Iron	200.8	2760	ug/L	2.0	0.3	1	10/24/23 14:22	10/20/23	
Manganese	200.8	2490	ug/L	0.20	0.04	1	10/24/23 14:22	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-5
Lab Code: K2311697-033

Service Request: K2311697
Date Collected: 10/10/23 18:05
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1700	ug/L	0.50	0.09	1	10/24/23 14:44	10/20/23	
Iron	200.8	2510	ug/L	2.0	0.3	1	10/24/23 14:44	10/20/23	
Manganese	200.8	2440	ug/L	0.20	0.04	1	10/24/23 14:44	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-6
Lab Code: K2311697-034

Service Request: K2311697
Date Collected: 10/11/23 08:10
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1520	ug/L	0.50	0.09	1	10/24/23 14:46	10/20/23	
Iron	200.8	2110	ug/L	2.0	0.3	1	10/24/23 14:46	10/20/23	
Manganese	200.8	2460	ug/L	0.20	0.04	1	10/24/23 14:46	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-7
Lab Code: K2311697-035

Service Request: K2311697
Date Collected: 10/11/23 17:55
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1390	ug/L	0.50	0.09	1	10/24/23 14:53	10/20/23	
Iron	200.8	1910	ug/L	2.0	0.3	1	10/24/23 14:53	10/20/23	
Manganese	200.8	2420	ug/L	0.20	0.04	1	10/24/23 14:53	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-1
Lab Code: K2311697-036

Service Request: K2311697
Date Collected: 10/09/23 10:35
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.30 J	ug/L	0.50	0.09	1	10/24/23 14:55	10/20/23	
Iron	200.8	1.1 J	ug/L	2.0	0.3	1	10/24/23 14:55	10/20/23	
Manganese	200.8	19.9	ug/L	0.20	0.04	1	10/24/23 14:55	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-2
Lab Code: K2311697-037

Service Request: K2311697
Date Collected: 10/09/23 14:05
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.17 J	ug/L	0.50	0.09	1	10/24/23 14:57	10/20/23	
Iron	200.8	7.4	ug/L	2.0	0.3	1	10/24/23 14:57	10/20/23	
Manganese	200.8	58.5	ug/L	0.20	0.04	1	10/24/23 14:57	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-3
Lab Code: K2311697-038

Service Request: K2311697
Date Collected: 10/09/23 18:05
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.19 J	ug/L	0.50	0.09	1	10/24/23 14:59	10/20/23	
Iron	200.8	23.8	ug/L	2.0	0.3	1	10/24/23 14:59	10/20/23	
Manganese	200.8	270	ug/L	0.20	0.04	1	10/24/23 14:59	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-4
Lab Code: K2311697-039

Service Request: K2311697
Date Collected: 10/10/23 07:15
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	2.00	ug/L	0.50	0.09	1	10/24/23 14:42	10/20/23	
Iron	200.8	1.7 J	ug/L	2.0	0.3	1	10/24/23 14:42	10/20/23	
Manganese	200.8	1000	ug/L	0.20	0.04	1	10/24/23 14:42	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-5
Lab Code: K2311697-040

Service Request: K2311697
Date Collected: 10/10/23 17:05
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	4.17	ug/L	0.50	0.09	1	10/24/23 15:03	10/20/23	
Iron	200.8	0.6 J	ug/L	2.0	0.3	1	10/24/23 15:03	10/20/23	
Manganese	200.8	1130	ug/L	0.20	0.04	1	10/24/23 15:03	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-6
Lab Code: K2311697-041

Service Request: K2311697
Date Collected: 10/11/23 07:20
Date Received: 10/12/23 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.86	ug/L	0.50	0.09	1	10/18/23 18:25	10/16/23	
Iron	200.8	28.6	ug/L	2.0	0.3	1	10/18/23 18:25	10/16/23	
Manganese	200.8	1300	ug/L	0.20	0.04	1	10/18/23 18:25	10/16/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-7
Lab Code: K2311697-042

Service Request: K2311697
Date Collected: 10/11/23 17:05
Date Received: 10/12/23 14:15

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.66	ug/L	0.50	0.09	1	10/18/23 18:27	10/16/23	
Iron	200.8	0.9 J	ug/L	2.0	0.3	1	10/18/23 18:27	10/16/23	
Manganese	200.8	1150	ug/L	0.20	0.04	1	10/18/23 18:27	10/16/23	



QC Summary Forms

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Metals

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2318071-01

Service Request: K2311697
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	10/24/23 14:07	10/20/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 14:07	10/20/23	
Manganese	200.8	0.11 J	ug/L	0.20	0.04	1	10/24/23 14:07	10/20/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2318073-01

Service Request: K2311697
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	10/24/23 12:14	10/20/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 12:14	10/20/23	
Lithium	200.8	ND U	ug/L	0.20	0.10	1	10/24/23 12:14	10/20/23	
Manganese	200.8	0.11 J	ug/L	0.20	0.04	1	10/24/23 12:14	10/20/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2318105-01

Service Request: K2311697
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	10/18/23 17:46	10/16/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/18/23 17:46	10/16/23	
Manganese	200.8	0.13 J	ug/L	0.20	0.04	1	10/18/23 17:46	10/16/23	

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dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/11/23
Date Received: 10/12/23
Date Analyzed: 10/24/23
Date Extracted: 10/20/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-2-INF-7
Lab Code: K2311697-021
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318071-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	278	325	50.0	93 #	70-130
Iron	5260	5310	50.0	108 #	70-130
Manganese	8550	8510	25.0	-172 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/09/23
Date Received: 10/12/23
Date Analyzed: 10/24/23
Date Extracted: 10/20/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-4-INF-2
Lab Code: K2311697-030
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318071-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	2080	2100	50.0	34 #	70-130
Iron	3160	3190	50.0	59 #	70-130
Manganese	2480	2510	25.0	98 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/09/23
Date Received: 10/12/23
Date Analyzed: 10/24/23
Date Extracted: 10/20/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-1
Lab Code: K2311697-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318073-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.69	49.0	50.0	97	70-130
Iron	24.0	73.0	50.0	98	70-130
Lithium	215	266	50.0	102 #	70-130
Manganese	12.8	37.5	25.0	99	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/09/23
Date Received: 10/12/23
Date Analyzed: 10/24/23
Date Extracted: 10/20/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-2
Lab Code: K2311697-002
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318073-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.66	47.6	50.0	94	70-130
Iron	22.7	71.1	50.0	97	70-130
Lithium	216	269	50.0	106 #	70-130
Manganese	4.55	28.7	25.0	97	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/11/23
Date Received: 10/12/23
Date Analyzed: 10/24/23

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-COL-MW-2-INF-7
Lab Code: K2311697-021

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318071-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/09/23
Date Received: 10/12/23
Date Analyzed: 10/24/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-COL-MW-4-INF-2
Lab Code: K2311697-030

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2318071-05 Result			
Arsenic	200.8	0.50	0.09	2080	2040	2060	2	20
Iron	200.8	2.0	0.3	3160	3120	3140	1	20
Manganese	200.8	0.20	0.04	2480	2460	2470	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/09/23
Date Received: 10/12/23
Date Analyzed: 10/24/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-1
Lab Code: K2311697-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318073-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Collected: 10/09/23
Date Received: 10/12/23
Date Analyzed: 10/24/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-2
Lab Code: K2311697-002

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318073-05 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Analyzed: 10/24/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2318071-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	48.7	50.0	97	85-115
Iron	200.8	50.2	50.0	100	85-115
Manganese	200.8	25.4	25.0	102	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Analyzed: 10/24/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2318073-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.9	50.0	100	85-115
Iron	200.8	51.6	50.0	103	85-115
Lithium	200.8	55.5	50.0	111	85-115
Manganese	200.8	26.0	25.0	104	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311697
Date Analyzed: 10/18/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2318105-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.0	50.0	98	85-115
Iron	200.8	50.5	50.0	101	85-115
Manganese	200.8	25.3	25.0	101	85-115



October 23, 2023

Service Request No:K2311796

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023 & 2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory October 16, 2023
For your reference, these analyses have been assigned our service request number **K2311796**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

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www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024
Sample Matrix: Water

Service Request: K2311796
Date Received: 10/16/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Twenty four water samples were received for analysis at ALS Environmental on 10/16/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 10/23/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-2-INF-8	Lab ID: K2311796-009
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	64.1		0.09	0.50	ug/L	200.8
Iron, Dissolved	4020		0.3	2.0	ug/L	200.8
Manganese, Dissolved	9090		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-9	Lab ID: K2311796-010
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	11.1		0.09	0.50	ug/L	200.8
Iron, Dissolved	3360		0.3	2.0	ug/L	200.8
Manganese, Dissolved	8510		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-10	Lab ID: K2311796-011
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.80		0.09	0.50	ug/L	200.8
Iron, Dissolved	2050		0.3	2.0	ug/L	200.8
Manganese, Dissolved	9600		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-INF-11	Lab ID: K2311796-012
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.02		0.09	0.50	ug/L	200.8
Iron, Dissolved	1440		0.3	2.0	ug/L	200.8
Manganese, Dissolved	9180		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-8	Lab ID: K2311796-013
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.84		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.4	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	7150		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-9	Lab ID: K2311796-014
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.88		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.3	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	6730		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-10	Lab ID: K2311796-015
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.81		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.8	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	7610		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-PM-11	Lab ID: K2311796-016
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.85		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.2	J	0.3	2.0	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-2-PM-11	Lab ID: K2311796-016
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Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	7120		0.4	2.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-8	Lab ID: K2311796-017
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1160		0.09	0.50	ug/L	200.8
Iron, Dissolved	1320		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2320		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-9	Lab ID: K2311796-018
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1020		0.09	0.50	ug/L	200.8
Iron, Dissolved	1070		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2300		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-10	Lab ID: K2311796-019
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	839		0.09	0.50	ug/L	200.8
Iron, Dissolved	704		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2310		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-INF-11	Lab ID: K2311796-020
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	732		0.09	0.50	ug/L	200.8
Iron, Dissolved	516		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2300		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-8	Lab ID: K2311796-021
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	12.2		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.0	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1190		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-9	Lab ID: K2311796-022
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	22.8		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.7	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1320		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-PM-10	Lab ID: K2311796-023
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	27.1		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.7	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1350		0.04	0.20	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-4-PM-11	Lab ID: K2311796-024
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	30.5		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.9	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1230		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-8	Lab ID: K2311796-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	20.0		0.3	2.0	ug/L	200.8
Lithium, Dissolved	211		0.10	0.10	ug/L	200.8
Manganese, Dissolved	4.39		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-9	Lab ID: K2311796-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	20.4		0.3	2.0	ug/L	200.8
Lithium, Dissolved	208		0.10	0.10	ug/L	200.8
Manganese, Dissolved	4.47		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-10	Lab ID: K2311796-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	19.2		0.3	2.0	ug/L	200.8
Lithium, Dissolved	208		0.10	0.10	ug/L	200.8
Manganese, Dissolved	4.37		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-INF-11	Lab ID: K2311796-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	19.6		0.3	2.0	ug/L	200.8
Lithium, Dissolved	212		0.10	0.10	ug/L	200.8
Manganese, Dissolved	4.29		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-8	Lab ID: K2311796-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	4.5		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.11		0.10	0.10	ug/L	200.8
Manganese, Dissolved	44.3		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-9	Lab ID: K2311796-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	2.0	J	0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.15		0.10	0.10	ug/L	200.8
Manganese, Dissolved	50.6		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-10	Lab ID: K2311796-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	2.9		0.3	2.0	ug/L	200.8
Lithium, Dissolved	1.22		0.10	0.10	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-10	Lab ID: K2311796-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	61.3		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-MOL-SBC-LP-11	Lab ID: K2311796-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	1.1	J	0.3	2.0	ug/L	200.8
Lithium, Dissolved	20.2		0.10	0.10	ug/L	200.8
Manganese, Dissolved	69.9		0.04	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08


