



# 2020 Annual Groundwater Monitoring and Corrective Action Report

Laramie River Station  
Wheatland, Wyoming

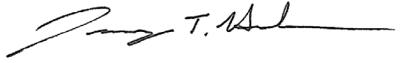
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## List of Acronyms

ACM	Assessment of Corrective Measures
ASD	Alternative Source Demonstration
Basin	Basin Electric Power Cooperative
bgs	below ground surface
CCR	coal combustion residuals
CFR	Code of Federal Regulations
ft	feet
ft/d	feet per day
GWPS	groundwater protection standards
LRS	Laramie River Station
MCL	maximum contaminant level
MW	megawatt
SSI	statistically significant increase
SSL	statistically significant levels
UPL	upper prediction limit
USGS	U.S. Geological Survey
95LCL	95 percent lower confidence limit

## Executive Summary

This report summarizes groundwater monitoring and corrective action activities completed between January 1 and December 31, 2020 for the Coal Combustion Residuals (CCR) units at the Basin Electric Power Cooperative (Basin) Laramie River Station (LRS) as required by 40 Code of Federal Regulations (CFR) § 257.90(e) of the U.S. Environmental Protection Agency CCR rule. The CCR units subject to the rule include

- Bottom Ash Pond 1,
- Bottom Ash Pond 2/Bottom Ash Pond 3/Ash Landfill Multi-unit, and
- Emergency Holding Ponds Multi-unit.

Site figures presenting the location of the CCR units and program monitoring networks for the CCR units are presented as **Figures 1-1 and 2-1**, respectively. No program monitoring wells were modified or abandoned during the reporting period.

Basin implemented an assessment monitoring program for Bottom Ash Pond 1 and the two CCR multi-units (Bottom Ash Pond 2/Bottom Ash Pond 3/Ash Landfill and Emergency Holding Ponds) in the spring of 2018 because of the identification of statistically significant increases (SSIs) of Appendix III constituents in downgradient monitoring wells as summarized below:

- Bottom Ash Pond 1: Boron (MW-38B), and calcium, chloride, sulfate, and total dissolved solids (MW-38B and MW-21B);
- Bottom Ash Pond 2/3 and CCR Landfill Multi-unit: Chloride (MW-37B), and fluoride (MW-20B, MW-40B, and MW-53B); and
- Emergency Holding Ponds Multi-unit: Fluoride (MW-44B and MW-45B).

Assessment monitoring was in place for all three units/multi-units at the start and end of the current annual reporting period (2020).

Assessment groundwater monitoring data have reported the detection of Appendix IV constituents of chromium, fluoride, lithium, molybdenum, and selenium in downgradient monitoring wells at concentrations that represent SSIs over background. Per CCR rule requirements, groundwater protection standards (GWPSs) for each constituent were developed and the data were tested for whether the concentrations represented statistically significant levels (SSLs) above their respective GWPSs. Downgradient well(s) with a constituent or constituents reported above GWPSs at an SSL are as follows:

Appendix IV Constituent	Unit/Multi-Unit	Downgradient Well(s) GWPS Standard Exceedance
Lithium and Molybdenum	Bottom Ash Pond 1	MW-38B

As required by the CCR rule, an Assessment of Corrective Measures (ACM) was initiated for Bottom Ash Pond 1 on April 10, 2019 and completed on August 30, 2019. A public meeting open to interested and affected parties was held on January 30, 2020 to discuss the results of the ACMs. After completion of the ACM, work was initiated on the Selection of Remedy for the impacted groundwater as required by 40 CFR § 257.97. A Groundwater Remedy Selection Report was prepared and issued in July 2020, after which work was initiated on the design and implementation of the following selected remedy:

- Bottom Ash Pond 1 retrofit, hydraulic capture of impacted groundwater, and treatment of the captured groundwater in the new zero-discharge Pond 1.

Assessment monitoring of the Bottom Ash Pond 2/Bottom Ash Pond 3/Ash Landfill Multi-unit in 2020 found that concentrations of some Appendix IV constituents (chromium, fluoride, selenium) exhibited SSIs above background values at selected monitoring wells but at concentrations below their respective GWPSs.

Assessment monitoring of the Emergency Holding Ponds Multi-unit in 2020 found that concentrations of one Appendix IV constituent (barium) exhibited an SSI above the background value at monitoring well MW-47B, but at a concentration below the GWPS.

Other activities and conditions for the 2020 annual reporting period include:

- Semiannual assessment-mode groundwater monitoring events were conducted in June and October. Monitoring involved sampling of background monitoring wells and downgradient monitoring wells.
- No well repair or decommissioning of the existing program monitoring networks was conducted.
- No program transitions (Detection to Assessment or vice versa) were triggered.
- Programmatic problems were encountered for Bottom Ash Pond 1 with the exceedance of GWPS at an SSL in Well MW-38B, so a remedy is required.

Anticipated activities for the next annual reporting period include:

- Completion of two semi-annual assessment-mode groundwater monitoring events.
- Statistical evaluation of groundwater data for Appendix III and Appendix IV constituents.
- Design and implementation of the selected remedy for the Bottom Ash Pond 1 Unit.

# 1. Introduction

On behalf of Basin Electric Power Cooperative, (Basin), AECOM has prepared this 2020 annual report documenting groundwater monitoring and corrective action for the Coal Combustion Residuals (CCR) units at Basin's Laramie River Station (LRS).

Chapter 1 provides background information on the LRS power generating facility, its CCR unit(s) and their physical setting including geology, hydrology, and groundwater conditions. Chapter 2 summarizes CCR groundwater monitoring activities conducted prior to 2020. Chapter 3 summarizes the groundwater monitoring and corrective action activities completed in 2020, and references attachments to this report that contain detailed documentation of those activities. Chapter 4 provides some general information regarding the LRS CCR program and actions planned for 2021. Chapter 5 presents a summary and conclusions from CCR groundwater monitoring in 2020 and statistical analysis of the results. Chapter 6 lists references cited in this report.

## Regulatory Background

The CCR rule (Chapter 40 of the Code of Federal Regulations [CFR] Part 257 Subpart D) became effective on October 19, 2015 and established standards for the disposal of CCR in landfills and surface impoundments (CCR units). In particular, the rule set forth groundwater monitoring and corrective action requirements for CCR units. The rule includes the requirement for an "annual groundwater monitoring and corrective action report" (annual report), with the annual report for 2020 due by January 31, 2021. The annual report is intended to document the status of the groundwater monitoring and corrective action program for each CCR unit, summarize key actions completed in the previous year, and project key activities for the upcoming year. This report is the fourth annual report for LRS, and includes activities performed in calendar year 2020.

## Facility Location and Operational History

LRS, located east of Wheatland, Wyoming (**Figure 1-1**), is one of the largest consumer-operated, regional, joint power supply ventures in the United States. The plant consists of three power generating units with a total power output capacity of 1,710 megawatts (MW):

- Unit 1, with a rating of 570 MW, which began operating in 1980;
- Unit 2, with a rating of 570 net MW, which began operating in 1981; and
- Unit 3, with a rating of 570 net MW, which began operating in 1982.

CCR produced at LRS includes fly ash, bottom ash, and flue gas desulfurization waste.

## CCR Unit Description

CCR is disposed at LRS in the following CCR units monitored as individual units or multi-units:

- Bottom Ash Pond 1;
- Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill (multi-unit); and
- Emergency Holding Ponds (multi-unit).

The Ash Landfill and three bottom ash ponds are located near the western edge of the site, west of the LRS generating units and office complex (**Figure 1-2**). The two emergency holding ponds are located north of the generating units in the northeastern part of the site. The landfill and ash ponds were permitted in 1978 and began receiving coal ash in 1980. The emergency holding ponds were subsequently incorporated due to disposal of flue gas desulfurization.

## Physical Setting

The geological and hydrogeological setting is important to understanding the groundwater environment in the vicinity of the LRS. The geologic history of Platte County is similar to most areas within the Front Range of the Rocky Mountains. Platte County is underlain by marine and continental deposits of limestone, conglomerate, sandstone, siltstone, shale, and unconsolidated sediments. Deposits range in thickness up to 10,000 feet (ft) in the east central and southeastern parts of the county. Precambrian rocks generally make up the mountainous areas, Paleozoic and Mesozoic rocks adjoin the older formations, and Tertiary and Quaternary period rocks underlie most of the county east of the Laramie Range (U.S. Geological Survey [USGS] 1960). The Laramide Orogeny was a period of mountain building active in the county approximately 70 million years ago marking the beginning of the Laramie Range and the Hartville Uplift, a structural divide separating the southern Powder River Basin from the northern Denver Basin. During the Cenozoic Era, streams eroded the eastern side of the range depositing silts, sands, and gravels of the Brule and Arikaree Formations that underlie the Wheatland area, including LRS.

Precipitation landing on the eastern flank of the Laramie Range supplies surface water to perennial and ephemeral streams that flow east towards the basin. Most surface water west of Wheatland eventually joins with the Laramie River continuing east before discharging into the Platte River near Fort Laramie. Groundwater near Wheatland is recharged primarily through infiltration of rain and melt water on the eastern flank of the Laramie Range and through infiltration of irrigation water during the spring, summer, and fall months. Some groundwater in the saturated zones eventually returns to the land surface through seeps and springs, or is discharged by wells and evapotranspiration; however, the majority flows into surface streams. Alluvial drainages bounding the eastern (Wheatland Creek) and western portions (Chugwater Creek) of the facility transport surface water generally northward, discharging to the Laramie River (USGS 1960). Some groundwater within these regions percolates into the Arikaree Formation which holds the uppermost aquifer beneath the LRS facility.

The LRS facility is underlain by a 5 to 30 ft thick section of Quaternary sediments that overlies the Arikaree Formation. The Arikaree Formation is comprised primarily of loosely to moderately cemented very fine to fine grained sandstone with interbedded silts and clays. A lower unit consists of lenses of loosely to well-cemented red to gray coarse sandstone interbedded with lenses of well-cemented conglomerate. A basal conglomerate lies unconformably upon the underlying Brule Formation in many places throughout Platte County (USGS 1960). A review of the geologic logs generated during the drilling of the on-site water supply well (Forell-Baumgardner No. 2) suggests the Brule Formation is approximately 820 ft below ground surface (bgs) in the western portions of the facility. Based on this information, the local thickness of the Arikaree Formation on-site is approximately 790 ft thick.

The lithologic characteristics of the Arikaree Formation beneath the LRS are generally consistent, although there are slight differences in the degree of cementation and induration, and minor variations in grain size. Few fractures were noted in borehole soil cores obtained during monitoring well network installation. Interbeds with higher silt and clay content, coupled with greater cementation generate thin discontinuous perched groundwater horizons that are interpreted to hold only seasonal groundwater. The perched groundwater would tend to percolate downward to what is interpreted as the uppermost aquifer based on data obtained during monitoring well installation and aquifer testing. The uppermost aquifer is present at a depth of approximately 95 ft bgs in the southwestern portion of the facility, and slopes generally north towards the Laramie River. The hydraulic gradient for the uppermost aquifer beneath the facility appears to be controlled dominantly through topographic features and enhanced infiltration zones in permeable shallow alluvium. A representative potentiometric surface map from the most recent assessment monitoring event conducted in October 2020 is presented in **Figure 1-2**. Data from aquifer pump testing conducted at the facility in 2016 were used to estimate hydraulic conductivities, which range from 0.65 feet per day (ft/d) to 3.12 ft/d, with an average of 1.40 ft/d. Aquifer slug tests were also performed on eight other wells, with resulting hydraulic conductivities ranging from 0.45 ft/d to 6.28 ft/d, with an average of 2.16 ft/d.

## 2. CCR Groundwater Monitoring Activities Prior to 2020

The regulatory process for CCR groundwater monitoring and corrective action is established by 40 CFR §§ 257.90 through 257.98. The process includes a phased approach to groundwater monitoring, leading (if applicable) to the establishment of groundwater protection standards (GWPSs) for each CCR unit. Exceedances of the GWPSs that are determined to be statistically significant can trigger requirements for additional groundwater characterization and corrective action assessment followed by corrective action implementation. The following paragraphs provide a summary of CCR groundwater monitoring activities performed prior to 2020. CCR groundwater monitoring activities performed in 2020 are discussed in Chapter 3.

Groundwater monitoring at LRS is performed using a network of monitoring wells that includes both wells to monitor background water quality that is not potentially influenced by the presence of the CCR unit, and wells placed at the downgradient boundary of the CCR units (**Figure 2-1**). The hydro stratigraphic positions of the CCR monitoring wells selected for sampling background and downgradient groundwater quality for each LRS CCR unit or multi-unit prior to 2020 is summarized below:

CCR Unit/multi-Unit	Background Wells	Downgradient Wells
Bottom Ash Pond 1	MW-52B, MW-53B	MW-49B, MW-21B, MW-38B
Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill	MW-39B, MW-32B	MW-36B, MW-37B, MW-20B, MW-14BR, MW-40B, MW-52B, MW-53B
Emergency Holding Ponds	MW-41B, MW-42B, MW-43B	MW-44B, MW-45B, MW-46B, MW-47B

The following eight monitoring wells were also included in the CCR monitoring network for the purpose of measuring groundwater elevations and evaluating groundwater flow direction and velocity in the vicinity of the bottom ash ponds and landfill:

- MW-22B, MW-23B, MW-33B, MW-34B, MW-35B, MW-48B, MW-50B, and MW-51B.

Monitoring wells MW-22B and MW-23B were not measured for water levels in 2020 due to damage to well MW-23B and a broken lock on MW-22B. Detection monitoring was initiated in August 2016, which involved sampling groundwater for Part 257 Appendix III and IV constituents over eight baseline detection monitoring events.

Baseline detection monitoring events were performed in general accordance with procedures established in the site-specific Sampling and Analysis Plan (AECOM 2018a), which is included in the facility's Operating Record. The Sampling and Analysis Plan describes the procedures for equipment calibration, monitoring well water level measurement, monitoring well purging and sampling, sample custody, sample shipping, laboratory analysis, and documentation requirements for each groundwater sample submitted. The results of detection monitoring at LRS were presented and discussed in the First Annual Groundwater Monitoring and Corrective Action Report, 2016-2017 (AECOM 2018b).

If a statistically significant increase (SSI) of any Appendix III constituent relative to background conditions was detected in the downgradient monitoring wells and could not be demonstrated to be associated with a source other than the CCR unit, then the CCR rule required that groundwater monitoring transition from the detection monitoring phase to the assessment monitoring phase. The results of detection monitoring identified the following Appendix III SSIs:

- Bottom Ash Pond 1 SSIs – boron, calcium, chloride, sulfate, and total dissolved solids;
- Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill SSIs – fluoride and chloride; and
- Emergency Holding Ponds SSI – fluoride.

Basin implemented an assessment monitoring program for the two CCR multi-units (Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill; Emergency Holding Ponds) in the spring of 2018 based on the results of detection monitoring . The initial assessment monitoring event for the two multi-units was conducted in April 2018 and included analysis of groundwater samples for constituents listed in Part 257 Appendix IV.

Basin elected to conduct an alternative source demonstration (ASD) investigation to evaluate whether an alternative source could explain the SSLs identified for Bottom Ash Pond 1 during detection monitoring . This ASD investigation involved the following activities:

- Analyzing soil samples collected from shallow soil borings at 10 locations near Bottom Ash Pond 1, and
- Performing groundwater modeling to evaluate potential constituent migration pathways and transport times from potential source areas to one of the downgradient wells for Bottom Ash Pond 1.

The ASD investigation could not confirm an alternative source; therefore, Basin initiated an assessment monitoring program for Bottom Ash Pond 1 and completed the initial assessment monitoring event in June 2018.

The following Appendix IV constituents were detected during the initial assessment monitoring of both CCR multi-units: barium, chromium, fluoride, lithium, molybdenum, radium-226 and -228 (combined), and selenium. The Appendix IV constituents detected during initial assessment monitoring of Bottom Ash Pond 1 included barium, chromium, cobalt, fluoride, lithium, molybdenum, and selenium.

Because one or more Appendix IV constituents were detected during the initial assessment monitoring event for all three CCR units/multi-units at LRS, the CCR rule required that a second verification assessment monitoring event be performed for each unit/multi-unit. Verification assessment monitoring was performed in June 2018 for the two multi-units and in October 2018 for Bottom Ash Pond 1. Verification monitoring for each unit/multi-unit involved analysis for Appendix III constituents plus the Appendix IV constituents detected during initial assessment monitoring.

The results of assessment monitoring conducted in 2018 were presented in the 2018 Annual Groundwater Monitoring and Corrective Action Report (AECOM 2019a).

The CCR rule requires that concentrations of Appendix III and Appendix IV constituents detected in downgradient wells during assessment monitoring be compared to background concentrations using the statistical procedures in § 257.93(g). The rule also requires the establishment of GWPSs in accordance with § 257.95(h) for each Appendix IV constituent detected in downgradient wells during assessment monitoring. If a GWPS is exceeded in one or more downgradient wells at statistically significant levels (SSLs), the rule requires additional groundwater characterization and an Assessment of Corrective Measures (ACM) unless the SSLs can be attributed to a source other than the CCR unit or attributed to an error in sampling, statistical evaluation, or to natural variation in groundwater quality.

Assessment monitoring of Bottom Ash Pond 1 found that lithium and molybdenum concentrations in monitoring well MW-38B exceeded GWPSs at an SSL. Although selenium concentrations in monitoring wells MW-21B and MW-38B exceeded the GWPS by direct comparison, their 95 percent lower confidence limit (95LCL) did not exceed the GWPS. Basin concluded the available data indicate that the SSLs associated with Bottom Ash Pond 1 could not be attributed to a source other than the CCR unit or to error in sampling, statistical evaluation, or natural variation in groundwater quality. Therefore, Basin performed additional groundwater characterization and an ACM for Bottom Ash Pond 1.

Groundwater characterization activities were performed in the spring of 2019 to evaluate the nature and extent of groundwater impacted by a release of CCR from Bottom Ash Pond 1 that has resulted in the exceedance of GWPSs for lithium and molybdenum. The characterization activities were designed to also support selection and implementation of a remedy to attain GWPSs. The activities involved installation and sampling of four monitoring wells (MW-38C, MW-54B, MW-55B, MW-56B) downgradient of Bottom Ash Pond 1 at the locations illustrated in

**Figure 2-1:**

- MW-38C was installed near MW-38B to evaluate the nature and vertical extent of groundwater impacts near MW-38B. The total depth of MW-38C was 130 ft bgs.
- MW-54B was installed to evaluate groundwater quality of the uppermost aquifer at the facility boundary. The total depth of MW-54B was 25 ft bgs.

- MW-55B was installed northeast of MW-21B to evaluate the nature and downgradient extent of groundwater impacts north of MW-38B. The total depth of MW-55B was 70 ft bgs.
- MW-56B was installed east of MW-21B to evaluate the nature and lateral extent of groundwater impacts northeast of MW-38B. The total depth of MW-56B was 79 ft bgs.

Groundwater samples from the four wells were analyzed for Appendix III parameters and the following Appendix IV parameters - barium, chromium, cobalt, fluoride, lithium, molybdenum, and selenium, and the geochemical parameters alkalinity, magnesium, and sodium. None of the 2019 results exceeded the GWPSs for lithium, molybdenum, or the other Appendix IV constituents detected during assessment monitoring in 2018. These results, combined with results from past assessment monitoring, reasonably defined the extent of groundwater impacted by lithium and molybdenum attributed to Bottom Ash Pond 1. The data suggest that the horizontal extent of groundwater with lithium and molybdenum concentrations exceeding GWPSs extends from Bottom Ash Pond 1 downgradient to MW-38B but not as far as MW-55B or MW-56B. Similarly, the vertical extent of groundwater exceeding GWPSs extends from the surface of the uppermost aquifer at MW-38B to possibly below the bottom of the screened interval of MW-38B (75 ft bgs), but not as deep as the screened interval of MW-38C (114 ft–125 ft bgs). Overall, the data enhanced understanding of relevant site conditions, assisted in selecting a remedy, and will be useful for remedy design and implementation.

Groundwater assessment monitoring of Bottom Ash Pond 1 identified lithium and molybdenum at SSLs above GWPSs. The exceedance of GWPSs triggered requirements for the assessment, selection and implementation of corrective measures to prevent further releases of hazardous constituents, remediate any releases and restore the affected area. Basin completed an ACM in 2019 (AECOM 2019b). The ACM focused on identifying and evaluating groundwater corrective measures to address the dissolved lithium and molybdenum in groundwater downgradient of Bottom Ash Pond 1.

Potentially applicable corrective measures were identified based on the nature and extent of groundwater impacts and site-specific geological and hydrogeological characteristics. Screening was performed by evaluating each corrective measure against the criteria of effectiveness, technical implementability, and relative cost. Those that were deemed ineffective and/or had significant implementation concerns were rejected from further consideration. Natural attenuation, groundwater extraction, and long-term monitoring passed the screening step and were assembled into the following two corrective measures alternatives for further detailed evaluation:

- Alternative A: Natural Attenuation and Long-Term Monitoring; and
- Alternative B: Groundwater Extraction, On-site Reuse or Disposal and Long-Term Monitoring.

The two alternatives were evaluated against the requirements specified in 40 §§ CFR 257.96 and 257.97, broadly categorized under the criterion of effectiveness, implementability, and cost. The results of the ACMs, including an evaluation of the two alternatives, are presented in the ACMs (AECOM, 2019b).

Assessment monitoring in 2018 of the Bottom Ash Pond 2, Bottom Ash Pond 3, and the Ash Landfill multi-unit found that concentrations of Appendix IV constituents chromium, fluoride, and selenium exhibited SSIs above background values, but all concentrations were below GWPSs. Therefore, assessment monitoring of this multi-unit is required on a semi-annual basis per the requirements of § 257.95. Assessment monitoring of the Emergency Holding Ponds multi-unit found that Appendix IV constituents chromium, fluoride, and selenium exhibited SSIs above background values but below GWPSs. Therefore, semi-annual assessment monitoring of this multi-unit is also required. The results of semi-annual assessment monitoring subsequently completed in 2020 are discussed in Chapter 3.

The first of two semi-annual assessment monitoring events for 2019 occurred on June 4-6, 2019. The field activities and resulting data were summarized in the Sampling and Analysis Report, Assessment Monitoring - June 2019 (AECOM 2019c). The second semi-annual assessment monitoring event for 2019 occurred on October 21-23, 2019. The field activities and data were summarized in the Sampling and Analysis Report, Assessment Monitoring, October 2019 (AECOM 2019d).

### 3. CCR Groundwater Monitoring and Corrective Action Activities in 2020

This chapter summarizes the activities conducted at LRS in 2020 to comply with the groundwater requirements of the CCR rule:

- Groundwater assessment monitoring activities for all CCR units:
  - monitoring system evaluation;
  - groundwater sampling;
  - laboratory analysis; and
  - statistical analysis of the monitoring results.
- Selection of a remedy for Bottom Ash Pond 1 and initiation of design activities.

The CCR rule groundwater compliance activities are discussed below.

#### Assessment Monitoring Activities

##### Monitoring System Evaluation

As described in the CCR Groundwater Monitoring System Report (AECOM 2017), monitoring wells were installed around the CCR unit/multi-units at LRS to: (1) facilitate collection of representative groundwater samples from the uppermost aquifer and (2) accurately measure water table elevations to support evaluation of groundwater gradient and flow direction (**Figure 1-2**). All monitoring wells comprising the LRS CCR monitoring system, except for MW-22B, were found to be in good condition during the assessment monitoring events conducted in 2020. The lock on MW-22B was unable to be opened in 2020. This well was used for water level measurements to aid in determining groundwater flow direction and velocity. Basin does plan to replace the lock on MW-22B in 2021.

Following additional groundwater characterization of Bottom Ash Pond 1 in the spring of 2019, Basin elected to incorporate the four newly installed monitoring wells into the assessment monitoring program which continued into 2020. Water level measurements and groundwater quality samples will be collected from MW-38C during assessment monitoring events, and water level measurements will also be taken at MW-54B, MW-55B and MW-56B.

Analysis of potentiometric surface maps constructed using the depth to groundwater measurements obtained in 2020 during groundwater assessment monitoring indicates the direction of groundwater flow is generally to the northeast, consistent with previous data collected during Detection and assessment monitoring from 2016 through 2019, and supports the design of the well network (**Figure 2-1**) to monitor background groundwater quality and the quality of groundwater downgradient of the CCR units.

##### Groundwater Sampling and Analysis

Groundwater assessment monitoring was performed at LRS in June and October 2020 for the three CCR unit/multi-units. Monitoring activities included collecting groundwater samples from the wells listed below:

CCR Unit/multi-unit	Background Wells	Downgradient Wells
Bottom Ash Pond 1	MW-52B, MW-53B	MW-21B, MW-38B, MW-38C*, MW-49B
Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill (multi-unit)	MW-39B, MW-32B	MW-36B, MW-37B, MW-20B, MW-14BR, MW-40B, MW-52B, MW-53B
Emergency Holding Ponds (multi-unit)	MW-41B, MW-42B, MW-43B	MW-44B, MW-45B, MW-46B, MW-47B

\* MW-38C, installed in April 2019, was added to the assessment monitoring program as a downgradient compliance well for Bottom Ash Pond 1.

Water levels were also measured in the following monitoring wells for the purpose of evaluating groundwater flow direction and velocity:

- MW-22B, MW-33B, MW-34B, MW-35B, MW-48B, MW-50B, MW-51B, MW-54B, MW-55B, and MW-56B.

A water level was not able to be measured in MW-22B due to a broken lock preventing access to the well. Assessment monitoring sampling and analysis was performed in general accordance with procedures established in the Sampling and Analysis Plan (AECOM 2018a). The results are presented in **Attachment A**, which also includes a representative potentiometric surface map for the uppermost aquifer, inferred groundwater flow direction and estimated velocities, and a tabulated summary of field measurements and laboratory analytical data.

## Statistical Procedures and Analysis

The CCR rule requires that concentrations of Appendix III and Appendix IV constituents detected in downgradient wells during assessment monitoring be compared to background concentrations using the statistical procedures in § 257.93(g). The rule also requires the establishment of GWPSs for each Appendix IV constituent detected in downgradient wells during assessment monitoring. The detected concentrations are then compared to the GWPSs for each constituent, which are either:

- The federal Safe Drinking Water Act maximum contaminant level (MCL);
- Concentrations for cobalt, lead, lithium, and molybdenum specified in § 257.95(h)(2); or
- The background concentration (upper prediction limit [UPL]) if it is higher than the MCL or concentration specified in § 257.95(h)(2).

The statistical analysis procedures and results from 2020 assessment monitoring for each LRS CCR unit/multi-unit are discussed below.

### Bottom Ash Pond 1

Appendix III and Appendix IV groundwater quality data from Bottom Ash Pond 1 assessment monitoring were evaluated using an interwell approach that statistically compared constituent concentrations at downgradient monitoring wells to those present at background monitoring wells. The statistical analyses were performed in accordance with the Statistical Method Certification and Statistical Methodology presented in the CCR Groundwater Monitoring System Report (AECOM 2017).

Prediction limits (i.e., parametric or nonparametric) were developed for each constituent based on the frequency of non-detect values and whether the background data for that constituent exhibited a normal, lognormal, or nonparametric distribution. For the statistical analysis, non-detect values were represented as one-half the detection limit. No outliers were identified in the background data. Analytical data from the background monitoring wells were used to develop an UPL for the Appendix III and Appendix IV background data at 95 percent confidence or better. Data from each downgradient compliance monitoring well were compared to the UPL to identify SSIs over background. Mann-Kendall trend analysis was used to identify statistically significant increasing trends for constituents with SSIs. ProUCL Version 5.1 was used to store the data and run the statistical analyses. Constituents exhibiting an SSI over the background UPL were further evaluated to determine whether they are present at SSLs relative to GWPS established under § 257.95(d)(2). SSLs were identified by calculating the 95LCL for the constituents exhibiting SSIs over background at the downgradient compliance wells at each CCR unit and comparing

the 95LCL to the established GWPS. A constituent is present at an SSL above the GWPS if the 95LCL is greater than the GWPS.

**Table 3-1** summarizes the statistically determined background UPLs of each Appendix III and Appendix IV constituent for Bottom Ash Pond 1. **Table 3-1** also identifies applicable Appendix IV GWPSs, whether each Appendix IV constituent concentration measured in the downgradient wells exceeds the GWPS by direct comparison, and if constituent concentrations are present at an SSL above the GWPS. Assessment monitoring of Bottom Ash Pond 1 in 2020 found that lithium and molybdenum at monitoring well MW-38B exceed their respective GWPSs at an SSL. While selenium concentrations at monitoring well MW-21B and fluoride concentrations at monitoring well MW-38B also exceed their respective GWPS by direct comparison, they do not exceed the GWPS at an SSL because the 95LCL does not exceed the GWPS. Therefore, assessment monitoring of this CCR unit will continue on a semi-annual basis per the requirements of § 257.95.

### Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill Multi-unit

Statistical analyses of Appendix III and Appendix IV groundwater quality data for the Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill multi-unit were performed in a manner like that described above for Bottom Ash Pond 1.

**Table 3-2** summarizes the statistically determined background UPLs of each Appendix III and Appendix IV constituent for the Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill multi-unit. **Table 3-2** also identifies applicable Appendix IV GWPSs, whether each Appendix IV constituent concentration measured in the downgradient wells exceeds a GWPS by direct comparison, and if the constituent concentrations are present at an SSL above the GWPS. Assessment monitoring of this multi-unit in 2020 found that concentrations of some Appendix IV constituents (chromium, fluoride, selenium) exhibited SSIs above background values at selected monitoring wells but were below GWPSs (**Table 3-2**). Therefore, assessment monitoring of this multi-unit will continue on a semi-annual basis per the requirements of § 257.95.

### Emergency Holding Ponds

Statistical analyses of Appendix III and Appendix IV groundwater quality data for the Emergency Holding Ponds multi-unit were also performed consistent with the methodology described above for Bottom Ash Pond 1. **Table 3-3** summarizes the statistically determined background UPLs of each Appendix III and IV constituent for the Emergency Holding Ponds multi-unit. **Table 3-3** also identifies applicable Appendix IV GWPSs, whether each Appendix IV constituent concentration measured in the downgradient wells exceeds a GWPS by direct comparison, and if the constituent concentrations are present at an SSL above the GWPS. Assessment monitoring of the Emergency Holding Ponds multi-unit in 2020 found that concentrations of one Appendix IV constituent (barium) exhibited an SSI above the background value at monitoring well MW-47B, but below the GWPS (**Table 3-3**). Therefore, assessment monitoring of this multi-unit will continue on at least a semi-annual basis per the requirements of § 257.95.

## Corrective Action Activities

### Selection of Remedy for Bottom Ash Pond 1

AECOM prepared a report in 2020 documenting Basin's selection of a remedy for Bottom Ash Pond 1 to address exceedances of GWPSs for lithium and molybdenum, and how it meets the required standards specified in § 257.97(b) (AECOM 2020). Basin's selection of a remedy was based on an ACM conducted in 2019 (AECOM 2019b) per the requirements of 40 CFR § 257.96. The ACM involved the detailed evaluation of the following two corrective measures alternatives for Bottom Ash Pond 1:

- Alternative A: Retrofit of Bottom Ash Pond 1, Natural Attenuation, and Long-Term Monitoring; and
- Alternative B: Retrofit of Bottom Ash Pond 1, Groundwater Extraction, On-site Reuse or Disposal, and Long-Term Monitoring.

These two alternatives were evaluated against the requirements specified in 40 §§ CFR 257.96 and 257.97, broadly categorized under the criterion of effectiveness, implementability, and cost. The two alternatives were presented at a public meeting held on January 30, 2020 in Wheatland, Wyoming. A 30-day public comment period started on

January 30, 2020 and ended on February 29, 2020. No comments were received during the 30-day period following the public meeting.

Following the public meeting, Basin Electric elected to implement Alternative B: Retrofit of Bottom Ash Pond 1, Groundwater Extraction, On-site Reuse or Disposal, and Long-Term Monitoring to meet the remedy requirements of the CCR rule. The Remedy Selection Report was certified and issued in July 2020 (AECOM 2020). Basin subsequently initiated remedial design activities within 90 days of remedy selection in accordance with § 257.97.