Service Request:K2311796

SAMPLE CROSS-REFERENCE

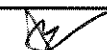

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2311796-001	GSD-COL-MW-21VC-INF-8	10/12/2023	0815
K2311796-002	GSD-COL-MW-21VC-INF-9	10/12/2023	1800
K2311796-003	GSD-COL-MW-21VC-INF-10	10/13/2023	0800
K2311796-004	GSD-COL-MW-21VC-INF-11	10/13/2023	1800
K2311796-005	GSD-COL-MW-21VC-MOL-SBC-LP-8	10/12/2023	0725
K2311796-006	GSD-COL-MW-21VC-MOL-SBC-LP-9	10/12/2023	1710
K2311796-007	GSD-COL-MW-21VC-MOL-SBC-LP-10	10/13/2023	0710
K2311796-008	GSD-COL-MW-21VC-MOL-SBC-LP-11	10/13/2023	1710
K2311796-009	GSD-COL-MW-2-INF-8	10/12/2023	0805
K2311796-010	GSD-COL-MW-2-INF-9	10/12/2023	1750
K2311796-011	GSD-COL-MW-2-INF-10	10/13/2023	0750
K2311796-012	GSD-COL-MW-2-INF-11	10/13/2023	1750
K2311796-013	GSD-COL-MW-2-PM-8	10/12/2023	0715
K2311796-014	GSD-COL-MW-2-PM-9	10/12/2023	1700
K2311796-015	GSD-COL-MW-2-PM-10	10/13/2023	0700
K2311796-016	GSD-COL-MW-2-PM-11	10/13/2023	1700
K2311796-017	GSD-COL-MW-4-INF-8	10/12/2023	0810
K2311796-018	GSD-COL-MW-4-INF-9	10/12/2023	1755
K2311796-019	GSD-COL-MW-4-INF-10	10/13/2023	0755
K2311796-020	GSD-COL-MW-4-INF-11	10/13/2023	1755
K2311796-021	GSD-COL-MW-4-PM-8	10/12/2023	0720
K2311796-022	GSD-COL-MW-4-PM-9	10/12/2023	1705
K2311796-023	GSD-COL-MW-4-PM-10	10/13/2023	0705
K2311796-024	GSD-COL-MW-4-PM-11	10/13/2023	1705

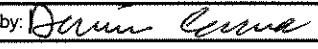

Chain of Custody Record & Laboratory Analysis Request

12311796

Laboratory Number: 503-972-5019					No. of Containers	Parameters										 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219					
Date:	10/16/2023					As, Fe, Mn															
Project Name:	Gadsden 2023 & 2024					Li, Fe, Mn															
Project Number:	221114-06.02 Task 08																				
Project Manager:	Masa Kanematsu																				
Phone Number:	503-972-5001 (backup number: 503-798-3456)																				
Shipment Method:	ALS Carrier																				
Line	Field Sample ID	Collection		Matrix	No. of Containers	Parameters														Comments/Preservation	
		Date	Time			As, Fe, Mn	Li, Fe, Mn														
1	GSD-COL-MW-21VC-INF-8	10/12/2023	8:15	Water	1		X												HNO3-Preserved bottles		
2	GSD-COL-MW-21VC-INF-9	10/12/2023	18:00	Water	1		X												HNO3-Preserved bottles		
3	GSD-COL-MW-21VC-INF-10	10/13/2023	8:00	Water	1		X												HNO3-Preserved bottles		
4	GSD-COL-MW-21VC-INF-11	10/13/2023	18:00	Water	1		X												HNO3-Preserved bottles		
5	GSD-COL-MW-21VC-MOL-SBC-LP-8	10/12/2023	7:25	Water	1		X												HNO3-Preserved bottles		
6	GSD-COL-MW-21VC-MOL-SBC-LP-9	10/12/2023	17:10	Water	1		X												HNO3-Preserved bottles		
7	GSD-COL-MW-21VC-MOL-SBC-LP-10	10/13/2023	7:10	Water	1		X												HNO3-Preserved bottles		
8	GSD-COL-MW-21VC-MOL-SBC-LP-11	10/13/2023	17:10	Water	1		X												HNO3-Preserved bottles		
9	GSD-COL-MW-2-INF-8	10/12/2023	8:05	Water	1	X													HNO3-Preserved bottles		
10	GSD-COL-MW-2-INF-9	10/12/2023	17:50	Water	1	X													HNO3-Preserved bottles		
11	GSD-COL-MW-2-INF-10	10/13/2023	7:50	Water	1	X													HNO3-Preserved bottles		
12	GSD-COL-MW-2-INF-11	10/13/2023	17:50	Water	1	X													HNO3-Preserved bottles		
13	GSD-COL-MW-2-PM-8	10/12/2023	7:15	Water	1	X													HNO3-Preserved bottles		
14	GSD-COL-MW-2-PM-9	10/12/2023	17:00	Water	1	X													HNO3-Preserved bottles		
15	GSD-COL-MW-2-PM-10	10/13/2023	7:00	Water	1	X													HNO3-Preserved bottles		
16	GSD-COL-MW-2-PM-11	10/13/2023	17:00	Water	1	X													HNO3-Preserved bottles		
17	GSD-COL-MW-4-INF-8	10/12/2023	8:10	Water	1	X													HNO3-Preserved bottles		
18	GSD-COL-MW-4-INF-9	10/12/2023	17:55	Water	1	X													HNO3-Preserved bottles		
19	GSD-COL-MW-4-INF-10	10/13/2023	7:55	Water	1	X													HNO3-Preserved bottles		
20	GSD-COL-MW-4-INF-11	10/13/2023	17:55	Water	1	X													HNO3-Preserved bottles		

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb.


Relinquished by: Sumant Avasarala	Company: Anchor QEA
Signature/Print Name: 	Date/Time: 10/16/23
Relinquished by: Daniel Swartz	Company: ALS
Signature/Print Name: 	Date/Time: 10/16/23 1500

Received by:  10/16/23
Signature/Print Name: Daniel Swartz
Received by: Daniel Swartz
Signature/Print Name:  10/16/23 1500

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Chain of Custody Record & Laboratory Analysis Request

W2311796

Laboratory Number: 503-972-5019					No. of Containers	Parameters										 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219						
Date:	10/16/2023					As, Fe, Mn																
Project Name:	Gadsden 2023 & 2024					Li, Fe, Mn																
Project Number:	221114-06.02 Task 08																					
Project Manager:	Masa Kanematsu																					
Phone Number:	503-972-5001 (backup number: 503-798-3456)																					
Shipment Method:	ALS Carrier																					
Line	Field Sample ID	Collection		Matrix	No. of Containers															Comments/Preservation		
		Date	Time																			
21	GSD-COL-MW-4-PM-8	10/12/2023	7:20	Water	1	X															HNO3-Preserved bottles	
22	GSD-COL-MW-4-PM-9	10/12/2023	17:05	Water	1	X															HNO3-Preserved bottles	
23	GSD-COL-MW-4-PM-10	10/13/2023	7:05	Water	1	X															HNO3-Preserved bottles	
24	GSD-COL-MW-4-PM-11	10/13/2023	17:05	Water	1	X															HNO3-Preserved bottles	

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb.

Relinquished by: Sumant Avasarala	Company: Anchor QEA	Received by: <i>Daniel Sweet</i> 11/16/23 ALS
Signature/Print Name: <i>AS</i>	Date/Time: 10/16/23	Signature/Print Name: Daniel Sweet 10/16/23 11:04
Relinquished by: <i>Daniel Sweet</i>	Company: ALS	Received by:
Signature/Print Name: <i>Daniel Sweet</i>	Date/Time: 10-16-23 1500	Signature/Print Name:

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Cooler Receipt and Preservation Form

Client Anchor

Service Request K23 11796

Received: 10-16-23 Opened: 10-16-23 By: DS Unloaded: 10-16-23 By: DS

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other _____ NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 middle
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with 'X'	PM Notified If out of temp	Tracking Number NA	Filed
<u>5.2</u>		<u>IR02</u>					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Did not pH due to limited volume



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311796

Sample Name: GSD-COL-MW-21VC-INF-8
Lab Code: K2311796-001
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-21VC-INF-9
Lab Code: K2311796-002
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-21VC-INF-10
Lab Code: K2311796-003
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-21VC-INF-11
Lab Code: K2311796-004
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-8
Lab Code: K2311796-005
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311796

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-9
Lab Code: K2311796-006
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-10
Lab Code: K2311796-007
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-11
Lab Code: K2311796-008
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-2-INF-8
Lab Code: K2311796-009
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-2-INF-9
Lab Code: K2311796-010
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311796

Sample Name: GSD-COL-MW-2-INF-10
Lab Code: K2311796-011
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-2-INF-11
Lab Code: K2311796-012
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-2-PM-8
Lab Code: K2311796-013
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-2-PM-9
Lab Code: K2311796-014
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-2-PM-10
Lab Code: K2311796-015
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

ALS Group USA, Corp.
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311796

Sample Name: GSD-COL-MW-2-PM-11
Lab Code: K2311796-016
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-INF-8
Lab Code: K2311796-017
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-INF-9
Lab Code: K2311796-018
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-INF-10
Lab Code: K2311796-019
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-INF-11
Lab Code: K2311796-020
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
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Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311796

Sample Name: GSD-COL-MW-4-PM-8
Lab Code: K2311796-021
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-PM-9
Lab Code: K2311796-022
Sample Matrix: Water

Date Collected: 10/12/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-PM-10
Lab Code: K2311796-023
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-PM-11
Lab Code: K2311796-024
Sample Matrix: Water

Date Collected: 10/13/23
Date Received: 10/16/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
JCHAN



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-8
Lab Code: K2311796-001

Service Request: K2311796
Date Collected: 10/12/23 08:15
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	20.0	ug/L	2.0	0.3	1	10/23/23 10:04	10/19/23	
Lithium	200.8	211	ug/L	0.10	0.10	1	10/23/23 10:04	10/19/23	
Manganese	200.8	4.39	ug/L	0.20	0.04	1	10/23/23 10:04	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-9
Lab Code: K2311796-002

Service Request: K2311796
Date Collected: 10/12/23 18:00
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	20.4	ug/L	2.0	0.3	1	10/23/23 10:10	10/19/23	
Lithium	200.8	208	ug/L	0.10	0.10	1	10/23/23 10:10	10/19/23	
Manganese	200.8	4.47	ug/L	0.20	0.04	1	10/23/23 10:10	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-10
Lab Code: K2311796-003

Service Request: K2311796
Date Collected: 10/13/23 08:00
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	19.2	ug/L	2.0	0.3	1	10/23/23 10:15	10/19/23	
Lithium	200.8	208	ug/L	0.10	0.10	1	10/23/23 10:15	10/19/23	
Manganese	200.8	4.37	ug/L	0.20	0.04	1	10/23/23 10:15	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-INF-11
Lab Code: K2311796-004

Service Request: K2311796
Date Collected: 10/13/23 18:00
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	19.6	ug/L	2.0	0.3	1	10/23/23 10:17	10/19/23	
Lithium	200.8	212	ug/L	0.10	0.10	1	10/23/23 10:17	10/19/23	
Manganese	200.8	4.29	ug/L	0.20	0.04	1	10/23/23 10:17	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-8
Lab Code: K2311796-005

Service Request: K2311796
Date Collected: 10/12/23 07:25
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	4.5	ug/L	2.0	0.3	1	10/23/23 10:27	10/19/23	
Lithium	200.8	0.11	ug/L	0.10	0.10	1	10/23/23 10:27	10/19/23	
Manganese	200.8	44.3	ug/L	0.20	0.04	1	10/23/23 10:27	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-9
Lab Code: K2311796-006

Service Request: K2311796
Date Collected: 10/12/23 17:10
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	2.0 J	ug/L	2.0	0.3	1	10/23/23 10:29	10/19/23	
Lithium	200.8	0.15	ug/L	0.10	0.10	1	10/23/23 10:29	10/19/23	
Manganese	200.8	50.6	ug/L	0.20	0.04	1	10/23/23 10:29	10/19/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-10
Lab Code: K2311796-007

Service Request: K2311796
Date Collected: 10/13/23 07:10
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	2.9	ug/L	2.0	0.3	1	10/23/23 10:30	10/19/23	
Lithium	200.8	1.22	ug/L	0.10	0.10	1	10/23/23 10:30	10/19/23	
Manganese	200.8	61.3	ug/L	0.20	0.04	1	10/23/23 10:30	10/19/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-MOL-SBC-LP-11
Lab Code: K2311796-008

Service Request: K2311796
Date Collected: 10/13/23 17:10
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	1.1 J	ug/L	2.0	0.3	1	10/23/23 10:32	10/19/23	
Lithium	200.8	20.2	ug/L	0.10	0.10	1	10/23/23 10:32	10/19/23	
Manganese	200.8	69.9	ug/L	0.20	0.04	1	10/23/23 10:32	10/19/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-8
Lab Code: K2311796-009

Service Request: K2311796
Date Collected: 10/12/23 08:05
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	64.1	ug/L	0.50	0.09	1	10/23/23 10:34	10/19/23	
Iron	200.8	4020	ug/L	2.0	0.3	1	10/23/23 10:34	10/19/23	
Manganese	200.8	9090	ug/L	2.0	0.4	10	10/23/23 11:10	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-9
Lab Code: K2311796-010

Service Request: K2311796
Date Collected: 10/12/23 17:50
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	11.1	ug/L	0.50	0.09	1	10/23/23 10:35	10/19/23	
Iron	200.8	3360	ug/L	2.0	0.3	1	10/23/23 10:35	10/19/23	
Manganese	200.8	8510	ug/L	2.0	0.4	10	10/23/23 11:16	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-10
Lab Code: K2311796-011

Service Request: K2311796
Date Collected: 10/13/23 07:50
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.80	ug/L	0.50	0.09	1	10/23/23 10:37	10/19/23	
Iron	200.8	2050	ug/L	2.0	0.3	1	10/23/23 10:37	10/19/23	
Manganese	200.8	9600	ug/L	2.0	0.4	10	10/23/23 11:18	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-INF-11
Lab Code: K2311796-012

Service Request: K2311796
Date Collected: 10/13/23 17:50
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.02	ug/L	0.50	0.09	1	10/23/23 10:39	10/19/23	
Iron	200.8	1440	ug/L	2.0	0.3	1	10/23/23 10:39	10/19/23	
Manganese	200.8	9180	ug/L	2.0	0.4	10	10/23/23 11:20	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-8
Lab Code: K2311796-013

Service Request: K2311796
Date Collected: 10/12/23 07:15
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.84	ug/L	0.50	0.09	1	10/23/23 10:41	10/19/23	
Iron	200.8	1.4 J	ug/L	2.0	0.3	1	10/23/23 10:41	10/19/23	
Manganese	200.8	7150	ug/L	2.0	0.4	10	10/23/23 11:22	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-9
Lab Code: K2311796-014

Service Request: K2311796
Date Collected: 10/12/23 17:00
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.88	ug/L	0.50	0.09	1	10/23/23 10:42	10/19/23	
Iron	200.8	1.3 J	ug/L	2.0	0.3	1	10/23/23 10:42	10/19/23	
Manganese	200.8	6730	ug/L	2.0	0.4	10	10/23/23 11:23	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-10
Lab Code: K2311796-015

Service Request: K2311796
Date Collected: 10/13/23 07:00
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.81	ug/L	0.50	0.09	1	10/23/23 10:48	10/19/23	
Iron	200.8	0.8 J	ug/L	2.0	0.3	1	10/23/23 10:48	10/19/23	
Manganese	200.8	7610	ug/L	2.0	0.4	10	10/23/23 11:25	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-PM-11
Lab Code: K2311796-016

Service Request: K2311796
Date Collected: 10/13/23 17:00
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.85	ug/L	0.50	0.09	1	10/23/23 10:50	10/19/23	
Iron	200.8	1.2 J	ug/L	2.0	0.3	1	10/23/23 10:50	10/19/23	
Manganese	200.8	7120	ug/L	2.0	0.4	10	10/23/23 11:27	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-8
Lab Code: K2311796-017

Service Request: K2311796
Date Collected: 10/12/23 08:10
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1160	ug/L	0.50	0.09	1	10/23/23 10:52	10/19/23	
Iron	200.8	1320	ug/L	2.0	0.3	1	10/23/23 10:52	10/19/23	
Manganese	200.8	2320	ug/L	0.20	0.04	1	10/23/23 10:52	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-9
Lab Code: K2311796-018

Service Request: K2311796
Date Collected: 10/12/23 17:55
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1020	ug/L	0.50	0.09	1	10/23/23 10:54	10/19/23	
Iron	200.8	1070	ug/L	2.0	0.3	1	10/23/23 10:54	10/19/23	
Manganese	200.8	2300	ug/L	0.20	0.04	1	10/23/23 10:54	10/19/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-10
Lab Code: K2311796-019

Service Request: K2311796
Date Collected: 10/13/23 07:55
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	839	ug/L	0.50	0.09	1	10/23/23 10:55	10/19/23	
Iron	200.8	704	ug/L	2.0	0.3	1	10/23/23 10:55	10/19/23	
Manganese	200.8	2310	ug/L	0.20	0.04	1	10/23/23 10:55	10/19/23	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-INF-11
Lab Code: K2311796-020

Service Request: K2311796
Date Collected: 10/13/23 17:55
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	732	ug/L	0.50	0.09	1	10/23/23 10:57	10/19/23	
Iron	200.8	516	ug/L	2.0	0.3	1	10/23/23 10:57	10/19/23	
Manganese	200.8	2300	ug/L	0.20	0.04	1	10/23/23 10:57	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-8
Lab Code: K2311796-021

Service Request: K2311796
Date Collected: 10/12/23 07:20
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	12.2	ug/L	0.50	0.09	1	10/23/23 09:28	10/19/23	
Iron	200.8	1.0 J	ug/L	2.0	0.3	1	10/23/23 09:28	10/19/23	
Manganese	200.8	1190	ug/L	0.20	0.04	1	10/23/23 09:28	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-9
Lab Code: K2311796-022

Service Request: K2311796
Date Collected: 10/12/23 17:05
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	22.8	ug/L	0.50	0.09	1	10/23/23 09:33	10/19/23	
Iron	200.8	0.7 J	ug/L	2.0	0.3	1	10/23/23 09:33	10/19/23	
Manganese	200.8	1320	ug/L	0.20	0.04	1	10/23/23 09:33	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-10
Lab Code: K2311796-023

Service Request: K2311796
Date Collected: 10/13/23 07:05
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	27.1	ug/L	0.50	0.09	1	10/23/23 09:35	10/19/23	
Iron	200.8	0.7 J	ug/L	2.0	0.3	1	10/23/23 09:35	10/19/23	
Manganese	200.8	1350	ug/L	0.20	0.04	1	10/23/23 09:35	10/19/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-PM-11
Lab Code: K2311796-024

Service Request: K2311796
Date Collected: 10/13/23 17:05
Date Received: 10/16/23 15:00
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	30.5	ug/L	0.50	0.09	1	10/23/23 09:37	10/19/23	
Iron	200.8	0.9 J	ug/L	2.0	0.3	1	10/23/23 09:37	10/19/23	
Manganese	200.8	1230	ug/L	0.20	0.04	1	10/23/23 09:37	10/19/23	



QC Summary Forms

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2318288-01

Service Request: K2311796
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	10/23/23 08:47	10/19/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/23/23 08:47	10/19/23	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	10/23/23 08:47	10/19/23	

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dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2318336-01

Service Request: K2311796
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	10/23/23 10:01	10/19/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/23/23 10:01	10/19/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	10/23/23 10:01	10/19/23	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	10/23/23 10:01	10/19/23	

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dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Collected: 10/12/23
Date Received: 10/16/23
Date Analyzed: 10/23/23
Date Extracted: 10/19/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-4-PM-8
Lab Code: K2311796-021
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318288-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	12.2	60.5	50.0	97	70-130
Iron	1.0 J	47.4	50.0	93	70-130
Manganese	1190	1210	25.0	84 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Collected: 10/12/23
Date Received: 10/16/23
Date Analyzed: 10/23/23
Date Extracted: 10/19/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-8
Lab Code: K2311796-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318336-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.62	46.1	50.0	91	70-130
Iron	20.0	63.4	50.0	87	70-130
Lithium	211	259	50.0	97 #	70-130
Manganese	4.39	27.0	25.0	91	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Collected: 10/12/23
Date Received: 10/16/23
Date Analyzed: 10/23/23
Date Extracted: 10/19/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-9
Lab Code: K2311796-002
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318336-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	0.66	47.4	50.0	94	70-130
Iron	20.4	65.6	50.0	90	70-130
Lithium	208	265	50.0	114 #	70-130
Manganese	4.47	28.0	25.0	94	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Collected: 10/12/23
Date Received: 10/16/23
Date Analyzed: 10/23/23

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-COL-MW-4-PM-8
Lab Code: K2311796-021

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318288-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Collected: 10/12/23
Date Received: 10/16/23
Date Analyzed: 10/23/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-8
Lab Code: K2311796-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318336-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Collected: 10/12/23
Date Received: 10/16/23
Date Analyzed: 10/23/23

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-COL-MW-21VC-INF-9
Lab Code: K2311796-002

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318336-05 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Analyzed: 10/23/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2318288-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	46.9	50.0	94	85-115
Iron	200.8	46.5	50.0	93	85-115
Manganese	200.8	23.6	25.0	94	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311796
Date Analyzed: 10/23/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2318336-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	48.1	50.0	96	85-115
Iron	200.8	47.6	50.0	95	85-115
Lithium	200.8	52.2	50.0	104	85-115
Manganese	200.8	23.9	25.0	95	85-115



October 25, 2023

Service Request No:K2311985

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023 & 2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory October 19, 2023
For your reference, these analyses have been assigned our service request number **K2311985**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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Narrative Documents

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Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024
Sample Matrix: Water

Service Request: K2311985
Date Received: 10/19/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Twelve water samples were received for analysis at ALS Environmental on 10/19/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

A handwritten signature in black ink that reads 'Noel D. O'Connell'.

Approved by _____

Date 10/25/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-DT-MW-2-PM-1	Lab ID: K2311985-004
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.65		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.8	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	8960		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-2-PM-2	Lab ID: K2311985-005
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.61		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.0	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	5190		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-2-PM-3	Lab ID: K2311985-006
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.71		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.1	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	4670		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-4-PM-1	Lab ID: K2311985-007
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	7.73		0.09	0.50	ug/L	200.8
Iron, Dissolved	0.5	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	2630		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-4-PM-2	Lab ID: K2311985-008
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	7.80		0.09	0.50	ug/L	200.8
Iron, Dissolved	4.2		0.3	2.0	ug/L	200.8
Manganese, Dissolved	1910		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-4-PM-3	Lab ID: K2311985-009
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	6.22		0.09	0.50	ug/L	200.8
Iron, Dissolved	1.9	J	0.3	2.0	ug/L	200.8
Manganese, Dissolved	1560		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-DT-COL-MW-14-INF-1	Lab ID: K2311985-010
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.99		0.09	0.50	ug/L	200.8
Iron, Dissolved	4.2		0.3	2.0	ug/L	200.8
Manganese, Dissolved	552		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-DT-COL-MW-14-INF-2	Lab ID: K2311985-011
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.92		0.09	0.50	ug/L	200.8
Iron, Dissolved	4.1		0.3	2.0	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-DT-COL-MW-14-INF-2	Lab ID: K2311985-011
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Analyte	Results	Flag	MDL	MRL	Units	Method
Manganese, Dissolved	562		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-DT-COL-MW-14-INF-3	Lab ID: K2311985-012
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.95		0.09	0.50	ug/L	200.8
Iron, Dissolved	5.1		0.3	2.0	ug/L	200.8
Manganese, Dissolved	555		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-21VC-MOL-SBC-LP-1	Lab ID: K2311985-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	3.1		0.3	2.0	ug/L	200.8
Lithium, Dissolved	2.21		0.10	0.10	ug/L	200.8
Manganese, Dissolved	34.6		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-21VC-MOL-SBC-LP-3	Lab ID: K2311985-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	0.3	J	0.3	2.0	ug/L	200.8
Lithium, Dissolved	73.4		0.10	0.10	ug/L	200.8
Manganese, Dissolved	12900		4	20	ug/L	200.8

CLIENT ID: GSD-COL-DT-MW-21VC-MOL-SBC-LP-2	Lab ID: K2311985-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Lithium, Dissolved	102		0.10	0.10	ug/L	200.8
Manganese, Dissolved	910		0.04	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

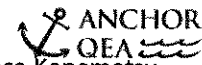
Service Request:K2311985

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2311985-001	GSD-COL-DT-MW-21VC-MOL-SBC-LP-1	10/16/2023	1610
K2311985-002	GSD-COL-DT-MW-21VC-MOL-SBC-LP-2	10/17/2023	1510
K2311985-003	GSD-COL-DT-MW-21VC-MOL-SBC-LP-3	10/18/2023	1410
K2311985-004	GSD-COL-DT-MW-2-PM-1	10/16/2023	1600
K2311985-005	GSD-COL-DT-MW-2-PM-2	10/17/2023	1500
K2311985-006	GSD-COL-DT-MW-2-PM-3	10/18/2023	1400
K2311985-007	GSD-COL-DT-MW-4-PM-1	10/16/2023	1605
K2311985-008	GSD-COL-DT-MW-4-PM-2	10/17/2023	1505
K2311985-009	GSD-COL-DT-MW-4-PM-3	10/18/2023	1405
K2311985-010	GSD-DT-COL-MW-14-INF-1	10/16/2023	1700
K2311985-011	GSD-DT-COL-MW-14-INF-2	10/17/2023	1600
K2311985-012	GSD-DT-COL-MW-14-INF-3	10/18/2023	1500