- The first step in the selected alternative involves the removal of all CCR from Bottom Ash Pond 1 and the placement of a liner system before returning it to service as a CCR unit. The retrofit was initiated in August 2020 and was projected to be completed in early 2021.
- The second step involves the use of proven, reliable groundwater pumping technology to intercept impacted groundwater and route it back to the retrofitted Bottom Ash Pond 1. Design of this step was initiated in November 2020 and is planned for implementation in the spring of 2021.

## 4. General Information

The following subsections summarize any problems encountered in the LRS CCR program through 2020, resolutions to those problems (if needed), and upcoming actions planned for 2021.

### Problems Encountered

No problems were encountered during the 2020 monitoring period other than the discovery of well MW-22B being unable to be opened due to an inoperable lock. MW-22B was only used for groundwater level measurements and the remaining CCR monitoring wells provide sufficient water level data to adequately evaluate flow direction and velocity in this area.

### Actions Planned for 2021

Basin plans on continuing the assessment monitoring program for the three CCR unit/multi-units at LRS in 2021. The assessment monitoring program will include semi-annual groundwater sampling events and the required statistical evaluations. Basin also plans to complete the design and implementation of the remedy selected for Bottom Ash Pond 1. Basin will prepare a semiannual report describing the progress in designing and implementing the remedy as needed.

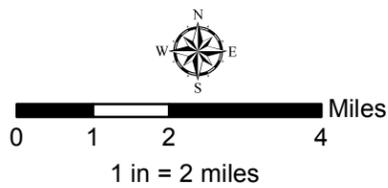
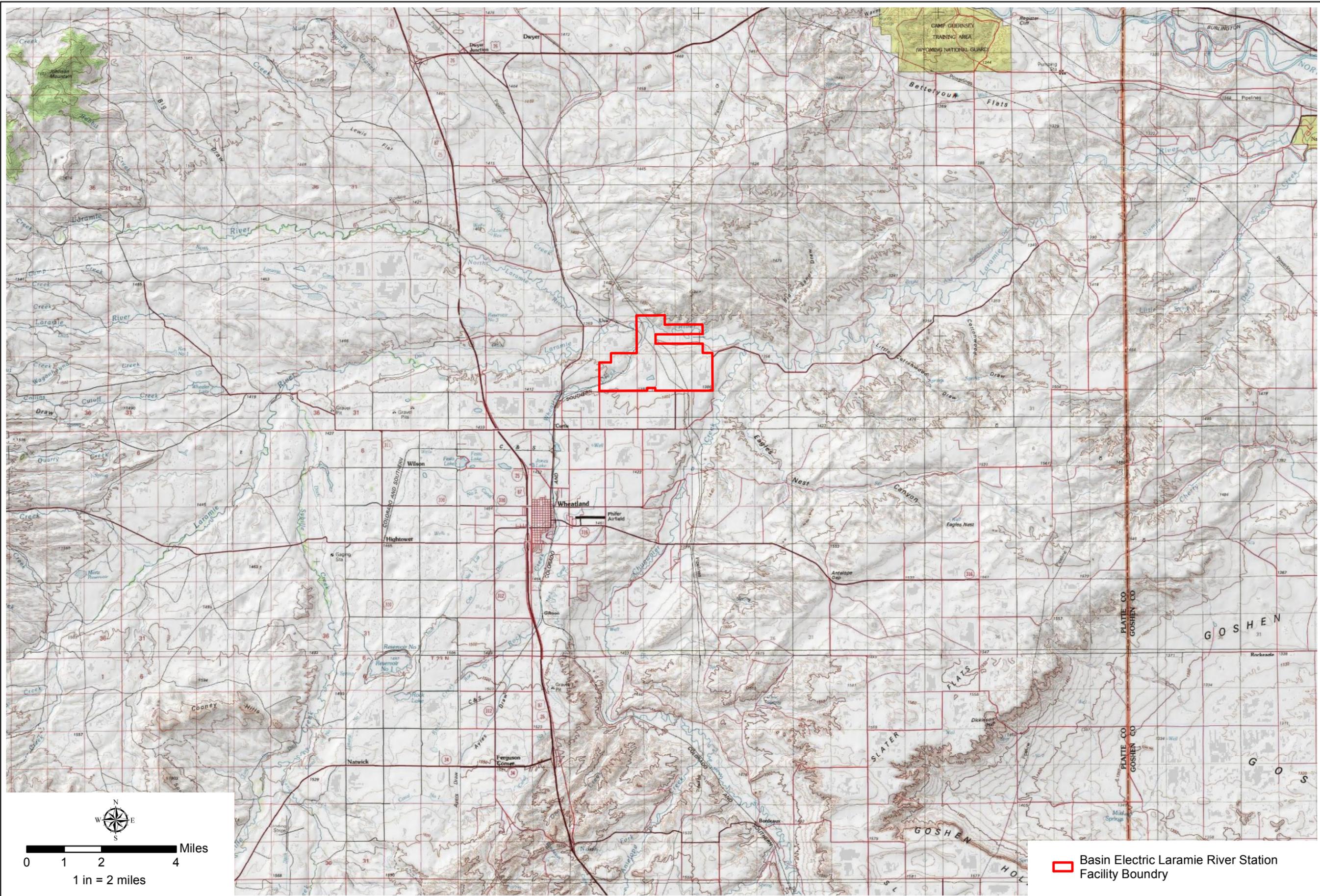
## 5. Summary and Conclusions

Two rounds of groundwater assessment monitoring were performed at LRS in 2020. Statistical analysis of the assessment monitoring results identified an SSI for at least one Appendix III constituent for each LRS CCR unit/multi-units. Therefore, assessment monitoring will be performed on a semi-annual basis in 2021 for all LRS CCR unit/multi-units. Basin will also design and implement the selected remedy to address Appendix IV SSLs for lithium and molybdenum associated with Bottom Ash Pond 1 and continue to comply with CCR rule notification, reporting, and certification requirements.

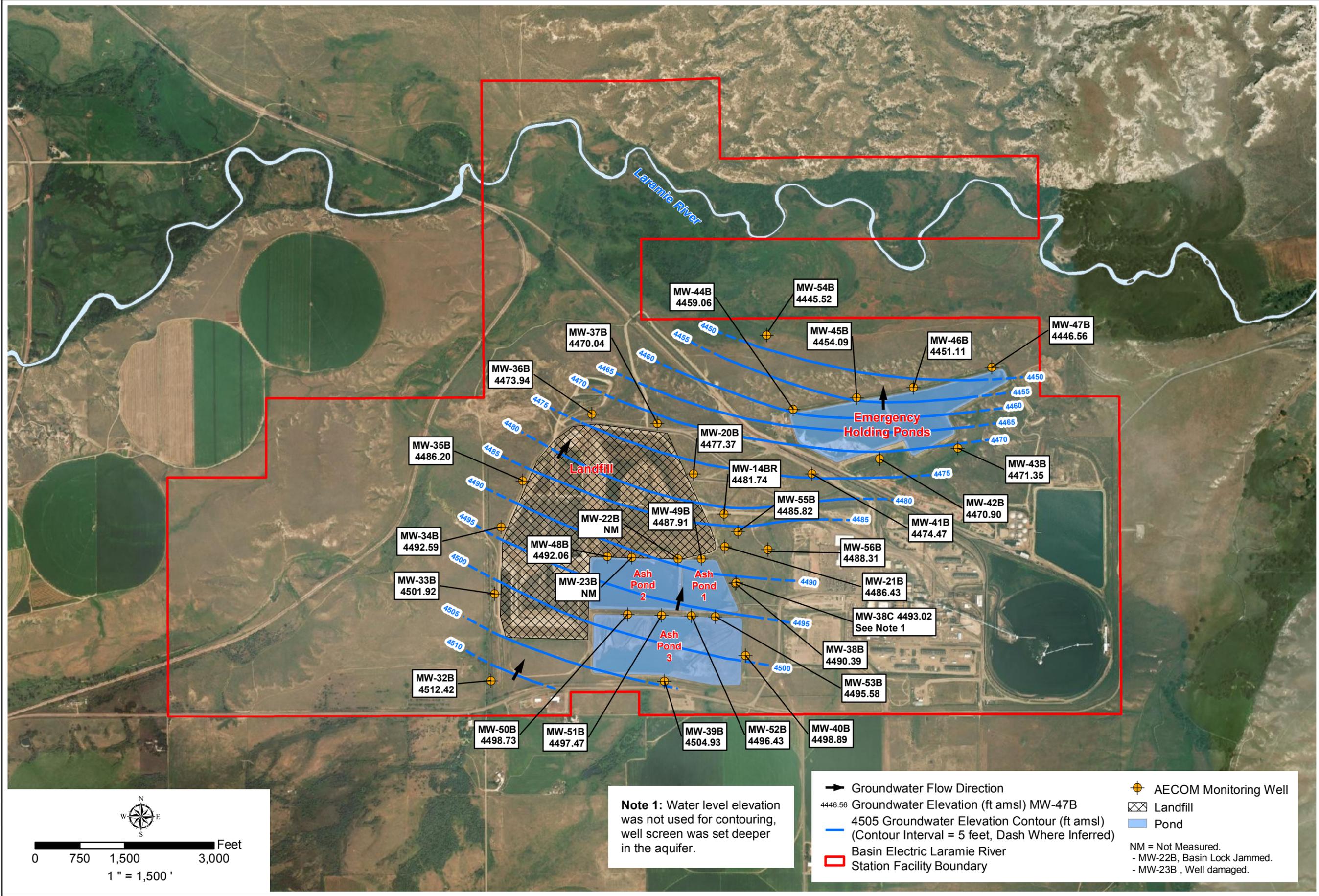
## 6. References

- AECOM. 2017. CCR Groundwater Monitoring System Report, Laramie River Station, Wheatland, Wyoming. Basin Electric Power Cooperative. October 2017.
- AECOM. 2018a. Sampling and Analysis Plan, CCR Monitoring Program, Laramie River Station, Wheatland, Wyoming. Basin Electric Power Cooperative. January 2018.
- AECOM. 2018b. First Annual Groundwater Monitoring and Corrective Action Report, 2016-2017, Laramie River Station, Wheatland, Wyoming. Basin Electric Power Cooperative. January 2018.
- AECOM. 2019a. 2018 Annual Groundwater Monitoring and Corrective Action Report, Laramie River Station, Wheatland, Wyoming. Basin Electric Power Cooperative. January 2019.
- AECOM. 2019b. Assessment of Corrective Measures, Laramie River Station, Bottom Ash Pond 1, Wheatland, Wyoming. Basin Electric Power Cooperative. August 2019.
- AECOM 2019c. Sampling and Analysis report, Assessment Monitoring, June 2019, Laramie River Station, Wheatland, Wyoming, basin Electric Power Cooperative, October 2019.
- AECOM 2019d. Sampling and Analysis report, Assessment Monitoring, October 2019, Laramie River Station, Wheatland, Wyoming, basin Electric Power Cooperative, January 2020.
- AECOM. 2020. Groundwater Remedy Selection Report. Laramie River Station, Wheatland, Wyoming. Basin Electric Power Cooperative. July 2020.
- U.S. Environmental Protection Agency. 2009. Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act Facilities. Unified Guidance. EPA 530-R-09-007. March 2009. 884 pp.
- U.S. Geological Survey (USGS). 1960. United States Department of the Interior, Geology and Ground Water Resources of Platte County, Wyoming, Geological Survey Water-Supply Paper 1490, 1960.

## Figures



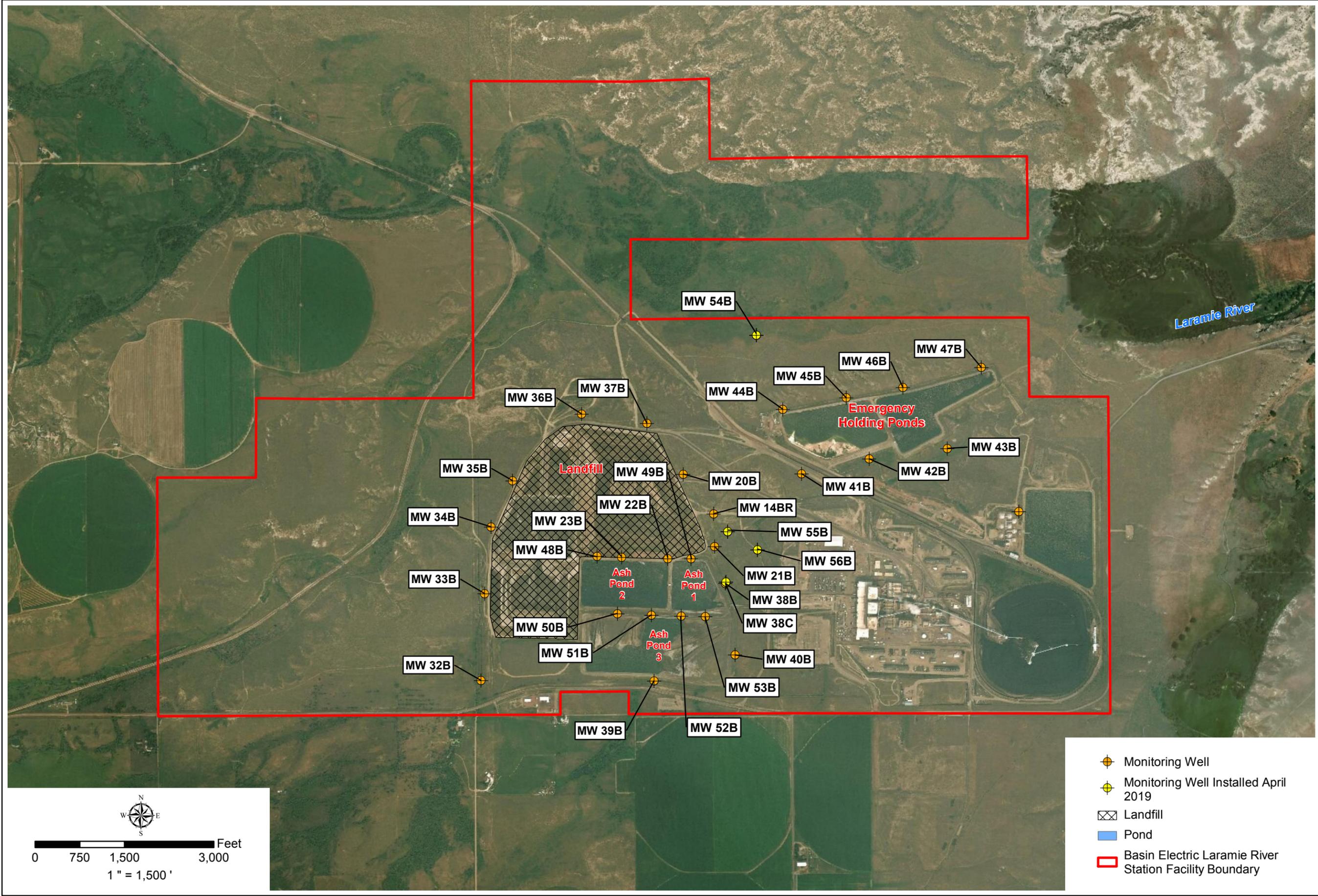
 Basin Electric Laramie River Station Facility Boundary



**Note 1:** Water level elevation was not used for contouring, well screen was set deeper in the aquifer.

- ➔ Groundwater Flow Direction
- 4446.56 Groundwater Elevation (ft amsl) MW-47B
- 4505 Groundwater Elevation Contour (ft amsl) (Contour Interval = 5 feet, Dash Where Inferred)
- Basin Electric Laramie River Station Facility Boundary
- ⊕ AECOM Monitoring Well
- ⊠ Landfill
- ▭ Pond
- NM = Not Measured.
- MW-22B, Basin Lock Jammed.
- MW-23B, Well damaged.

Potentiometric Surface Map  
October 6 - 7, 2020



0 750 1,500 3,000 Feet  
1" = 1,500'

- Monitoring Well
- Monitoring Well Installed April 2019
- Landfill
- Pond
- Basin Electric Laramie River Station Facility Boundary

## Tables

**Table 3-1 Statistical Analysis Methods and Results - Bottom Ash Pond 1**

Parameter (units)	Number of Samples	Percent Nondetects	Normal or Lognormal Distribution?	Statistical Test	Background UPL	GWPS Basis	GWPS	SSI Above Background?	Exceeds GWPS?	SSL Above GWPS?
<b>Appendix III</b>										
Boron (mg/L)	28	39	No/No	Nonparametric	0.19	----	----	Yes (MW-21B, MW-38B)	----	----
Calcium (mg/L)	28	0	No/Yes	Parametric	194	----	----	Yes (MW-21B, MW-38B)	----	----
Chloride (mg/L)	28	0	No/No	Nonparametric	47	----	----	Yes (MW-21B, MW-38B)	----	----
Fluoride (mg/L)	30	47	No/No	Nonparametric	1.33	----	----	Yes (MW-38B)	----	----
pH (std units)	28	0	No/No	Nonparametric	6.94/8.98	----	----	No	----	----
Sulfate (mg/L)	28	0	No/No	Nonparametric	923	----	----	Yes (MW-38B)	----	----
TDS (mg/L)	28	0	No/Yes	Parametric	1,398	----	----	Yes (MW-21B, MW-38B)	----	----
<b>Appendix IV</b>										
Antimony (mg/L)	26	100	No/No	MDL	0.002	----	----	No	----	----
Arsenic (mg/L)	26	100	No/No	MDL	0.005	----	----	No	----	----
Barium (mg/L)	30	0	No/Yes	Parametric	0.191	----	----	No	----	----
Beryllium (mg/L)	26	100	No/No	MDL	0.001	----	----	No	----	----
Cadmium (mg/L)	26	100	No/No	MDL	0.001	----	----	No	----	----
Chromium (mg/L)	30	63	No/No	Nonparametric	0.011	MCL	0.1	Yes (MW-21B)	No	No
Cobalt (mg/L)	28	86	No/No	Nonparametric	0.004	----	----	No	----	----
Fluoride (mg/L)	30	47	No/No	Nonparametric	1.33	----	4.0	Yes (MW-38B)	Yes	No
Lead (mg/L)	26	96	No/No	Nonparametric	0.004	----	----	No	----	----
Lithium (mg/L)	30	0	Yes/Yes	Parametric	0.055	\$257.95(h)(3)	0.055	Yes (MW-38B)	Yes (MW-38B)	Yes (MW-38B)
Mercury (mg/L)	26	100	No/No	MDL	0.0002	----	----	No	----	----
Molybdenum (mg/L)	30	13	No/Yes	Parametric	0.017	\$257.95(h)(2)	0.1	Yes (MW-38B)	Yes (MW-38B)	Yes (MW-38B)
Radium 226+228 (pCi/L)	26	69	No/Yes	Nonparametric	1.09	----	----	No	----	----
Selenium (mg/L)	30	73	No/No	Nonparametric	0.011	MCL	0.05	Yes (MW-21B)	No	No
Thallium (mg/L)	26	100	No/No	Nonparametric	0.001	----	----	No	----	----

UPL - upper prediction limit

GWPS - groundwater protection standard

SSI - statistically significant increase

SSL - statistically significant level (95LCL exceeds GWPS)

MCL - maximum contaminant level

mg/L - milligram per liter

pCi/L - picocuries per liter

MDL - UPL set at maximum Method Detection Limit

**Table 3-2 Statistical Analysis Methods and Results - Ash Pond 2, Ash Pond 3, Ash Landfill Multiunit**

Parameter (units)	Number of Samples	Percent Nondetects	Normal or Lognormal Distribution?	Statistical Test	Background UPL	GWPS Basis	GWPS	SSI Above Background?	Exceeds GWPS?	SSL Above GWPS?
<b>Appendix III</b>										
Boron (mg/L)	26	0	No/No	Nonparametric	0.31	----	----	No	----	----
Calcium (mg/L)	26	0	Yes/Yes	Parametric	210	----	----	No	----	----
Chloride (mg/L)	26	0	No/No	Nonparametric	94	----	----	Yes (MW-37B)	----	----
Fluoride (mg/L)	28	29	No/No	Nonparametric	0.79	----	----	Yes (MW-53B)	----	----
pH (std units)	26	0	No/No	Nonparametric	6.37/7.78	----	----	No	----	----
Sulfate (mg/L)	26	0	No/No	Nonparametric	877	----	----	No	----	----
TDS (mg/L)	26	0	No/No	Nonparametric	1,830	----	----	No	----	----
<b>Appendix IV</b>										
Antimony (mg/L)	26	100	No/No	MDL	0.002	----	----	No	----	----
Arsenic (mg/L)	26	96	No/No	MDL	0.006	----	----	No	----	----
Barium (mg/L)	28	0	No/Yes	Parametric	0.088	----	----	No	----	----
Beryllium (mg/L)	26	100	No/No	MDL	0.001	----	----	No	----	----
Cadmium (mg/L)	26	100	No/No	MDL	0.001	----	----	No	----	----
Chromium (mg/L)	28	96	No/No	Nonparametric	0.002	MCL	0.1	Yes (MW-14BR)	No	No
Cobalt (mg/L)	24	88	No/No	Nonparametric	0.003	----	----	No	----	----
Fluoride (mg/L)	28	29	No/No	Nonparametric	0.79	MCL	4.0	Yes (MW-53B)	No	No
Lead (mg/L)	26	100	No/No	Nonparametric	0.001	----	----	No	----	----
Lithium (mg/L)	28	0	Yes/Yes	Parametric	0.086	----	----	No	----	----
Mercury (mg/L)	26	100	No/No	MDL	0.0002	----	----	No	----	----
Molybdenum (mg/L)	28	21	No/Yes	Parametric	0.046	----	----	No	----	----
Radium 226+228 (pCi/L)	28	32	Yes/Yes	Nonparametric	1.160	----	----	No	----	----
Selenium (mg/L)	28	100	No/No	Nonparametric	0.005	MCL	0.05	Yes (MW-14BR, MW-36B, MW-37B, MW-53B)	No	No
Thallium (mg/L)	26	100	No/No	Nonparametric	0.001	----	----	No	----	----

UPL - upper prediction limit

GWPS - groundwater protection standard

SSI - statistically significant increase

SSL - statistically significant level (95LCL exceeds GWPS)

MCL - maximum contaminant level

mg/L - milligram per liter

pCi/L - picocuries per liter

MDL - UPL set at maximum Method Detection Limit

**Table 3-3 Statistical Analysis Methods and Results - Emergency Holding Ponds**

Parameter (units)	Number of Samples	Percent Nondetects	Normal or Lognormal Distribution?	Statistical Test	Background UPL	GWPS Basis	GWPS	SSI Above Background?	Exceeds GWPS?	SSL Above GWPS?
<b>Appendix III</b>										
Boron (mg/L)	39	0	No/No	Nonparametric	1.07	----	----	No	----	----
Calcium (mg/L)	39	0	Yes/Yes	Parametric	473	----	----	No	----	----
Chloride (mg/L)	39	0	No/No	Nonparametric	320	----	----	No	----	----
Fluoride (mg/L)	42	86	No/No	Nonparametric	0.74	----	----	No	----	----
pH (std units)	38	0	No/No	Nonparametric	6.45/7.85	----	----	No	----	----
Sulfate (mg/L)	39	5	No/No	Nonparametric	2,200	----	----	No	----	----
TDS (mg/L)	39	0	No/No	Nonparametric	4,000	----	----	No	----	----
<b>Appendix IV</b>										
Antimony (mg/L)	36	100	No/No	MDL	0.002	----	----	No	----	----
Arsenic (mg/L)	36	100	No/No	MDL	0.005	----	----	No	----	----
Barium (mg/L)	42	0	No/Yes	Parametric	0.059	MCL	2	Yes (MW-47B)	No	No
Beryllium (mg/L)	36	100	No/No	MDL	0.001	----	----	No	----	----
Cadmium (mg/L)	36	100	No/No	MDL	0.001	----	----	No	----	----
Chromium (mg/L)	42	21	No/Yes	Parametric	0.009	----	----	No	----	----
Cobalt (mg/L)	36	89	No/No	Nonparametric	0.002	----	----	No	----	----
Fluoride (mg/L)	42	86	No/No	Nonparametric	0.74	----	----	No	----	----
Lead (mg/L)	36	100	No/No	Nonparametric	0.001	----	----	No	----	----
Lithium (mg/L)	42	0	Yes/Yes	Parametric	0.085	----	----	No	----	----
Mercury (mg/L)	36	100	No/No	MDL	0.0002	----	----	No	----	----
Molybdenum (mg/L)	42	0	No/No	Nonparametric	0.180	----	----	No	----	----
Radium 226+228 (pCi/L)	39	59	No/Yes	Nonparametric	1.020	----	----	No	----	----
Selenium (mg/L)	42	50	No/No	Nonparametric	0.012	----	----	No	----	----
Thallium (mg/L)	36	100	No/No	Nonparametric	0.001	----	----	No	----	----

UPL - upper prediction limit

GWPS - groundwater protection standard

SSI - statistically significant increase

SSL - statistically significant level (95LCL exceeds GWPS)

MCL - maximum contaminant level

mg/L - milligram per liter

pCi/L - picocuries per liter

MDL - UPL set at maximum Method Detection Limit

## **Attachment A**

# **Sampling and Analysis Report, 2020**

# 2020 Sampling and Analysis Report CCR Monitoring Program

Laramie River Station  
Wheatland, Wyoming

Basin Electric Power Cooperative

January 31, 2021

## Prepared for:

Basin Electric Power Cooperative  
Bismarck, North Dakota

## Prepared by:

AECOM  
1601 Prospect Park Way  
Fort Collins, CO 80525  
aecom.com

Project number: 60632474

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## List of Acronyms

AECOM	AECOM Technical Services, Inc.
Basin	Basin Electric Power Cooperative
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
LRS	Laramie River Station
USEPA	United States Environmental Protection Agency

# 1. Introduction

On behalf of Basin Electric Power Cooperative (Basin), AECOM Technical Services, Inc. (AECOM) prepared this Coal Combustion Residuals (CCR) Groundwater Sampling and Analysis Report for the Basin Laramie River Station (LRS).

This Sampling and Analysis Report was prepared to present the results of sampling and analysis of groundwater conducted per the monitoring requirements of the United States Environmental Protection Agency (USEPA) CCR rule (Chapter 40 of the Code of Federal Regulations [CFR], §§ 257.90 to 257.98).

The following three CCR unit/multi-units are present at LRS:

- Bottom Ash Pond 1
- Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill (multi-unit)
- Emergency Holding Ponds (multi-unit)

Semi-annual groundwater Assessment Monitoring was performed at LRS in June and October 2020 for the three CCR unit/multi-units. assessment monitoring involves groundwater level measurements, collection of groundwater samples from CCR monitoring wells, and analysis for Part 257 Appendix III and selected Appendix IV parameters.

## 2. Groundwater Flow

As required by 40 CFR § 257.93(c), groundwater elevations were measured in each well prior to purging each time groundwater was sampled. The groundwater measurements, presented in **Table 1**, were used to create potentiometric surface maps for the uppermost aquifer for the baseline monitoring events. The resulting potentiometric surface maps (contained in the operating record) were used to evaluate the direction of groundwater flow and hydraulic gradient for each subject CCR unit/multi-unit. **Figure 1** and **Figure 2** represent a potentiometric surface map constructed using measurements taken on June 2-4, 2020 and October 6-7, 2020, respectively and show inferred groundwater flow directions for each CCR unit/multi-unit. The potentiometric maps are generally consistent with the groundwater flow patterns observed during the other CCR monitoring events performed at LRS since monitoring began in 2016. Groundwater flow velocities were calculated for each unit/multi-unit using measurements from the semi-annual assessment monitoring events in June and October 2020, as presented in **Appendix I** and summarized below:

CCR Unit/multi-unit	Calculated Seepage Velocities (ft/day)		
	Minimum	Maximum	Average
Bottom Ash Pond 1	0.030	0.45	0.12
Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill	0.013	3.1	0.2
Emergency Holding Ponds	0.041	2.9	0.3

Based on the groundwater flow conditions documented in this chapter, the relative function of the monitoring wells employed in the LRS CCR groundwater monitoring system is as follows:

CCR Unit/multi-unit	Background Wells	Downgradient Wells
Bottom Ash Pond 1	MW-52B, MW-53B	MW-49B, MW-21B, MW-38B, MW-38C*
Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill	MW-39B, MW-32B	MW-36B, MW-37B, MW-20B, MW-14BR, MW-40B, MW-52B, MW-53B
Emergency Holding Ponds	MW-41B, MW-42B, MW-43B	MW-44B, MW-45B, MW-46B, MW-47B

\* MW-38C was added to the monitoring system following its installation during groundwater characterization activities in the spring of 2019.

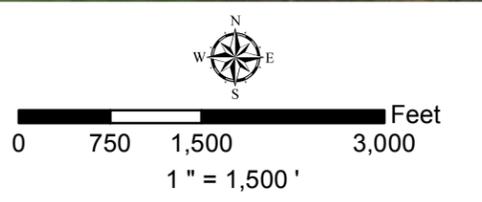
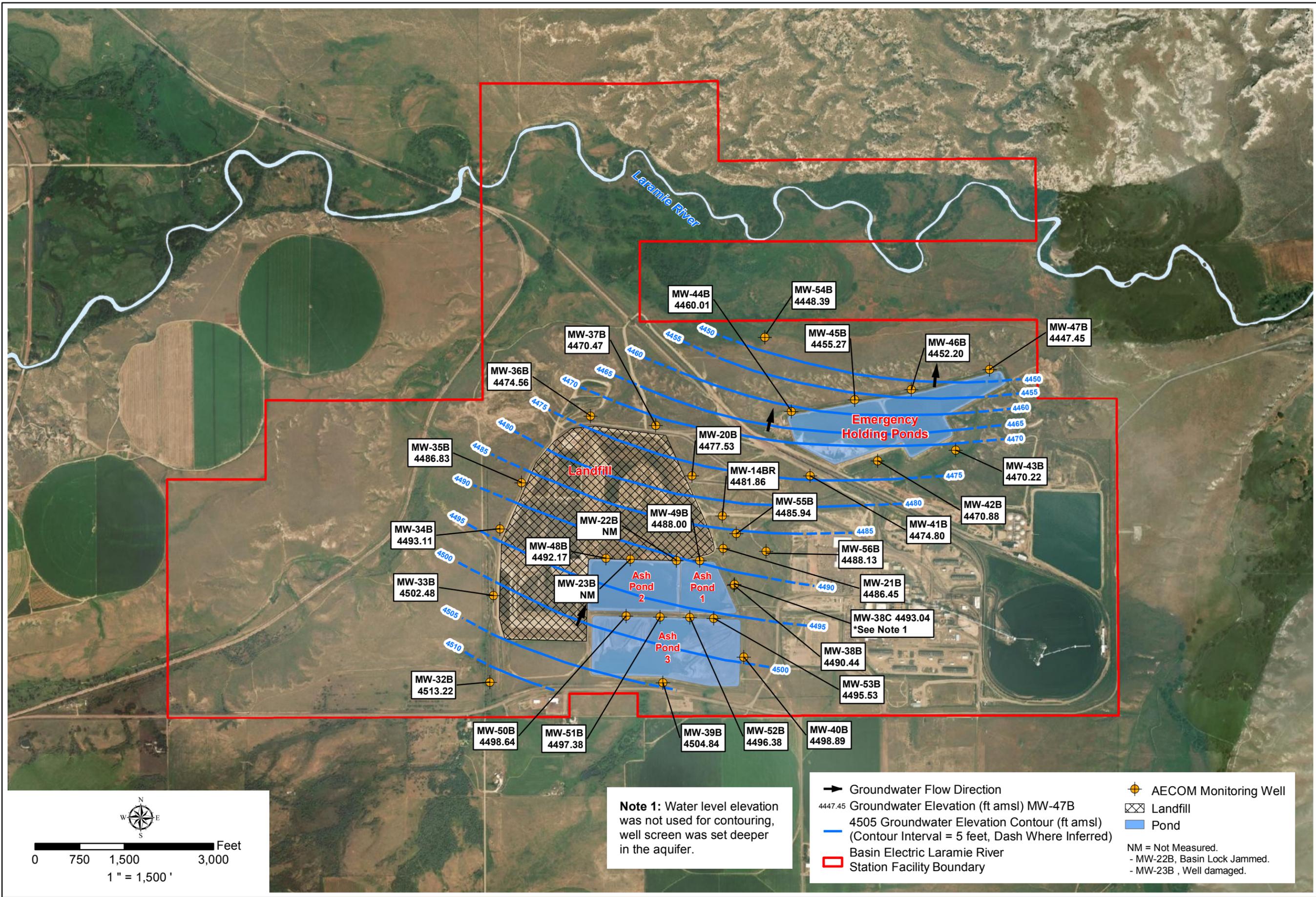
The following 10 monitoring wells are also included in the LRS CCR monitoring system for the purpose of measuring groundwater elevations and evaluating groundwater flow direction and velocity in the vicinity of the bottom ash ponds and landfill: MW-22B, MW-33B, MW-34B, MW-35B, MW-48B, MW-50B, MW-51B, MW-54B, MW-55B, and MW-56B. MW-54B, MW-55B, and MW-56B. These wells were added to the list following their installation during groundwater characterization activities conducted in the spring of 2019. Well MW-22B was not measured in 2020 due to the lock being damaged and the well being unable to be opened. Well MW-23B was removed from the monitoring well network after the well was found to be damaged in 2019 and it was determined the well was not needed to determine groundwater flow in the area.