Chain of Custody Record & Laboratory Analysis Request

152311985

Laboratory Number: 503-972-5019						Parameters										 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219						
Date:	10/19/2023																					
Project Name:	Gadsden 2023 & 2024																					
Project Number:	221114-06.02 Task 08																					
Project Manager:	Masa Kanematsu																					
Phone Number:	503-972-5001 (backup number: 503-798-3456)																					
Shipment Method:	ALS Carrier					No. of Containers As, Fe, Mn Li, Fe, Mn											Comments/Preservation					
Line	Field Sample ID	Collection		Matrix																		
		Date	Time																			
1	GSD-COL-DT-MW-21VC-MOL-SBC-LP-1	10/16/2023	16:10	Water	1			X													HNO3-Preserved bottles	
2	GSD-COL-DT-MW-21VC-MOL-SBC-LP-2	10/17/2023	15:10	Water	1			X														HNO3-Preserved bottles
3	GSD-COL-DT-MW-21VC-MOL-SBC-LP-3	10/18/2023	14:10	Water	1			X														HNO3-Preserved bottles
4	GSD-COL-DT-MW-2-PM-1	10/16/2023	16:00	Water	1		X															HNO3-Preserved bottles
5	GSD-COL-DT-MW-2-PM-2	10/17/2023	15:00	Water	1		X															HNO3-Preserved bottles
6	GSD-COL-DT-MW-2-PM-3	10/18/2023	14:00	Water	1		X															HNO3-Preserved bottles
7	GSD-COL-DT-MW-4-PM-1	10/16/2023	16:05	Water	1		X															HNO3-Preserved bottles
8	GSD-COL-DT-MW-4-PM-2	10/17/2023	15:05	Water	1		X															HNO3-Preserved bottles
9	GSD-COL-DT-MW-4-PM-3	10/18/2023	14:05	Water	1		X															HNO3-Preserved bottles
10	GSD-DT-COL-MW-14-INF-1	10/16/2023	17:00	Water	1		X															HNO3-Preserved bottles
11	GSD-DT-COL-MW-14-INF-2	10/17/2023	16:00	Water	1		X															HNO3-Preserved bottles
12	GSD-DT-COL-MW-14-INF-3	10/18/2023	15:00	Water	1		X															HNO3-Preserved bottles
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb, and with a **5-day TAT**.

Relinquished by: Sumant Avasthi Emily DeVore	Company: Anchor QEA
Signature/Print Name: <i>Emily DeVore</i>	Date/Time: 10/19/2023 11:36am
Relinquished by: Daniel Swartz	Company: ALS
Signature/Print Name: <i>Davin Dorse</i>	Date/Time: 10/19/23 1330

Received by: Daniel Swartz / ALS
Signature/Print Name: <i>Davin Dorse</i> 10/19/23 1136
Received by: <i>Mike MS</i>
Signature/Print Name: <i>Mattelyn Mifolo</i> 10/19/23 1330

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Cooler Receipt and Preservation Form

Client Anchor Service Request K23 11985
 Received: 10/19/23 Opened: 10/19/23 By: VM Unloaded: 10/19/23 By: VM

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
4.7	# VM	IR201					

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N
- If applicable, tissue samples were received: *Frozen Partially Thawed Thawed*
6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
14. Was C12/Res negative? NA Y N
15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Dilute pH due to limited volume



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311985

Sample Name: GSD-COL-DT-MW-21VC-MOL-SBC-LP-
Lab Code: K2311985-001
Sample Matrix: Water

Date Collected: 10/16/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-DT-MW-21VC-MOL-SBC-LP-
Lab Code: K2311985-002
Sample Matrix: Water

Date Collected: 10/17/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-DT-MW-21VC-MOL-SBC-LP-
Lab Code: K2311985-003
Sample Matrix: Water

Date Collected: 10/18/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-DT-MW-2-PM-1
Lab Code: K2311985-004
Sample Matrix: Water

Date Collected: 10/16/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-DT-MW-2-PM-2
Lab Code: K2311985-005
Sample Matrix: Water

Date Collected: 10/17/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311985

Sample Name: GSD-COL-DT-MW-2-PM-3
Lab Code: K2311985-006
Sample Matrix: Water

Date Collected: 10/18/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-DT-MW-4-PM-1
Lab Code: K2311985-007
Sample Matrix: Water

Date Collected: 10/16/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-DT-MW-4-PM-2
Lab Code: K2311985-008
Sample Matrix: Water

Date Collected: 10/17/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-DT-MW-4-PM-3
Lab Code: K2311985-009
Sample Matrix: Water

Date Collected: 10/18/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-DT-COL-MW-14-INF-1
Lab Code: K2311985-010
Sample Matrix: Water

Date Collected: 10/16/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2311985

Sample Name: GSD-DT-COL-MW-14-INF-2
Lab Code: K2311985-011
Sample Matrix: Water

Date Collected: 10/17/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER

Sample Name: GSD-DT-COL-MW-14-INF-3
Lab Code: K2311985-012
Sample Matrix: Water

Date Collected: 10/18/23
Date Received: 10/19/23

Analysis Method
200.8

Extracted/Digested By
ABOYER

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-21VC-MOL-SBC-LP-1
Lab Code: K2311985-001

Service Request: K2311985
Date Collected: 10/16/23 16:10
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	3.1	ug/L	2.0	0.3	1	10/24/23 11:40	10/23/23	
Lithium	200.8	2.21	ug/L	0.10	0.10	1	10/24/23 11:40	10/23/23	
Manganese	200.8	34.6	ug/L	0.20	0.04	1	10/24/23 11:40	10/23/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-21VC-MOL-SBC-LP-2
Lab Code: K2311985-002

Service Request: K2311985
Date Collected: 10/17/23 15:10
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 11:41	10/23/23	
Lithium	200.8	102	ug/L	0.10	0.10	1	10/24/23 11:41	10/23/23	
Manganese	200.8	910	ug/L	0.20	0.04	1	10/24/23 11:41	10/23/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-21VC-MOL-SBC-LP-3
Lab Code: K2311985-003

Service Request: K2311985
Date Collected: 10/18/23 14:10
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	0.3 J	ug/L	2.0	0.3	1	10/24/23 11:52	10/23/23	
Lithium	200.8	73.4	ug/L	0.10	0.10	1	10/24/23 11:52	10/23/23	
Manganese	200.8	12900	ug/L	20	4	100	10/24/23 12:07	10/23/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-2-PM-1
Lab Code: K2311985-004

Service Request: K2311985
Date Collected: 10/16/23 16:00
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.65	ug/L	0.50	0.09	1	10/24/23 11:54	10/23/23	
Iron	200.8	0.8 J	ug/L	2.0	0.3	1	10/24/23 11:54	10/23/23	
Manganese	200.8	8960	ug/L	0.20	0.04	1	10/24/23 11:54	10/23/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-2-PM-2
Lab Code: K2311985-005

Service Request: K2311985
Date Collected: 10/17/23 15:00
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.61	ug/L	0.50	0.09	1	10/24/23 11:56	10/23/23	
Iron	200.8	1.0 J	ug/L	2.0	0.3	1	10/24/23 11:56	10/23/23	
Manganese	200.8	5190	ug/L	0.20	0.04	1	10/24/23 11:56	10/23/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-2-PM-3
Lab Code: K2311985-006

Service Request: K2311985
Date Collected: 10/18/23 14:00
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	0.71	ug/L	0.50	0.09	1	10/24/23 11:58	10/23/23	
Iron	200.8	1.1 J	ug/L	2.0	0.3	1	10/24/23 11:58	10/23/23	
Manganese	200.8	4670	ug/L	0.20	0.04	1	10/24/23 11:58	10/23/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-4-PM-1
Lab Code: K2311985-007

Service Request: K2311985
Date Collected: 10/16/23 16:05
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.73	ug/L	0.50	0.09	1	10/24/23 11:59	10/23/23	
Iron	200.8	0.5 J	ug/L	2.0	0.3	1	10/24/23 11:59	10/23/23	
Manganese	200.8	2630	ug/L	0.20	0.04	1	10/24/23 11:59	10/23/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-4-PM-2
Lab Code: K2311985-008

Service Request: K2311985
Date Collected: 10/17/23 15:05
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	7.80	ug/L	0.50	0.09	1	10/24/23 12:01	10/23/23	
Iron	200.8	4.2	ug/L	2.0	0.3	1	10/24/23 12:01	10/23/23	
Manganese	200.8	1910	ug/L	0.20	0.04	1	10/24/23 12:01	10/23/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-DT-MW-4-PM-3
Lab Code: K2311985-009

Service Request: K2311985
Date Collected: 10/18/23 14:05
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	6.22	ug/L	0.50	0.09	1	10/24/23 12:03	10/23/23	
Iron	200.8	1.9 J	ug/L	2.0	0.3	1	10/24/23 12:03	10/23/23	
Manganese	200.8	1560	ug/L	0.20	0.04	1	10/24/23 12:03	10/23/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-DT-COL-MW-14-INF-1
Lab Code: K2311985-010

Service Request: K2311985
Date Collected: 10/16/23 17:00
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.99	ug/L	0.50	0.09	1	10/24/23 12:05	10/23/23	
Iron	200.8	4.2	ug/L	2.0	0.3	1	10/24/23 12:05	10/23/23	
Manganese	200.8	552	ug/L	0.20	0.04	1	10/24/23 12:05	10/23/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-DT-COL-MW-14-INF-2
Lab Code: K2311985-011

Service Request: K2311985
Date Collected: 10/17/23 16:00
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.92	ug/L	0.50	0.09	1	10/24/23 11:28	10/23/23	
Iron	200.8	4.1	ug/L	2.0	0.3	1	10/24/23 11:28	10/23/23	
Manganese	200.8	562	ug/L	0.20	0.04	1	10/24/23 11:28	10/23/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-DT-COL-MW-14-INF-3
Lab Code: K2311985-012

Service Request: K2311985
Date Collected: 10/18/23 15:00
Date Received: 10/19/23 13:30
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.95	ug/L	0.50	0.09	1	10/24/23 11:34	10/23/23	
Iron	200.8	5.1	ug/L	2.0	0.3	1	10/24/23 11:34	10/23/23	
Manganese	200.8	555	ug/L	0.20	0.04	1	10/24/23 11:34	10/23/23	



QC Summary Forms

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Metals

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ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2318601-01

Service Request: K2311985
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	10/24/23 11:25	10/23/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	10/24/23 11:25	10/23/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	10/24/23 11:25	10/23/23	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	10/24/23 11:25	10/23/23	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311985
Date Collected: 10/17/23
Date Received: 10/19/23
Date Analyzed: 10/24/23
Date Extracted: 10/23/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-DT-COL-MW-14-INF-2
Lab Code: K2311985-011
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318601-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.92	50.2	50.0	97	70-130
Iron	4.1	53.8	50.0	99	70-130
Lithium	5.34	55.2	50.0	100	70-130
Manganese	562	586	25.0	95 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311985
Date Collected: 10/18/23
Date Received: 10/19/23
Date Analyzed: 10/24/23
Date Extracted: 10/23/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-DT-COL-MW-14-INF-3
Lab Code: K2311985-012
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2318601-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.95	50.1	50.0	96	70-130
Iron	5.1	54.9	50.0	99	70-130
Lithium	5.28	55.5	50.0	100	70-130
Manganese	555	580	25.0	102 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311985
Date Collected: 10/17/23
Date Received: 10/19/23
Date Analyzed: 10/24/23

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-DT-COL-MW-14-INF-2
Lab Code: K2311985-011

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318601-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311985
Date Collected: 10/18/23
Date Received: 10/19/23
Date Analyzed: 10/24/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-DT-COL-MW-14-INF-3
Lab Code: K2311985-012

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2318601-05 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2311985
Date Analyzed: 10/24/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2318601-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	51.5	50.0	103	85-115
Iron	200.8	52.0	50.0	104	85-115
Lithium	200.8	53.7	50.0	107	85-115
Manganese	200.8	25.8	25.0	103	85-115



November 02, 2023

Service Request No:K2312285

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023 & 2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory October 27, 2023
For your reference, these analyses have been assigned our service request number **K2312285**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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dba ALS Environmental



Narrative Documents

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SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-AP-PT-1-SSE-F1	Lab ID: K2312285-001
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	19.5		0.5	2.5	ug/L	200.8
Iron, Dissolved	61		2	10	ug/L	200.8
Lithium, Dissolved	18.2		0.50	0.50	ug/L	200.8
Manganese, Dissolved	62.4		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-AP-PT-1-SSE-F2	Lab ID: K2312285-002
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	586		0.5	2.5	ug/L	200.8
Iron, Dissolved	3380		2	10	ug/L	200.8
Lithium, Dissolved	2.74		0.50	0.50	ug/L	200.8
Manganese, Dissolved	979		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-AP-PT-1-SSE-F3	Lab ID: K2312285-003
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	17.4		0.09	0.50	ug/L	200.8
Iron, Dissolved	2470		0.3	2.0	ug/L	200.8
Lithium, Dissolved	1.12		0.10	0.10	ug/L	200.8
Manganese, Dissolved	1500		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-AP-PT-2-SSE-F1	Lab ID: K2312285-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.1	J	0.5	2.5	ug/L	200.8
Iron, Dissolved	63		2	10	ug/L	200.8
Lithium, Dissolved	17.5		0.50	0.50	ug/L	200.8
Manganese, Dissolved	410		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-AP-PT-2-SSE-F2	Lab ID: K2312285-005
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	34.4		0.5	2.5	ug/L	200.8
Iron, Dissolved	4050		2	10	ug/L	200.8
Lithium, Dissolved	2.12		0.50	0.50	ug/L	200.8
Manganese, Dissolved	234		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-AP-PT-2-SSE-F3	Lab ID: K2312285-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	2.11		0.09	0.50	ug/L	200.8
Iron, Dissolved	2570		0.3	2.0	ug/L	200.8
Lithium, Dissolved	0.16		0.10	0.10	ug/L	200.8
Manganese, Dissolved	70.9		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MB-SSE-F2	Lab ID: K2312285-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	5.3		0.5	2.5	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MB-SSE-F2	Lab ID: K2312285-008
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	33		2	10	ug/L	200.8
Manganese, Dissolved	4.2		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-SSE-F1	Lab ID: K2312285-016
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	13.3		0.5	2.5	ug/L	200.8
Iron, Dissolved	298		2	10	ug/L	200.8
Manganese, Dissolved	670		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-SSE-F2	Lab ID: K2312285-017
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	632		0.5	2.5	ug/L	200.8
Iron, Dissolved	3030		2	10	ug/L	200.8
Manganese, Dissolved	1590		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-2-SSE-F3	Lab ID: K2312285-018
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	18.7		0.09	0.50	ug/L	200.8
Iron, Dissolved	2270		0.3	2.0	ug/L	200.8
Manganese, Dissolved	2460		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-SSE-F1	Lab ID: K2312285-019
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	37.9		0.5	2.5	ug/L	200.8
Iron, Dissolved	34		2	10	ug/L	200.8
Manganese, Dissolved	221		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-SSE-F2	Lab ID: K2312285-020
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1030		0.5	2.5	ug/L	200.8
Iron, Dissolved	3330		2	10	ug/L	200.8
Manganese, Dissolved	213		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-SSE-F3	Lab ID: K2312285-021
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	18.7		0.09	0.50	ug/L	200.8
Iron, Dissolved	1710		0.3	2.0	ug/L	200.8
Manganese, Dissolved	899		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MB-SSE-F1	Lab ID: K2312285-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	4	J	2	10	ug/L	200.8
Lithium, Dissolved	17.5		0.50	0.50	ug/L	200.8
Manganese, Dissolved	1.6		0.2	1.0	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MB-SSE-F1	Lab ID: K2312285-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
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CLIENT ID: GSD-COL-MB-SSE-F3	Lab ID: K2312285-009
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Analyte	Results	Flag	MDL	MRL	Units	Method
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Iron, Dissolved	5.9		0.3	2.0	ug/L	200.8
Manganese, Dissolved	3.23		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-DUP-F1	Lab ID: K2312285-010
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Analyte	Results	Flag	MDL	MRL	Units	Method
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Iron, Dissolved	45		2	10	ug/L	200.8
Lithium, Dissolved	19.5		0.50	0.50	ug/L	200.8
Manganese, Dissolved	403		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-DUP-F2	Lab ID: K2312285-011
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
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Iron, Dissolved	1100		2	10	ug/L	200.8
Lithium, Dissolved	41.5		0.50	0.50	ug/L	200.8
Manganese, Dissolved	2080		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-DUP-F3	Lab ID: K2312285-012
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Analyte	Results	Flag	MDL	MRL	Units	Method
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Iron, Dissolved	1360		0.3	2.0	ug/L	200.8
Lithium, Dissolved	3.15		0.10	0.10	ug/L	200.8
Manganese, Dissolved	3140		0.04	0.20	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-F1	Lab ID: K2312285-013
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Analyte	Results	Flag	MDL	MRL	Units	Method
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Iron, Dissolved	75		2	10	ug/L	200.8
Lithium, Dissolved	17.8		0.50	0.50	ug/L	200.8
Manganese, Dissolved	94.0		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-F2	Lab ID: K2312285-014
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Analyte	Results	Flag	MDL	MRL	Units	Method
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Iron, Dissolved	986		2	10	ug/L	200.8
Lithium, Dissolved	44.2		0.50	0.50	ug/L	200.8
Manganese, Dissolved	2150		0.2	1.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-F3	Lab ID: K2312285-015
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Analyte	Results	Flag	MDL	MRL	Units	Method
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Iron, Dissolved	1450		0.3	2.0	ug/L	200.8
Lithium, Dissolved	3.74		0.10	0.10	ug/L	200.8
Manganese, Dissolved	3660		0.04	0.20	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08


Service Request:K2312285

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2312285-001	GSD-AP-PT-1-SSE-F1	10/23/2023	1650
K2312285-002	GSD-AP-PT-1-SSE-F2	10/25/2023	1620
K2312285-003	GSD-AP-PT-1-SSE-F3	10/26/2023	1720
K2312285-004	GSD-AP-PT-2-SSE-F1	10/23/2023	1655
K2312285-005	GSD-AP-PT-2-SSE-F2	10/25/2023	1625
K2312285-006	GSD-AP-PT-2-SSE-F3	10/26/2023	1725
K2312285-007	GSD-COL-MB-SSE-F1	10/23/2023	1700
K2312285-008	GSD-COL-MB-SSE-F2	10/25/2023	1630
K2312285-009	GSD-COL-MB-SSE-F3	10/26/2023	1730
K2312285-010	GSD-COL-MW-21VC-SSE-DUP-F1	10/23/2023	1645
K2312285-011	GSD-COL-MW-21VC-SSE-DUP-F2	10/25/2023	1615
K2312285-012	GSD-COL-MW-21VC-SSE-DUP-F3	10/26/2023	1715
K2312285-013	GSD-COL-MW-21VC-SSE-F1	10/23/2023	1640
K2312285-014	GSD-COL-MW-21VC-SSE-F2	10/25/2023	1610
K2312285-015	GSD-COL-MW-21VC-SSE-F3	10/26/2023	1710
K2312285-016	GSD-COL-MW-2-SSE-F1	10/23/2023	1630
K2312285-017	GSD-COL-MW-2-SSE-F2	10/25/2023	1600
K2312285-018	GSD-COL-MW-2-SSE-F3	10/26/2023	1700
K2312285-019	GSD-COL-MW-4-SSE-F1	10/23/2023	1635
K2312285-020	GSD-COL-MW-4-SSE-F2	10/25/2023	1605
K2312285-021	GSD-COL-MW-4-SSE-F3	10/26/2023	1705

Chain of Custody Record & Laboratory Analysis Request

K2312285

Laboratory Number: 503-972-5019					No. of Containers	Parameters												 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219			
Date:	10/27/2023					Dissolved As, Fe, Mn	Dissolved Li, Fe, Mn	Dissolved As, Li, Fe and Mn													
Project Name:	Gadsden 2023 & 2024																				
Project Number:	221114-06.02 Task 08																				
Project Manager:	Masa Kanematsu																				
Phone Number:	503-972-5001 (backup number: 503-798-3456)																				
Shipment Method:	ALS Carrier																				
Line	Field Sample ID	Collection		Matrix													Comments/Preservation				
		Date	Time																		
1	GSD-AP-PT-1-SSE-F1	10/23/2023	16:50	Water	1			X											0.67 M magnesium chloride, see notes		
2	GSD-AP-PT-1-SSE-F2	10/25/2023	16:20	Water	1			X											0.67 M monosodium phosphate, see notes		
3	GSD-AP-PT-1-SSE-F3	10/26/2023	17:20	Water	1			X											0.067 M hydroxylamine hydrochloride, see notes		
4	GSD-AP-PT-2-SSE-F1	10/23/2023	16:55	Water	1			X											0.67 M magnesium chloride, see notes		
5	GSD-AP-PT-2-SSE-F2	10/25/2023	16:25	Water	1			X											0.67 M monosodium phosphate, see notes		
6	GSD-AP-PT-2-SSE-F3	10/26/2023	17:25	Water	1			X											0.067 M hydroxylamine hydrochloride, see notes		
7	GSD-COL-MB-SSE-F1	10/23/2023	17:00	Water	1			X											0.67 M magnesium chloride, see notes		
8	GSD-COL-MB-SSE-F2	10/25/2023	16:30	Water	1			X											0.67 M monosodium phosphate, see notes		
9	GSD-COL-MB-SSE-F3	10/26/2023	17:30	Water	1			X											0.067 M hydroxylamine hydrochloride, see notes		
10	GSD-COL-MW-21VC-SSE-DUP-F1	10/23/2023	16:45	Water	1	X													0.67 M magnesium chloride, see notes		
11	GSD-COL-MW-21VC-SSE-DUP-F2	10/25/2023	16:15	Water	1	X													0.67 M monosodium phosphate, see notes		
12	GSD-COL-MW-21VC-SSE-DUP-F3	10/26/2023	17:15	Water	1	X													0.067 M hydroxylamine hydrochloride, see notes		
13	GSD-COL-MW-21VC-SSE-F1	10/23/2023	16:40	Water	1	X													0.67 M magnesium chloride, see notes		
14	GSD-COL-MW-21VC-SSE-F2	10/25/2023	16:10	Water	1	X													0.67 M monosodium phosphate, see notes		
15	GSD-COL-MW-21VC-SSE-F3	10/26/2023	17:10	Water	1	X													0.067 M hydroxylamine hydrochloride, see notes		
16	GSD-COL-MW-2-SSE-F1	10/23/2023	16:30	Water	1	X													0.67 M magnesium chloride, see notes		
17	GSD-COL-MW-2-SSE-F2	10/25/2023	16:00	Water	1	X													0.67 M monosodium phosphate, see notes		
18	GSD-COL-MW-2-SSE-F3	10/26/2023	17:00	Water	1	X													0.067 M hydroxylamine hydrochloride, see notes		
19	GSD-COL-MW-4-SSE-F1	10/23/2023	16:35	Water	1	X													0.67 M magnesium chloride, see notes		
20	GSD-COL-MW-4-SSE-F2	10/25/2023	16:05	Water	1	X													0.67 M monosodium phosphate, see notes		

Notes: All samples are HNO3-preserved, 0.45-µm filtered, Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb, and with a 3-day TAT.

Relinquished by: <i>Sumant Avasthala</i> <i>Emily DeVore</i>	Company: Anchor QEA
Signature/Print Name: <i>Emily DeVore</i>	Date/Time: <i>10/27/23 11:00</i>
Relinquished by: <i>Daniel Swank</i>	Company: ALS
Signature/Print Name: <i>Daniel Swank</i>	Date/Time: <i>10/27/23 12:20</i>

Received by: <i>Darin Eng</i> <i>10/27/23 11:07</i>
Signature/Print Name: <i>Darin Eng</i> <i>10/27/23 12:20</i>
Received by:
Signature/Print Name:

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Chain of Custody Record & Laboratory Analysis Request

K2312289

Laboratory Number: 503-972-5019					Parameters											ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219 Comments/Preservation									
Date:	10/27/2023				No. of Containers	Dissolved As, Fe, Mn	Dissolved Li, Fe, Mn	Dissolved As, Li, Fe and Mn																	
Project Name:	Gadsden 2023 & 2024																								
Project Number:	221114-06.02 Task 08																								
Project Manager:	Masa Kanematsu																								
Phone Number:	503-972-5001 (backup number: 503-798-3456)																								
Shipment Method:	ALS Carrier																								
Line	Field Sample ID	Collection		Matrix																					
		Date	Time																						
21	GSD-COL-MW-4-SSE-F3	10/26/2023	17:05	Water	1	X																			0.067 M hydroxylamine hydrochloride, see notes

Notes: Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb, and with a 3-day TAT.