### 3. Groundwater Quality

Eurofins TestAmerica provided laboratory reports following each monitoring event presenting the results of laboratory analysis. The laboratory reports are included in the operating record and were reviewed against the chain-of-custody forms and for compliance with maximum holding times and conformance with project-required methods. The reported analytical results were reviewed and verified by an AECOM data validator/chemist using USEPA guidelines (USEPA 2017). Data validation concluded that field and laboratory precision, field and laboratory accuracy, method compliance, and data set completeness were acceptable based on the data reported. No data were missing or rejected, and all reported data are suitable for their intended use as reported with the clarifications and qualifications noted. Data validation reports were prepared for each monitoring event and are included in the operating record. The validated results were compiled into summary form as presented in **Tables 2, 3, and 4** for the two semi-annual assessment monitoring events in 2020. The first semi-annual event in June 2020 involved the laboratory analysis of samples for Appendix III parameters and those Appendix IV parameters detected in the previous assessment monitoring event. The second semi-annual event in October 2020 involved analysis for Appendix III and all Appendix IV parameters. The 2020 analytical laboratory and data validation reports are included as Appendix II.

**Table 5** contains the results of quality assurance/quality control field blank samples collected during the groundwater monitoring events conducted in 2020.

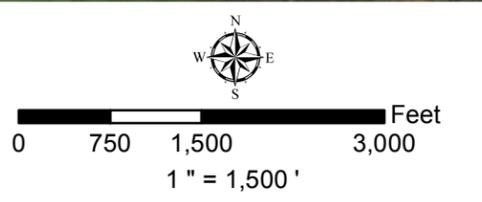
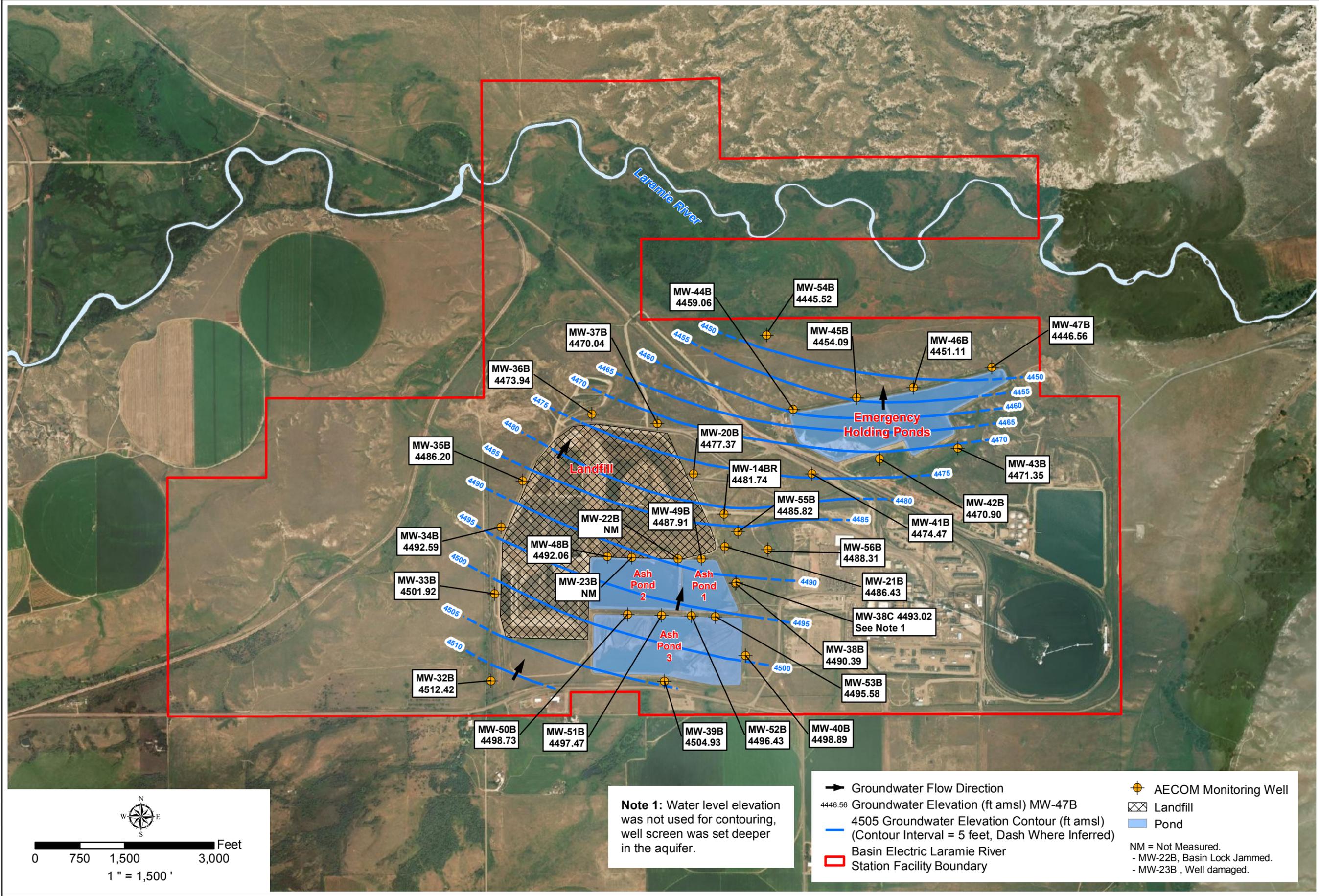
## Figures



**Note 1:** Water level elevation was not used for contouring, well screen was set deeper in the aquifer.

- ➔ Groundwater Flow Direction
- 4447.45 Groundwater Elevation (ft amsl) MW-47B
- 4505 Groundwater Elevation Contour (ft amsl) (Contour Interval = 5 feet, Dash Where Inferred)
- ▭ Basin Electric Laramie River Station Facility Boundary
- ⊕ AECOM Monitoring Well
- ▨ Landfill
- ▭ Pond
- NM = Not Measured.
- MW-22B, Basin Lock Jammed.
- MW-23B, Well damaged.

Potentiometric Surface Map  
June 2 - 4, 2020



**Note 1:** Water level elevation was not used for contouring, well screen was set deeper in the aquifer.

- ➔ Groundwater Flow Direction
- 4446.56 Groundwater Elevation (ft amsl) MW-47B
- 4505 Groundwater Elevation Contour (ft amsl) (Contour Interval = 5 feet, Dash Where Inferred)
- ▭ Basin Electric Laramie River Station Facility Boundary
- ⊕ AECOM Monitoring Well
- ▨ Landfill
- ▭ Pond
- NM = Not Measured.
- MW-22B, Basin Lock Jammed.
- MW-23B, Well damaged.

Potentiometric Surface Map  
October 6 - 7, 2020

## Tables

**Table 1 Groundwater Level Measurements and Elevations**

Location ID	Top of Casing Elevation (feet amsl)	June 2-4, 2020			October 6-7, 2020		
		Date	Depth To Water (feet)	Water Level Elevation (feet amsl)	Date	Depth To Water (feet)	Water Level Elevation (feet amsl)
MW-14BR	4537.90	6/2/2020	56.04	4,481.86	10/6/2020	56.16	4481.74
MW-20B	4535.47	6/2/2020	57.94	4,477.53	10/6/2020	58.10	4477.37
MW-21B	4539.58	6/2/2020	53.13	4,486.45	10/6/2020	53.15	4486.43
MW-22B	4569.21	6/3/2020	NM	NM	10/7/2020	NM	NM
MW-23B	4569.48	6/3/2020	NM	NM	10/7/2020	NM	NM
MW-32B	4567.11	6/3/2020	53.89	4,513.22	10/7/2020	54.69	4512.42
MW-33B	4566.61	6/4/2020	64.13	4,502.48	10/7/2020	64.69	4501.92
MW-34B	4554.72	6/4/2020	61.61	4,493.11	10/7/2020	62.13	4492.59
MW-35B	4548.67	6/4/2020	61.84	4,486.83	10/7/2020	62.47	4486.20
MW-36B	4532.44	6/4/2020	57.88	4,474.56	10/7/2020	58.50	4473.94
MW-37B	4530.37	6/4/2020	59.90	4,470.47	10/7/2020	60.33	4470.04
MW-38B	4547.48	6/3/2020	57.04	4,490.44	10/6/2020	57.09	4490.39
MW-38C	4549.45	6/2/2020	56.41	4,493.04	10/6/2020	56.43	4493.02
MW-39B	4581.45	6/3/2020	76.61	4,504.84	10/7/2020	76.52	4504.93
MW-40B	4589.59	6/3/2020	90.70	4,498.89	10/7/2020	90.70	4498.89
MW-41B	4529.64	6/2/2020	54.84	4,474.80	10/6/2020	55.17	4474.47
MW-42B	4515.83	6/3/2020	44.95	4,470.88	10/7/2020	44.93	4470.90
MW-43B	4501.44	6/3/2020	31.22	4,470.22	10/7/2020	30.09	4471.35
MW-44B	4529.39	6/2/2020	69.38	4,460.01	10/6/2020	70.33	4459.06
MW-45B	4530.92	6/2/2020	75.65	4,455.27	10/6/2020	76.83	4454.09
MW-46B	4527.72	6/2/2020	75.52	4,452.20	10/6/2020	76.61	4451.11
MW-47B	4522.60	6/2/2020	75.15	4,447.45	10/6/2020	76.04	4446.56
MW-48B	4568.66	6/3/2020	76.49	4,492.17	10/7/2020	76.60	4492.06
MW-49B	4564.36	6/3/2020	76.36	4,488.00	10/6/2020	76.45	4487.91
MW-50B	4588.34	6/3/2020	89.70	4,498.64	10/7/2020	89.61	4498.73
MW-51B	4588.90	6/3/2020	91.52	4,497.38	10/7/2020	91.43	4497.47
MW-52B	4589.60	6/3/2020	93.22	4,496.38	10/7/2020	93.17	4496.43
MW-53B	4589.23	6/3/2020	93.70	4,495.53	10/7/2020	93.65	4495.58
MW-54B	4454.80	6/2/2020	6.41	4,448.39	10/6/2020	9.28	4445.52
MW-55B	4532.37	6/3/2020	46.43	4,485.94	10/6/2020	46.55	4485.82
MW-56B	4541.95	6/3/2020	53.82	4,488.13	10/6/2020	53.64	4488.31

Notes:

TOC = top of casing

amsl = above mean sea level

NM = not measured

Geodetic Datum: North American Datum of 1983 (NAD 83)

Vertical Datum: North American Vertical Datum of 1988 (NAVD 88)

**Table 2: Groundwater Analytical Data - Bottom Ash Pond 1**

Chemical Name Unit				Appendix III Constituents													Antimony mg/L		Arsenic mg/L		
				Boron mg/L		Calcium mg/L		Chloride mg/L		Fluoride mg/L		pH SU		Sulfate mg/L		TDS mg/L					
Relative Location	Well ID	Date	Sample Type																		
Background	MW-52B	6/3/2020	N	0.149		167		34.8		0.5	U	7.53		450		1890		0.002	U	0.005	U
		10/7/2020	N	0.187		161		40.7		0.5	U	7.58		923		1140		0.002	U	0.005	U
	MW-53B	6/3/2020	N	0.1	U	101		41.2		0.939		7.76		220		697		0.002	U	0.005	U
		10/7/2020	N	0.117		102		42.1		0.958		7.74		238		709		0.002	U	0.005	U
Downgradient	MW-21B	6/2/2020	N	0.208		281		261		0.5	U	7.66		635		1700		0.002	U	0.005	U
		10/6/2020	N	0.195		257		248		0.5	U	7.57		644		1520		0.002	U	0.005	U
	MW-38B	6/3/2020	N	3.85		556		385		1.68		7.58		5100		8640		0.002	U	0.005	U
		10/6/2020	N	3.98		504		306		7.58		7.26		5470		7060		0.002	U	0.005	U
	MW-38C	6/2/2020	N	0.1	U	99.2		24.2		0.512		7.45		212		634		0.002	U	0.005	U
		10/6/2020	N	0.1	U	96.3		24		0.546		7.52		224		610		0.002	U	0.005	U
	MW-49B	6/3/2020	N	0.155		141		30.6		0.5	U	7.69		419		168		0.002	U	0.005	U
		10/7/2020	N	0.177		143		28.6		0.5	U	7.7		424		998		0.002	U	0.005	U

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 N = primary Sample

**Table 2: Groundwater Analytical Data - Bottom Ash Pond 1**

Chemical Name Unit				Appendix IV Constituents																	
				Barium mg/L		Beryllium mg/L		Cadmium mg/L		Chromium mg/L		Cobalt mg/L		Lead mg/L		Lithium mg/L		Mercury mg/L		Molybdenum mg/L	
Relative Location	Well ID	Date	Sample Type																		
Background	MW-52B	6/3/2020	N	0.0715		0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.0426		0.0002	U	0.01	U
		10/7/2020	N	0.0514		0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.0406	U	0.0002	U	0.01	U
	MW-53B	6/3/2020	N	0.0504		0.001	U	0.001	U	0.0024		0.001	U	0.001	U	0.0378		0.0002	U	0.01	U
		10/7/2020	N	0.0427		0.001	U	0.001	U	0.0027		0.001	U	0.001	U	0.0331	U	0.0002	U	0.01	U
Downgradient	MW-21B	6/2/2020	N	0.0464		0.001	U	0.001	U	0.0197		0.001	U	0.001	U	0.0419		0.0002	U	0.0185	
		10/6/2020	N	0.0432		0.001	U	0.001	U	0.0162		0.001	U	0.001	U	0.0361	U	0.0002	U	0.0132	
	MW-38B	6/3/2020	N	0.0176		0.001	U	0.001	U	0.00731		0.001	U	0.001	U	0.13		0.0002	U	0.221	
		10/6/2020	N	0.0146		0.001	U	0.001	U	0.00629		0.00109		0.001	U	0.108		0.0002	U	0.193	
	MW-38C	6/2/2020	N	0.0484		0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.027		0.0002	U	0.01	U
		10/6/2020	N	0.0437		0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.033	U	0.0002	U	0.01	U
	MW-49B	6/3/2020	N	0.0695		0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.045		0.0002	U	0.01	U
		10/7/2020	N	0.064		0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.0391	U	0.0002	U	0.01	U

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 N = primary Sample

**Table 2: Groundwater Analytical Data - Bottom Ash Pond 1**

Chemical Name Unit				Radium 226/228 pCi/L		Selenium mg/L		Thallium mg/L	
Relative Location	Well ID	Date	Sample Type						
Background	MW-52B	6/3/2020	N	0.669		0.005	U	0.001	U
		10/7/2020	N	0.626		0.005	U	0.001	U
	MW-53B	6/3/2020	N	0.505	U	0.00951		0.001	U
		10/7/2020	N	0.632	U	0.0106		0.001	U
Downgradient	MW-21B	6/2/2020	N	0.508	U	0.0404		0.001	U
		10/6/2020	N	0.633	U	0.0426		0.001	U
	MW-38B	6/3/2020	N	0.465	U	0.01		0.001	U
		10/6/2020	N	0.596	U	0.0091		0.001	U
	MW-38C	6/2/2020	N	0.496	U	0.00597		0.001	U
		10/6/2020	N	0.519	U	0.00618		0.001	U
	MW-49B	6/3/2020	N	0.507	U	0.005	U	0.001	U
		10/7/2020	N	0.909		0.005	U	0.001	U

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 N = primary Sample

**Table 3: Groundwater Analytical Data - Bottom Ash Pond 2, Bottom Ash Pond 3, Ash Landfill**

Chemical Name Unit				Appendix III Constituents									
				Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH (field) SU	Sulfate mg/L	TDS mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L
Relative Location	Well ID	Date	Type										
Background	MW-32B	6/2/2020	N	0.305	203	85.2	0.5 U	7.37	820	1820	0.002 U	0.005 U	0.0351
		10/7/2020	N	0.306	191	83.8	0.5 U	7.25	833	1810	0.002 U	0.005 U	0.0309
	MW-39B	6/3/2020	N	0.185	195	40.7	0.5 U	7.12	537	1360	0.002 U	0.005 U	0.0356
		10/7/2020	N	0.192	183	40.8	0.5 U	7.2	556	1340	0.002 U	0.005 U	0.0321
Downgradient	MW-14BR	6/2/2020	N	0.151	173	80.5	0.5 U	7.6	336	928	0.002 U	0.005 U	0.042
		10/6/2020	N	0.155	163	76.8	0.5 U	7.64	338	852	0.002 U	0.005 U	0.0399
	MW-20B	6/2/2020	FD	0.224	144	44.7	0.551	7.74	415	1020	0.002 U	0.005 U	0.0598
		6/2/2020	N	0.231	152	45	0.511	7.74	410	1010	0.002 U	0.005 U	0.0579
		10/6/2020	N	0.243	142	44.3	0.55	7.77	392	1000	0.002 U	0.005 U	0.0544
	MW-36B	6/4/2020	N	0.1 U	140	39.2	0.5 U	7.71	361	918	0.002 U	0.005 U	0.0655
		10/7/2020	FD	0.104	131	38.8	0.6	7.67	350	897	0.002 U	0.005 U	0.0584
		10/7/2020	N	0.102	131	38.3	0.63	7.67	347	902	0.002 U	0.005 U	0.0596
	MW-37B	6/4/2020	N	0.156	207	97.1	0.5 UJ	7.62	521	1260	0.002 U	0.005 U	0.0664
		10/7/2020	N	0.16	200	105	0.5 U	7.45	560	1330	0.002 U	0.005 U	0.0623
	MW-40B	6/3/2020	N	0.165	138	25	0.653	7.71	315	896	0.002 U	0.005 U	0.0293
		10/7/2020	N	0.174	136	24.7	0.705	7.61	310	922	0.002 U	0.005 U	0.0258
	MW-52B	6/3/2020	N	0.149	167	34.8	0.5 U	7.53	450	1890	0.002 U	0.005 U	0.0715
		10/7/2020	N	0.187	161	40.7	0.5 U	7.58	923	1140	0.002 U	0.005 U	0.0514
	MW-53B	6/3/2020	N	0.1 U	101	41.2	0.939	7.76	220	697	0.002 U	0.005 U	0.0504
		10/7/2020	N	0.117	102	42.1	0.958	7.74	238	709	0.002 U	0.005 U	0.0427

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 UJ = undetected, reporting limit is estimated  
 FD = field duplicate  
 N = primary sample

**Table 3: Groundwater Analytical Data - Bottom Ash Pond 2, Bottom Ash F**

Chemical Name Unit				Appendix IV Constituents								
Relative Location	Well ID	Date	Type	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	
Background	MW-32B	6/2/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0734	0.0002 U	0.01 U	
		10/7/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0648 U	0.0002 U	0.01 U	
	MW-39B	6/3/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0588	0.0002 U	0.01 U	
		10/7/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0555 U	0.0002 U	0.01 U	
Downgradient	MW-14BR	6/2/2020	N	0.001 U	0.001 U	0.0104	0.001 U	0.001 U	0.0289	0.0002 U	0.01 U	
		10/6/2020	N	0.001 U	0.001 U	0.00984	0.001 U	0.001 U	0.0265 U	0.0002 U	0.01 U	
	MW-20B	6/2/2020	FD	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0346	0.0002 U	0.01 U	
		6/2/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0351	0.0002 U	0.01 U	
		10/6/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0317 U	0.0002 U	0.01 U	
	MW-36B	6/4/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0318	0.0002 U	0.01 U	
		10/7/2020	FD	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0357 U	0.0002 U	0.01 U	
		10/7/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0298 U	0.0002 U	0.01 U	
	MW-37B	6/4/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.038	0.0002 U	0.0344	
		10/7/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0376 U	0.0002 U	0.0369	
	MW-40B	6/3/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0508	0.0002 U	0.01 U	
		10/7/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0474 U	0.0002 U	0.01 U	
	MW-52B	6/3/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0426	0.0002 U	0.01 U	
		10/7/2020	N	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.0406 U	0.0002 U	0.01 U	
	MW-53B	6/3/2020	N	0.001 U	0.001 U	0.0024	0.001 U	0.001 U	0.0378	0.0002 U	0.01 U	
		10/7/2020	N	0.001 U	0.001 U	0.0027	0.001 U	0.001 U	0.0331 U	0.0002 U	0.01 U	

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 UJ = undetected, reporting limit is estimated  
 FD = field duplicate  
 N = primary sample

**Table 3: Groundwater Analytical Data - Bottom Ash Pond 2, Bottom Ash F**

Chemical Name				Radium 226/228		Selenium		Thallium	
Unit				pCi/L		mg/L		mg/L	
Relative Location	Well ID	Date	Type						
Background	MW-32B	6/2/2020	N	0.48	U	0.005	U	0.001	U
		10/7/2020	N	0.726		0.005	U	0.001	U
	MW-39B	6/3/2020	N	0.552		0.005	U	0.001	U
		10/7/2020	N	0.874		0.005	U	0.001	U
Downgradient	MW-14BR	6/2/2020	N	0.485	U	0.0098		0.001	U
		10/6/2020	N	0.696	U	0.0094		0.001	U
	MW-20B	6/2/2020	FD	0.523	U	0.005	U	0.001	U
		6/2/2020	N	0.444	U	0.005	U	0.001	U
		10/6/2020	N	0.656	U	0.005	U	0.001	U
	MW-36B	6/4/2020	N	0.467	U	0.00643		0.001	U
		10/7/2020	FD	0.78		0.0075		0.001	U
		10/7/2020	N	0.551	U	0.00659		0.001	U
	MW-37B	6/4/2020	N	0.622	U	0.00835		0.001	U
		10/7/2020	N	0.714	U	0.00969		0.001	U
	MW-40B	6/3/2020	N	0.479	U	0.005	U	0.001	U
		10/7/2020	N	0.761		0.005	U	0.001	U
	MW-52B	6/3/2020	N	0.669		0.005	U	0.001	U
		10/7/2020	N	0.626		0.005	U	0.001	U
	MW-53B	6/3/2020	N	0.505	U	0.00951		0.001	U
		10/7/2020	N	0.632	U	0.0106		0.001	U

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 UJ = undetected, reporting limit is estimated  
 FD = field duplicate  
 N = primary sample

**Table 4: Groundwater Analytical Data - Emergency Holding Ponds**

Chemical Name Unit				Appendix III Constituents										Antimony		Arsenic		Barium					
				Boron mg/L		Calcium mg/L		Chloride mg/L		Fluoride mg/L		pH SU		Sulfate mg/L		TDS mg/L		mg/L		mg/L			
Relative Location	Well ID	Date	Sample Type																				
Background	MW-41B	6/2/2020	N	0.972		284		172		0.5	U	7.59		1300		2590		0.002	U	0.005	U	0.0254	
	MW-41B	10/6/2020	N	1.02		257		155		0.5	U	7.56		1160		2230		0.002	U	0.005	U	0.0207	
	MW-42B	6/3/2020	N	0.733		173		133		0.536		7.68		980		1940		0.002	U	0.005	U	0.0219	
	MW-42B	10/7/2020	N	0.767		204		143		0.5	U	7.64		1030		2090		0.002	U	0.005	U	0.0211	
	MW-43B	6/3/2020	N	0.316		149		52.9		0.5	U	7.43		550		1200		0.002	U	0.005	U	0.0371	
	MW-43B	10/7/2020	N	0.328		122		31.3		0.5	U	7.43		413		1000		0.002	U	0.005	U	0.0261	
Downgradient	MW-44B	6/2/2020	N	0.1	U	173		52.6		0.54		7.78		405		1060		0.002	U	0.005	U	0.0507	
	MW-44B	10/6/2020	N	0.112		176		52.1		0.616		7.65		398		1050		0.002	U	0.005	U	0.0454	
	MW-45B	6/2/2020	N	0.182		150		40.1		0.626		7.78		333		892		0.002	U	0.005	U	0.0463	
	MW-45B	10/6/2020	N	0.193		153		40.5		0.662		7.75		337		876		0.002	U	0.005	U	0.0356	
	MW-46B	6/2/2020	N	0.1	U	89.7		28.4		0.517		7.56		211		615		0.002	U	0.005	U	0.0626	
	MW-46B	10/6/2020	N	0.1	U	80.1		16		0.791	J+	7.75		165		520		0.002	U	0.005	U	0.0408	
	MW-47B	6/2/2020	N	0.124		127		26.8		0.5	U	7.65		306		744		0.002	U	0.005	U	0.0715	
	MW-47B	10/6/2020	N	0.139		129		26.2		0.5	U	7.6		337		749		0.002	U	0.005	U	0.0656	

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 J+ = estimated concentration, high bias indicated  
 N = primary sample

**Table 4: Groundwater Analytical Data - Emergency Ho**

Chemical Name Unit				Appendix IV Constituents																					
				Beryllium mg/L		Cadmium mg/L		Chromium mg/L		Cobalt mg/L		Lead mg/L		Lithium mg/L		Mercury mg/L		Molybdenum mg/L		Radium 226/228 pCi/L		Selenium mg/L		Thallium mg/L	
Relative Location	Well ID	Date	Sample Type																						
Background	MW-41B	6/2/2020	N	0.001	U	0.001	U	0.00327		0.001	U	0.001	U	0.0541		0.0002	U	0.14		0.486	U	0.00562		0.001	U
	MW-41B	10/6/2020	N	0.001	U	0.001	U	0.00389		0.001	U	0.001	U	0.0507	U	0.0002	U	0.135				0.00608		0.001	U
	MW-42B	6/3/2020	N	0.001	U	0.001	U	0.0022		0.001	U	0.001	U	0.0428		0.0002	U	0.0772		0.475	U	0.0124		0.001	U
	MW-42B	10/7/2020	N	0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.0437	U	0.0002	U	0.0706				0.0119		0.001	U
	MW-43B	6/3/2020	N	0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.0353		0.0002	U	0.0192		0.474	U	0.005	U	0.001	U
	MW-43B	10/7/2020	N	0.001	U	0.001	U	0.00514		0.001	U	0.001	U	0.0295	U	0.0002	U	0.0186				0.005	U	0.001	U
Downgradient	MW-44B	6/2/2020	N	0.001	U	0.001	U	0.00741		0.001	U	0.001	U	0.0321		0.0002	U	0.01	U	0.517	U	0.005	U	0.001	U
	MW-44B	10/6/2020	N	0.001	U	0.001	U	0.00542		0.001	U	0.001	U	0.0333	U	0.0002	U	0.01	U			0.005	U	0.001	U
	MW-45B	6/2/2020	N	0.001	U	0.001	U	0.00326		0.001	U	0.001	U	0.0321		0.0002	U	0.01	U	0.553	U	0.00872		0.001	U
	MW-45B	10/6/2020	N	0.001	U	0.001	U	0.002	U	0.001	U	0.001	U	0.0271	U	0.0002	U	0.01	U			0.00704		0.001	U
	MW-46B	6/2/2020	N	0.001	U	0.001	U	0.0104		0.001	U	0.001	U	0.0239		0.0002	U	0.01	U	0.499	U	0.005	U	0.001	U
	MW-46B	10/6/2020	N	0.001	U	0.001	U	0.00229		0.001	U	0.001	U	0.0252	U	0.0002	U	0.01	U			0.005	U	0.001	U
	MW-47B	6/2/2020	N	0.001	U	0.001	U	0.0049		0.001	U	0.001	U	0.0267		0.0002	U	0.01	U	0.458	U	0.005	U	0.001	U
	MW-47B	10/6/2020	N	0.001	U	0.001	U	0.00451		0.001	U	0.001	U	0.0298	U	0.0002	U	0.01	U			0.005	U	0.001	U

Notes:  
 mg/L = milligrams per liter  
 U = undetected at the reporting limit/concentration  
 J+ = estimated concentration, high bias indicated  
 N = primary sample

**Table 5: Groundwater Analytical Data - Field Blanks**

Chemical Name			Appendix III Constituents												Antimony		Arsenic		Barium	
Sample ID	Date	Unit	Boron mg/L		Calcium mg/L		Chloride mg/L		Fluoride mg/L		Sulfate mg/L		TDS mg/L		mg/L		mg/L		mg/L	
		Type		U		U		U		U		U		U		U		U		U
FB-01	6/3/2020	FB	0.1	U	0.2	U	3	U	0.5	U	5	U	10	U	0.002	U	0.005	U	0.005	U
FB-01	10/7/2020	FB	0.1	U	0.2	U	3	U	0.5	U	5	U	10	U	0.002	U	0.005	U	0.005	U

Notes:  
 mg/L = milligrams per liter  
 U = undetected at reporting limit/concentration  
 FB = field blank

## **Appendix I**

### **Groundwater Flow Calculations**

Project: Laramie River Station  
Calculations by: Jeremy Hurshman  
Date: 1/19/2021

CCR Unit: Bottom Ash Pond 1  
Checked by: JDL  
Date: 1/21/2021

Background Wells: MW-52B, MW-53B  
Downgradient Wells: MW-49B, MW-21B, MW-38B

**Hydraulic Gradient (i, ft/ft)**

$$i = -dh/dl$$

where, i= hydraulic gradient  
dh= change in hydraulic head between upgradient and downgradient locations  
dl= horizontal distance between upgradient and downgradient locations, parallel to flow (perpendicular to potentiometric contours)

Date	Upgradient WL elevation (ft MSL)	Downgradient WL Elevation (ft MSL)	dh (ft)	dl (ft)	i (ft/ft)
June 2020 (49B)	4495	4488	7.00	820	0.0085
October 2020 (49B)	4495	4487.91	7.09	820	0.0086
				<b>Minimum</b>	<b>0.0085</b>
				<b>Maximum</b>	<b>0.0086</b>
				<b>Average</b>	<b>0.0086</b>

**Hydraulic Conductivity (K, ft/d)**

K, from slug and pumping tests		
Minimum	1.04	ft/day
Maximum	1.04	ft/day
Average (geomean)	1.04	ft/day

**Specific Yield, Effective Porosity**

Specific Yield, Effective Porosity	
Minimum	0.02
Maximum	0.3
Average	0.15

Note: Effective porosity/specific yield is based on literature values from Arikaree Formation literature and textbook values for sandstone

**Seepage Velocity**

$$v_s = -K * i / n_e$$

where, v<sub>s</sub>= seepage velocity, feet per day (ft/d)  
K= hydraulic conductivity, feet per day (ft/d)  
i= hydraulic gradient, feet per foot (ft/ft)  
n<sub>e</sub>= effective porosity/specific yield, unitless

Calculated Seepage Velocities (ft/day)				
	K (ft/day)	i (ft/ft)	n <sub>e</sub>	v <sub>s</sub> (ft/day)
Minimum	1.04	0.0085	0.30	<b>0.030</b>
Maximum	1.04	0.0086	0.02	<b>0.45</b>
	<b>Geometric Mean</b>			<b>0.12</b>

Project: Laramie River Station  
Calculations by: Jeremy Hurshman  
Date: 1/19/2021

CCR Unit: Bottom Ash Ponds 2&3 and Ash Landfill  
Checked by: JDL  
Date: 1/21/2021

Background Wells: MW-39B, MW-32B  
Downgradient Wells: MW-36B, MW-37B, MW-20B, MW-148R, MW-40B, MW-52B, MW-53B

**Hydraulic Gradient (i, ft/ft)**

$$i = -dh/dl$$

where, i= hydraulic gradient  
dh= change in hydraulic head between upgradient and downgradient locations  
dl= horizontal distance between upgradient and downgradient locations, parallel to flow (perpendicular to potentiometric contours)