Relinquished by: ~~Sumont Avasthala~~ Emily Devore Company: Anchor QEA
 Signature/Print Name: Emily Deltre Date/Time: 10/27/23 11:00
 Relinquished by: ~~Daniel Switzer~~ Company: ALS
 Signature/Print Name: Daniel Switzer Date/Time: 10/27/23 12:20

Received by: ~~Daniel Switzer~~ K2312289 11:07
 Signature/Print Name: ~~Daniel Switzer~~ 10/27/23 12:20
 Received by:
 Signature/Print Name:

Cooler Receipt and Preservation Form

Client Anchor Service Request K23 12285
 Received: 10/27/23 Opened: 10/27/23 By: [Signature] Unloaded: 10/27/23 By: [Signature]

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other NA
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number <u>NA</u>	Filed
<u>1.6</u>	<u>4.4</u>	<u>1800</u>					

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed
6. Packing material: Inserts Buggles Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
14. Was C12/Rcs negative? NA Y N
15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:
		RUSH

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Did not pH due to limited volumes



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312285

Sample Name: GSD-AP-PT-1-SSE-F1
Lab Code: K2312285-001
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-AP-PT-1-SSE-F2
Lab Code: K2312285-002
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-AP-PT-1-SSE-F3
Lab Code: K2312285-003
Sample Matrix: Water

Date Collected: 10/26/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-AP-PT-2-SSE-F1
Lab Code: K2312285-004
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-AP-PT-2-SSE-F2
Lab Code: K2312285-005
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312285

Sample Name: GSD-AP-PT-2-SSE-F3
Lab Code: K2312285-006
Sample Matrix: Water

Date Collected: 10/26/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MB-SSE-F1
Lab Code: K2312285-007
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MB-SSE-F1
Lab Code: K2312285-007.R01
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MB-SSE-F2
Lab Code: K2312285-008
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MB-SSE-F2
Lab Code: K2312285-008.R01
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312285

Sample Name: GSD-COL-MB-SSE-F3
Lab Code: K2312285-009
Sample Matrix: Water

Date Collected: 10/26/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-SSE-DUP-F1
Lab Code: K2312285-010
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-SSE-DUP-F2
Lab Code: K2312285-011
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-SSE-DUP-F3
Lab Code: K2312285-012
Sample Matrix: Water

Date Collected: 10/26/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-SSE-F1
Lab Code: K2312285-013
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312285

Sample Name: GSD-COL-MW-21VC-SSE-F2
Lab Code: K2312285-014
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-SSE-F3
Lab Code: K2312285-015
Sample Matrix: Water

Date Collected: 10/26/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-SSE-F1
Lab Code: K2312285-016
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-SSE-F2
Lab Code: K2312285-017
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-SSE-F3
Lab Code: K2312285-018
Sample Matrix: Water

Date Collected: 10/26/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312285

Sample Name: GSD-COL-MW-4-SSE-F1
Lab Code: K2312285-019
Sample Matrix: Water

Date Collected: 10/23/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-SSE-F2
Lab Code: K2312285-020
Sample Matrix: Water

Date Collected: 10/25/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-SSE-F3
Lab Code: K2312285-021
Sample Matrix: Water

Date Collected: 10/26/23
Date Received: 10/27/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER



Sample Results

ALS Environmental—Kelso Laboratory
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Metals

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-1-SSE-F1
Lab Code: K2312285-001

Service Request: K2312285
Date Collected: 10/23/23 16:50
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	19.5	ug/L	2.5	0.5	1	11/01/23 17:03	10/30/23	
Iron	200.8	61	ug/L	10	2	1	11/01/23 17:03	10/30/23	
Lithium	200.8	18.2	ug/L	0.50	0.50	1	11/01/23 17:03	10/30/23	
Manganese	200.8	62.4	ug/L	1.0	0.2	1	11/01/23 17:03	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-1-SSE-F2
Lab Code: K2312285-002

Service Request: K2312285
Date Collected: 10/25/23 16:20
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	586	ug/L	2.5	0.5	1	11/01/23 17:07	10/30/23	
Iron	200.8	3380	ug/L	10	2	1	11/01/23 17:07	10/30/23	
Lithium	200.8	2.74	ug/L	0.50	0.50	1	11/01/23 17:07	10/30/23	
Manganese	200.8	979	ug/L	1.0	0.2	1	11/01/23 17:07	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-1-SSE-F3
Lab Code: K2312285-003

Service Request: K2312285
Date Collected: 10/26/23 17:20
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	17.4	ug/L	0.50	0.09	1	11/01/23 15:59	10/30/23	
Iron	200.8	2470	ug/L	2.0	0.3	1	11/01/23 15:59	10/30/23	
Lithium	200.8	1.12	ug/L	0.10	0.10	1	11/01/23 15:59	10/30/23	
Manganese	200.8	1500	ug/L	0.20	0.04	1	11/01/23 15:59	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-2-SSE-F1
Lab Code: K2312285-004

Service Request: K2312285
Date Collected: 10/23/23 16:55
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1.1 J	ug/L	2.5	0.5	1	11/01/23 17:12	10/30/23	
Iron	200.8	63	ug/L	10	2	1	11/01/23 17:12	10/30/23	
Lithium	200.8	17.5	ug/L	0.50	0.50	1	11/01/23 17:12	10/30/23	
Manganese	200.8	410	ug/L	1.0	0.2	1	11/01/23 17:12	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-2-SSE-F2
Lab Code: K2312285-005

Service Request: K2312285
Date Collected: 10/25/23 16:25
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	34.4	ug/L	2.5	0.5	1	11/01/23 17:13	10/30/23	
Iron	200.8	4050	ug/L	10	2	1	11/01/23 17:13	10/30/23	
Lithium	200.8	2.12	ug/L	0.50	0.50	1	11/01/23 17:13	10/30/23	
Manganese	200.8	234	ug/L	1.0	0.2	1	11/01/23 17:13	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-2-SSE-F3
Lab Code: K2312285-006

Service Request: K2312285
Date Collected: 10/26/23 17:25
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	2.11	ug/L	0.50	0.09	1	11/01/23 16:04	10/30/23	
Iron	200.8	2570	ug/L	2.0	0.3	1	11/01/23 16:04	10/30/23	
Lithium	200.8	0.16	ug/L	0.10	0.10	1	11/01/23 16:04	10/30/23	
Manganese	200.8	70.9	ug/L	0.20	0.04	1	11/01/23 16:04	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MB-SSE-F1
Lab Code: K2312285-007

Service Request: K2312285
Date Collected: 10/23/23 17:00
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	2.5	0.5	1	11/01/23 17:15	10/30/23	
Iron	200.8	4 J	ug/L	10	2	1	11/01/23 17:15	10/30/23	
Lithium	200.8	17.5	ug/L	0.50	0.50	1	11/01/23 17:15	10/30/23	
Manganese	200.8	1.6	ug/L	1.0	0.2	1	11/02/23 13:51	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MB-SSE-F2
Lab Code: K2312285-008

Service Request: K2312285
Date Collected: 10/25/23 16:30
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	5.3	ug/L	2.5	0.5	1	11/01/23 17:17	10/30/23	
Iron	200.8	33	ug/L	10	2	1	11/01/23 17:17	10/30/23	
Lithium	200.8	ND U	ug/L	0.50	0.50	1	11/01/23 17:17	10/30/23	
Manganese	200.8	4.2	ug/L	1.0	0.2	1	11/02/23 13:50	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MB-SSE-F3
Lab Code: K2312285-009

Service Request: K2312285
Date Collected: 10/26/23 17:30
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/01/23 16:06	10/30/23	
Iron	200.8	5.9	ug/L	2.0	0.3	1	11/01/23 16:06	10/30/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	11/01/23 16:06	10/30/23	
Manganese	200.8	3.23	ug/L	0.20	0.04	1	11/01/23 16:06	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-DUP-F1
Lab Code: K2312285-010

Service Request: K2312285
Date Collected: 10/23/23 16:45
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	45	ug/L	10	2	1	11/01/23 17:22	10/30/23	
Lithium	200.8	19.5	ug/L	0.50	0.50	1	11/01/23 17:22	10/30/23	
Manganese	200.8	403	ug/L	1.0	0.2	1	11/01/23 17:22	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-DUP-F2
Lab Code: K2312285-011

Service Request: K2312285
Date Collected: 10/25/23 16:15
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	1100	ug/L	10	2	1	11/01/23 17:23	10/30/23	
Lithium	200.8	41.5	ug/L	0.50	0.50	1	11/01/23 17:23	10/30/23	
Manganese	200.8	2080	ug/L	1.0	0.2	1	11/01/23 17:23	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-DUP-F3
Lab Code: K2312285-012

Service Request: K2312285
Date Collected: 10/26/23 17:15
Date Received: 10/27/23 12:20

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	1360	ug/L	2.0	0.3	1	11/01/23 16:07	10/30/23	
Lithium	200.8	3.15	ug/L	0.10	0.10	1	11/01/23 16:07	10/30/23	
Manganese	200.8	3140	ug/L	0.20	0.04	1	11/01/23 16:07	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-F1
Lab Code: K2312285-013

Service Request: K2312285
Date Collected: 10/23/23 16:40
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	75	ug/L	10	2	1	11/01/23 17:25	10/30/23	
Lithium	200.8	17.8	ug/L	0.50	0.50	1	11/01/23 17:25	10/30/23	
Manganese	200.8	94.0	ug/L	1.0	0.2	1	11/01/23 17:25	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-F2
Lab Code: K2312285-014

Service Request: K2312285
Date Collected: 10/25/23 16:10
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	986	ug/L	10	2	1	11/01/23 17:26	10/30/23	
Lithium	200.8	44.2	ug/L	0.50	0.50	1	11/01/23 17:26	10/30/23	
Manganese	200.8	2150	ug/L	1.0	0.2	1	11/01/23 17:26	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-F3
Lab Code: K2312285-015

Service Request: K2312285
Date Collected: 10/26/23 17:10
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	1450	ug/L	2.0	0.3	1	11/01/23 16:09	10/30/23	
Lithium	200.8	3.74	ug/L	0.10	0.10	1	11/01/23 16:09	10/30/23	
Manganese	200.8	3660	ug/L	0.20	0.04	1	11/01/23 16:09	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-SSE-F1
Lab Code: K2312285-016

Service Request: K2312285
Date Collected: 10/23/23 16:30
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	13.3	ug/L	2.5	0.5	1	11/01/23 17:28	10/30/23	
Iron	200.8	298	ug/L	10	2	1	11/01/23 17:28	10/30/23	
Manganese	200.8	670	ug/L	1.0	0.2	1	11/01/23 17:28	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-SSE-F2
Lab Code: K2312285-017

Service Request: K2312285
Date Collected: 10/25/23 16:00
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	632	ug/L	2.5	0.5	1	11/01/23 17:30	10/30/23	
Iron	200.8	3030	ug/L	10	2	1	11/01/23 17:30	10/30/23	
Manganese	200.8	1590	ug/L	1.0	0.2	1	11/01/23 17:30	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-SSE-F3
Lab Code: K2312285-018

Service Request: K2312285
Date Collected: 10/26/23 17:00
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	18.7	ug/L	0.50	0.09	1	11/01/23 16:10	10/30/23	
Iron	200.8	2270	ug/L	2.0	0.3	1	11/01/23 16:10	10/30/23	
Manganese	200.8	2460	ug/L	0.20	0.04	1	11/01/23 16:10	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-SSE-F1
Lab Code: K2312285-019

Service Request: K2312285
Date Collected: 10/23/23 16:35
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	37.9	ug/L	2.5	0.5	1	11/01/23 17:31	10/30/23	
Iron	200.8	34	ug/L	10	2	1	11/01/23 17:31	10/30/23	
Manganese	200.8	221	ug/L	1.0	0.2	1	11/01/23 17:31	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-SSE-F2
Lab Code: K2312285-020

Service Request: K2312285
Date Collected: 10/25/23 16:05
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	1030	ug/L	2.5	0.5	1	11/01/23 17:33	10/30/23	
Iron	200.8	3330	ug/L	10	2	1	11/01/23 17:33	10/30/23	
Manganese	200.8	213	ug/L	1.0	0.2	1	11/01/23 17:33	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-SSE-F3
Lab Code: K2312285-021

Service Request: K2312285
Date Collected: 10/26/23 17:05
Date Received: 10/27/23 12:20
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	18.7	ug/L	0.50	0.09	1	11/01/23 16:24	10/30/23	
Iron	200.8	1710	ug/L	2.0	0.3	1	11/01/23 16:24	10/30/23	
Manganese	200.8	899	ug/L	0.20	0.04	1	11/01/23 16:24	10/30/23	



QC Summary Forms

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2319189-01

Service Request: K2312285
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/01/23 15:56	10/30/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	11/01/23 15:56	10/30/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	11/01/23 15:56	10/30/23	
Manganese	200.8	ND U	ug/L	0.20	0.04	1	11/01/23 15:56	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2319190-01

Service Request: K2312285
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/01/23 16:56	10/30/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	11/01/23 16:56	10/30/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	11/01/23 16:56	10/30/23	
Manganese	200.8	0.41	ug/L	0.20	0.04	1	11/01/23 16:56	10/30/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2319447-01

Service Request: K2312285
Date Collected: NA
Date Received: NA
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Manganese	200.8	ND U	ug/L	0.20	0.04	1	11/02/23 13:49	11/02/23	