**Summary Table - Hydraulic Gradient**

Date	Vector	Upgradient WL elevation (ft MSL)	Downgradient WL Elevation (ft MSL)	dh (ft)	dl (ft)	i (ft/ft)	Average i (ft/ft)
June 2, 2020	Vector 1 (36B)	4510.00	4474.56	35.44	4500	0.0079	0.0077
	Vector 2 (48B)	4505.00	4492.17	12.83	1800	0.0071	
	Vector 3 (37B)	4505.00	4470.47	34.53	4200	0.0082	
October 6, 2020	Vector 1 (36B)	4505	4473.94	31.06	4500	0.0069	0.0102
	Vector 2 (20B)	4505.00	4477.37	27.63	1800	0.0154	
	Vector 3 (37B)	4505.00	4470.04	34.96	4200	0.0083	
<b>Minimum</b>							<b>0.0077</b>
<b>Maximum</b>							<b>0.0102</b>
<b>Average</b>							<b>0.0090</b>

**Hydraulic Conductivity (K, ft/d)**

K from slug and pumping tests conducted at site		
Minimum	0.50	ft/day
Maximum	6.16	ft/day
Average (geomean)	1.54	ft/day

**Specific Yield, Effective Porosity**

Specific Yield, Effective Porosity	
Minimum	0.02
Maximum	0.3
Average	0.15

Note: Effective porosity/specific yield is based on literature values from Arikaree Formation literature and textbook values for sandstone

**Seepage Velocity**

$$v_s = -K * i / n_e$$

where, v<sub>s</sub>= seepage velocity, feet per day (ft/d)  
K= hydraulic conductivity, feet per day (ft/d)  
i= hydraulic gradient, feet per foot (ft/ft)  
n<sub>e</sub>= effective porosity/specific yield, unitless

Calculated Seepage Velocities (ft/day)				
	K (ft/day)	i (ft/ft)	n <sub>e</sub>	v <sub>s</sub> (ft/day)
Minimum	0.50	0.0077	0.30	0.013
Maximum	6.16	0.0102	0.02	3.1
<b>Geometric Mean</b>				<b>0.20</b>

Project: Laramie River Station  
Calculations by: Jeremy Hurshman  
Date: 1/19/2021

CCR Unit: Emergency Holding Ponds  
Checked by: JDL  
Date: 1/21/2021

Background Wells: MW-41B, MW-42B, MW-43B  
Downgradient Wells: MW-44B, MW-45B, MW-46B, MW-47B

**Hydraulic Gradient (i, ft/ft)**

Governing Equation:  
(Hydraulic Gradient)

$$i = -dh/dl$$

where, i= hydraulic gradient

dh= change in hydraulic head between upgradient and downgradient locations

dl= horizontal distance between upgradient and downgradient locations, parallel to flow (perpendicular to potentiometric contours)

Calculation Table

Date	Vector	Upgradient WL elevation (ft MSL)	Downgradient WL Elevation (ft MSL)	dh (ft)	dl (ft)	i (ft/ft)	Average i (ft/ft)
June 2020	Vector 1 (42B)	4470.88	4455.00	15.88	1100	0.0144	0.0164
	Vector 2 (43B)	4470.22	4450.00	20.22	1100	0.0184	
October 2020	Vector 1 (42B)	4470.90	4455.00	15.90	900	0.0177	0.0185
	Vector 2 (43B)	4471.35	4450.00	21.35	1100	0.0194	
						Minimum	0.0164
						Maximum	0.0185
						Average	0.0175

**Hydraulic Conductivity (K, ft/d)**

K from slug and pumping tests conducted at site		
Minimum	0.75	ft/day
Maximum	3.12	ft/day
Average (geomean)	1.31	ft/day

**Specific Yield, Effective Porosity**

Specific Yield, Effective Porosity	
Minimum	0.02
Maximum	0.3
Average	0.15

Note: Effective porosity/specific yield is based on literature values from Arikaree Formation literature and textbook values for sandstone

**Seepage Velocity**

$$v_s = -K * i / n_e$$

where,

v<sub>s</sub>= seepage velocity, feet per day (ft/d)

K= hydraulic conductivity, feet per day (ft/d)

i= hydraulic gradient, feet per foot (ft/ft)

n<sub>e</sub>= effective porosity/specific yield, unitless

Calculated Seepage Velocities (ft/day)				
	K (ft/day)	i (ft/ft)	n <sub>e</sub>	v <sub>s</sub> (ft/day)
Minimum	0.75	0.0164	0.30	0.04
Maximum	3.12	0.0185	0.02	2.9
Geometric Mean				0.34

## **Appendix II**

### **Analytical Laboratory and Data Validation Reports**



Environment

Submitted to:  
Basin Electric Laramie River Station

Submitted by:  
AECOM  
Denver, CO

December 28, 2020

Inorganic

Limited Data Validation Report

Basin Electric Laramie, Wyoming

Groundwater Sampling – October 2020

Analyzed by Eurofins TestAmerica Laboratories

Prepared By Katie Abbott  
Data Reviewer/Chemist

## **Overview**

The samples analyzed for the October 2020 sampling event are listed in the Table of Samples Validated (page 3). Limited data validation was performed on a total of twenty groundwater samples, one field duplicate sample, and one field blank Quality Control (QC) sample.

Samples were submitted to Eurofins TestAmerica Laboratories of Denver, Colorado (TA-DEN).

The reviewed analyses were Select Total Metals by SW-846 Methods 6010C, 6020A, and 7470A, Chloride, Fluoride, and Sulfate by SW-846 Method 9056A, Total Dissolved Solids (TDS) by SM2540C, Radium-226 by SW-846 Method 9315, Radium-228 by SW-846 Method 9320, and combined Radium-226 and Radium-228 by calculation.

The Analytical Limited Data Validation Checklist is presented as pages 4-8. Data were evaluated using guidance set forth in the *United States Environmental Protection Agency (USEPA) contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Superfund Methods Data Review*, document number EPA-540-R-2017-001, January 2017; method requirements, and laboratory criteria.

The following data components were reviewed during the data validation procedure:

<b>Submitted Deliverables</b>
Case Narratives (including any assigned laboratory flags)
Chain-of-Custody form(s) and sample integrity
Sample results, reporting limits, dilution factors
Holding times
Method (preparation) blank results
Field blank results
Laboratory control sample (LCS), laboratory control sample duplicate (LCSD) results
Matrix spike (MS), matrix spike duplicate (MSD) results
Laboratory duplicate (or spiked duplicate) results
Field duplicate (FD) results (calculated Relative Percent Differences [RPD])
Electronic data deliverables (EDDs) – EQUIS format

### **Data Validation Qualifiers Assigned During this Review**

J+ estimated concentration, high bias indicated  
U non-detect

Assigned qualifiers are detailed in the Analytical Data Validation Checklist and are summarized in the

Table of Qualified Analytical Results (page 9).

### **Overall Data Assessment**

Field and laboratory precision, field and laboratory accuracy, method compliance, and data set completeness are determined to be acceptable based on the data reported. No data are missing or rejected, therefore the completeness of the data set was calculated to be 100% and is acceptable. All reported data are suitable for their intended use as reported with the clarifications and qualifications noted.

**Table of Samples Validated  
Basin Electric – Laramie, Wyoming  
October 2020 Sampling  
Eurofins TestAmerica Laboratories**

Matrix	Sample ID	Lab SDG	Lab ID	Sample Type
WG	MW-14BR	280-141350-1/-2	280-141350-1	N
WG	MW-20B		280-141350-2	N
WG	MW-21B		280-141350-3	N
WG	MW-32B		280-141350-4	N
WG	MW-36B		280-141350-5	N
WG	DUP-01		280-141350-6	FD
WG	MW-37B		280-141350-7	N
WQ	FB-01		280-141350-8	FB
WG	MW-38B		280-141350-9	N
WG	MW-38C		280-141350-10	N
WG	MW-39B		280-141350-11	N
WG	MW-40B		280-141350-12	N
WG	MW-41B		280-141350-13	N
WG	MW-42B		280-141350-14	N
WG	MW-43B		280-141350-15	N
WG	MW-44B		280-141350-16	N
WG	MW-45B		280-141350-17	N
WG	MW-46B		280-141350-18	N
WG	MW-47B		280-141350-19	N
WG	MW-49B		280-141350-20	N
WG	MW-52B		280-141350-21	N
WG	MW-53B		280-141350-22	N

FB = Field Blank

FD = Field Duplicate Sample

ID = Identifier

N = Normal Investigative Sample

SDG = Sample Delivery Group

WG = Ground Water

WQ = Water Quality Sample

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

Project Name: Basin Electric Laramie River Station, Wyoming	Laboratory: Eurofins TestAmerica Denver, Colorado Eurofins TestAmerica Canton (6020A Metals) Eurofins TestAmerica Saint Louis, Missouri (radiochemistry)
Project Reference: Sampling – October 2020	Sample Matrix: Groundwater
AECOM Project: 6063274.Task 1.0	Sample Start Date: 10/6/2020
Validator/Date Validated: Katie Abbott/ December 28, 2020	Sample End Date: 10/7/2020
Secondary Review by: Steve Szocik	Secondary Review Date: January 13, 2021
Samples Analyzed: See Table of Samples Validated (page 3).	
Parameters Validated: Total Metals by SW-846 Method 6010C Total Metals by SW-846 Method 6020A Total Mercury by SW-846 Method 7470A Anions (Chloride, Fluoride, and Sulfate) by SW-846 Method 9056A TDS by SM2540C Radium-226 by SW-846 Method 9315 Radium-228 by SW-846 Method 9320 Combined Radium-226 and Radium-228	
Laboratory Project IDs/Sample Delivery Groups (SDGs): 280-141350-1 and 280-141350-2	

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

<b>PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT</b>						
Precision:	<b>X</b>	Acceptable		Unacceptable	KA	Initials
<p>Comments: Precision is the measure of variability of individual sample measurements. Field precision was evaluated by reviewing the field duplicate results, and laboratory precision was evaluated by reviewing method duplicate sample results, laboratory control sample (LCS) to laboratory control sample duplicate (LCSD) results, and matrix spike (MS) to matrix spike duplicate (MSD) results.</p> <p>The following criteria was used to evaluate the field duplicate results:</p> <ul style="list-style-type: none"> <li>• For results where both reported values were greater than five times the reporting limit (RL), the relative percent difference between the samples and its field duplicate were compared against a criterion of 30%.</li> <li>• For results where either value reported was less than five times the RL, the absolute difference between the results was compared to a criterion of agreement within <math>\pm 2</math> times the RL.</li> </ul> <p>Laboratory criteria was used to evaluate laboratory precision.</p> <p>Field and laboratory precision is acceptable because no data are rejected. Precision measurements are reviewed in items 17 and 21.</p>						
Accuracy:	<b>X</b>	Acceptable		Unacceptable	KA	Initials
<p>Comments: Field accuracy, a measure of the sampling bias, can be determined by reviewing field and equipment blank results for evidence of sample contamination stemming from sampling activities and/or field conditions. Laboratory accuracy is a measure of the system bias, and was measured by evaluating LCS, MS, and MSD percent recoveries (%Rs). LCS %Rs demonstrated the overall performance of the analysis. MS, MSD %Rs provided information on sample matrix interferences. Accuracy measurements were evaluated using laboratory control limits. Overall field and laboratory accuracy is acceptable because the majority of the results are unqualified based on accuracy and no data are rejected. Accuracy measurements are reviewed in items 12, 14, 15, 16, and 20.</p>						
Method Compliance:	<b>X</b>	Acceptable		Unacceptable	KA	Initials
<p>Comments: For this data set, method compliance was determined by evaluating sample integrity, holding time, reporting limits, and laboratory blanks against method specified requirements. Overall method compliance is acceptable because the results were unqualified based on the method compliance parameters reviewed. Method compliance measurements are also reviewed in items 4, 6, 8, 11, 13, 18, 19, 20, and 22.</p>						
Completeness:	<b>X</b>	Acceptable		Unacceptable	KA	Initials
<p>Comments: Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Determination of completeness included a review of chain of custody records, laboratory analytical methods and reporting limits, laboratory case narratives, and project requirements. Completeness also included 100% review of the laboratory sample data results, QC summary reports, and electronic data deliverables (EDDs). Any EDD modifications were made as documented in item 23.</p> <p>Because no results were missing or rejected, completeness of the data set was calculated to be 100% and is acceptable.</p>						

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

VALIDATION CRITERIA CHECK						
<p>Data validation qualifiers potentially assigned during this review:</p> <p>J+      estimated concentration, high bias indicated</p> <p>U      non-detect</p> <p>The following comments identifying sample results requiring qualification are in bold type. The other comments are of interest, but qualification of the sample results is not necessary.</p>						
1. Did the laboratory identify any non-conformances related to the analytical results?		Yes	<b>X</b>	No	KA	Initials
<p>Comments: Data qualification, if any, related to the narrative comments and/or assigned laboratory flags contained in the analytical reports are discussed in the following sections.</p> <p><b>Data Package 280-141350-1</b></p> <p>The laboratory noted the incorrect preservative was listed on the radiochemistry container for sample MW-32B. As the laboratory label confirm and bottle order concur, further action was not considered necessary.</p> <p><b>Data Package 280-141350-2</b></p> <p>A revised report was issued by the laboratory to report the results to the reporting limit (RL).</p>						
2. Were sample Chain-of-Custody forms complete?	<b>X</b>	Yes		No	KA	Initials
<p>Comments: No issues were observed, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt.</p>						
3. Were all the analyses requested for the samples on the COCs completed by the laboratory?	<b>X</b>	Yes		No	KA	Initials
<p>Comments: All requested analyses were completed by the laboratory.</p>						
4. Were samples received in good condition and at the appropriate temperature?	<b>X</b>	Yes		No	KA	Initials
<p>Comments: All samples were received intact and within the recommended &lt;6°C temperature for the applicable methods.</p>						
5. Were the reported analytical methods in compliance with WP/QAPP, permit, or COC?	<b>X</b>	Yes		No	KA	Initials
<p>Comments: The reported target analytes and methods are in compliance with parameters and methods listed on the COC.</p>						
6. Were detection limits in accordance with WP/QAPP, permit, or method?		Yes	<b>X</b>	No	KA	Initials
<p>Comments: No results were reported as non-detect at elevating reporting limits with the following exceptions.</p> <p><b>Data Package 280-141350-1</b></p> <p>The laboratory noted that a reduced volume was used for the radiochemistry analysis. The associated minimum detectable concentrations should be evaluated by the end user of the data with respect to project objectives.</p>						
7. Do the laboratory reports include only those constituents requested to be reported for a specific analytical method?	<b>X</b>	Yes		No	KA	Initials
<p>Comments: Only the requested target analytes were reported.</p>						
8. Were sample holding times met?	<b>X</b>	Yes		No	KA	Initials
<p>Comments: Sample preparation and analytical holding times were within the method requirements.</p>						



## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

VALIDATION CRITERIA CHECK						
J+ – Estimated with a potential high bias      m – Matrix spike/matrix spike duplicate recovery failure <b>Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (page 9).</b>						
17. Were laboratory duplicate RPDs and/or serial dilution %Ds within control limits?	<b>X</b>	Yes		No	KA	Initials
Comments: A laboratory duplicate was performed on sample MW-14BR for TDS, sample MW-32B for anions and TDS, sample FB-01 for anions, sample MW-39B for sulfate, and sample MW-46B for anions. The RPDs for target analytes in project-specific MS/MSD and project-specific laboratory duplicate samples were within laboratory control limits. Serial dilutions were not evaluated for this level of validation.						
18. Were organic system performance criteria met?	<b>NA</b>	Yes	<b>NA</b>	No	KA	Initials
Comments: Not applicable for this level of limited data validation or for the methods reported.						
19. Were internal standards within method criteria for ICP-MS sample analyses?	<b>NA</b>	Yes	<b>NA</b>	No	KA	Initials
Comments: Not evaluated for this level of data validation. No internal standard issues were noted in the case narrative.						
20. Were system performance criteria met?	<b>NA</b>	Yes	<b>NA</b>	No	KA	Initials
Comments: Not evaluated for this level of data validation.						
21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	<b>X</b>	Yes	<b>NA</b>	No	KA	Initials
Duplicate Sample No.	DUP-1	Primary Sample No.	MW-36B			
Comments: The duplicate sample pair met the acceptance criteria.						
22. Were qualitative criteria for organic target analyte identification met?	<b>NA</b>	Yes	<b>NA</b>	No	KA	Initials
Comments: Not applicable for this level of limited data validation or for the methods reported.						
23. Were 10% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	<b>X</b>	Yes	<b>NA</b>	No	KA	Initials
Comments: During the validation procedure, 10% of the positive sample concentrations and 100% of the RLs for project samples were compared to hardcopy laboratory reports. The data validator made sure that RLs were entered into the correct EDD fields.						
24. General Comments: Data were also evaluated using guidance set forth in the <i>United States Environmental Protection Agency (USEPA) contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Superfund Methods Data Review</i> , document number EPA-540-R-2017-001, January 2017; method requirements, and laboratory criteria. All data is considered usable.						

**Table of Qualified Analytical Results  
Basin Electric – Laramie, Wyoming  
October 2020 Sampling  
Eurofins TestAmerica Laboratories**

Laboratory Group	Sample ID	Lab Sample ID	Analytical Method	Analyte	Result (mg/L)/ Final Flag	Reason Code
280-141350-2	MW-14BR	280-141350-1	SW6020A	Lithium	0.0265 U	bf
280-141350-2	MW-38C	280-141350-10	SW6020A	Lithium	0.0330 U	bf
280-141350-2	MW-39B	280-141350-11	SW6020A	Lithium	0.0555 U	bf
280-141350-2	MW-40B	280-141350-12	SW6020A	Lithium	0.0474 U	bf
280-141350-2	MW-41B	280-141350-13	SW6020A	Lithium	0.0507 U	bf
280-141350-2	MW-42B	280-141350-14	SW6020A	Lithium	0.0437 U	bf
280-141350-2	MW-43B	280-141350-15	SW6020A	Lithium	0.0295 U	bf
280-141350-2	MW-44B	280-141350-16	SW6020A	Lithium	0.0333 U	bf
280-141350-2	MW-45B	280-141350-17	SW6020A	Lithium	0.0271 U	bf
280-141350-2	MW-46B	280-141350-18	SW9056A	Fluoride	0.791 J+	m
280-141350-2	MW-46B	280-141350-18	SW6020A	Lithium	0.0252 U	bf
280-141350-2	MW-47B	280-141350-19	SW6020A	Lithium	0.0298 U	bf
280-141350-2	MW-20B	280-141350-2	SW6020A	Lithium	0.0317 U	bf
280-141350-2	MW-49B	280-141350-20	SW6020A	Lithium	0.0391 U	bf
280-141350-2	MW-52B	280-141350-21	SW6020A	Lithium	0.0406 U	bf
280-141350-2	MW-53B	280-141350-22	SW6020A	Lithium	0.0331 U	bf
280-141350-2	MW-21B	280-141350-3	SW6020A	Lithium	0.0361 U	bf
280-141350-2	MW-32B	280-141350-4	SW6020A	Lithium	0.0648 U	bf
280-141350-2	MW-36B	280-141350-5	SW6020A	Lithium	0.0298 U	bf
280-141350-2	DUP-01	280-141350-6	SW6020A	Lithium	0.0357 U	bf
280-141350-2	MW-37B	280-141350-7	SW6020A	Lithium	0.0376 U	bf

**Definitions:**

bf – field blank contamination

ID – identifier

J+ – estimated, high bias

m – matrix spike/matrix spike duplicate recovery failure

mg/L – Milligrams per Liter

SDG – Sample Delivery Group

U – Non-detect

## ANALYTICAL REPORT

Eurofins TestAmerica, Denver  
4955 Yarrow Street  
Arvada, CO 80002  
Tel: (303)736-0100

Laboratory Job ID: 280-141350-1  
Client Project/Site: CCR - Basin Electric 2020 - LRS

**For:**

AECOM Technical Services Inc.  
6200 S. Quebec Street  
Greenwood Village, Colorado 80111

Attn: Ms. Katie Abbott



*Authorized for release by:  
11/18/2020 5:56:47 AM*

Patrick McEntee, Client Service Manager  
(303)736-0107  
[Patrick.McEntee@Eurofinset.com](mailto:Patrick.McEntee@Eurofinset.com)

### LINKS

Review your project  
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*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

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

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



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# Definitions/Glossary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Qualifiers

### Rad

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

## Glossary

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

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

**Job ID: 280-141350-1**

**Laboratory: Eurofins TestAmerica, Denver**

**Narrative**

## CASE NARRATIVE

**Client: AECOM Technical Services Inc.**

**Project: CCR - Basin Electric 2020 - LRS**

**Report Number: 280-141350-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **RECEIPT**

The samples were received on 10/8/2020 3:40 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.3° C, 1.9° C, 2.1° C, 2.2° C, 2.3° C and 2.4° C.

Radiochemical analysis is reported under 280-141350-1. All other analysis requested on the COC is reported under 280-141350-2

### **Receipt Exceptions**

The 1L Plastic HNO<sub>3</sub> bottle for the following sample has the wrong preservative on the container label: MW-32B (280-141350-4). The container label notes HNO<sub>3</sub>, but the client label notes HCL preserved.

### **RADIUM-226 (GFPC)**

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for Radium-226 (GFPC) in accordance with SW 846 9315. The samples were prepared on 10/16/2020 and analyzed on 11/14/2020.

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

The following samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: 280-141350-1, 280-141350-2, 280-141350-3, 280-141350-4, 280-141350-4[MS], 280-141350-4[MSD], 280-141350-5, 280-141350-6, 280-141350-7, 280-141350-8, 280-141350-9, 280-141350-10, 280-141350-11, 280-141350-12, 280-141350-20, 280-141350-21 and 280-141350-22.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **RADIUM-228**

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for Radium-228 in accordance with 9320. The samples were prepared on 10/16/2020 and

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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## Job ID: 280-141350-1 (Continued)

---

### Laboratory: Eurofins TestAmerica, Denver (Continued)

analyzed on 11/13/2020.

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

The following samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: 280-141350-1, 280-141350-2, 280-141350-3, 280-141350-4, 280-141350-4[MS], 280-141350-4[MSD], 280-141350-5, 280-141350-6, 280-141350-7, 280-141350-8, 280-141350-9, 280-141350-10, 280-141350-11, 280-141350-12, 280-141350-20, 280-141350-21 and 280-141350-22.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### RADIUM-226/RADIUM-228 (GFPC)

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for Radium-226/Radium-228 (GFPC) in accordance with 9315/9320. The samples were analyzed on 11/16/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

<b>Client Sample ID: MW-14BR</b>	<b>Lab Sample ID: 280-141350-1</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-20B</b>	<b>Lab Sample ID: 280-141350-2</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-21B</b>	<b>Lab Sample ID: 280-141350-3</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-32B</b>	<b>Lab Sample ID: 280-141350-4</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-36B</b>	<b>Lab Sample ID: 280-141350-5</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: DUP-01</b>	<b>Lab Sample ID: 280-141350-6</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-37B</b>	<b>Lab Sample ID: 280-141350-7</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: FB-01</b>	<b>Lab Sample ID: 280-141350-8</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-38B</b>	<b>Lab Sample ID: 280-141350-9</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-38C</b>	<b>Lab Sample ID: 280-141350-10</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-39B</b>	<b>Lab Sample ID: 280-141350-11</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-40B</b>	<b>Lab Sample ID: 280-141350-12</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-49B</b>	<b>Lab Sample ID: 280-141350-20</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-52B</b>	<b>Lab Sample ID: 280-141350-21</b>
<input type="checkbox"/> No Detections.	
<b>Client Sample ID: MW-53B</b>	<b>Lab Sample ID: 280-141350-22</b>
<input type="checkbox"/> No Detections.	

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Method Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

#### Protocol References:

None = None

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

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

#### Laboratory References:

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

# Sample Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141350-1	MW-14BR	Water	10/06/20 10:20	10/08/20 15:40	
280-141350-2	MW-20B	Water	10/06/20 09:30	10/08/20 15:40	
280-141350-3	MW-21B	Water	10/06/20 11:20	10/08/20 15:40	
280-141350-4	MW-32B	Water	10/07/20 15:30	10/08/20 15:40	
280-141350-5	MW-36B	Water	10/07/20 16:45	10/08/20 15:40	
280-141350-6	DUP-01	Water	10/07/20 09:30	10/08/20 15:40	
280-141350-7	MW-37B	Water	10/07/20 17:30	10/08/20 15:40	
280-141350-8	FB-01	Water	10/07/20 17:30	10/08/20 15:40	
280-141350-9	MW-38B	Water	10/06/20 13:15	10/08/20 15:40	
280-141350-10	MW-38C	Water	10/06/20 12:15	10/08/20 15:40	
280-141350-11	MW-39B	Water	10/07/20 14:40	10/08/20 15:40	
280-141350-12	MW-40B	Water	10/07/20 13:50	10/08/20 15:40	
280-141350-20	MW-49B	Water	10/07/20 08:00	10/08/20 15:40	
280-141350-21	MW-52B	Water	10/07/20 11:45	10/08/20 15:40	
280-141350-22	MW-53B	Water	10/07/20 12:50	10/08/20 15:40	

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.269	U	0.213	0.214	1.00	0.298	pCi/L	10/16/20 07:53	11/14/20 07:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110					10/16/20 07:53	11/14/20 07:09	1

**Client Sample ID: MW-20B**  
**Date Collected: 10/06/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-2**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.173	U	0.204	0.205	1.00	0.332	pCi/L	10/16/20 07:53	11/14/20 07:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110					10/16/20 07:53	11/14/20 07:09	1

**Client Sample ID: MW-21B**  
**Date Collected: 10/06/20 11:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-3**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.215	U	0.204	0.205	1.00	0.310	pCi/L	10/16/20 07:53	11/14/20 07:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110					10/16/20 07:53	11/14/20 07:09	1

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.301	U	0.248	0.250	1.00	0.366	pCi/L	10/16/20 07:53	11/14/20 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110					10/16/20 07:53	11/14/20 07:10	1

**Client Sample ID: MW-36B**  
**Date Collected: 10/07/20 16:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-5**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.145	U	0.171	0.172	1.00	0.278	pCi/L	10/16/20 07:53	11/14/20 09:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					10/16/20 07:53	11/14/20 09:09	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

**Client Sample ID: DUP-01**  
**Date Collected: 10/07/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-6**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.243	U	0.241	0.242	1.00	0.376	pCi/L	10/16/20 07:53	11/14/20 09:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.0		40 - 110					10/16/20 07:53	11/14/20 09:09	1

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.232	U	0.263	0.264	1.00	0.427	pCi/L	10/16/20 07:53	11/14/20 09:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					10/16/20 07:53	11/14/20 09:09	1

**Client Sample ID: FB-01**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-8**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.172	U	0.195	0.195	1.00	0.313	pCi/L	10/16/20 07:53	11/14/20 09:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					10/16/20 07:53	11/14/20 09:09	1

**Client Sample ID: MW-38B**  
**Date Collected: 10/06/20 13:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-9**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.287	U	0.265	0.266	1.00	0.413	pCi/L	10/16/20 07:53	11/14/20 09:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					10/16/20 07:53	11/14/20 09:09	1

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.237	U	0.192	0.193	1.00	0.273	pCi/L	10/16/20 07:53	11/14/20 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					10/16/20 07:53	11/14/20 09:10	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

**Client Sample ID: MW-39B**  
**Date Collected: 10/07/20 14:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-11**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.362		0.227	0.230	1.00	0.291	pCi/L	10/16/20 07:53	11/14/20 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.2		40 - 110					10/16/20 07:53	11/14/20 09:10	1

**Client Sample ID: MW-40B**  
**Date Collected: 10/07/20 13:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-12**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.285	U	0.215	0.216	1.00	0.301	pCi/L	10/16/20 07:53	11/14/20 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		40 - 110					10/16/20 07:53	11/14/20 09:10	1

**Client Sample ID: MW-49B**  
**Date Collected: 10/07/20 08:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-20**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.399		0.235	0.238	1.00	0.285	pCi/L	10/16/20 07:53	11/14/20 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110					10/16/20 07:53	11/14/20 09:10	1

**Client Sample ID: MW-52B**  
**Date Collected: 10/07/20 11:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-21**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.350		0.223	0.225	1.00	0.281	pCi/L	10/16/20 07:53	11/14/20 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110					10/16/20 07:53	11/14/20 09:10	1

**Client Sample ID: MW-53B**  
**Date Collected: 10/07/20 12:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-22**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0996	U	0.183	0.184	1.00	0.327	pCi/L	10/16/20 07:53	11/14/20 09:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110					10/16/20 07:53	11/14/20 09:10	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0867	U	0.398	0.398	1.00	0.696	pCi/L	10/16/20 08:18	11/13/20 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110					10/16/20 08:18	11/13/20 11:47	1
Y Carrier	80.4		40 - 110					10/16/20 08:18	11/13/20 11:47	1

**Client Sample ID: MW-20B**  
**Date Collected: 10/06/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-2**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00332	U	0.369	0.369	1.00	0.656	pCi/L	10/16/20 08:18	11/13/20 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110					10/16/20 08:18	11/13/20 11:47	1
Y Carrier	80.4		40 - 110					10/16/20 08:18	11/13/20 11:47	1

**Client Sample ID: MW-21B**  
**Date Collected: 10/06/20 11:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-3**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.194	U	0.372	0.372	1.00	0.633	pCi/L	10/16/20 08:18	11/13/20 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110					10/16/20 08:18	11/13/20 11:47	1
Y Carrier	78.1		40 - 110					10/16/20 08:18	11/13/20 11:47	1

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.425	U	0.375	0.377	1.00	0.601	pCi/L	10/16/20 08:18	11/13/20 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110					10/16/20 08:18	11/13/20 11:47	1
Y Carrier	83.7		40 - 110					10/16/20 08:18	11/13/20 11:47	1

**Client Sample ID: MW-36B**  
**Date Collected: 10/07/20 16:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-5**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0212	U	0.309	0.309	1.00	0.551	pCi/L	10/16/20 08:18	11/13/20 11:48	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110	10/16/20 08:18	11/13/20 11:48	1
Y Carrier	85.2		40 - 110	10/16/20 08:18	11/13/20 11:48	1

**Client Sample ID: DUP-01**  
**Date Collected: 10/07/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-6**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.537	U	0.422	0.425	1.00	0.669	pCi/L	10/16/20 08:18	11/13/20 11:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.0		40 - 110	10/16/20 08:18	11/13/20 11:48	1
Y Carrier	84.9		40 - 110	10/16/20 08:18	11/13/20 11:48	1

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.287	U	0.426	0.426	1.00	0.714	pCi/L	10/16/20 08:18	11/13/20 11:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110	10/16/20 08:18	11/13/20 11:48	1
Y Carrier	75.9		40 - 110	10/16/20 08:18	11/13/20 11:48	1

**Client Sample ID: FB-01**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-8**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0314	U	0.326	0.326	1.00	0.583	pCi/L	10/16/20 08:18	11/13/20 11:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110	10/16/20 08:18	11/13/20 11:48	1
Y Carrier	81.5		40 - 110	10/16/20 08:18	11/13/20 11:48	1

**Client Sample ID: MW-38B**  
**Date Collected: 10/06/20 13:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-9**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0905	U	0.342	0.342	1.00	0.596	pCi/L	10/16/20 08:18	11/13/20 11:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110	10/16/20 08:18	11/13/20 11:48	1
Y Carrier	87.1		40 - 110	10/16/20 08:18	11/13/20 11:48	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.115	U	0.299	0.299	1.00	0.519	pCi/L	10/16/20 08:18	11/13/20 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					10/16/20 08:18	11/13/20 11:48	1
Y Carrier	85.2		40 - 110					10/16/20 08:18	11/13/20 11:48	1

**Client Sample ID: MW-39B**  
**Date Collected: 10/07/20 14:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-11**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.512	U	0.400	0.403	1.00	0.631	pCi/L	10/16/20 08:18	11/13/20 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.2		40 - 110					10/16/20 08:18	11/13/20 11:48	1
Y Carrier	79.3		40 - 110					10/16/20 08:18	11/13/20 11:48	1

**Client Sample ID: MW-40B**  
**Date Collected: 10/07/20 13:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-12**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.476	U	0.390	0.393	1.00	0.623	pCi/L	10/16/20 08:18	11/13/20 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		40 - 110					10/16/20 08:18	11/13/20 11:48	1
Y Carrier	86.4		40 - 110					10/16/20 08:18	11/13/20 11:48	1

**Client Sample ID: MW-49B**  
**Date Collected: 10/07/20 08:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-20**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.510	U	0.372	0.375	1.00	0.584	pCi/L	10/16/20 08:18	11/13/20 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110					10/16/20 08:18	11/13/20 11:50	1
Y Carrier	88.6		40 - 110					10/16/20 08:18	11/13/20 11:50	1

**Client Sample ID: MW-52B**  
**Date Collected: 10/07/20 11:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-21**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.275	U	0.343	0.344	1.00	0.569	pCi/L	10/16/20 08:18	11/13/20 11:50	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110	10/16/20 08:18	11/13/20 11:50	1
Y Carrier	86.7		40 - 110	10/16/20 08:18	11/13/20 11:50	1

**Client Sample ID: MW-53B**  
**Date Collected: 10/07/20 12:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-22**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0436	U	0.349	0.349	1.00	0.632	pCi/L	10/16/20 08:18	11/13/20 11:50	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110	10/16/20 08:18	11/13/20 11:50	1
Y Carrier	82.6		40 - 110	10/16/20 08:18	11/13/20 11:50	1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.356	U	0.451	0.452	5.00	0.696	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-20B**  
**Date Collected: 10/06/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-2**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.177	U	0.422	0.422	5.00	0.656	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-21B**  
**Date Collected: 10/06/20 11:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-3**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.409	U	0.424	0.425	5.00	0.633	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>0.726</b>		0.450	0.452	5.00	0.601	pCi/L		11/16/20 20:40	1

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Client Sample ID: MW-36B**  
**Date Collected: 10/07/20 16:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-5**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.166	U	0.353	0.354	5.00	0.551	pCi/L		11/16/20 20:40	1

**Client Sample ID: DUP-01**  
**Date Collected: 10/07/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-6**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.780		0.486	0.489	5.00	0.669	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.519	U	0.501	0.501	5.00	0.714	pCi/L		11/16/20 20:40	1

**Client Sample ID: FB-01**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-8**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.203	U	0.380	0.380	5.00	0.583	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-38B**  
**Date Collected: 10/06/20 13:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-9**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.377	U	0.433	0.433	5.00	0.596	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.352	U	0.355	0.356	5.00	0.519	pCi/L		11/16/20 20:40	1

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Client Sample ID: MW-39B**  
**Date Collected: 10/07/20 14:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-11**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.874		0.460	0.464	5.00	0.631	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-40B**  
**Date Collected: 10/07/20 13:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-12**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.761		0.445	0.448	5.00	0.623	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-49B**  
**Date Collected: 10/07/20 08:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-20**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.909		0.440	0.444	5.00	0.584	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-52B**  
**Date Collected: 10/07/20 11:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-21**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.626		0.409	0.411	5.00	0.569	pCi/L		11/16/20 20:40	1

**Client Sample ID: MW-53B**  
**Date Collected: 10/07/20 12:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-22**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0560	U	0.394	0.395	5.00	0.632	pCi/L		11/16/20 20:40	1

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

**Lab Sample ID: MB 160-485916/24-A**  
**Matrix: Water**  
**Analysis Batch: 489050**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 485916**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.2458	U	0.225	0.226	1.00	0.344	pCi/L	10/16/20 07:53	11/14/20 11:02	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.2		40 - 110					10/16/20 07:53	11/14/20 11:02	1

**Lab Sample ID: LCS 160-485916/1-A**  
**Matrix: Water**  
**Analysis Batch: 489050**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 485916**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.1	13.16		1.69	1.00	0.318	pCi/L	87	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	76.0		40 - 110						

**Lab Sample ID: 280-141350-4 MS**  
**Matrix: Water**  
**Analysis Batch: 489050**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**  
**Prep Batch: 485916**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
						Uncert. (2σ+/-)					
Radium-226	0.301	U	15.1	16.14		1.93	1.00	0.356	pCi/L	105	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	84.8		40 - 110								

**Lab Sample ID: 280-141350-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 489050**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**  
**Prep Batch: 485916**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
						Uncert. (2σ+/-)							
Radium-226	0.301	U	15.1	13.85		1.70	1.00	0.296	pCi/L	90	75 - 138	0.63	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	83.9		40 - 110										

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

**Lab Sample ID: MB 160-485917/24-A**  
**Matrix: Water**  
**Analysis Batch: 489049**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 485917**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.2636	U	0.331	0.331	1.00	0.548	pCi/L	10/16/20 08:18	11/13/20 11:51	1

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

Carrier	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Yield	Qualifier				
Ba Carrier	84.2		40 - 110	10/16/20 08:18	11/13/20 11:51	1
Y Carrier	88.6		40 - 110	10/16/20 08:18	11/13/20 11:51	1

Lab Sample ID: LCS 160-485917/1-A  
 Matrix: Water  
 Analysis Batch: 489048

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 485917

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

Carrier	LCS LCS		Limits
	%Yield	Qualifier	
Ba Carrier	76.0		40 - 110
Y Carrier	83.7		40 - 110

Lab Sample ID: 280-141350-4 MS  
 Matrix: Water  
 Analysis Batch: 489048

Client Sample ID: MW-32B  
 Prep Type: Total/NA  
 Prep Batch: 485917

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits

Carrier	MS MS		Limits
	%Yield	Qualifier	
Ba Carrier	84.8		40 - 110
Y Carrier	83.7		40 - 110

Lab Sample ID: 280-141350-4 MSD  
 Matrix: Water  
 Analysis Batch: 489048

Client Sample ID: MW-32B  
 Prep Type: Total/NA  
 Prep Batch: 485917

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit

Carrier	MSD MSD		Limits
	%Yield	Qualifier	
Ba Carrier	83.9		40 - 110
Y Carrier	83.7		40 - 110

# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Rad

### Prep Batch: 485916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total/NA	Water	PrecSep-21	
280-141350-2	MW-20B	Total/NA	Water	PrecSep-21	
280-141350-3	MW-21B	Total/NA	Water	PrecSep-21	
280-141350-4	MW-32B	Total/NA	Water	PrecSep-21	
280-141350-5	MW-36B	Total/NA	Water	PrecSep-21	
280-141350-6	DUP-01	Total/NA	Water	PrecSep-21	
280-141350-7	MW-37B	Total/NA	Water	PrecSep-21	
280-141350-8	FB-01	Total/NA	Water	PrecSep-21	
280-141350-9	MW-38B	Total/NA	Water	PrecSep-21	
280-141350-10	MW-38C	Total/NA	Water	PrecSep-21	
280-141350-11	MW-39B	Total/NA	Water	PrecSep-21	
280-141350-12	MW-40B	Total/NA	Water	PrecSep-21	
280-141350-20	MW-49B	Total/NA	Water	PrecSep-21	
280-141350-21	MW-52B	Total/NA	Water	PrecSep-21	
280-141350-22	MW-53B	Total/NA	Water	PrecSep-21	
MB 160-485916/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-485916/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
280-141350-4 MS	MW-32B	Total/NA	Water	PrecSep-21	
280-141350-4 MSD	MW-32B	Total/NA	Water	PrecSep-21	

### Prep Batch: 485917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total/NA	Water	PrecSep_0	
280-141350-2	MW-20B	Total/NA	Water	PrecSep_0	
280-141350-3	MW-21B	Total/NA	Water	PrecSep_0	
280-141350-4	MW-32B	Total/NA	Water	PrecSep_0	
280-141350-5	MW-36B	Total/NA	Water	PrecSep_0	
280-141350-6	DUP-01	Total/NA	Water	PrecSep_0	
280-141350-7	MW-37B	Total/NA	Water	PrecSep_0	
280-141350-8	FB-01	Total/NA	Water	PrecSep_0	
280-141350-9	MW-38B	Total/NA	Water	PrecSep_0	
280-141350-10	MW-38C	Total/NA	Water	PrecSep_0	
280-141350-11	MW-39B	Total/NA	Water	PrecSep_0	
280-141350-12	MW-40B	Total/NA	Water	PrecSep_0	
280-141350-20	MW-49B	Total/NA	Water	PrecSep_0	
280-141350-21	MW-52B	Total/NA	Water	PrecSep_0	
280-141350-22	MW-53B	Total/NA	Water	PrecSep_0	
MB 160-485917/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-485917/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
280-141350-4 MS	MW-32B	Total/NA	Water	PrecSep_0	
280-141350-4 MSD	MW-32B	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Client Sample ID: MW-14BR

## Lab Sample ID: 280-141350-1

Date Collected: 10/06/20 10:20

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.14 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 07:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.14 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:47	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-20B

## Lab Sample ID: 280-141350-2

Date Collected: 10/06/20 09:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.51 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 07:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.51 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:47	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-21B

## Lab Sample ID: 280-141350-3

Date Collected: 10/06/20 11:20

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.39 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 07:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.39 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:47	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-32B

## Lab Sample ID: 280-141350-4

Date Collected: 10/07/20 15:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.40 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 07:10	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.40 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:47	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

# Lab Chronicle

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Client Sample ID: MW-36B

Lab Sample ID: 280-141350-5

Date Collected: 10/07/20 16:45

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.99 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.99 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: DUP-01

Lab Sample ID: 280-141350-6

Date Collected: 10/07/20 09:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.66 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.66 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-37B

Lab Sample ID: 280-141350-7

Date Collected: 10/07/20 17:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.76 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.76 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: FB-01

Lab Sample ID: 280-141350-8

Date Collected: 10/07/20 17:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.55 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.55 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

# Lab Chronicle

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Client Sample ID: MW-38B

Lab Sample ID: 280-141350-9

Date Collected: 10/06/20 13:15

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.60 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.60 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-38C

Lab Sample ID: 280-141350-10

Date Collected: 10/06/20 12:15

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.78 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:10	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.78 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-39B

Lab Sample ID: 280-141350-11

Date Collected: 10/07/20 14:40

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.15 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:10	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.15 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-40B

Lab Sample ID: 280-141350-12

Date Collected: 10/07/20 13:50

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.14 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:10	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.14 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489048	11/13/20 11:48	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

# Lab Chronicle

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Client Sample ID: MW-49B

Lab Sample ID: 280-141350-20

Date Collected: 10/07/20 08:00

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.73 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:10	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.73 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489049	11/13/20 11:50	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-52B

Lab Sample ID: 280-141350-21

Date Collected: 10/07/20 11:45

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.12 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:10	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.12 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489049	11/13/20 11:50	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

## Client Sample ID: MW-53B

Lab Sample ID: 280-141350-22

Date Collected: 10/07/20 12:50

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.16 mL	1.0 g	485916	10/16/20 07:53	AVB	TAL SL
Total/NA	Analysis	9315		1			489050	11/14/20 09:10	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.16 mL	1.0 g	485917	10/16/20 08:18	AVB	TAL SL
Total/NA	Analysis	9320		1			489049	11/13/20 11:50	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489284	11/16/20 20:40	GRW	TAL SL

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

## Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	12-01-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

# Denver #280

## Chain of Custody Record

**Eurofins TestAmerica, Denver**  
 4955 Yarrow Street  
 Arvada, CO 80002  
 Phone (303) 736-0100 Fax (303) 431-7171



Environment Testing America

**Client Information**  
 Company: AECOM Technical Services Inc.  
 Address: 6200 S. Quebec Street  
 City: Greenwood Village  
 State, Zip: CO, 80111  
 Phone: [blank]  
 Email: katie.abott@aecom.com  
 Project Name: CCR - Basin Electric 2020 - LRS  
 Site: [blank]

**Sample Information**  
 Sample: Chairs in room  
 Phone: 612-202-5465  
 Lab PM: McEntee, Patrick J  
 E-Mail: Patrick.McEntee@Eurofins.com

**Due Date Requested:** [blank]  
**TAT Requested (days):** Standard  
**PO #:** [blank]  
**WO #:** [blank]  
**Project #:** 28020759  
**SSOW#:** [blank]

**Carrier Tracking Info:** Delivered by Sample  
**COC No.:** 280-102196-29898\_1  
**Page:** Page 1 of 2  
**Job #:** NA 10/8/20

**Barcode:** 280-141350 Chain of Custody

**Codes:**  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4-5  
 X - EDTA  
 Y - EDA  
 Z - other (specify)

**Other:** [blank]

**Special Instructions/Note:** [blank]

**Total Number of containers:** [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, On-site, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	610C, 7470A	2540C, Calcd - Local Method	956A, 280 - (MOD) Copy Analytes	6020A - (MOD) 13 Metals	9315_Ra226 - Standard Target List	9320_Ra228	Ra226Ra228_GFP
MW-14 BR	10/6/2020	1020	Grab	Water		N	N	X	X	X	X	X	X	X
MW-20 B	10/6/2020	0930		Water		N	N	X	X	X	X	X	X	X
MW-21 B	10/6/2020	1120		Water		N	N	X	X	X	X	X	X	X
MW-32 B	10/7/2020	1530		Water		N	N	X	X	X	X	X	X	X
MW-36 B	10/7/2020	1615		Water		N	N	X	X	X	X	X	X	X
DUP-01	10/7/2020	-		Water		N	N	X	X	X	X	X	X	X
MW-37 B	10/7/2020	1730		Water		N	N	X	X	X	X	X	X	X
FB-01	10/7/2020	1730		Water		N	N	X	X	X	X	X	X	X
MW-38 B	10/6/2020	1315		Water		N	N	X	X	X	X	X	X	X
MW-38 C	10/6/2020	1215		Water		N	N	X	X	X	X	X	X	X
MW-39 B	10/7/2020	1440	Grab	Water		N	N	X	X	X	X	X	X	X

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:** [blank]

**Method of Shipment:** [blank]

**Relinquished by:** MJ GAWA **Date:** 10/8/2020 15:40  
**Relinquished by:** Patrick Hall **Date:** 10/8/2020 15:40  
**Relinquished by:** [blank] **Date:** [blank]

**Company:** AECOM  
**Company:** AECOM  
**Company:** AECOM

**Custody Seal No.:** 11-03 RR-1018120





# Chain of Custody Record



Environment Testing  
 America



<b>Client Information (Sub Contract Lab)</b>		Lab PM: McEntee, Patrick J	Carrier Tracking No(s):	COC No: 280-542359.1								
Shipping/Receiving		E-Mail: Patrick.McEntee@Eurofins.com	State of Origin: Colorado	Page: Page 1 of 2								
Company: TestAmerica Laboratories, Inc.		Address: 13715 Rider Trail North, Earth City Slate, Zip: MO, 63045	Accreditations Required (See note): NELAP - Oregon	Job #: 280-141350-1								
Due Date Requested: 11/5/2020		PO #:	<b>Analysis Requested</b>									
TAT Requested (days):		WO #:	M - Hexane N - None O - AsNbO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA L - EDA Z - other (specify)									
Project Name: CCR - Basin Electric 2020 - LRS		Project #: 28020759	Preservation Codes:									
Site:		SSOW#:	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:									
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (W=water, S=solid, O=wastebiol, BT=Tissue, A=AP)</b>	<b>Field Filtered Sample (Yes or No)</b>	<b>Perform MS/MSD (Yes or No)</b>	<b>9315_Ra226/PreSep_21 Standard Target List</b>	<b>9320_Ra228/PreSep_0 Standard Target List</b>	<b>Ra226Ra228_GFPc</b>	<b>Total Number of Containers</b>	<b>Special Instructions/Note:</b>
MW-14BR (280-141350-1)	10/6/20	10:20	Mountain	Water	Water	X	X	X	X	X	1	
MW-20B (280-141350-2)	10/6/20	09:30	Mountain	Water	Water	X	X	X	X	X	1	
MW-21B (280-141350-3)	10/6/20	11:20	Mountain	Water	Water	X	X	X	X	X	1	
MW-32B (280-141350-4)	10/7/20	15:30	Mountain	Water	Water	X	X	X	X	X	1	
MW-32B (280-141350-4MS)	10/7/20	15:30	Mountain	MS	Water	X	X	X	X	X	1	
MW-32B (280-141350-4MSD)	10/7/20	15:30	Mountain	MSD	Water	X	X	X	X	X	1	
MW-36B (280-141350-5)	10/7/20	16:45	Mountain	Water	Water	X	X	X	X	X	1	
DUP-01 (280-141350-6)	10/7/20	09:30	Mountain	Water	Water	X	X	X	X	X	1	
MW-37B (280-141350-7)	10/7/20	17:30	Mountain	Water	Water	X	X	X	X	X	1	

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

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_

Relinquished by: *Jul 8-20* Date: 10/12/2020 1300 Company: FEDEX  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Δ Yes Δ No

Received by: FEDEX Date/Time: \_\_\_\_\_  
 Received by: *Jul 8-20* Date/Time: 10/13/2020 0822 Company: ETA SIL  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks:



## Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 280-141350-1

**Login Number: 141350**

**List Source: Eurofins TestAmerica, Denver**

**List Number: 1**

**Creator: Pottruff, Reed W**

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

## Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 280-141350-1

**Login Number: 141350**

**List Number: 3**

**Creator: Mazariegos, Leonel A**

**List Source: Eurofins TestAmerica, St. Louis**

**List Creation: 10/14/20 03:22 PM**

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

# Tracer/Carrier Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-1

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

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
280-141350-1	MW-14BR	80.9
280-141350-2	MW-20B	86.8
280-141350-3	MW-21B	85.6
280-141350-4	MW-32B	83.6
280-141350-4 MS	MW-32B	84.8
280-141350-4 MSD	MW-32B	83.9
280-141350-5	MW-36B	92.1
280-141350-6	DUP-01	78.0
280-141350-7	MW-37B	78.3
280-141350-8	FB-01	82.1
280-141350-9	MW-38B	84.5
280-141350-10	MW-38C	90.9
280-141350-11	MW-39B	84.2
280-141350-12	MW-40B	86.2
280-141350-20	MW-49B	83.6
280-141350-21	MW-52B	83.6
280-141350-22	MW-53B	85.6
LCS 160-485916/1-A	Lab Control Sample	76.0
MB 160-485916/24-A	Method Blank	84.2

**Tracer/Carrier Legend**

Ba = Ba Carrier

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

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
280-141350-1	MW-14BR	80.9	80.4
280-141350-2	MW-20B	86.8	80.4
280-141350-3	MW-21B	85.6	78.1
280-141350-4	MW-32B	83.6	83.7
280-141350-4 MS	MW-32B	84.8	83.7
280-141350-4 MSD	MW-32B	83.9	83.7
280-141350-5	MW-36B	92.1	85.2
280-141350-6	DUP-01	78.0	84.9
280-141350-7	MW-37B	78.3	75.9
280-141350-8	FB-01	82.1	81.5
280-141350-9	MW-38B	84.5	87.1
280-141350-10	MW-38C	90.9	85.2
280-141350-11	MW-39B	84.2	79.3
280-141350-12	MW-40B	86.2	86.4
280-141350-20	MW-49B	83.6	88.6
280-141350-21	MW-52B	83.6	86.7
280-141350-22	MW-53B	85.6	82.6
LCS 160-485917/1-A	Lab Control Sample	76.0	83.7
MB 160-485917/24-A	Method Blank	84.2	88.6

**Tracer/Carrier Legend**

Ba = Ba Carrier

# Tracer/Carrier Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS  
Y = Y Carrier

Job ID: 280-141350-1

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## ANALYTICAL REPORT

Eurofins TestAmerica, Denver  
4955 Yarrow Street  
Arvada, CO 80002  
Tel: (303)736-0100

Laboratory Job ID: 280-141350-2  
Client Project/Site: CCR - Basin Electric 2020 - LRS  
Revision: 1

For:  
AECOM Technical Services Inc.  
6200 S. Quebec Street  
Greenwood Village, Colorado 80111

Attn: Ms. Katie Abbott



Authorized for release by:  
1/5/2021 8:20:22 AM

Patrick McEntee, Client Service Manager  
(303)736-0107  
[Patrick.McEntee@Eurofinset.com](mailto:Patrick.McEntee@Eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



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[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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

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



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# Definitions/Glossary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Qualifiers

### General Chemistry

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

## Glossary

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

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

**Job ID: 280-141350-2**

**Laboratory: Eurofins TestAmerica, Denver**

**Narrative**

## CASE NARRATIVE

**Client: AECOM Technical Services Inc.**

**Project: CCR - Basin Electric 2020 - LRS**

**Report Number: 280-141350-2**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **REVISION 1, JANUARY 5, 2021**

Results and EDD were revised to report to the RL.

### **RECEIPT**

The samples were received on 10/8/2020 3:40 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.3° C, 1.9° C, 2.1° C, 2.2° C, 2.3° C and 2.4° C.

### **Receipt Exceptions**

The 1L Plastic HNO<sub>3</sub> bottle for the following sample has the wrong preservative on the container label: 280-141350-4 Container bottle notes HNO<sub>3</sub>, but the client label notes HCL preserved.

Radiochemical analysis is not reported under 280-141350-1. All other analysis us reported under 280-141350-2

### **TOTAL RECOVERABLE METALS**

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-41B (280-141350-13), MW-42B (280-141350-14), MW-43B (280-141350-15), MW-44B (280-141350-16), MW-45B (280-141350-17), MW-46B (280-141350-18), MW-47B (280-141350-19), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/14/2020 and 10/15/2020 and analyzed on 10/16/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **TOTAL RECOVERABLE METALS (ICPMS)**

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-41B (280-141350-13), MW-42B (280-141350-14), MW-43B (280-141350-15), MW-44B (280-141350-16), MW-45B (280-141350-17), MW-46B (280-141350-18), MW-47B (280-141350-19), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/14/2020 and analyzed on 10/15/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Job ID: 280-141350-2 (Continued)

### Laboratory: Eurofins TestAmerica, Denver (Continued)

#### **TOTAL MERCURY**

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-41B (280-141350-13), MW-42B (280-141350-14), MW-43B (280-141350-15), MW-44B (280-141350-16), MW-45B (280-141350-17), MW-46B (280-141350-18), MW-47B (280-141350-19), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 10/14/2020 and 10/16/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **TOTAL DISSOLVED SOLIDS**

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-41B (280-141350-13), MW-42B (280-141350-14), MW-43B (280-141350-15), MW-44B (280-141350-16), MW-45B (280-141350-17), MW-46B (280-141350-18), MW-47B (280-141350-19), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 10/09/2020 and 10/13/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **ANIONS (28 DAYS)**

Samples MW-14BR (280-141350-1), MW-20B (280-141350-2), MW-21B (280-141350-3), MW-32B (280-141350-4), MW-36B (280-141350-5), DUP-01 (280-141350-6), MW-37B (280-141350-7), FB-01 (280-141350-8), MW-38B (280-141350-9), MW-38C (280-141350-10), MW-39B (280-141350-11), MW-40B (280-141350-12), MW-41B (280-141350-13), MW-42B (280-141350-14), MW-43B (280-141350-15), MW-44B (280-141350-16), MW-45B (280-141350-17), MW-46B (280-141350-18), MW-47B (280-141350-19), MW-49B (280-141350-20), MW-52B (280-141350-21) and MW-53B (280-141350-22) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 10/16/2020, 10/17/2020, 10/19/2020, 10/20/2020 and 10/21/2020.

Samples MW-14BR (280-141350-1)[5X], MW-20B (280-141350-2)[5X], MW-21B (280-141350-3)[5X], MW-32B (280-141350-4)[5X], MW-36B (280-141350-5)[5X], DUP-01 (280-141350-6)[5X], MW-37B (280-141350-7)[5X], MW-38B (280-141350-9)[100X], MW-38B (280-141350-9) [20X], MW-38C (280-141350-10)[5X], MW-39B (280-141350-11)[5X], MW-40B (280-141350-12)[5X], MW-41B (280-141350-13)[20X], MW-42B (280-141350-14)[20X], MW-43B (280-141350-15)[20X], MW-44B (280-141350-16)[20X], MW-45B (280-141350-17)[20X], MW-46B (280-141350-18)[10X], MW-47B (280-141350-19)[20X], MW-49B (280-141350-20)[5X], MW-52B (280-141350-21)[5X] and MW-53B (280-141350-22)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Samples MW-36B (280-141350-5) and DUP-01 (280-141350-6) were reanalyzed for Fluoride, confirming reported results.

The continuing calibration verification (CCV 280-512929/17) associated with batch 280-512929 recovered above the upper control limit for Fluoride. This CCV was only associated with the QC samples associated with the batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-14BR

## Lab Sample ID: 280-141350-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.155		0.100		mg/L	1		6010C	Total Recoverable
Calcium	163		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0399		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00984		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0265		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00940		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	76.8		3.00		mg/L	1		9056A	Total/NA
Sulfate	338		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	852		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-20B

## Lab Sample ID: 280-141350-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.243		0.100		mg/L	1		6010C	Total Recoverable
Calcium	142		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0544		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0317		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	44.3		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.550		0.500		mg/L	1		9056A	Total/NA
Sulfate	392		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1000		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-21B

## Lab Sample ID: 280-141350-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.195		0.100		mg/L	1		6010C	Total Recoverable
Calcium	257		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0432		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.0162		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0361		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0132		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.0426		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	248		15.0		mg/L	5		9056A	Total/NA
Sulfate	644		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1520		20.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-32B

## Lab Sample ID: 280-141350-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.306		0.100		mg/L	1		6010C	Total Recoverable
Calcium	191		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0309		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0648		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	83.8		3.00		mg/L	1		9056A	Total/NA
Sulfate	833		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1810		25.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-36B

## Lab Sample ID: 280-141350-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.102		0.100		mg/L	1		6010C	Total Recoverable
Calcium	131		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0596		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0298		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00659		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	38.3		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.630		0.500		mg/L	1		9056A	Total/NA
Sulfate	347		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	902		16.7		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-01

## Lab Sample ID: 280-141350-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.104		0.100		mg/L	1		6010C	Total Recoverable
Calcium	131		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0584		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0357		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00750		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	38.8		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.600		0.500		mg/L	1		9056A	Total/NA
Sulfate	350		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	897		16.7		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-37B

## Lab Sample ID: 280-141350-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.160		0.100		mg/L	1		6010C	Total Recoverable
Calcium	200		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0623		0.00500		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-37B (Continued)

## Lab Sample ID: 280-141350-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0376		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0369		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.00969		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	105		3.00		mg/L	1		9056A	Total/NA
Sulfate	560		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1330		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-01

## Lab Sample ID: 280-141350-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0102		0.00800		mg/L	1		6020A	Total Recoverable

## Client Sample ID: MW-38B

## Lab Sample ID: 280-141350-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.98		0.100		mg/L	1		6010C	Total Recoverable
Calcium	504		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0146		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00629		0.00200		mg/L	1		6020A	Total Recoverable
Cobalt	0.00109		0.00100		mg/L	1		6020A	Total Recoverable
Lithium	0.108		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.193		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.00910		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	306		60.0		mg/L	20		9056A	Total/NA
Fluoride	7.58		0.500		mg/L	1		9056A	Total/NA
Sulfate	5470		500		mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	7060		100		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-38C

## Lab Sample ID: 280-141350-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	96.3		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0437		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0330		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00618		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	24.0		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.546		0.500		mg/L	1		9056A	Total/NA
Sulfate	224		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	610		10.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-39B

## Lab Sample ID: 280-141350-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.192		0.100		mg/L	1		6010C	Total Recoverable
Calcium	183		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0321		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0555		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	40.8		3.00		mg/L	1		9056A	Total/NA
Sulfate	556		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1340		25.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-40B

## Lab Sample ID: 280-141350-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.174		0.100		mg/L	1		6010C	Total Recoverable
Calcium	136		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0258		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0474		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	24.7		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.705		0.500		mg/L	1		9056A	Total/NA
Sulfate	310		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	922		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-41B

## Lab Sample ID: 280-141350-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.02		0.100		mg/L	1		6010C	Total Recoverable
Calcium	257		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0207		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00389		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0507		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.135		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.00608		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	155		3.00		mg/L	1		9056A	Total/NA
Sulfate	1160		100		mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	2230		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-42B

## Lab Sample ID: 280-141350-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.767		0.100		mg/L	1		6010C	Total Recoverable
Calcium	204		0.200		mg/L	1		6010C	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-42B (Continued)

## Lab Sample ID: 280-141350-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0211		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0437		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0706		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.0119		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	143		3.00		mg/L	1		9056A	Total/NA
Sulfate	1030		100		mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	2090		33.3		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-43B

## Lab Sample ID: 280-141350-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.328		0.100		mg/L	1		6010C	Total Recoverable
Calcium	122		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0261		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00514		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0295		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0186		0.0100		mg/L	1		6020A	Total Recoverable
Chloride	31.3		3.00		mg/L	1		9056A	Total/NA
Sulfate	413		100		mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	1000		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-44B

## Lab Sample ID: 280-141350-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.112		0.100		mg/L	1		6010C	Total Recoverable
Calcium	176		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0454		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00542		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0333		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	52.1		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.616		0.500		mg/L	1		9056A	Total/NA
Sulfate	398		100		mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	1050		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-45B

## Lab Sample ID: 280-141350-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.193		0.100		mg/L	1		6010C	Total Recoverable
Calcium	153		0.200		mg/L	1		6010C	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-45B (Continued)

## Lab Sample ID: 280-141350-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0356		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0271		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00704		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	40.5		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.662		0.500		mg/L	1		9056A	Total/NA
Sulfate	337		100		mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	876		10.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-46B

## Lab Sample ID: 280-141350-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	80.1		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0408		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00229		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0252		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	16.0		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.791	F1	0.500		mg/L	1		9056A	Total/NA
Sulfate	165		50.0		mg/L	10		9056A	Total/NA
Total Dissolved Solids (TDS)	520		10.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-47B

## Lab Sample ID: 280-141350-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.139		0.100		mg/L	1		6010C	Total Recoverable
Calcium	129		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0656		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00451		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0298		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	26.2		3.00		mg/L	1		9056A	Total/NA
Sulfate	337		100		mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	749		10.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-49B

## Lab Sample ID: 280-141350-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.177		0.100		mg/L	1		6010C	Total Recoverable
Calcium	143		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0640		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0391		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	28.6		3.00		mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-49B (Continued)

Lab Sample ID: 280-141350-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	424		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	998		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-52B

Lab Sample ID: 280-141350-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.187		0.100		mg/L	1		6010C	Total Recoverable
Calcium	161		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0514		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0406		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	40.7		3.00		mg/L	1		9056A	Total/NA
Sulfate	923		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1140		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-53B

Lab Sample ID: 280-141350-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.117		0.100		mg/L	1		6010C	Total Recoverable
Calcium	102		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0427		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00270		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0331		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.0106		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	42.1		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.958		0.500		mg/L	1		9056A	Total/NA
Sulfate	238		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	709		10.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Method Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN

#### Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

#### Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

# Sample Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141350-1	MW-14BR	Water	10/06/20 10:20	10/08/20 15:40	
280-141350-2	MW-20B	Water	10/06/20 09:30	10/08/20 15:40	
280-141350-3	MW-21B	Water	10/06/20 11:20	10/08/20 15:40	
280-141350-4	MW-32B	Water	10/07/20 15:30	10/08/20 15:40	
280-141350-5	MW-36B	Water	10/07/20 16:45	10/08/20 15:40	
280-141350-6	DUP-01	Water	10/07/20 09:30	10/08/20 15:40	
280-141350-7	MW-37B	Water	10/07/20 17:30	10/08/20 15:40	
280-141350-8	FB-01	Water	10/07/20 17:30	10/08/20 15:40	
280-141350-9	MW-38B	Water	10/06/20 13:15	10/08/20 15:40	
280-141350-10	MW-38C	Water	10/06/20 12:15	10/08/20 15:40	
280-141350-11	MW-39B	Water	10/07/20 14:40	10/08/20 15:40	
280-141350-12	MW-40B	Water	10/07/20 13:50	10/08/20 15:40	
280-141350-13	MW-41B	Water	10/06/20 08:45	10/08/20 15:40	
280-141350-14	MW-42B	Water	10/07/20 10:00	10/08/20 15:40	
280-141350-15	MW-43B	Water	10/07/20 09:25	10/08/20 15:40	
280-141350-16	MW-44B	Water	10/06/20 14:30	10/08/20 15:40	
280-141350-17	MW-45B	Water	10/06/20 15:15	10/08/20 15:40	
280-141350-18	MW-46B	Water	10/06/20 15:30	10/08/20 15:40	
280-141350-19	MW-47B	Water	10/06/20 16:40	10/08/20 15:40	
280-141350-20	MW-49B	Water	10/07/20 08:00	10/08/20 15:40	
280-141350-21	MW-52B	Water	10/07/20 11:45	10/08/20 15:40	
280-141350-22	MW-53B	Water	10/07/20 12:50	10/08/20 15:40	