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/26/23
Date Received: 10/27/23
Date Analyzed: 11/1/23
Date Extracted: 10/30/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-AP-PT-1-SSE-F3
Lab Code: K2312285-003
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2319189-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	17.4	65.5	50.0	96	70-130
Iron	2470	2520	50.0	110 #	70-130
Lithium	1.12	54.3	50.0	106	70-130
Manganese	1500	1520	25.0	54 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/23/23
Date Received: 10/27/23
Date Analyzed: 11/1/23
Date Extracted: 10/30/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-AP-PT-1-SSE-F1
Lab Code: K2312285-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2319190-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	19.5	274	250	102	70-130
Iron	61	321	250	104	70-130
Lithium	18.2	312	250	118	70-130
Manganese	62.4	201	125	111	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/25/23
Date Received: 10/27/23
Date Analyzed: 11/1/23
Date Extracted: 10/30/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-AP-PT-1-SSE-F2
Lab Code: K2312285-002
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2319190-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	586	850	250	106	70-130
Iron	3380	3740	250	143 #	70-130
Lithium	2.74	287	250	114	70-130
Manganese	979	1130	125	122 #	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/23/23
Date Received: 10/27/23
Date Analyzed: 11/2/23
Date Extracted: 11/2/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MB-SSE-F1
Lab Code: K2312285-007
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2319447-04

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Manganese	1.6	145	125	114	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/26/23
Date Received: 10/27/23
Date Analyzed: 11/01/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-AP-PT-1-SSE-F3
Lab Code: K2312285-003

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2319189-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/23/23
Date Received: 10/27/23
Date Analyzed: 11/01/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-AP-PT-1-SSE-F1
Lab Code: K2312285-001

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2319190-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/25/23
Date Received: 10/27/23
Date Analyzed: 11/01/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-AP-PT-1-SSE-F2
Lab Code: K2312285-002

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2319190-05 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Collected: 10/23/23
Date Received: 10/27/23
Date Analyzed: 11/02/23

Replicate Sample Summary

Dissolved Metals

Sample Name: GSD-COL-MB-SSE-F1
Lab Code: K2312285-007

Units: ug/L
Basis: NA

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2319447-03 Result, Average, RPD, RPD Limit. Row 1: Manganese, 200.8, 1.0, 0.2, 1.6, 1.6, 1.6, <1, 20.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Analyzed: 11/01/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2319189-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	48.4	50.0	97	85-115
Iron	200.8	49.9	50.0	100	85-115
Lithium	200.8	51.8	50.0	104	85-115
Manganese	200.8	24.9	25.0	100	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Analyzed: 11/01/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2319190-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	49.1	50.0	98	85-115
Iron	200.8	50.0	50.0	100	85-115
Lithium	200.8	50.8	50.0	102	85-115
Manganese	200.8	25.2	25.0	101	85-115

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312285
Date Analyzed: 11/02/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2319447-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Manganese	200.8	25.8	25.0	103	85-115



November 03, 2023

Service Request No:K2312358

Masa Kanematsu
Anchor QEA, LLC
6720 SW Macadam Avenue
Suite 125
Portland, OR 97219

Laboratory Results for: Gadsden 2023 & 2024

Dear Masa,

Enclosed are the results of the sample(s) submitted to our laboratory October 31, 2023
For your reference, these analyses have been assigned our service request number **K2312358**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024
Sample Matrix: Soil, Water

Service Request: K2312358
Date Received: 10/31/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Thirteen soil, water samples were received for analysis at ALS Environmental on 10/31/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by _____

Date 11/03/2023



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-2-SSE-F5	Lab ID: K2312358-008
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	6.01		0.06	0.52	mg/Kg	200.8
Iron	10600		0.4	1.0	mg/Kg	200.8
Lithium	1.71		0.10	0.10	mg/Kg	200.8
Manganese	41.7		0.021	0.052	mg/Kg	200.8

CLIENT ID: GSD-COL-MW-4-SSE-F5	Lab ID: K2312358-009
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	3.54		0.06	0.51	mg/Kg	200.8
Iron	8970		0.4	1.0	mg/Kg	200.8
Lithium	0.77		0.10	0.10	mg/Kg	200.8
Manganese	30.4		0.021	0.051	mg/Kg	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-F5	Lab ID: K2312358-010
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	4.56		0.06	0.51	mg/Kg	200.8
Iron	7850		0.4	1.0	mg/Kg	200.8
Lithium	2.07		0.10	0.10	mg/Kg	200.8
Manganese	31.6		0.021	0.051	mg/Kg	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-DUP-F5	Lab ID: K2312358-011
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	4.76		0.06	0.50	mg/Kg	200.8
Iron	8420		0.4	1.0	mg/Kg	200.8
Lithium	1.25		0.10	0.10	mg/Kg	200.8
Manganese	42.7		0.020	0.050	mg/Kg	200.8

CLIENT ID: GSD-AP-PT-1-SSE-F5	Lab ID: K2312358-012
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Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.61		0.06	0.49	mg/Kg	200.8
Iron	11200		0.39	0.98	mg/Kg	200.8
Lithium	1.12		0.098	0.098	mg/Kg	200.8
Manganese	32.6		0.020	0.049	mg/Kg	200.8

CLIENT ID: GSD-AP-PT-2-SSE-F5	Lab ID: K2312358-013
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	6.45		0.06	0.51	mg/Kg	200.8
Iron	10900		0.4	1.0	mg/Kg	200.8
Lithium	1.83		0.10	0.10	mg/Kg	200.8
Manganese	40.4		0.020	0.051	mg/Kg	200.8

CLIENT ID: GSD-COL-MW-2-SSE-F4	Lab ID: K2312358-001
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	135		2	10	ug/L	200.8



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GSD-COL-MW-2-SSE-F4	Lab ID: K2312358-001
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	19900		6	40	ug/L	200.8
Manganese, Dissolved	322		0.8	4.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-4-SSE-F4	Lab ID: K2312358-002
---------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	46		2	10	ug/L	200.8
Iron, Dissolved	9410		6	40	ug/L	200.8
Manganese, Dissolved	73.1		0.8	4.0	ug/L	200.8

CLIENT ID: GSD-AP-PT-1-SSE-F4	Lab ID: K2312358-005
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	5	J	2	10	ug/L	200.8
Iron, Dissolved	15400		6	40	ug/L	200.8
Manganese, Dissolved	75.4		0.8	4.0	ug/L	200.8

CLIENT ID: GSD-AP-PT-2-SSE-F4	Lab ID: K2312358-006
--------------------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	114		2	10	ug/L	200.8
Iron, Dissolved	20400		6	40	ug/L	200.8
Lithium, Dissolved	4.5		2.0	2.0	ug/L	200.8
Manganese, Dissolved	192		0.8	4.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-F4	Lab ID: K2312358-003
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	13100		6	40	ug/L	200.8
Lithium, Dissolved	3.0		2.0	2.0	ug/L	200.8
Manganese, Dissolved	217		0.8	4.0	ug/L	200.8

CLIENT ID: GSD-COL-MW-21VC-SSE-DUP-F4	Lab ID: K2312358-004
--	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	12600		6	40	ug/L	200.8
Lithium, Dissolved	2.9		2.0	2.0	ug/L	200.8
Manganese, Dissolved	204		0.8	4.0	ug/L	200.8

CLIENT ID: GSD-COL-MB-SSE-F4	Lab ID: K2312358-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Dissolved	21	J	6	40	ug/L	200.8
Manganese, Dissolved	2.5	J	0.8	4.0	ug/L	200.8



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08


Service Request:K2312358

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2312358-001	GSD-COL-MW-2-SSE-F4	10/27/2023	1700
K2312358-002	GSD-COL-MW-4-SSE-F4	10/27/2023	1705
K2312358-003	GSD-COL-MW-21VC-SSE-F4	10/27/2023	1710
K2312358-004	GSD-COL-MW-21VC-SSE-DUP-F4	10/27/2023	1715
K2312358-005	GSD-AP-PT-1-SSE-F4	10/27/2023	1720
K2312358-006	GSD-AP-PT-2-SSE-F4	10/27/2023	1725
K2312358-007	GSD-COL-MB-SSE-F4	10/27/2023	1730
K2312358-008	GSD-COL-MW-2-SSE-F5	10/30/2023	1000
K2312358-009	GSD-COL-MW-4-SSE-F5	10/30/2023	1005
K2312358-010	GSD-COL-MW-21VC-SSE-F5	10/30/2023	1010
K2312358-011	GSD-COL-MW-21VC-SSE-DUP-F5	10/30/2023	1015
K2312358-012	GSD-AP-PT-1-SSE-F5	10/30/2023	1020
K2312358-013	GSD-AP-PT-2-SSE-F5	10/30/2023	1025

W2312358

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: 503-972-5019					No. of Containers	Parameters													 ANCHOR QEA Masa Kanematsu 6720 SW Macadam Ave Suite 300 Portland OR 97219									
Date:	10/31/2023																											
Project Name:	Gadsden 2023 & 2024																											
Project Number:	221114-06.02 Task 08																											
Project Manager:	Masa Kanematsu																											
Phone Number:	503-972-5001 (backup number: 503-798-3456)																											
Shipment Method:	ALS Carrier																											
Line	Field Sample ID	Collection		Matrix																						Comments/Preservation		
		Date	Time																									
1	GSD-COL-MW-2-SSE-F4	10/27/2023	17:00	Water	1	X																					10.7M nitric acid, see notes	
2	GSD-COL-MW-4-SSE-F4	10/27/2023	17:05	Water	1	X																					10.7M nitric acid, see notes	
3	GSD-COL-MW-21VC-SSE-F4	10/27/2023	17:10	Water	1		X																				10.7M nitric acid, see notes	
4	GSD-COL-MW-21VC-SSE-DUP-F4	10/27/2023	17:15	Water	1		X																				10.7M nitric acid, see notes	
5	GSD-AP-PT-1-SSE-F4	10/27/2023	17:20	Water	1			X																			10.7M nitric acid, see notes	
6	GSD-AP-PT-2-SSE-F4	10/27/2023	17:25	Water	1			X																			10.7M nitric acid, see notes	
7	GSD-COL-MB-SSE-F4	10/27/2023	17:30	Water	1			X																			10.7M nitric acid, see notes	
8	GSD-COL-MW-2-SSE-F5	10/30/2023	10:00	Soil	1			X																			Remaining solids, see notes	
9	GSD-COL-MW-4-SSE-F5	10/30/2023	10:05	Soil	1			X																			Remaining solids, see notes	
10	GSD-COL-MW-21VC-SSE-F5	10/30/2023	10:10	Soil	1			X																			Remaining solids, see notes	
11	GSD-COL-MW-21VC-SSE-DUP-F5	10/30/2023	10:15	Soil	1			X																			Remaining solids, see notes	
12	GSD-AP-PT-1-SSE-F5	10/30/2023	10:20	Soil	1			X																			Remaining solids, see notes	
13	GSD-AP-PT-2-SSE-F5	10/30/2023	10:25	Soil	1			X																			Remaining solids, see notes	
14																												
15																												
16																												
17																												
18																												
19																												
20																												

Notes: All samples are HNO3-preserved, 0.45-µM filtered, Please Contact Masa (503-972-5001, mkanematsu@anchorqea.com) if running > 10X dilution. Please analyze by ICP-MS method 200.8 to achieve the MDL < 1 ppb., and with a 3-day TAT.

Relinquished by: Emly DeVore	Company: Anchor QEA
Signature/Print Name: <i>Emly DeVore</i>	Date/Time: 10/31/23 9:40
Relinquished by: <i>Daniel Swartz</i>	Company: ALS
Signature/Print Name: <i>Daniel Swartz</i>	Date/Time: 10/31/23 12:40

Received by: <i>Darin Rowe</i>	10/31/23 9:16
Signature/Print Name: <i>Daniel Swartz</i>	
Received by: <i>Daniel Swartz</i>	
Signature/Print Name: <i>Darin Rowe</i>	10/31/23 12:40

Distribution: A copy will be made for the laboratory and client. The Project file will retain the original.