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6010C - Metals (ICP) - Total Recoverable

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.155		0.100		mg/L		10/15/20 15:40	10/16/20 07:48	1
Calcium	163		0.200		mg/L		10/15/20 15:40	10/16/20 07:48	1

**Client Sample ID: MW-20B**  
**Date Collected: 10/06/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.243		0.100		mg/L		10/15/20 15:40	10/16/20 07:52	1
Calcium	142		0.200		mg/L		10/15/20 15:40	10/16/20 07:52	1

**Client Sample ID: MW-21B**  
**Date Collected: 10/06/20 11:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.195		0.100		mg/L		10/15/20 15:40	10/16/20 08:08	1
Calcium	257		0.200		mg/L		10/15/20 15:40	10/16/20 08:08	1

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.306		0.100		mg/L		10/15/20 15:40	10/16/20 07:31	1
Calcium	191		0.200		mg/L		10/15/20 15:40	10/16/20 07:31	1

**Client Sample ID: MW-36B**  
**Date Collected: 10/07/20 16:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.102		0.100		mg/L		10/15/20 15:40	10/16/20 08:12	1
Calcium	131		0.200		mg/L		10/15/20 15:40	10/16/20 08:12	1

**Client Sample ID: DUP-01**  
**Date Collected: 10/07/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.104		0.100		mg/L		10/15/20 15:40	10/16/20 08:15	1
Calcium	131		0.200		mg/L		10/15/20 15:40	10/16/20 08:15	1

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.160		0.100		mg/L		10/15/20 15:40	10/16/20 08:19	1
Calcium	200		0.200		mg/L		10/15/20 15:40	10/16/20 08:19	1

**Client Sample ID: FB-01**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.100		mg/L		10/15/20 15:40	10/16/20 08:22	1
Calcium	ND		0.200		mg/L		10/15/20 15:40	10/16/20 08:22	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6010C - Metals (ICP) - Total Recoverable

**Client Sample ID: MW-38B**  
**Date Collected: 10/06/20 13:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.98		0.100		mg/L		10/15/20 15:40	10/16/20 08:25	1
Calcium	504		0.200		mg/L		10/15/20 15:40	10/16/20 08:25	1

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.100		mg/L		10/15/20 15:40	10/16/20 08:29	1
Calcium	96.3		0.200		mg/L		10/15/20 15:40	10/16/20 08:29	1

**Client Sample ID: MW-39B**  
**Date Collected: 10/07/20 14:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.192		0.100		mg/L		10/14/20 20:21	10/16/20 21:23	1
Calcium	183		0.200		mg/L		10/14/20 20:21	10/16/20 21:23	1

**Client Sample ID: MW-40B**  
**Date Collected: 10/07/20 13:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.174		0.100		mg/L		10/14/20 20:21	10/16/20 21:41	1
Calcium	136		0.200		mg/L		10/14/20 20:21	10/16/20 21:41	1

**Client Sample ID: MW-41B**  
**Date Collected: 10/06/20 08:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.02		0.100		mg/L		10/14/20 20:21	10/16/20 21:59	1
Calcium	257		0.200		mg/L		10/14/20 20:21	10/16/20 21:59	1

**Client Sample ID: MW-42B**  
**Date Collected: 10/07/20 10:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.767		0.100		mg/L		10/14/20 20:21	10/16/20 22:02	1
Calcium	204		0.200		mg/L		10/14/20 20:21	10/16/20 22:02	1

**Client Sample ID: MW-43B**  
**Date Collected: 10/07/20 09:25**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.328		0.100		mg/L		10/14/20 20:21	10/16/20 22:06	1
Calcium	122		0.200		mg/L		10/14/20 20:21	10/16/20 22:06	1

**Client Sample ID: MW-44B**  
**Date Collected: 10/06/20 14:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.112		0.100		mg/L		10/14/20 20:21	10/16/20 22:10	1
Calcium	176		0.200		mg/L		10/14/20 20:21	10/16/20 22:10	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6010C - Metals (ICP) - Total Recoverable

**Client Sample ID: MW-45B**  
**Date Collected: 10/06/20 15:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.193		0.100		mg/L		10/14/20 20:21	10/16/20 22:13	1
Calcium	153		0.200		mg/L		10/14/20 20:21	10/16/20 22:13	1

**Client Sample ID: MW-46B**  
**Date Collected: 10/06/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.100		mg/L		10/14/20 20:21	10/16/20 22:17	1
Calcium	80.1		0.200		mg/L		10/14/20 20:21	10/16/20 22:17	1

**Client Sample ID: MW-47B**  
**Date Collected: 10/06/20 16:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.139		0.100		mg/L		10/14/20 20:21	10/16/20 22:20	1
Calcium	129		0.200		mg/L		10/14/20 20:21	10/16/20 22:20	1

**Client Sample ID: MW-49B**  
**Date Collected: 10/07/20 08:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.177		0.100		mg/L		10/14/20 20:21	10/16/20 22:24	1
Calcium	143		0.200		mg/L		10/14/20 20:21	10/16/20 22:24	1

**Client Sample ID: MW-52B**  
**Date Collected: 10/07/20 11:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.187		0.100		mg/L		10/14/20 20:21	10/16/20 22:28	1
Calcium	161		0.200		mg/L		10/14/20 20:21	10/16/20 22:28	1

**Client Sample ID: MW-53B**  
**Date Collected: 10/07/20 12:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.117		0.100		mg/L		10/14/20 20:21	10/16/20 22:31	1
Calcium	102		0.200		mg/L		10/14/20 20:21	10/16/20 22:31	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:13	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:13	1
Barium	0.0399		0.00500		mg/L		10/14/20 14:00	10/15/20 15:13	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:13	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:13	1
Chromium	0.00984		0.00200		mg/L		10/14/20 14:00	10/15/20 15:13	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:13	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:13	1
<b>Lithium</b>	<b>0.0265</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:13	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:13	1
<b>Selenium</b>	<b>0.00940</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:13	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:13	1

**Client Sample ID: MW-20B**  
**Date Collected: 10/06/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:16	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:16	1
<b>Barium</b>	<b>0.0544</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:16	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:16	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:16	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:16	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:16	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:16	1
<b>Lithium</b>	<b>0.0317</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:16	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:16	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:16	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:16	1

**Client Sample ID: MW-21B**  
**Date Collected: 10/06/20 11:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:28	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:28	1
<b>Barium</b>	<b>0.0432</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:28	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:28	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:28	1
<b>Chromium</b>	<b>0.0162</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 15:28	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:28	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:28	1
<b>Lithium</b>	<b>0.0361</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:28	1
<b>Molybdenum</b>	<b>0.0132</b>		0.0100		mg/L		10/14/20 14:00	10/15/20 15:28	1
<b>Selenium</b>	<b>0.0426</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:28	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:28	1

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:01	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:01	1
<b>Barium</b>	<b>0.0309</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:01	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:01	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:01	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:01	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:01	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:01	1
<b>Lithium</b>	<b>0.0648</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:01	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:01	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:01	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:01	1

**Client Sample ID: MW-36B**  
**Date Collected: 10/07/20 16:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:31	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:31	1
<b>Barium</b>	<b>0.0596</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:31	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:31	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:31	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:31	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:31	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:31	1
<b>Lithium</b>	<b>0.0298</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:31	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:31	1
<b>Selenium</b>	<b>0.00659</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:31	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:31	1

**Client Sample ID: DUP-01**  
**Date Collected: 10/07/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:36	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:36	1
<b>Barium</b>	<b>0.0584</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:36	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:36	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:36	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:36	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:36	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:36	1
<b>Lithium</b>	<b>0.0357</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:36	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:36	1
<b>Selenium</b>	<b>0.00750</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:36	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:36	1

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:38	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:38	1
<b>Barium</b>	<b>0.0623</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:38	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:38	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:38	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:38	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:38	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:38	1
<b>Lithium</b>	<b>0.0376</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:38	1
<b>Molybdenum</b>	<b>0.0369</b>		0.0100		mg/L		10/14/20 14:00	10/15/20 15:38	1
<b>Selenium</b>	<b>0.00969</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:38	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:38	1

**Client Sample ID: FB-01**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:43	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:43	1
Barium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:43	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:43	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:43	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:43	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:43	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:43	1
<b>Lithium</b>	<b>0.0102</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:43	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:43	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:43	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:43	1

**Client Sample ID: MW-38B**  
**Date Collected: 10/06/20 13:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:46	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:46	1
<b>Barium</b>	<b>0.0146</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:46	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:46	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:46	1
<b>Chromium</b>	<b>0.00629</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 15:46	1
<b>Cobalt</b>	<b>0.00109</b>		0.00100		mg/L		10/14/20 14:00	10/15/20 15:46	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:46	1
<b>Lithium</b>	<b>0.108</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:46	1
<b>Molybdenum</b>	<b>0.193</b>		0.0100		mg/L		10/14/20 14:00	10/15/20 15:46	1
<b>Selenium</b>	<b>0.00910</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:46	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:46	1

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:56	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:56	1
<b>Barium</b>	<b>0.0437</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:56	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:56	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:56	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:56	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:56	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:56	1
<b>Lithium</b>	<b>0.0330</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:56	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:56	1
<b>Selenium</b>	<b>0.00618</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:56	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:56	1

**Client Sample ID: MW-39B**  
**Date Collected: 10/07/20 14:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:58	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:58	1
<b>Barium</b>	<b>0.0321</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 15:58	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:58	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:58	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 15:58	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:58	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:58	1
<b>Lithium</b>	<b>0.0555</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 15:58	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 15:58	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 15:58	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 15:58	1

**Client Sample ID: MW-40B**  
**Date Collected: 10/07/20 13:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:03	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:03	1
<b>Barium</b>	<b>0.0258</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:03	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:03	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:03	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:03	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:03	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:03	1
<b>Lithium</b>	<b>0.0474</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:03	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 16:03	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:03	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:03	1

**Client Sample ID: MW-41B**  
**Date Collected: 10/06/20 08:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:08	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:08	1
<b>Barium</b>	<b>0.0207</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:08	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-41B**  
**Date Collected: 10/06/20 08:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:08	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:08	1
<b>Chromium</b>	<b>0.00389</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 16:08	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:08	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:08	1
<b>Lithium</b>	<b>0.0507</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:08	1
<b>Molybdenum</b>	<b>0.135</b>		0.0100		mg/L		10/14/20 14:00	10/15/20 16:08	1
<b>Selenium</b>	<b>0.00608</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:08	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:08	1

**Client Sample ID: MW-42B**  
**Date Collected: 10/07/20 10:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:13	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:13	1
<b>Barium</b>	<b>0.0211</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:13	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:13	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:13	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:13	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:13	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:13	1
<b>Lithium</b>	<b>0.0437</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:13	1
<b>Molybdenum</b>	<b>0.0706</b>		0.0100		mg/L		10/14/20 14:00	10/15/20 16:13	1
<b>Selenium</b>	<b>0.0119</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:13	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:13	1

**Client Sample ID: MW-43B**  
**Date Collected: 10/07/20 09:25**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:16	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:16	1
<b>Barium</b>	<b>0.0261</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:16	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:16	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:16	1
<b>Chromium</b>	<b>0.00514</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 16:16	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:16	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:16	1
<b>Lithium</b>	<b>0.0295</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:16	1
<b>Molybdenum</b>	<b>0.0186</b>		0.0100		mg/L		10/14/20 14:00	10/15/20 16:16	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:16	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:16	1

**Client Sample ID: MW-44B**  
**Date Collected: 10/06/20 14:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:26	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:26	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-44B**  
**Date Collected: 10/06/20 14:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.0454</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:26	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:26	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:26	1
<b>Chromium</b>	<b>0.00542</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 16:26	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:26	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:26	1
<b>Lithium</b>	<b>0.0333</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:26	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 16:26	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:26	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:26	1

**Client Sample ID: MW-45B**  
**Date Collected: 10/06/20 15:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:29	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:29	1
<b>Barium</b>	<b>0.0356</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:29	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:29	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:29	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:29	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:29	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:29	1
<b>Lithium</b>	<b>0.0271</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:29	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 16:29	1
<b>Selenium</b>	<b>0.00704</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:29	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:29	1

**Client Sample ID: MW-46B**  
**Date Collected: 10/06/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:34	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:34	1
<b>Barium</b>	<b>0.0408</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:34	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:34	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:34	1
<b>Chromium</b>	<b>0.00229</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 16:34	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:34	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:34	1
<b>Lithium</b>	<b>0.0252</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:34	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 16:34	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:34	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:34	1

**Client Sample ID: MW-47B**  
**Date Collected: 10/06/20 16:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:39	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-47B**  
**Date Collected: 10/06/20 16:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:39	1
<b>Barium</b>	<b>0.0656</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:39	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:39	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:39	1
<b>Chromium</b>	<b>0.00451</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 16:39	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:39	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:39	1
<b>Lithium</b>	<b>0.0298</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:39	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 16:39	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:39	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:39	1

**Client Sample ID: MW-49B**  
**Date Collected: 10/07/20 08:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:41	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:41	1
<b>Barium</b>	<b>0.0640</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 16:41	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:41	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:41	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 16:41	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:41	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:41	1
<b>Lithium</b>	<b>0.0391</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 16:41	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 16:41	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 16:41	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 16:41	1

**Client Sample ID: MW-52B**  
**Date Collected: 10/07/20 11:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 13:29	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 13:29	1
<b>Barium</b>	<b>0.0514</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 13:29	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:29	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:29	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 13:29	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:29	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:29	1
<b>Lithium</b>	<b>0.0406</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 13:29	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 13:29	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 13:29	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:29	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

**Client Sample ID: MW-53B**  
**Date Collected: 10/07/20 12:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 13:31	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 13:31	1
<b>Barium</b>	<b>0.0427</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 13:31	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:31	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:31	1
<b>Chromium</b>	<b>0.00270</b>		0.00200		mg/L		10/14/20 14:00	10/15/20 13:31	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:31	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:31	1
<b>Lithium</b>	<b>0.0331</b>		0.00800		mg/L		10/14/20 14:00	10/15/20 13:31	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 13:31	1
<b>Selenium</b>	<b>0.0106</b>		0.00500		mg/L		10/14/20 14:00	10/15/20 13:31	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 13:31	1

## Method: 7470A - Mercury (CVAA)

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 18:28	1

**Client Sample ID: MW-20B**  
**Date Collected: 10/06/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 18:31	1

**Client Sample ID: MW-21B**  
**Date Collected: 10/06/20 11:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 18:33	1

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 18:36	1

**Client Sample ID: MW-36B**  
**Date Collected: 10/07/20 16:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 18:44	1

**Client Sample ID: DUP-01**  
**Date Collected: 10/07/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 18:57	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 7470A - Mercury (CVAA)

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 19:00	1

**Client Sample ID: FB-01**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 19:02	1

**Client Sample ID: MW-38B**  
**Date Collected: 10/06/20 13:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 19:05	1

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 19:07	1

**Client Sample ID: MW-39B**  
**Date Collected: 10/07/20 14:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 19:10	1

**Client Sample ID: MW-40B**  
**Date Collected: 10/07/20 13:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:14	1

**Client Sample ID: MW-41B**  
**Date Collected: 10/06/20 08:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:21	1

**Client Sample ID: MW-42B**  
**Date Collected: 10/07/20 10:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:24	1

**Client Sample ID: MW-43B**  
**Date Collected: 10/07/20 09:25**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:26	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 7470A - Mercury (CVAA)

**Client Sample ID: MW-44B**  
**Date Collected: 10/06/20 14:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:29	1

**Client Sample ID: MW-45B**  
**Date Collected: 10/06/20 15:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:31	1

**Client Sample ID: MW-46B**  
**Date Collected: 10/06/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:34	1

**Client Sample ID: MW-47B**  
**Date Collected: 10/06/20 16:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:36	1

**Client Sample ID: MW-49B**  
**Date Collected: 10/07/20 08:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:39	1

**Client Sample ID: MW-52B**  
**Date Collected: 10/07/20 11:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:42	1

**Client Sample ID: MW-53B**  
**Date Collected: 10/07/20 12:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 19:44	1

## General Chemistry

**Client Sample ID: MW-14BR**  
**Date Collected: 10/06/20 10:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	76.8		3.00		mg/L			10/19/20 23:58	1
Fluoride	ND		0.500		mg/L			10/19/20 23:58	1
Sulfate	338		25.0		mg/L			10/20/20 08:44	5
Total Dissolved Solids (TDS)	852		20.0		mg/L			10/09/20 16:44	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## General Chemistry

**Client Sample ID: MW-20B**  
**Date Collected: 10/06/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.3		3.00		mg/L			10/20/20 00:14	1
Fluoride	0.550		0.500		mg/L			10/20/20 00:14	1
Sulfate	392		25.0		mg/L			10/20/20 09:02	5
Total Dissolved Solids (TDS)	1000		20.0		mg/L			10/09/20 16:44	1

**Client Sample ID: MW-21B**  
**Date Collected: 10/06/20 11:20**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	248		15.0		mg/L			10/20/20 09:19	5
Fluoride	ND		0.500		mg/L			10/20/20 02:09	1
Sulfate	644		25.0		mg/L			10/20/20 09:19	5
Total Dissolved Solids (TDS)	1520		20.0		mg/L			10/09/20 16:44	1

**Client Sample ID: MW-32B**  
**Date Collected: 10/07/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	83.8		3.00		mg/L			10/20/20 00:31	1
Fluoride	ND		0.500		mg/L			10/20/20 00:31	1
Sulfate	833		25.0		mg/L			10/20/20 09:37	5
Total Dissolved Solids (TDS)	1810		25.0		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-36B**  
**Date Collected: 10/07/20 16:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38.3		3.00		mg/L			10/16/20 22:57	1
Fluoride	0.630		0.500		mg/L			10/26/20 16:51	1
Sulfate	347		25.0		mg/L			10/20/20 11:22	5
Total Dissolved Solids (TDS)	902		16.7		mg/L			10/13/20 18:52	1

**Client Sample ID: DUP-01**  
**Date Collected: 10/07/20 09:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38.8		3.00		mg/L			10/16/20 23:13	1
Fluoride	0.600		0.500		mg/L			10/26/20 17:07	1
Sulfate	350		25.0		mg/L			10/20/20 11:40	5
Total Dissolved Solids (TDS)	897		16.7		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-37B**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	105		3.00		mg/L			10/16/20 23:30	1
Fluoride	ND		0.500		mg/L			10/16/20 23:30	1
Sulfate	560		25.0		mg/L			10/20/20 11:57	5
Total Dissolved Solids (TDS)	1330		20.0		mg/L			10/13/20 18:52	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## General Chemistry

**Client Sample ID: FB-01**  
**Date Collected: 10/07/20 17:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			10/16/20 23:46	1
Fluoride	ND		0.500		mg/L			10/16/20 23:46	1
Sulfate	ND		5.00		mg/L			10/16/20 23:46	1
Total Dissolved Solids (TDS)	ND		10.0		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-38B**  
**Date Collected: 10/06/20 13:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	306		60.0		mg/L			10/17/20 01:41	20
Fluoride	7.58		0.500		mg/L			10/17/20 01:25	1
Sulfate	5470		500		mg/L			10/20/20 12:32	100
Total Dissolved Solids (TDS)	7060		100		mg/L			10/09/20 16:44	1

**Client Sample ID: MW-38C**  
**Date Collected: 10/06/20 12:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.0		3.00		mg/L			10/17/20 01:58	1
Fluoride	0.546		0.500		mg/L			10/17/20 01:58	1
Sulfate	224		25.0		mg/L			10/20/20 12:50	5
Total Dissolved Solids (TDS)	610		10.0		mg/L			10/09/20 16:44	1

**Client Sample ID: MW-39B**  
**Date Collected: 10/07/20 14:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.8		3.00		mg/L			10/17/20 02:14	1
Fluoride	ND		0.500		mg/L			10/17/20 02:14	1
Sulfate	556		25.0		mg/L			10/20/20 13:07	5
Total Dissolved Solids (TDS)	1340		25.0		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-40B**  
**Date Collected: 10/07/20 13:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.7		3.00		mg/L			10/17/20 02:30	1
Fluoride	0.705		0.500		mg/L			10/17/20 02:30	1
Sulfate	310		25.0		mg/L			10/20/20 15:45	5
Total Dissolved Solids (TDS)	922		20.0		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-41B**  
**Date Collected: 10/06/20 08:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	155		3.00		mg/L			10/17/20 02:47	1
Fluoride	ND		0.500		mg/L			10/17/20 02:47	1
Sulfate	1160		100		mg/L			10/20/20 15:43	20
Total Dissolved Solids (TDS)	2230		20.0		mg/L			10/09/20 16:44	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## General Chemistry

**Client Sample ID: MW-42B**  
**Date Collected: 10/07/20 10:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	143		3.00		mg/L			10/20/20 03:15	1
Fluoride	ND		0.500		mg/L			10/20/20 03:15	1
Sulfate	1030		100		mg/L			10/20/20 16:16	20
Total Dissolved Solids (TDS)	2090		33.3		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-43B**  
**Date Collected: 10/07/20 09:25**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.3		3.00		mg/L			10/20/20 05:26	1
Fluoride	ND		0.500		mg/L			10/20/20 05:26	1
Sulfate	413		100		mg/L			10/20/20 16:33	20
Total Dissolved Solids (TDS)	1000		20.0		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-44B**  
**Date Collected: 10/06/20 14:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.1		3.00		mg/L			10/20/20 05:59	1
Fluoride	0.616		0.500		mg/L			10/20/20 05:59	1
Sulfate	398		100		mg/L			10/20/20 16:49	20
Total Dissolved Solids (TDS)	1050		20.0		mg/L			10/09/20 16:44	1

**Client Sample ID: MW-45B**  
**Date Collected: 10/06/20 15:15**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.5		3.00		mg/L			10/20/20 06:32	1
Fluoride	0.662		0.500		mg/L			10/20/20 06:32	1
Sulfate	337		100		mg/L			10/20/20 17:06	20
Total Dissolved Solids (TDS)	876		10.0		mg/L			10/09/20 16:44	1

**Client Sample ID: MW-46B**  
**Date Collected: 10/06/20 15:30**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.0		3.00		mg/L			10/20/20 07:05	1
Fluoride	0.791	F1	0.500		mg/L			10/20/20 07:05	1
Sulfate	165		50.0		mg/L			10/20/20 17:22	10
Total Dissolved Solids (TDS)	520		10.0		mg/L			10/09/20 16:44	1

**Client Sample ID: MW-47B**  
**Date Collected: 10/06/20 16:40**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.2		3.00		mg/L			10/20/20 10:57	1
Fluoride	ND		0.500		mg/L			10/20/20 10:57	1
Sulfate	337		100		mg/L			10/21/20 22:11	20
Total Dissolved Solids (TDS)	749		10.0		mg/L			10/09/20 16:44	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## General Chemistry

**Client Sample ID: MW-49B**  
**Date Collected: 10/07/20 08:00**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.6		3.00		mg/L			10/20/20 02:26	1
Fluoride	ND		0.500		mg/L			10/20/20 02:26	1
Sulfate	424		25.0		mg/L			10/20/20 16:02	5
<b>Total Dissolved Solids (TDS)</b>	<b>998</b>		20.0		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-52B**  
**Date Collected: 10/07/20 11:45**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.7		3.00		mg/L			10/20/20 02:42	1
Fluoride	ND		0.500		mg/L			10/20/20 02:42	1
Sulfate	923		25.0		mg/L			10/20/20 16:19	5
<b>Total Dissolved Solids (TDS)</b>	<b>1140</b>		20.0		mg/L			10/13/20 18:52	1

**Client Sample ID: MW-53B**  
**Date Collected: 10/07/20 12:50**  
**Date Received: 10/08/20 15:40**

**Lab Sample ID: 280-141350-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.1		3.00		mg/L			10/20/20 02:59	1
Fluoride	0.958		0.500		mg/L			10/20/20 02:59	1
Sulfate	238		25.0		mg/L			10/20/20 16:37	5
<b>Total Dissolved Solids (TDS)</b>	<b>709</b>		10.0		mg/L			10/13/20 18:52	1

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 280-512649/1-A**  
**Matrix: Water**  
**Analysis Batch: 512855**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 512649**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.100		mg/L		10/15/20 15:40	10/16/20 07:25	1
Calcium	ND		0.200		mg/L		10/15/20 15:40	10/16/20 07:25	1

**Lab Sample ID: LCS 280-512649/2-A**  
**Matrix: Water**  
**Analysis Batch: 512855**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 512649**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.000		mg/L		100	86 - 110
Calcium	50.0	48.04		mg/L		96	90 - 111

**Lab Sample ID: 280-141350-4 MS**  
**Matrix: Water**  
**Analysis Batch: 512855**

**Client Sample ID: MW-32B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 512649**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.306		1.00	1.358		mg/L		105	87 - 113
Calcium	191		50.0	236.4		mg/L		92	48 - 153

**Lab Sample ID: 280-141350-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 512855**

**Client Sample ID: MW-32B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 512649**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	0.306		1.00	1.361		mg/L		106	87 - 113	0	20
Calcium	191		50.0	237.6		mg/L		94	48 - 153	1	20

**Lab Sample ID: MB 280-512650/1-A**  
**Matrix: Water**  
**Analysis Batch: 513098**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 512650**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.100		mg/L		10/14/20 20:21	10/16/20 21:16	1
Calcium	ND		0.200		mg/L		10/14/20 20:21	10/16/20 21:16	1

**Lab Sample ID: LCS 280-512650/2-A**  
**Matrix: Water**  
**Analysis Batch: 513098**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 512650**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.017		mg/L		102	86 - 110
Calcium	50.0	49.71		mg/L		99	90 - 111

**Lab Sample ID: 280-141350-11 MS**  
**Matrix: Water**  
**Analysis Batch: 513098**

**Client Sample ID: MW-39B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 512650**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.192		1.00	1.242		mg/L		105	87 - 113
Calcium	183		50.0	228.7		mg/L		92	48 - 153

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6010C - Metals (ICP)

Lab Sample ID: 280-141350-11 MSD  
Matrix: Water  
Analysis Batch: 513098

Client Sample ID: MW-39B  
Prep Type: Total Recoverable  
Prep Batch: 512650

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Boron	0.192		1.00	1.266		mg/L		107	87 - 113	2	20
Calcium	183		50.0	236.3		mg/L		107	48 - 153	3	20

## Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-455954/1-A  
Matrix: Water  
Analysis Batch: 456232

Client Sample ID: Method Blank  
Prep Type: Total Recoverable  
Prep Batch: 455954

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 14:56	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 14:56	1
Barium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 14:56	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 14:56	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 14:56	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 14:56	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 14:56	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 14:56	1
Lithium	ND		0.00800		mg/L		10/14/20 14:00	10/15/20 14:56	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 14:56	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 14:56	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 14:56	1

Lab Sample ID: LCS 240-455954/2-A  
Matrix: Water  
Analysis Batch: 456232

Client Sample ID: Lab Control Sample  
Prep Type: Total Recoverable  
Prep Batch: 455954

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Antimony	0.100	0.09006		mg/L		90	80 - 120
Arsenic	1.00	0.9346		mg/L		93	80 - 120
Barium	1.00	0.9060		mg/L		91	80 - 120
Beryllium	0.500	0.4483		mg/L		90	80 - 120
Cadmium	0.500	0.4524		mg/L		90	80 - 120
Chromium	0.500	0.4705		mg/L		94	80 - 120
Cobalt	0.500	0.4860		mg/L		97	80 - 120
Lead	0.500	0.4760		mg/L		95	80 - 120
Lithium	0.500	0.4622		mg/L		92	80 - 120
Molybdenum	0.500	0.4604		mg/L		92	80 - 120
Selenium	1.00	0.9251		mg/L		93	80 - 120
Thallium	1.00	0.9154		mg/L		92	80 - 120

Lab Sample ID: 280-141350-4 MS  
Matrix: Water  
Analysis Batch: 456232

Client Sample ID: MW-32B  
Prep Type: Total Recoverable  
Prep Batch: 455954

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Antimony	ND		0.100	0.09396		mg/L		94	75 - 125
Arsenic	ND		1.00	0.9935		mg/L		99	75 - 125
Barium	0.0309		1.00	0.9912		mg/L		96	75 - 125

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 280-141350-4 MS**  
**Matrix: Water**  
**Analysis Batch: 456232**

**Client Sample ID: MW-32B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 455954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		0.500	0.4517		mg/L		90	75 - 125
Cadmium	ND		0.500	0.4579		mg/L		92	75 - 125
Chromium	ND		0.500	0.4585		mg/L		92	75 - 125
Cobalt	ND		0.500	0.4988		mg/L		100	75 - 125
Lead	ND		0.500	0.4677		mg/L		94	75 - 125
Lithium	0.0648		0.500	0.5229		mg/L		92	75 - 125
Molybdenum	ND		0.500	0.4864		mg/L		97	75 - 125
Selenium	ND		1.00	0.9522		mg/L		95	75 - 125
Thallium	ND		1.00	0.8952		mg/L		90	75 - 125

**Lab Sample ID: 280-141350-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 456232**

**Client Sample ID: MW-32B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 455954**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.100	0.09254		mg/L		93	75 - 125	2	20
Arsenic	ND		1.00	0.9881		mg/L		99	75 - 125	1	20
Barium	0.0309		1.00	0.9726		mg/L		94	75 - 125	2	20
Beryllium	ND		0.500	0.4486		mg/L		90	75 - 125	1	20
Cadmium	ND		0.500	0.4529		mg/L		91	75 - 125	1	20
Chromium	ND		0.500	0.4619		mg/L		92	75 - 125	1	20
Cobalt	ND		0.500	0.4893		mg/L		98	75 - 125	2	20
Lead	ND		0.500	0.4634		mg/L		93	75 - 125	1	20
Lithium	0.0648		0.500	0.5147		mg/L		90	75 - 125	2	20
Molybdenum	ND		0.500	0.4815		mg/L		96	75 - 125	1	20
Selenium	ND		1.00	0.9479		mg/L		95	75 - 125	0	20
Thallium	ND		1.00	0.8986		mg/L		90	75 - 125	0	20

**Lab Sample ID: MB 240-455955/1-A**  
**Matrix: Water**  
**Analysis Batch: 456232**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 455955**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 12:50	1
Arsenic	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 12:50	1
Barium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 12:50	1
Beryllium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 12:50	1
Cadmium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 12:50	1
Chromium	ND		0.00200		mg/L		10/14/20 14:00	10/15/20 12:50	1
Cobalt	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 12:50	1
Lead	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 12:50	1
Lithium	ND		0.00800		mg/L		10/14/20 14:00	10/15/20 12:50	1
Molybdenum	ND		0.0100		mg/L		10/14/20 14:00	10/15/20 12:50	1
Selenium	ND		0.00500		mg/L		10/14/20 14:00	10/15/20 12:50	1
Thallium	ND		0.00100		mg/L		10/14/20 14:00	10/15/20 12:50	1

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 240-455955/3-A**  
**Matrix: Water**  
**Analysis Batch: 456232**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 455955**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.100	0.09056		mg/L		91	80 - 120
Arsenic	1.00	0.9807		mg/L		98	80 - 120
Barium	1.00	0.9378		mg/L		94	80 - 120
Beryllium	0.500	0.4705		mg/L		94	80 - 120
Cadmium	0.500	0.4621		mg/L		92	80 - 120
Chromium	0.500	0.4852		mg/L		97	80 - 120
Cobalt	0.500	0.4983		mg/L		100	80 - 120
Lead	0.500	0.4843		mg/L		97	80 - 120
Lithium	0.500	0.4624		mg/L		92	80 - 120
Molybdenum	0.500	0.4681		mg/L		94	80 - 120
Selenium	1.00	0.9485		mg/L		95	80 - 120
Thallium	1.00	0.9324		mg/L		93	80 - 120

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 280-512538/1-A**  
**Matrix: Water**  
**Analysis Batch: 512663**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 512538**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/14/20 14:20	10/14/20 18:21	1

**Lab Sample ID: LCS 280-512538/2-A**  
**Matrix: Water**  
**Analysis Batch: 512663**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 512538**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00500	0.004485		mg/L		90	84 - 120

**Lab Sample ID: LCSD 280-512538/3-A**  
**Matrix: Water**  
**Analysis Batch: 512663**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 512538**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Mercury	0.00500	0.004984		mg/L		100	84 - 120	11	15

**Lab Sample ID: 280-141350-4 MS**  
**Matrix: Water**  
**Analysis Batch: 512663**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**  
**Prep Batch: 512538**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		0.00500	0.005135		mg/L		103	75 - 125

**Lab Sample ID: 280-141350-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 512663**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**  
**Prep Batch: 512538**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00500	0.005055		mg/L		101	75 - 125	2	20

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 280-512934/1-A  
Matrix: Water  
Analysis Batch: 512972

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 512934

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		10/16/20 15:15	10/16/20 18:33	1

Lab Sample ID: LCS 280-512934/2-A  
Matrix: Water  
Analysis Batch: 512972

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 512934

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.004764		mg/L		95	84 - 120

## Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-512929/6  
Matrix: Water  
Analysis Batch: 512929

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			10/16/20 13:52	1
Fluoride	ND	^+	0.500		mg/L			10/16/20 13:52	1
Sulfate	ND		5.00		mg/L			10/16/20 13:52	1

Lab Sample ID: LCS 280-512929/4  
Matrix: Water  
Analysis Batch: 512929

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.70		mg/L		96	90 - 110
Fluoride	5.00	4.866	^+	mg/L		97	90 - 110
Sulfate	100	95.45		mg/L		95	90 - 110

Lab Sample ID: LCSD 280-512929/5  
Matrix: Water  
Analysis Batch: 512929

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.63		mg/L		96	90 - 110	0	10
Fluoride	5.00	4.836	^+	mg/L		97	90 - 110	1	10
Sulfate	100	95.89		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 280-512929/3  
Matrix: Water  
Analysis Batch: 512929

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.288		mg/L		86	50 - 150
Fluoride	0.500	0.5272		mg/L		105	50 - 150
Sulfate	5.00	ND		mg/L		93	50 - 150

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 280-141350-8 MS**  
**Matrix: Water**  
**Analysis Batch: 512929**

**Client Sample ID: FB-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		50.0	45.15		mg/L		90	80 - 120
Fluoride	ND		5.00	5.144		mg/L		103	80 - 120
Sulfate	ND		50.0	45.69		mg/L		91	80 - 120

**Lab Sample ID: 280-141350-8 MSD**  
**Matrix: Water**  
**Analysis Batch: 512929**

**Client Sample ID: FB-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		50.0	44.53		mg/L		89	80 - 120	1	20
Fluoride	ND		5.00	5.102		mg/L		102	80 - 120	1	20
Sulfate	ND		50.0	45.15		mg/L		90	80 - 120	1	20

**Lab Sample ID: 280-141350-8 DU**  
**Matrix: Water**  
**Analysis Batch: 512929**

**Client Sample ID: FB-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	ND		ND		mg/L		NC	15
Fluoride	ND		ND		mg/L		NC	15
Sulfate	ND		ND		mg/L		NC	15

**Lab Sample ID: MB 280-513151/90**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			10/20/20 03:30	1
Sulfate	ND		5.00		mg/L			10/20/20 03:30	1

**Lab Sample ID: MB 280-513151/93**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			10/20/20 14:52	1
Sulfate	ND		5.00		mg/L			10/20/20 14:52	1

**Lab Sample ID: LCS 280-513151/88**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.56		mg/L		96	90 - 110
Sulfate	100	100.8		mg/L		101	90 - 110

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 280-513151/91**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	96.47		mg/L		96	90 - 110
Sulfate	100	101.4		mg/L		101	90 - 110

**Lab Sample ID: LCSD 280-513151/89**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.76		mg/L		96	90 - 110	0	10
Sulfate	100	100.4		mg/L		100	90 - 110	0	10

**Lab Sample ID: LCSD 280-513151/92**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	96.40		mg/L		96	90 - 110	0	10
Sulfate	100	100.3		mg/L		100	90 - 110	1	10

**Lab Sample ID: MRL 280-513151/3**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.515		mg/L		90	50 - 150
Sulfate	5.00	ND		mg/L		86	50 - 150

**Lab Sample ID: 280-141350-4 MS**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	833		250	1062	E	mg/L		92	80 - 120

**Lab Sample ID: 280-141350-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	833		250	1068	E	mg/L		94	80 - 120	1	20

**Lab Sample ID: 280-141350-11 MS**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: MW-39B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	556		250	810.1		mg/L		102	80 - 120

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 280-141350-11 MSD**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: MW-39B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	556		250	808.4		mg/L		101	80 - 120	0	20

**Lab Sample ID: 280-141350-4 DU**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	ND	*+	ND	*+	mg/L		NC	15
Sulfate	833		816.1		mg/L		2	15

**Lab Sample ID: 280-141350-11 DU**  
**Matrix: Water**  
**Analysis Batch: 513151**

**Client Sample ID: MW-39B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	ND	*+	ND	*+	mg/L		NC	15
Sulfate	556		547.3		mg/L		2	15

**Lab Sample ID: MB 280-513157/13**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			10/19/20 19:19	1
Fluoride	ND		0.500		mg/L			10/19/20 19:19	1

**Lab Sample ID: LCS 280-513157/11**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	91.56		mg/L		92	90 - 110
Fluoride	5.00	4.846		mg/L		97	90 - 110

**Lab Sample ID: LCSD 280-513157/12**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	91.41		mg/L		91	90 - 110	0	10
Fluoride	5.00	4.849		mg/L		97	90 - 110	0	10

**Lab Sample ID: MRL 280-513157/10**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.095		mg/L		82	50 - 150
Fluoride	0.500	0.5168		mg/L		103	50 - 150

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 280-141350-4 MS**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	83.8		50.0	138.1		mg/L		109	80 - 120
Fluoride	ND		5.00	4.913		mg/L		92	80 - 120

**Lab Sample ID: 280-141350-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	83.8		50.0	137.7		mg/L		108	80 - 120	0	20
Fluoride	ND		5.00	4.782		mg/L		90	80 - 120	3	20

**Lab Sample ID: 280-141350-18 MS**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: MW-46B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16.0		50.0	66.38		mg/L		101	80 - 120
Fluoride	0.791	F1	5.00	7.117	F1	mg/L		127	80 - 120

**Lab Sample ID: 280-141350-18 MSD**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: MW-46B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	16.0		50.0	66.38		mg/L		101	80 - 120	0	20
Fluoride	0.791	F1	5.00	6.109		mg/L		106	80 - 120	15	20

**Lab Sample ID: 280-141350-4 DU**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	83.8		84.04		mg/L		0.3	15
Fluoride	ND		ND		mg/L		NC	15

**Lab Sample ID: 280-141350-18 DU**  
**Matrix: Water**  
**Analysis Batch: 513157**

**Client Sample ID: MW-46B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	16.0		16.00		mg/L		0	15
Fluoride	0.791	F1	0.8009		mg/L		1	15

**Lab Sample ID: MB 280-513325/6**  
**Matrix: Water**  
**Analysis Batch: 513325**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.00		mg/L			10/20/20 15:25	1

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 280-513325/4**  
**Matrix: Water**  
**Analysis Batch: 513325**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	95.05		mg/L		95	90 - 110

**Lab Sample ID: LCSD 280-513325/5**  
**Matrix: Water**  
**Analysis Batch: 513325**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100	94.95		mg/L		95	90 - 110	0	10

**Lab Sample ID: MRL 280-513325/3**  
**Matrix: Water**  
**Analysis Batch: 513325**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	ND		mg/L		98	50 - 150

**Lab Sample ID: 280-141350-18 MS**  
**Matrix: Water**  
**Analysis Batch: 513325**

**Client Sample ID: MW-46B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	165		500	672.8		mg/L		101	80 - 120

**Lab Sample ID: 280-141350-18 MSD**  
**Matrix: Water**  
**Analysis Batch: 513325**

**Client Sample ID: MW-46B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	165		500	665.0		mg/L		100	80 - 120	1	20

**Lab Sample ID: 280-141350-18 DU**  
**Matrix: Water**  
**Analysis Batch: 513325**

**Client Sample ID: MW-46B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	165		500	162.6		mg/L				2	15

**Lab Sample ID: MB 280-513527/6**  
**Matrix: Water**  
**Analysis Batch: 513527**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.00		mg/L			10/21/20 21:17	1

**Lab Sample ID: LCS 280-513527/4**  
**Matrix: Water**  
**Analysis Batch: 513527**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	96.48		mg/L		96	90 - 110

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: LCSD 280-513527/5**  
**Matrix: Water**  
**Analysis Batch: 513527**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100	96.54		mg/L		97	90 - 110	0	10

**Lab Sample ID: MRL 280-513527/3**  
**Matrix: Water**  
**Analysis Batch: 513527**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	0.500	ND	^	mg/L		98	50 - 150		
Sulfate	5.00	ND		mg/L		94	50 - 150		

**Lab Sample ID: MB 280-514145/6**  
**Matrix: Water**  
**Analysis Batch: 514145**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.500		mg/L			10/26/20 16:32	1

**Lab Sample ID: LCS 280-514145/4**  
**Matrix: Water**  
**Analysis Batch: 514145**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	5.00	5.084		mg/L		102	90 - 110		

**Lab Sample ID: LCSD 280-514145/5**  
**Matrix: Water**  
**Analysis Batch: 514145**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	5.00	5.085		mg/L		102	90 - 110	0	10

**Lab Sample ID: MRL 280-514145/3**  
**Matrix: Water**  
**Analysis Batch: 514145**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	0.500	0.5245		mg/L		105	50 - 150		

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 280-512020/1**  
**Matrix: Water**  
**Analysis Batch: 512020**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10.0		mg/L			10/09/20 16:44	1

Eurofins TestAmerica, Denver

# QC Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 280-512020/2**  
**Matrix: Water**  
**Analysis Batch: 512020**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	475.0		mg/L		95	93 - 110

**Lab Sample ID: LCSD 280-512020/3**  
**Matrix: Water**  
**Analysis Batch: 512020**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids (TDS)	501	487.0		mg/L		97	93 - 110	2	20

**Lab Sample ID: 280-141350-1 DU**  
**Matrix: Water**  
**Analysis Batch: 512020**

**Client Sample ID: MW-14BR**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	852		882.0		mg/L		3	10

**Lab Sample ID: MB 280-512444/2**  
**Matrix: Water**  
**Analysis Batch: 512444**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10.0		mg/L			10/13/20 18:52	1

**Lab Sample ID: LCS 280-512444/1**  
**Matrix: Water**  
**Analysis Batch: 512444**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	509.0		mg/L		102	93 - 110

**Lab Sample ID: 280-141350-4 DU**  
**Matrix: Water**  
**Analysis Batch: 512444**

**Client Sample ID: MW-32B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	1810		1868		mg/L		3	10

# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Metals

### Prep Batch: 455954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total Recoverable	Water	3005A	
280-141350-2	MW-20B	Total Recoverable	Water	3005A	
280-141350-3	MW-21B	Total Recoverable	Water	3005A	
280-141350-4	MW-32B	Total Recoverable	Water	3005A	
280-141350-5	MW-36B	Total Recoverable	Water	3005A	
280-141350-6	DUP-01	Total Recoverable	Water	3005A	
280-141350-7	MW-37B	Total Recoverable	Water	3005A	
280-141350-8	FB-01	Total Recoverable	Water	3005A	
280-141350-9	MW-38B	Total Recoverable	Water	3005A	
280-141350-10	MW-38C	Total Recoverable	Water	3005A	
280-141350-11	MW-39B	Total Recoverable	Water	3005A	
280-141350-12	MW-40B	Total Recoverable	Water	3005A	
280-141350-13	MW-41B	Total Recoverable	Water	3005A	
280-141350-14	MW-42B	Total Recoverable	Water	3005A	
280-141350-15	MW-43B	Total Recoverable	Water	3005A	
280-141350-16	MW-44B	Total Recoverable	Water	3005A	
280-141350-17	MW-45B	Total Recoverable	Water	3005A	
280-141350-18	MW-46B	Total Recoverable	Water	3005A	
280-141350-19	MW-47B	Total Recoverable	Water	3005A	
280-141350-20	MW-49B	Total Recoverable	Water	3005A	
MB 240-455954/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-455954/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-141350-4 MS	MW-32B	Total Recoverable	Water	3005A	
280-141350-4 MSD	MW-32B	Total Recoverable	Water	3005A	

### Prep Batch: 455955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-21	MW-52B	Total Recoverable	Water	3005A	
280-141350-22	MW-53B	Total Recoverable	Water	3005A	
MB 240-455955/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-455955/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Analysis Batch: 456232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total Recoverable	Water	6020A	455954
280-141350-2	MW-20B	Total Recoverable	Water	6020A	455954
280-141350-3	MW-21B	Total Recoverable	Water	6020A	455954
280-141350-4	MW-32B	Total Recoverable	Water	6020A	455954
280-141350-5	MW-36B	Total Recoverable	Water	6020A	455954
280-141350-6	DUP-01	Total Recoverable	Water	6020A	455954
280-141350-7	MW-37B	Total Recoverable	Water	6020A	455954
280-141350-8	FB-01	Total Recoverable	Water	6020A	455954
280-141350-9	MW-38B	Total Recoverable	Water	6020A	455954
280-141350-10	MW-38C	Total Recoverable	Water	6020A	455954
280-141350-11	MW-39B	Total Recoverable	Water	6020A	455954
280-141350-12	MW-40B	Total Recoverable	Water	6020A	455954
280-141350-13	MW-41B	Total Recoverable	Water	6020A	455954
280-141350-14	MW-42B	Total Recoverable	Water	6020A	455954
280-141350-15	MW-43B	Total Recoverable	Water	6020A	455954
280-141350-16	MW-44B	Total Recoverable	Water	6020A	455954
280-141350-17	MW-45B	Total Recoverable	Water	6020A	455954

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# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Metals (Continued)

### Analysis Batch: 456232 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-18	MW-46B	Total Recoverable	Water	6020A	455954
280-141350-19	MW-47B	Total Recoverable	Water	6020A	455954
280-141350-20	MW-49B	Total Recoverable	Water	6020A	455954
280-141350-21	MW-52B	Total Recoverable	Water	6020A	455955
280-141350-22	MW-53B	Total Recoverable	Water	6020A	455955
MB 240-455954/1-A	Method Blank	Total Recoverable	Water	6020A	455954
MB 240-455955/1-A	Method Blank	Total Recoverable	Water	6020A	455955
LCS 240-455954/2-A	Lab Control Sample	Total Recoverable	Water	6020A	455954
LCS 240-455955/3-A	Lab Control Sample	Total Recoverable	Water	6020A	455955
280-141350-4 MS	MW-32B	Total Recoverable	Water	6020A	455954
280-141350-4 MSD	MW-32B	Total Recoverable	Water	6020A	455954

### Prep Batch: 512538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total/NA	Water	7470A	
280-141350-2	MW-20B	Total/NA	Water	7470A	
280-141350-3	MW-21B	Total/NA	Water	7470A	
280-141350-4	MW-32B	Total/NA	Water	7470A	
280-141350-5	MW-36B	Total/NA	Water	7470A	
280-141350-6	DUP-01	Total/NA	Water	7470A	
280-141350-7	MW-37B	Total/NA	Water	7470A	
280-141350-8	FB-01	Total/NA	Water	7470A	
280-141350-9	MW-38B	Total/NA	Water	7470A	
280-141350-10	MW-38C	Total/NA	Water	7470A	
280-141350-11	MW-39B	Total/NA	Water	7470A	
MB 280-512538/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-512538/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-512538/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
280-141350-4 MS	MW-32B	Total/NA	Water	7470A	
280-141350-4 MSD	MW-32B	Total/NA	Water	7470A	

### Prep Batch: 512649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total Recoverable	Water	3005A	
280-141350-2	MW-20B	Total Recoverable	Water	3005A	
280-141350-3	MW-21B	Total Recoverable	Water	3005A	
280-141350-4	MW-32B	Total Recoverable	Water	3005A	
280-141350-5	MW-36B	Total Recoverable	Water	3005A	
280-141350-6	DUP-01	Total Recoverable	Water	3005A	
280-141350-7	MW-37B	Total Recoverable	Water	3005A	
280-141350-8	FB-01	Total Recoverable	Water	3005A	
280-141350-9	MW-38B	Total Recoverable	Water	3005A	
280-141350-10	MW-38C	Total Recoverable	Water	3005A	
MB 280-512649/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-512649/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-141350-4 MS	MW-32B	Total Recoverable	Water	3005A	
280-141350-4 MSD	MW-32B	Total Recoverable	Water	3005A	

### Prep Batch: 512650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-11	MW-39B	Total Recoverable	Water	3005A	

Eurofins TestAmerica, Denver

# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Metals (Continued)

### Prep Batch: 512650 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-12	MW-40B	Total Recoverable	Water	3005A	
280-141350-13	MW-41B	Total Recoverable	Water	3005A	
280-141350-14	MW-42B	Total Recoverable	Water	3005A	
280-141350-15	MW-43B	Total Recoverable	Water	3005A	
280-141350-16	MW-44B	Total Recoverable	Water	3005A	
280-141350-17	MW-45B	Total Recoverable	Water	3005A	
280-141350-18	MW-46B	Total Recoverable	Water	3005A	
280-141350-19	MW-47B	Total Recoverable	Water	3005A	
280-141350-20	MW-49B	Total Recoverable	Water	3005A	
280-141350-21	MW-52B	Total Recoverable	Water	3005A	
280-141350-22	MW-53B	Total Recoverable	Water	3005A	
MB 280-512650/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-512650/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-141350-11 MS	MW-39B	Total Recoverable	Water	3005A	
280-141350-11 MSD	MW-39B	Total Recoverable	Water	3005A	

### Analysis Batch: 512663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total/NA	Water	7470A	512538
280-141350-2	MW-20B	Total/NA	Water	7470A	512538
280-141350-3	MW-21B	Total/NA	Water	7470A	512538
280-141350-4	MW-32B	Total/NA	Water	7470A	512538
280-141350-5	MW-36B	Total/NA	Water	7470A	512538
280-141350-6	DUP-01	Total/NA	Water	7470A	512538
280-141350-7	MW-37B	Total/NA	Water	7470A	512538
280-141350-8	FB-01	Total/NA	Water	7470A	512538
280-141350-9	MW-38B	Total/NA	Water	7470A	512538
280-141350-10	MW-38C	Total/NA	Water	7470A	512538
280-141350-11	MW-39B	Total/NA	Water	7470A	512538
MB 280-512538/1-A	Method Blank	Total/NA	Water	7470A	512538
LCS 280-512538/2-A	Lab Control Sample	Total/NA	Water	7470A	512538
LCSD 280-512538/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	512538
280-141350-4 MS	MW-32B	Total/NA	Water	7470A	512538
280-141350-4 MSD	MW-32B	Total/NA	Water	7470A	512538

### Analysis Batch: 512855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total Recoverable	Water	6010C	512649
280-141350-2	MW-20B	Total Recoverable	Water	6010C	512649
280-141350-3	MW-21B	Total Recoverable	Water	6010C	512649
280-141350-4	MW-32B	Total Recoverable	Water	6010C	512649
280-141350-5	MW-36B	Total Recoverable	Water	6010C	512649
280-141350-6	DUP-01	Total Recoverable	Water	6010C	512649
280-141350-7	MW-37B	Total Recoverable	Water	6010C	512649
280-141350-8	FB-01	Total Recoverable	Water	6010C	512649
280-141350-9	MW-38B	Total Recoverable	Water	6010C	512649
280-141350-10	MW-38C	Total Recoverable	Water	6010C	512649
MB 280-512649/1-A	Method Blank	Total Recoverable	Water	6010C	512649
LCS 280-512649/2-A	Lab Control Sample	Total Recoverable	Water	6010C	512649
280-141350-4 MS	MW-32B	Total Recoverable	Water	6010C	512649
280-141350-4 MSD	MW-32B	Total Recoverable	Water	6010C	512649

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# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Metals

### Prep Batch: 512934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-12	MW-40B	Total/NA	Water	7470A	
280-141350-13	MW-41B	Total/NA	Water	7470A	
280-141350-14	MW-42B	Total/NA	Water	7470A	
280-141350-15	MW-43B	Total/NA	Water	7470A	
280-141350-16	MW-44B	Total/NA	Water	7470A	
280-141350-17	MW-45B	Total/NA	Water	7470A	
280-141350-18	MW-46B	Total/NA	Water	7470A	
280-141350-19	MW-47B	Total/NA	Water	7470A	
280-141350-20	MW-49B	Total/NA	Water	7470A	
280-141350-21	MW-52B	Total/NA	Water	7470A	
280-141350-22	MW-53B	Total/NA	Water	7470A	
MB 280-512934/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-512934/2-A	Lab Control Sample	Total/NA	Water	7470A	

### Analysis Batch: 512972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-12	MW-40B	Total/NA	Water	7470A	512934
280-141350-13	MW-41B	Total/NA	Water	7470A	512934
280-141350-14	MW-42B	Total/NA	Water	7470A	512934
280-141350-15	MW-43B	Total/NA	Water	7470A	512934
280-141350-16	MW-44B	Total/NA	Water	7470A	512934
280-141350-17	MW-45B	Total/NA	Water	7470A	512934
280-141350-18	MW-46B	Total/NA	Water	7470A	512934
280-141350-19	MW-47B	Total/NA	Water	7470A	512934
280-141350-20	MW-49B	Total/NA	Water	7470A	512934
280-141350-21	MW-52B	Total/NA	Water	7470A	512934
280-141350-22	MW-53B	Total/NA	Water	7470A	512934
MB 280-512934/1-A	Method Blank	Total/NA	Water	7470A	512934
LCS 280-512934/2-A	Lab Control Sample	Total/NA	Water	7470A	512934

### Analysis Batch: 513098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-11	MW-39B	Total Recoverable	Water	6010C	512650
280-141350-12	MW-40B	Total Recoverable	Water	6010C	512650
280-141350-13	MW-41B	Total Recoverable	Water	6010C	512650
280-141350-14	MW-42B	Total Recoverable	Water	6010C	512650
280-141350-15	MW-43B	Total Recoverable	Water	6010C	512650
280-141350-16	MW-44B	Total Recoverable	Water	6010C	512650
280-141350-17	MW-45B	Total Recoverable	Water	6010C	512650
280-141350-18	MW-46B	Total Recoverable	Water	6010C	512650
280-141350-19	MW-47B	Total Recoverable	Water	6010C	512650
280-141350-20	MW-49B	Total Recoverable	Water	6010C	512650
280-141350-21	MW-52B	Total Recoverable	Water	6010C	512650
280-141350-22	MW-53B	Total Recoverable	Water	6010C	512650
MB 280-512650/1-A	Method Blank	Total Recoverable	Water	6010C	512650
LCS 280-512650/2-A	Lab Control Sample	Total Recoverable	Water	6010C	512650
280-141350-11 MS	MW-39B	Total Recoverable	Water	6010C	512650
280-141350-11 MSD	MW-39B	Total Recoverable	Water	6010C	512650

Eurofins TestAmerica, Denver

# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## General Chemistry

### Analysis Batch: 512020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total/NA	Water	SM 2540C	
280-141350-2	MW-20B	Total/NA	Water	SM 2540C	
280-141350-3	MW-21B	Total/NA	Water	SM 2540C	
280-141350-9	MW-38B	Total/NA	Water	SM 2540C	
280-141350-10	MW-38C	Total/NA	Water	SM 2540C	
280-141350-13	MW-41B	Total/NA	Water	SM 2540C	
280-141350-16	MW-44B	Total/NA	Water	SM 2540C	
280-141350-17	MW-45B	Total/NA	Water	SM 2540C	
280-141350-18	MW-46B	Total/NA	Water	SM 2540C	
280-141350-19	MW-47B	Total/NA	Water	SM 2540C	
MB 280-512020/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-512020/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 280-512020/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
280-141350-1 DU	MW-14BR	Total/NA	Water	SM 2540C	

### Analysis Batch: 512444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-4	MW-32B	Total/NA	Water	SM 2540C	
280-141350-5	MW-36B	Total/NA	Water	SM 2540C	
280-141350-6	DUP-01	Total/NA	Water	SM 2540C	
280-141350-7	MW-37B	Total/NA	Water	SM 2540C	
280-141350-8	FB-01	Total/NA	Water	SM 2540C	
280-141350-11	MW-39B	Total/NA	Water	SM 2540C	
280-141350-12	MW-40B	Total/NA	Water	SM 2540C	
280-141350-14	MW-42B	Total/NA	Water	SM 2540C	
280-141350-15	MW-43B	Total/NA	Water	SM 2540C	
280-141350-20	MW-49B	Total/NA	Water	SM 2540C	
280-141350-21	MW-52B	Total/NA	Water	SM 2540C	
280-141350-22	MW-53B	Total/NA	Water	SM 2540C	
MB 280-512444/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-512444/1	Lab Control Sample	Total/NA	Water	SM 2540C	
280-141350-4 DU	MW-32B	Total/NA	Water	SM 2540C	

### Analysis Batch: 512929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-5	MW-36B	Total/NA	Water	9056A	
280-141350-6	DUP-01	Total/NA	Water	9056A	
280-141350-7	MW-37B	Total/NA	Water	9056A	
280-141350-8	FB-01	Total/NA	Water	9056A	
280-141350-9	MW-38B	Total/NA	Water	9056A	
280-141350-9	MW-38B	Total/NA	Water	9056A	
280-141350-10	MW-38C	Total/NA	Water	9056A	
280-141350-11	MW-39B	Total/NA	Water	9056A	
280-141350-12	MW-40B	Total/NA	Water	9056A	
280-141350-13	MW-41B	Total/NA	Water	9056A	
MB 280-512929/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512929/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512929/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512929/3	Lab Control Sample	Total/NA	Water	9056A	
280-141350-8 MS	FB-01	Total/NA	Water	9056A	
280-141350-8 MSD	FB-01	Total/NA	Water	9056A	

Eurofins TestAmerica, Denver

# QC Association Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## General Chemistry (Continued)

### Analysis Batch: 512929 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-8 DU	FB-01	Total/NA	Water	9056A	

### Analysis Batch: 513151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total/NA	Water	9056A	
280-141350-2	MW-20B	Total/NA	Water	9056A	
280-141350-3	MW-21B	Total/NA	Water	9056A	
280-141350-4	MW-32B	Total/NA	Water	9056A	
280-141350-5	MW-36B	Total/NA	Water	9056A	
280-141350-6	DUP-01	Total/NA	Water	9056A	
280-141350-7	MW-37B	Total/NA	Water	9056A	
280-141350-9	MW-38B	Total/NA	Water	9056A	
280-141350-10	MW-38C	Total/NA	Water	9056A	
280-141350-11	MW-39B	Total/NA	Water	9056A	
280-141350-12	MW-40B	Total/NA	Water	9056A	
280-141350-20	MW-49B	Total/NA	Water	9056A	
280-141350-21	MW-52B	Total/NA	Water	9056A	
280-141350-22	MW-53B	Total/NA	Water	9056A	
MB 280-513151/90	Method Blank	Total/NA	Water	9056A	
MB 280-513151/93	Method Blank	Total/NA	Water	9056A	
LCS 280-513151/88	Lab Control Sample	Total/NA	Water	9056A	
LCS 280-513151/91	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-513151/89	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 280-513151/92	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-513151/3	Lab Control Sample	Total/NA	Water	9056A	
280-141350-4 MS	MW-32B	Total/NA	Water	9056A	
280-141350-4 MSD	MW-32B	Total/NA	Water	9056A	
280-141350-11 MS	MW-39B	Total/NA	Water	9056A	
280-141350-11 MSD	MW-39B	Total/NA	Water	9056A	
280-141350-4 DU	MW-32B	Total/NA	Water	9056A	
280-141350-11 DU	MW-39B	Total/NA	Water	9056A	

### Analysis Batch: 513157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-1	MW-14BR	Total/NA	Water	9056A	
280-141350-2	MW-20B	Total/NA	Water	9056A	
280-141350-3	MW-21B	Total/NA	Water	9056A	
280-141350-4	MW-32B	Total/NA	Water	9056A	
280-141350-14	MW-42B	Total/NA	Water	9056A	
280-141350-15	MW-43B	Total/NA	Water	9056A	
280-141350-16	MW-44B	Total/NA	Water	9056A	
280-141350-17	MW-45B	Total/NA	Water	9056A	
280-141350-18	MW-46B	Total/NA	Water	9056A	
280-141350-19	MW-47B	Total/NA	Water	9056A	
280-141350-20	MW-49B	Total/NA	Water	9056A	
280-141350-21	MW-52B	Total/NA	Water	9056A	
280-141350-22	MW-53B	Total/NA	Water	9056A	
MB 280-513157/13	Method Blank	Total/NA	Water	9056A	
LCS 280-513157/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-513157/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-513157/10	Lab Control Sample	Total/NA	Water	9056A	

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# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## General Chemistry (Continued)

### Analysis Batch: 513157 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-4 MS	MW-32B	Total/NA	Water	9056A	
280-141350-4 MSD	MW-32B	Total/NA	Water	9056A	
280-141350-18 MS	MW-46B	Total/NA	Water	9056A	
280-141350-18 MSD	MW-46B	Total/NA	Water	9056A	
280-141350-4 DU	MW-32B	Total/NA	Water	9056A	
280-141350-18 DU	MW-46B	Total/NA	Water	9056A	

### Analysis Batch: 513325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-13	MW-41B	Total/NA	Water	9056A	
280-141350-14	MW-42B	Total/NA	Water	9056A	
280-141350-15	MW-43B	Total/NA	Water	9056A	
280-141350-16	MW-44B	Total/NA	Water	9056A	
280-141350-17	MW-45B	Total/NA	Water	9056A	
280-141350-18	MW-46B	Total/NA	Water	9056A	
MB 280-513325/6	Method Blank	Total/NA	Water	9056A	
LCS 280-513325/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-513325/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-513325/3	Lab Control Sample	Total/NA	Water	9056A	
280-141350-18 MS	MW-46B	Total/NA	Water	9056A	
280-141350-18 MSD	MW-46B	Total/NA	Water	9056A	
280-141350-18 DU	MW-46B	Total/NA	Water	9056A	

### Analysis Batch: 513527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-19	MW-47B	Total/NA	Water	9056A	
MB 280-513527/6	Method Blank	Total/NA	Water	9056A	
LCS 280-513527/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-513527/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-513527/3	Lab Control Sample	Total/NA	Water	9056A	

### Analysis Batch: 514145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141350-5	MW-36B	Total/NA	Water	9056A	
280-141350-6	DUP-01	Total/NA	Water	9056A	
MB 280-514145/6	Method Blank	Total/NA	Water	9056A	
LCS 280-514145/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-514145/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-514145/3	Lab Control Sample	Total/NA	Water	9056A	

# Lab Chronicle

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

**Client Sample ID: MW-14BR**

**Lab Sample ID: 280-141350-1**

Date Collected: 10/06/20 10:20

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 07:48	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:13	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 18:28	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 08:44	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/19/20 23:58	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

**Client Sample ID: MW-20B**

**Lab Sample ID: 280-141350-2**

Date Collected: 10/06/20 09:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 07:52	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:16	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 18:31	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 09:02	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 00:14	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

**Client Sample ID: MW-21B**

**Lab Sample ID: 280-141350-3**

Date Collected: 10/06/20 11:20

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 08:08	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:28	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 18:33	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 09:19	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 02:09	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-32B

## Lab Sample ID: 280-141350-4

Date Collected: 10/07/20 15:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 07:31	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:01	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 18:36	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 09:37	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 00:31	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	40 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

## Client Sample ID: MW-36B

## Lab Sample ID: 280-141350-5

Date Collected: 10/07/20 16:45

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 08:12	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:31	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 18:44	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 11:22	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/16/20 22:57	BWH	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	514145	10/26/20 16:51	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	60 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

## Client Sample ID: DUP-01

## Lab Sample ID: 280-141350-6

Date Collected: 10/07/20 09:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 08:15	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:36	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 18:57	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 11:40	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/16/20 23:13	BWH	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	514145	10/26/20 17:07	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	60 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

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# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