Cooler Receipt and Preservation Form

Client Anchor QEA

Service Request K23 12358

Received: 10-31-23 Opened: 10-31-23 By: DS Unloaded: 10-31-23 By: DS

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
33		FROZ					

- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # above and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N
- 15. Were samples received within the method specified time limit? If not, notate the error below and notify the PM NA Y N
- 16. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:
		RUSH

Sample ID	Bottle Count Bottle Type	Head-space Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- 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.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312358

Sample Name: GSD-COL-MW-2-SSE-F4
Lab Code: K2312358-001
Sample Matrix: Water

Date Collected: 10/27/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-4-SSE-F4
Lab Code: K2312358-002
Sample Matrix: Water

Date Collected: 10/27/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-SSE-F4
Lab Code: K2312358-003
Sample Matrix: Water

Date Collected: 10/27/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-21VC-SSE-DUP-F4
Lab Code: K2312358-004
Sample Matrix: Water

Date Collected: 10/27/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-AP-PT-1-SSE-F4
Lab Code: K2312358-005
Sample Matrix: Water

Date Collected: 10/27/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312358

Sample Name: GSD-AP-PT-2-SSE-F4
Lab Code: K2312358-006
Sample Matrix: Water

Date Collected: 10/27/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MB-SSE-F4
Lab Code: K2312358-007
Sample Matrix: Water

Date Collected: 10/27/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MSOLADEY

Analyzed By
EMCALLISTER

Sample Name: GSD-COL-MW-2-SSE-F5
Lab Code: K2312358-008
Sample Matrix: Soil

Date Collected: 10/30/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MCHATTICK

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-4-SSE-F5
Lab Code: K2312358-009
Sample Matrix: Soil

Date Collected: 10/30/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MCHATTICK

Analyzed By
JCHAN

Sample Name: GSD-COL-MW-21VC-SSE-F5
Lab Code: K2312358-010
Sample Matrix: Soil

Date Collected: 10/30/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MCHATTICK

Analyzed By
JCHAN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08

Service Request: K2312358

Sample Name: GSD-COL-MW-21VC-SSE-DUP-F5
Lab Code: K2312358-011
Sample Matrix: Soil

Date Collected: 10/30/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MCHATTICK

Analyzed By
JCHAN

Sample Name: GSD-AP-PT-1-SSE-F5
Lab Code: K2312358-012
Sample Matrix: Soil

Date Collected: 10/30/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MCHATTICK

Analyzed By
JCHAN

Sample Name: GSD-AP-PT-2-SSE-F5
Lab Code: K2312358-013
Sample Matrix: Soil

Date Collected: 10/30/23
Date Received: 10/31/23

Analysis Method
200.8

Extracted/Digested By
MCHATTICK

Analyzed By
JCHAN



Sample Results

ALS Environmental—Kelso Laboratory
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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-2-SSE-F4
Lab Code: K2312358-001

Service Request: K2312358
Date Collected: 10/27/23 17:00
Date Received: 10/31/23 12:40
Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	135	ug/L	10	2	1	11/03/23 10:58	11/02/23	
Iron	200.8	19900	ug/L	40	6	1	11/03/23 10:58	11/02/23	
Manganese	200.8	322	ug/L	4.0	0.8	1	11/03/23 10:58	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-4-SSE-F4
Lab Code: K2312358-002

Service Request: K2312358
Date Collected: 10/27/23 17:05
Date Received: 10/31/23 12:40
Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	46	ug/L	10	2	1	11/03/23 11:03	11/02/23	
Iron	200.8	9410	ug/L	40	6	1	11/03/23 11:03	11/02/23	
Manganese	200.8	73.1	ug/L	4.0	0.8	1	11/03/23 11:03	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-F4
Lab Code: K2312358-003

Service Request: K2312358
Date Collected: 10/27/23 17:10
Date Received: 10/31/23 12:40
Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	13100	ug/L	40	6	1	11/03/23 11:05	11/02/23	
Lithium	200.8	3.0	ug/L	2.0	2.0	1	11/03/23 11:05	11/02/23	
Manganese	200.8	217	ug/L	4.0	0.8	1	11/03/23 11:05	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MW-21VC-SSE-DUP-F4
Lab Code: K2312358-004

Service Request: K2312358
Date Collected: 10/27/23 17:15
Date Received: 10/31/23 12:40
Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Iron	200.8	12600	ug/L	40	6	1	11/03/23 11:06	11/02/23	
Lithium	200.8	2.9	ug/L	2.0	2.0	1	11/03/23 11:06	11/02/23	
Manganese	200.8	204	ug/L	4.0	0.8	1	11/03/23 11:06	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-1-SSE-F4
Lab Code: K2312358-005

Service Request: K2312358
Date Collected: 10/27/23 17:20
Date Received: 10/31/23 12:40
Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	5 J	ug/L	10	2	1	11/03/23 11:08	11/02/23	
Iron	200.8	15400	ug/L	40	6	1	11/03/23 11:08	11/02/23	
Lithium	200.8	ND U	ug/L	2.0	2.0	1	11/03/23 11:08	11/02/23	
Manganese	200.8	75.4	ug/L	4.0	0.8	1	11/03/23 11:08	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-AP-PT-2-SSE-F4
Lab Code: K2312358-006

Service Request: K2312358
Date Collected: 10/27/23 17:25
Date Received: 10/31/23 12:40
Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	114	ug/L	10	2	1	11/03/23 11:12	11/02/23	
Iron	200.8	20400	ug/L	40	6	1	11/03/23 11:12	11/02/23	
Lithium	200.8	4.5	ug/L	2.0	2.0	1	11/03/23 11:12	11/02/23	
Manganese	200.8	192	ug/L	4.0	0.8	1	11/03/23 11:12	11/02/23	

ALS Group USA, Corp.
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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: GSD-COL-MB-SSE-F4
Lab Code: K2312358-007

Service Request: K2312358
Date Collected: 10/27/23 17:30
Date Received: 10/31/23 12:40
Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	10	2	1	11/03/23 10:55	11/02/23	
Iron	200.8	21 J	ug/L	40	6	1	11/03/23 10:55	11/02/23	
Lithium	200.8	ND U	ug/L	2.0	2.0	1	11/03/23 10:55	11/02/23	
Manganese	200.8	2.5 J	ug/L	4.0	0.8	1	11/03/23 10:55	11/02/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil
Sample Name: GSD-COL-MW-2-SSE-F5
Lab Code: K2312358-008

Service Request: K2312358
Date Collected: 10/30/23 10:00
Date Received: 10/31/23 12:40
Basis: As Received

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	6.01	mg/Kg	0.52	0.06	5	11/03/23 08:40	11/01/23	
Iron	200.8	10600	mg/Kg	1.0	0.4	5	11/03/23 08:40	11/01/23	
Lithium	200.8	1.71	mg/Kg	0.10	0.10	5	11/03/23 08:40	11/01/23	
Manganese	200.8	41.7	mg/Kg	0.052	0.021	5	11/03/23 08:40	11/01/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil
Sample Name: GSD-COL-MW-4-SSE-F5
Lab Code: K2312358-009

Service Request: K2312358
Date Collected: 10/30/23 10:05
Date Received: 10/31/23 12:40
Basis: As Received

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	3.54	mg/Kg	0.51	0.06	5	11/03/23 08:42	11/01/23	
Iron	200.8	8970	mg/Kg	1.0	0.4	5	11/03/23 08:42	11/01/23	
Lithium	200.8	0.77	mg/Kg	0.10	0.10	5	11/03/23 08:42	11/01/23	
Manganese	200.8	30.4	mg/Kg	0.051	0.021	5	11/03/23 08:42	11/01/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil
Sample Name: GSD-COL-MW-21VC-SSE-F5
Lab Code: K2312358-010

Service Request: K2312358
Date Collected: 10/30/23 10:10
Date Received: 10/31/23 12:40
Basis: As Received

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	4.56	mg/Kg	0.51	0.06	5	11/03/23 08:44	11/01/23	
Iron	200.8	7850	mg/Kg	1.0	0.4	5	11/03/23 08:44	11/01/23	
Lithium	200.8	2.07	mg/Kg	0.10	0.10	5	11/03/23 08:44	11/01/23	
Manganese	200.8	31.6	mg/Kg	0.051	0.021	5	11/03/23 08:44	11/01/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil
Sample Name: GSD-COL-MW-21VC-SSE-DUP-F5
Lab Code: K2312358-011

Service Request: K2312358
Date Collected: 10/30/23 10:15
Date Received: 10/31/23 12:40
Basis: As Received

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	4.76	mg/Kg	0.50	0.06	5	11/03/23 08:45	11/01/23	
Iron	200.8	8420	mg/Kg	1.0	0.4	5	11/03/23 08:45	11/01/23	
Lithium	200.8	1.25	mg/Kg	0.10	0.10	5	11/03/23 08:45	11/01/23	
Manganese	200.8	42.7	mg/Kg	0.050	0.020	5	11/03/23 08:45	11/01/23	

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil
Sample Name: GSD-AP-PT-1-SSE-F5
Lab Code: K2312358-012

Service Request: K2312358
Date Collected: 10/30/23 10:20
Date Received: 10/31/23 12:40
Basis: As Received

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	2.61	mg/Kg	0.49	0.06	5	11/03/23 08:47	11/01/23	
Iron	200.8	11200	mg/Kg	0.98	0.39	5	11/03/23 08:47	11/01/23	
Lithium	200.8	1.12	mg/Kg	0.098	0.098	5	11/03/23 08:47	11/01/23	
Manganese	200.8	32.6	mg/Kg	0.049	0.020	5	11/03/23 08:47	11/01/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil
Sample Name: GSD-AP-PT-2-SSE-F5
Lab Code: K2312358-013

Service Request: K2312358
Date Collected: 10/30/23 10:25
Date Received: 10/31/23 12:40
Basis: As Received

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	6.45	mg/Kg	0.51	0.06	5	11/03/23 08:48	11/01/23	
Iron	200.8	10900	mg/Kg	1.0	0.4	5	11/03/23 08:48	11/01/23	
Lithium	200.8	1.83	mg/Kg	0.10	0.10	5	11/03/23 08:48	11/01/23	
Manganese	200.8	40.4	mg/Kg	0.051	0.020	5	11/03/23 08:48	11/01/23	



QC Summary Forms

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Metals

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Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2319389-01

Service Request: K2312358
Date Collected: NA
Date Received: NA

Basis: As Received

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	mg/Kg	0.50	0.06	5	11/03/23 08:35	11/01/23	
Iron	200.8	ND U	mg/Kg	1.0	0.4	5	11/03/23 08:35	11/01/23	
Lithium	200.8	ND U	mg/Kg	0.10	0.10	5	11/03/23 08:35	11/01/23	
Manganese	200.8	ND U	mg/Kg	0.050	0.020	5	11/03/23 08:35	11/01/23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2319465-01

Service Request: K2312358
Date Collected: NA
Date Received: NA

Basis: As Received

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	200.8	ND U	ug/L	0.50	0.09	1	11/03/23 10:54	11/02/23	
Iron	200.8	ND U	ug/L	2.0	0.3	1	11/03/23 10:54	11/02/23	
Lithium	200.8	ND U	ug/L	0.10	0.10	1	11/03/23 10:54	11/02/23	
Manganese	200.8	0.04 J	ug/L	0.20	0.04	1	11/03/23 10:54	11/02/23	

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312358
Date Collected: 10/27/23
Date Received: 10/31/23
Date Analyzed: 11/3/23
Date Extracted: 11/2/23

Matrix Spike Summary
Dissolved Metals

Sample Name: GSD-COL-MW-2-SSE-F4
Lab Code: K2312358-001
Analysis Method: 200.8
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: As Received

Matrix Spike
KQ2319465-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	135	1060	1000	92	70-130
Iron	19900	21200	1000	133 #	70-130
Lithium	3.2	1070	1000	106	70-130
Manganese	322	856	500	107	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312358
Date Collected: 10/27/23
Date Received: 10/31/23
Date Analyzed: 11/03/23

Replicate Sample Summary
Dissolved Metals

Sample Name: GSD-COL-MW-2-SSE-F4
Lab Code: K2312358-001

Units: ug/L
Basis: As Received

Table with 9 columns: Analyte Name, Analysis Method, MRL, MDL, Sample Result, Duplicate Sample KQ2319465-03 Result, Average, RPD, RPD Limit. Rows include Arsenic, Iron, Lithium, and Manganese.

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Water

Service Request: K2312358
Date Analyzed: 11/03/23

Lab Control Sample Summary
Dissolved Metals

Units:ug/L
Basis:As Received

Lab Control Sample
KQ2319465-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	200.8	48.4	50.0	97	85-115
Iron	200.8	49.9	50.0	100	85-115
Lithium	200.8	50.9	50.0	102	85-115
Manganese	200.8	26.3	25.0	105	85-115

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QA/QC Report

Client: Anchor QEA, LLC
Project: Gadsden 2023 & 2024/221114-06.02 Task 08
Sample Matrix: Soil

Service Request: K2312358
Date Analyzed: 11/03/23

Duplicate Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:As Received

Lab Control Sample
KQ2319389-02

Duplicate Lab Control Sample
KQ2319389-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Arsenic	200.8	108	100	108	105	100	105	85-115	3	30
Iron	200.8	214	200	107	209	200	104	85-115	2	30
Lithium	200.8	21.7	20.0	108	21.0	20.0	105	85-115	3	30
Manganese	200.8	107	100	107	105	100	105	85-115	2	30