**Client Sample ID: MW-37B**

**Lab Sample ID: 280-141350-7**

**Date Collected: 10/07/20 17:30**

**Matrix: Water**

**Date Received: 10/08/20 15:40**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 08:19	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:38	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 19:00	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 11:57	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/16/20 23:30	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

**Client Sample ID: FB-01**

**Lab Sample ID: 280-141350-8**

**Date Collected: 10/07/20 17:30**

**Matrix: Water**

**Date Received: 10/08/20 15:40**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 08:22	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:43	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 19:02	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/16/20 23:46	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

**Client Sample ID: MW-38B**

**Lab Sample ID: 280-141350-9**

**Date Collected: 10/06/20 13:15**

**Matrix: Water**

**Date Received: 10/08/20 15:40**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 08:25	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:46	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 19:05	NK	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	513151	10/20/20 12:32	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/17/20 01:25	BWH	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	512929	10/17/20 01:41	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

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# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-38C

## Lab Sample ID: 280-141350-10

Date Collected: 10/06/20 12:15

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512649	10/15/20 15:40	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			512855	10/16/20 08:29	MRJ	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:56	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 19:07	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 12:50	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/17/20 01:58	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

## Client Sample ID: MW-39B

## Lab Sample ID: 280-141350-11

Date Collected: 10/07/20 14:40

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 21:23	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:58	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512538	10/14/20 14:20	NK	TAL DEN
Total/NA	Analysis	7470A		1			512663	10/14/20 19:10	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 13:07	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/17/20 02:14	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	40 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

## Client Sample ID: MW-40B

## Lab Sample ID: 280-141350-12

Date Collected: 10/07/20 13:50

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 21:41	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:03	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:14	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 15:45	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/17/20 02:30	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-41B

## Lab Sample ID: 280-141350-13

Date Collected: 10/06/20 08:45

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 21:59	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:08	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:21	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512929	10/17/20 02:47	BWH	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	513325	10/20/20 15:43	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

## Client Sample ID: MW-42B

## Lab Sample ID: 280-141350-14

Date Collected: 10/07/20 10:00

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:02	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:13	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:24	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 03:15	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	513325	10/20/20 16:16	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	30 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

## Client Sample ID: MW-43B

## Lab Sample ID: 280-141350-15

Date Collected: 10/07/20 09:25

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:06	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:16	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:26	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 05:26	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	513325	10/20/20 16:33	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

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# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-44B

## Lab Sample ID: 280-141350-16

Date Collected: 10/06/20 14:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:10	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:26	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:29	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 05:59	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	513325	10/20/20 16:49	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

## Client Sample ID: MW-45B

## Lab Sample ID: 280-141350-17

Date Collected: 10/06/20 15:15

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:13	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:29	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:31	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 06:32	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	513325	10/20/20 17:06	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

## Client Sample ID: MW-46B

## Lab Sample ID: 280-141350-18

Date Collected: 10/06/20 15:30

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:17	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:34	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:34	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 07:05	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	513325	10/20/20 17:22	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Client Sample ID: MW-47B

## Lab Sample ID: 280-141350-19

Date Collected: 10/06/20 16:40

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:20	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:39	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:36	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 10:57	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	513527	10/21/20 22:11	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	512020	10/09/20 16:44	BAR	TAL DEN

## Client Sample ID: MW-49B

## Lab Sample ID: 280-141350-20

Date Collected: 10/07/20 08:00

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:24	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455954	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:41	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:39	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 16:02	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 02:26	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

## Client Sample ID: MW-52B

## Lab Sample ID: 280-141350-21

Date Collected: 10/07/20 11:45

Matrix: Water

Date Received: 10/08/20 15:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:28	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455955	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 13:29	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:42	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 16:19	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 02:42	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

**Client Sample ID: MW-53B**

**Lab Sample ID: 280-141350-22**

**Date Collected: 10/07/20 12:50**

**Matrix: Water**

**Date Received: 10/08/20 15:40**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	512650	10/14/20 20:21	MRJ	TAL DEN
Total Recoverable	Analysis	6010C		1			513098	10/16/20 22:31	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	455955	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 13:31	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	512934	10/16/20 15:15	NK	TAL DEN
Total/NA	Analysis	7470A		1			512972	10/16/20 19:44	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	513151	10/20/20 16:37	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/20/20 02:59	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	512444	10/13/20 18:52	SVC	TAL DEN

**Laboratory References:**

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

# Accreditation/Certification Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-141350-2

## Laboratory: Eurofins TestAmerica, Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4025-011	01-08-21

## Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	12-20-20
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

# Denver #280

## Chain of Custody Record

Eurolins TestAmerica, Denver  
 4955 Yarrow Street  
 Arvada, CO 80002  
 Phone (303) 736-0100 Fax (303) 431-7171



Environment Testing  
 America

**Client Information**  
 Company: AECOM Technical Services Inc.  
 Address: 6200 S. Quebec Street  
 City: Greenwood Village  
 State, Zip: CO, 80111  
 Phone: [blank]  
 Email: katie.abott@aecom.com  
 Project Name: CCR - Basin Electric 2020 - LRS  
 Site: [blank]

**Sample Information**  
 Sample: Chairs Arrived  
 Phone: 612-202-5465  
 Lab PM: McEntee, Patrick J  
 E-Mail: Patrick.McEntee@Eurolins.com

**Due Date Requested:** [blank]  
**TAT Requested (days):** Standard  
**PO #:** [blank]  
**WO #:** [blank]  
**Purchase Order Requested:** [blank]

**Carrier Tracking Info:** Delivered by Sample  
 COC No: 280-102196-29898\_1  
 Page: Page 1 of 2  
 Job #: NA 10/20/20

**Barcode:** 280-141350 Chain of Custody

**Codes:**  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4-5  
 X - EDTA  
 Y - EDA  
 Z - other (specify)

**Matrix (Water, Solid, Other):** [blank]  
**Preservation Code:** [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	610C, 7470A	2540C, Calcd - Local Method	956A, 280 - (MOD) Copy Analytes	6020A - (MOD) 13 Metals	9315_Ra226 - Standard Target List	9320_Ra228	Ra226Ra228_GFP	Total Number of Containers	Special Instructions/Note:
MW-14BR	10/6/2020	1020	Grab	Water		N	N	X	X	X	X	X	X	X	X	
MW-20B	10/6/2020	0930		Water		N	N	X	X	X	X	X	X	X	X	
MW-21B	10/6/2020	1120		Water		N	N	X	X	X	X	X	X	X	X	
MW-32B	10/7/2020	1530		Water		N	N	X	X	X	X	X	X	X	X	
MW-36B	10/7/2020	1615		Water		N	N	X	X	X	X	X	X	X	X	
DUP-01	10/7/2020	-		Water		N	N	X	X	X	X	X	X	X	X	
MW-37B	10/7/2020	1730		Water		N	N	X	X	X	X	X	X	X	X	
FB-01	10/7/2020	1730		Water		N	N	X	X	X	X	X	X	X	X	
MW-38B	10/6/2020	1315		Water		N	N	X	X	X	X	X	X	X	X	
MW-38C	10/6/2020	1215		Water		N	N	X	X	X	X	X	X	X	X	
MW-39B	10/7/2020	1440	Grab	Water		N	N	X	X	X	X	X	X	X	X	

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:** [blank]

**Relinquished by:** NA **Date:** 10/8/2020 15:40  
**Relinquished by:** Patrick McEntee **Date:** 10/8/2020 15:40  
**Relinquished by:** [blank] **Date:** [blank]

**Company:** AECOM  
**Company:** AECOM  
**Company:** AECOM

**Custody Seal No.:** 11-03 RR-1018/20



# Denver #280

## Chain of Custody Record

**Eurofins TestAmerica, Denver**  
 4955 Yarrow Street  
 Arvada, CO 80002  
 Phone (303) 736-0100 Fax (303) 431-7171

**eurofins** Environment Testing America

**Client Information**  
 Company: AECOM Technical Services Inc.  
 Address: 6200 S. Quebec Street  
 City: Greenwood Village  
 State, Zip: CO, 80111  
 Phone: [Blank]  
 Email: katie.abbott@aecom.com  
 Project Name: CCR - Basin Electric 2020 - LRS  
 Site: [Blank]

**Sample Information**  
 Sample: Chris Abbott  
 Phone: 612-202-5465  
 Lab PM: McEntee, Patrick J  
 E-Mail: Patrick.McEntee@Eurofins.com

**Due Date Requested:** TAT Requested (days): Standard  
 PO #: [Blank]  
 Purchase Order Requested: [Blank]  
 WO #: [Blank]  
 Project #: 28020759  
 SSOW#: [Blank]

**Analysis Requested**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Solid, Other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7470A	2540C, Calcd - Local Method	9056A, 280 - (MOD) Copy Analytes	6020A - (MOD) 13 Metals	9315, Ra226 - Standard Target List	9320, Ra228	Ra226Ra228, GFFC	Total Number of Containers	Special Instructions/Note:
MW-40B	10/7/2020	1350	Grab	Water		N	X	X	X	X	X	X	X	X		
MW-41B	10/6/2020	0845		Water		N	X	X	X	X	X	X	X	X		
MW-42B	10/7/2020	1000		Water		N	X	X	X	X	X	X	X	X		
MW-43B	10/7/2020	0925		Water		N	X	X	X	X	X	X	X	X		
MW-44B	10/6/2020	1430		Water		N	X	X	X	X	X	X	X	X		
MW-45B	10/6/2020	1515		Water		N	X	X	X	X	X	X	X	X		
MW-46B	10/6/2020	1530		Water		N	X	X	X	X	X	X	X	X		
MW-47B	10/6/2020	1640		Water		N	X	X	X	X	X	X	X	X		
MW-49B	10/7/2020	0800		Water		N	X	X	X	X	X	X	X	X		
MW-52B	10/7/2020	1145		Water		N	X	X	X	X	X	X	X	X		
MW-53B	10/7/2020	1250	Grab	Water		N	X	X	X	X	X	X	X	X		

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)

**Empty Kit Relinquished by:** [Blank]  
**Relinquished by:** [Blank]  
**Relinquished by:** [Blank]  
**Relinquished by:** [Blank]

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:** [Blank]

**Method of Shipment:** [Blank]  
 Date/Time: 10/8/20 1540  
 Date/Time: [Blank]  
 Date/Time: [Blank]

**Received by:** [Blank]  
 Received by: [Blank]  
 Received by: [Blank]

**Company:** AECOM  
 Company: [Blank]  
 Company: [Blank]

**Custody Seal No.:** [Blank]  
 Δ Yes Δ No

**Cooler Temperature(s) °C and Other Remarks:** [Blank]



# Chain of Custody Record



Environment Testing  
 America



<b>Client Information (Sub Contract Lab)</b>		Sampler: Lab PM: McEntee, Patrick J	Carrier Tracking Net(s):	COC No: 280-542360.1						
Shipping/Receiving		Phone: Patrick, McEntee@Eurofins.com	State of Origin: Colorado	Page: Page 1 of 3						
TestAmerica Laboratories, Inc.		Address: 4101 Shuffel Street NW, North Canton, OH, 44720	Accreditations Required (See note): NELAP - Oregon	Job #: 280-141350-2						
Due Date Requested: 10/21/2020		PO #: 330-497-9396(Tel) 330-497-0772(Fax)	<b>Analysis Requested</b>							
TAT Requested (days):		VO #:	A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:							
Project Name: CCR - Basin Electric 2020 - LRS		Project #: 28020759	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)							
Site:		SSOW#:	Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:							
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (W=Water, S=solid, D=dust/aerosol, BT=BIOM, AP=Air)</b>	<b>Field Filtered Sample (Yes or No)</b>	<b>Perform MS/MSD (Yes or No)</b>	<b>6020A/3005A (MD) 13 Metals</b>	<b>Total Number of Containers</b>	<b>Special Instructions/Note:</b>
MW-14BR (280-141350-1)		10/6/20	10:20 Mountain	Water	Water	X	X	-	1	545
MW-20B (280-141350-2)		10/6/20	09:30 Mountain	Water	Water	X	X	-	1	
MW-21B (280-141350-3)		10/6/20	11:20 Mountain	Water	Water	X	X	-	1	
MW-32B (280-141350-4)		10/7/20	15:30 Mountain	Water	Water	X	X	-	1	
MW-32B (280-141350-4MS)		10/7/20	15:30 Mountain	MS	Water	X	X	-	1	
MW-32B (280-141350-4MSD)		10/7/20	15:30 Mountain	MSD	Water	X	X	-	1	
MW-36B (280-141350-5)		10/7/20	16:45 Mountain	Water	Water	X	X	-	1	
DUP-01 (280-141350-6)		10/7/20	09:30 Mountain	Water	Water	X	X	-	1	
MW-37B (280-141350-7)		10/7/20	17:30 Mountain	Water	Water	X	X	-	1	

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

**Possible Hazard Identification**

Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by: *Paul J...* Date/Time: 10/12/2020 0845 Company: *B. Bricker*

Relinquished by: *Paul J...* Date/Time: 10/13/2020 1000 Company: *EA*

Relinquished by: Date/Time: Company:

Custody Seals Intact:  Yes  No  No  
 Cooler Temperature(s) °C and Other Remarks:





Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : \_\_\_\_\_

Canton Facility

Client IA Canton Site Name \_\_\_\_\_  
Cooler Received on 10/13/20 Opened on 10/13/20  
FedEx: 1<sup>st</sup> Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other \_\_\_\_\_

Cooler unpacked by: B. Bridwell

Receipt After-hours: Drop-off Date/Time \_\_\_\_\_ Storage Location \_\_\_\_\_

TestAmerica Cooler # IA Foam Box Client Cooler Box Other \_\_\_\_\_  
Packing material used: Bubble Wrap Foam Plastic Bag None Other \_\_\_\_\_  
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt  See Multiple Cooler Form  
IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
IR GUN #IR-12 (CF +0.5 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1  
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA  
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA  
-Were tamper/custody seals intact and uncompromised? Yes No NA

Tests that are not checked for pH by Receiving:  
VOAs  
Oil and Grease  
TOC

3. Shippers' packing slip attached to the cooler(s)? Yes No  
4. Did custody papers accompany the sample(s)? Yes No  
5. Were the custody papers relinquished & signed in the appropriate place? Yes No  
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No  
7. Did all bottles arrive in good condition (Unbroken)? Yes No  
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No  
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No  
10. Were correct bottle(s) used for the test(s) indicated? Yes No  
11. Sufficient quantity received to perform indicated analyses? Yes No  
12. Are these work share samples and all listed on the COC? Yes No

If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861  
14. Were VOAs on the COC? Yes No  
15. Were air bubbles >6 mm in any VOA vials? Yes ← Larger than this. Yes No NA  
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # \_\_\_\_\_ Yes No  
17. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_

Concerning \_\_\_\_\_

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES  additional next page

Samples processed by: \_\_\_\_\_

19. SAMPLE CONDITION

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
Sample(s) \_\_\_\_\_ were received in a broken container.  
Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.  
Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

VOA Sample Preservation - Date/Time VOAs Frozen: \_\_\_\_\_



# Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 280-141350-2

**Login Number: 141350**

**List Source: Eurofins TestAmerica, Denver**

**List Number: 1**

**Creator: Pottruff, Reed W**

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





Environment

Submitted to:  
Basin Electric Laramie River Station

Submitted by:  
AECOM  
Denver, CO

August 14, 2020

Inorganic & Radiochemistry  
Limited Data Validation Report

Basin Electric Laramie River Station  
Wheatland, Wyoming

Groundwater Sampling – June 2020  
Analyzed by TestAmerica Laboratories

Prepared by Joseph Capotrio  
Data Reviewer/Chemist

## **Overview**

The samples analyzed for the June 2020 sampling event are listed in the Table of Samples Validated (page 3). Limited data validation was performed on a total of twenty groundwater samples, one field duplicate sample, and one field blank Quality Control (QC) sample.

Samples were submitted to TestAmerica Laboratories of Denver, Colorado (TA-DEN) and radiochemistry analyses were subcontracted to TestAmerica Laboratories of Saint Louis, Missouri (TA-STL).

The reviewed analyses were Radium-226 by SW-846 Method 9315, Radium-228 by SW-846 Method 9320, the calculated combined Radium-226 and Radium-228, Select Total Metals by SW-846 Methods 6010C and 6020A, Chloride, Fluoride, and Sulfate by SW-846 Method 9056A, and Total Dissolved Solids (TDS) by SM2540C.

The Analytical Limited Data Validation Checklist is presented as pages 4-8. Data were evaluated using guidance set forth in the *United States Environmental Protection Agency (USEPA) contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Superfund Methods Data Review*, document number EPA-540-R-2017-001, January 2017; method requirements, and laboratory criteria.

The following data components were reviewed during the data validation procedure:

<b>Submitted Deliverables</b>
Case Narratives (including any assigned laboratory flags)
Chain-of-Custody (COC) form(s) and sample integrity
Sample results, reporting limits, dilution factors
Holding times
Method (preparation) blank results
Field blank results
Laboratory control sample (LCS), laboratory control sample duplicate (LCSD) results
Matrix spike (MS), matrix spike duplicate (MSD) results
Laboratory duplicate (or spiked duplicate) results
Field duplicate (FD) results (calculated Relative Percent Differences [RPD])
Electronic data deliverables (EDDs) – EQUIS format

### **Data Validation Qualifiers Assigned During this Review**

UJ Undetected, reporting limit estimated

Assigned qualifiers are detailed in the Analytical Data Validation Checklist and are summarized in the

Table of Qualified Analytical Results (page 9).

### **Overall Data Assessment**

Field and laboratory precision, field and laboratory accuracy, method compliance, and data set completeness are determined to be acceptable based on the data reported. No data are missing or rejected, therefore the completeness of the data set was calculated to be 100% and is acceptable. All reported data are suitable for their intended use as reported with the clarifications and qualifications noted.

**Table of Samples Validated  
Basin Electric – Laramie, Wyoming  
June 2020 Sampling  
TestAmerica Laboratories**

<b>Matrix</b>	<b>Sample ID</b>	<b>Sample Date and Time</b>	<b>Lab SDG</b>	<b>Lab ID</b>	<b>Sample Type</b>
WG	MW-14BR	06/04/19 15:40	280-137307-2	280-137307-1	N
WG	MW-20B	06/04/19 15:40	280-124847-2	280-124847-2	N
WG	MW-21B	06/04/19 15:40	280-137307-2	280-137307-3	N
WG	MW-32B	06/05/19 16:25	280-137307-1,2	280-137307-4	N
WG	MW-36B	06/06/19 08:45	280-137307-1,2	280-137307-5	N
WG	MW-37B	06/06/19 07:55	280-137307-1,2	280-137307-6	N
WG	MW-38B	06/05/19 12:00	280-137307-2	280-137307-7	N
WG	MW-39B	06/05/19 15:40	280-137307-1,2	280-137307-8	N
WG	MW-40B	06/05/19 14:45	280-137307-1,2	280-137307-9	N
WG	MW-41B	06/04/19 14:45	280-137307-1,2	280-137307-10	N
WG	MW-42B	06/04/19 13:00	280-137307-1,2	280-137307-11	N
WG	MW-43B	06/04/19 13:55	280-137307-1,2	280-137307-12	N
WG	MW-44B	06/04/19 12:00	280-137307-1,2	280-137307-13	N
WG	MW-45B	06/04/19 10:55	280-137307-1,2	280-137307-14	N
WG	MW-46B	06/04/19 10:15	280-137307-1,2	280-137307-15	N
WG	MW-47B	06/04/19 09:30	280-137307-1,2	280-137307-16	N
WG	MW-49B	06/04/19 17:00	280-137307-2	280-137307-17	N
WG	MW-52B	06/05/19 14:00	280-137307-2	280-137307-18	N
WG	MW-53B	06/05/19 13:00	280-137307-2	280-137307-19	N
WG	DUP-01 (MW-20B)	06/05/19 12:00	280-137307-1,2	280-137307-21	FD
WQ	FB-01	06/05/19 16:30	280-137307-1,2	280-137307-22	FB

FB = Field Blank

FD = Field Duplicate Sample

ID = Identifier

N = Normal Investigative Sample

SDG = Sample Delivery Group

WG = Ground Water

WQ = Water Quality Sample

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

Project Name: Basin Electric Laramie River Station, Wheatland, Wyoming	Laboratory: TestAmerica Denver, Colorado- primary laboratory					
Project Reference: Sampling – June 2020	Sample Matrix: Ground Water					
AECOM Project: 60577052	Sample Start Date: 6/02/2020					
Validator/Date Validated: Joseph Capotrio/ August 14, 2020 (completed)	Sample End Date: 6/04/2020					
Secondary Review by: Katie Abbott	Secondary Review Date: August 14, 2020					
Samples Analyzed: See Table of Samples Validated (page 3).						
Parameters Validated: Total Metals by SW-846 Method 6010C Total Metals by SW-846 Method 6020A Anions (Chloride, Fluoride, and Sulfate) by SW-846 Method 9056A Total Dissolved Solids (TDS) by SM2540C Radium-226 by SW-846 Method 9315 Radium-228 by SW-846 Method 9320 Combined Radium-226+Radium-228 by calculation						
Laboratory Project IDs/Sample Delivery Groups (SDGs): 280-137307-1,-2						
<b>PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT</b>						
Precision:	<b>X</b>	Acceptable		Unacceptable	<i>je</i>	Initials
<p>Comments: Precision is the measure of variability of individual sample measurements. Field precision was evaluated by reviewing the field duplicate results, and laboratory precision was evaluated by reviewing method duplicate sample results, laboratory control sample (LCS) to laboratory control sample duplicate (LCSD) results, and matrix spike (MS) to matrix spike duplicate (MSD) results.</p> <p>The following criteria was used to evaluate the field duplicate results:</p> <ul style="list-style-type: none"> <li>• For results where both reported values were greater than five times the reporting limit (RL), the relative percent difference between the samples and its field duplicate were compared against a criterion of 30%.</li> <li>• For results where either value reported was less than five times the RL, the absolute difference between the results was compared to a criterion of agreement within <math>\pm 2</math> times the RL</li> <li>• For radiochemistry, relative error ratio (RER) <math>\leq 1</math></li> </ul> <p>Laboratory criteria was used to evaluate laboratory precision.</p> <p>Field and laboratory precision is acceptable because no data are rejected. Precision measurements are reviewed in items 15, 16, 17, and 21.</p>						
Accuracy:	<b>X</b>	Acceptable		Unacceptable	<i>je</i>	Initials
<p>Comments: Field accuracy, a measure of the sampling bias, can be determined by reviewing field and equipment blank results for evidence of sample contamination stemming from sampling activities and/or field conditions. Laboratory accuracy is a measure of the system bias, and was measured by evaluating LCS, MS, and MSD percent recoveries (%Rs). LCS %Rs demonstrated the overall performance of the analysis. MS, MSD %Rs provided information on sample matrix interferences. Accuracy measurements were evaluated using laboratory control limits. The fluoride results for sample MW-37B was qualified as estimated due to low matrix spike recoveries; however, the overall field and laboratory accuracy is acceptable as the remaining results are unqualified based on accuracy and no data are rejected. Accuracy measurements are reviewed in items 12, 14, 15, 16, and 20.</p>						

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

Method Compliance:	<b>X</b>	Acceptable		Unacceptable	<i>je</i>	Initials
<p>Comments: For this data set, method compliance was determined by evaluating sample integrity, holding time, reporting limits, and laboratory blanks against method specified requirements. The overall method compliance is acceptable because the results were unqualified based on the method compliance parameters reviewed. Method compliance measurements are also reviewed in items 4, 6, 8, 11, 13, 18, 19, 20, and 22.</p>						
Completeness:	<b>X</b>	Acceptable		Unacceptable	<i>je</i>	Initials
<p>Comments: Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Determination of completeness included a review of chain of custody records, laboratory analytical methods and reporting limits, laboratory case narratives, and project requirements. Completeness also included 100% review of the laboratory sample data results, QC summary reports, and electronic data deliverables (EDDs). Any EDD modifications were made as documented in item 23.</p> <p>Because no results were missing or rejected, completeness of the data set was calculated to be 100% and is acceptable.</p>						

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

VALIDATION CRITERIA CHECK						
Data validation qualifiers potentially assigned during this review:						
J        estimated concentration						
J+      estimated concentration, high bias indicated						
J-      estimated concentration, low bias indicated						
R        rejected due to severe QA/QC noncompliance						
U        evaluated to be undetected at the reporting limit/concentration, due to evidence of contamination						
UU      undetected, reporting limit is estimated						
The following comments identifying sample results requiring qualification are in bold type. The other comments are of interest, but qualification of the sample results is not necessary.						
1. Did the laboratory identify any non-conformances related to the analytical results?	<b>X</b>	Yes		No	<i>je</i>	Initials
Comments: Data qualification, if any, related to the narrative comments and/or assigned laboratory flags contained in the analytical reports are discussed in the following sections.						
2. Were sample Chain-of-Custody forms complete?		Yes	<b>X</b>	No	<i>je</i>	Initials
Comments: The laboratory noted that the sample collection time was not included on some labels for samples MW-42B, MW-439B, MW-20B, and MW-14BR. As the samples were logged per the COC, further action was not necessary. Data qualification was not required. The laboratory noted that sample FB-01 was not listed on the COC. The sample was logged on per the sample container labels and further action was not required.						
3. Were all the analyses requested for the samples on the COCs completed by the laboratory?	<b>X</b>	Yes		No	<i>je</i>	Initials
All requested analyses were completed by the laboratory.						
4. Were samples received in good condition and at the appropriate temperature?	<b>X</b>	Yes		No	<i>je</i>	Initials
Comments: All samples were received intact and within the recommended <6°C temperature at TA-DEN. The radiochemistry submitted to TA-STL does not require temperature preservation.						
5. Were the reported analytical methods in compliance with WP/QAPP, permit, or COC?	<b>X</b>	Yes		No	<i>je</i>	Initials
Comments: The reported target analytes and methods are in compliance with parameters and methods listed on the COC.						
6. Were detection limits in accordance with WP/QAPP, permit, or method?	<b>X</b>	Yes		No	<i>je</i>	Initials
Comments: No results were reported as non-detect at elevated reporting limits.						
7. Do the laboratory reports include only those constituents requested to be reported for a specific analytical method?	<b>X</b>	Yes		No	<i>je</i>	Initials
Comments: Only the requested target analytes were reported.						
8. Were sample holding times met?	<b>X</b>	Yes		No	<i>je</i>	Initials
Comments: Sample preparation and analytical holding times were within the method requirements.						
9. Were correct concentration units reported?		Yes	<b>X</b>	No	<i>je</i>	Initials

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

VALIDATION CRITERIA CHECK						
<p>Comments: Metals and general chemistry data were reported as mg/L (ppm) and radiochemistry data was reported in picocuries per liter (pCi/L). A revised report was issued by the laboratory to report results to three significant figures. Further action was not necessary.</p>						
10. Were the reporting requirements for flagged data met?	<b>X</b>	Yes		No	<i>je</i>	Initials
<p>Comments: Laboratory flags were reviewed and considered during the data validation procedure. Data validation qualifiers override assigned laboratory flags.</p>						
11. Were laboratory blank samples free of target analyte contamination?	<b>X</b>	Yes		No	<i>je</i>	Initials
<p>Comments: All laboratory blanks were free of target analyte contamination</p>						
12. Were trip blank, field blank, and/or equipment rinse blank samples free of target analyte contamination?	<b>X</b>	Yes		No	<i>je</i>	Initials
<p>Comments: One field blank was collected. The field blank was free of target analyte contamination.</p>						
13. Were instrument calibrations within method or data validation control limits?	<b>X</b>	Yes		No	<i>je</i>	Initials
<p>Comments: Not evaluated for this level of data validation.</p>						
14. Were surrogate recoveries within control limits?	<b>NA</b>	Yes	<b>NA</b>	No	<i>je</i>	Initials
<p>Comments: Not applicable for the analytical methods reported.</p>						
15. Were laboratory control sample recoveries and RPDs within control limits?	<b>X</b>	Yes		No	<i>je</i>	Initials
<p>Comments: LCS and LCSD percent recoveries and RPDs were within laboratory control limits.</p>						
16. Were matrix spike recoveries and RPDs within control limits?	<b>X</b>	Yes		No	<i>je</i>	Initials
<p>Comments: An MS and/ or MSD were performed on the following samples and methods:</p> <ul style="list-style-type: none"> <li>• MW-37B – Methods 6010C, 6020A, 7470A, 9056A, SM2540C, 9315, and 9320</li> <li>• Dup-01 – Methods 6020A, 9056A</li> <li>• MW-41B – Method 6010C</li> <li>• MW-53B – Method 9056A</li> </ul> <p>With the exception listed below, the MS and MSD percent recoveries and RPDs were within laboratory control limits.</p> <p>The fluoride MS/MSD (74%/ 74%) recoveries for sample MW-37B were below the laboratory control acceptance criteria of 80-120%. The fluoride results for the associated sample was qualified as estimated UJ m to reflect the potential low bias.</p>						
17. Were laboratory duplicate RPDs and/or serial dilution %Ds within control limits?	<b>X</b>	Yes		No	<i>je</i>	Initials
<p>Comments: A laboratory duplicate was performed on the following samples and methods: MW-37B, and MW-53B – Method 9056A; MW-14BR, and FB-01 – Method SM2540C. Serial dilutions were not evaluated for this level of validation.</p>						
18. Were organic system performance criteria met?	<b>NA</b>	Yes	<b>NA</b>	No	<i>je</i>	Initials

## ANALYTICAL LIMITED DATA VALIDATION CHECKLIST

VALIDATION CRITERIA CHECK						
Comments: Not applicable for this level of limited data validation or for the methods reported.						
19. Were internal standards within method criteria for ICP-MS sample analyses?	NA	Yes	NA	No	<i>je</i>	Initials
Comments: Not evaluated for this level of data validation. No internal standard issues were noted in the case narrative.						
20. Were system performance criteria met?	NA	Yes	NA	No	<i>je</i>	Initials
Comments: Not evaluated for this level of data validation.						
21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	X	Yes		No	<i>je</i>	Initials
Duplicate Sample No.	DUP-1		Primary Sample No.	MW-20B		
Comments: The field duplicate criterion was met.						
22. Were qualitative criteria for organic target analyte identification met?	NA	Yes	NA	No	<i>je</i>	Initials
Comments: Not applicable for this level of limited data validation or for the methods reported.						
23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	X	Yes		No	<i>je</i>	Initials
Comments: During the validation procedure, 100% of the positive sample concentrations and 100% of the RLs for project samples were compared to hardcopy laboratory reports. The data validator made sure that RLs were entered into the correct EDD fields.						
24. General Comments: Data were also evaluated using guidance set forth in the <i>United States Environmental Protection Agency (USEPA) contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Superfund Methods Data Review</i> , document number EPA-540-R-2017-001, January 2017; method requirements, and laboratory criteria. All data is considered usable.						

**Table of Qualified Analytical Results  
Basin Electric Laramie River Station  
Wheatland, Wyoming  
June 2020 Sampling  
TestAmerica Laboratories**

SDG	Sample ID	Method	Analyte	Qualifier	Reason Code
280-137307-2	MW-37B	9056A	Fluoride	UJ	m

**Definitions:**

ID – Identifier

m – Matrix Spike Recovery

SDG – Sample Delivery Group

UJ – Undetected, reporting limit estimated

## ANALYTICAL REPORT

Eurofins TestAmerica, Denver  
4955 Yarrow Street  
Arvada, CO 80002  
Tel: (303)736-0100

Laboratory Job ID: 280-137307-1  
Client Project/Site: CCR - Basin Electric 2020 - LRS  
Revision: 1

For:  
AECOM Technical Services Inc.  
6200 S. Quebec Street  
Greenwood Village, Colorado 80111

Attn: Ms. Katie Abbott



Authorized for release by:  
8/7/2020 5:48:40 AM

Patrick McEntee, Client Service Manager  
(303)736-0107  
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### LINKS

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

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



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# Definitions/Glossary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Qualifiers

### Rad

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

## Glossary

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

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

**Job ID: 280-137307-1**

**Laboratory: Eurofins TestAmerica, Denver**

**Narrative**

## CASE NARRATIVE

**Client: AECOM Technical Services Inc.**

**Project: CCR - Basin Electric 2020 - LRS**

**Report Number: 280-137307-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **REVISION 1, AUGUST 7, 2020**

Deliverables revised to report results to three significant figures.

Radiochemical analysis is not reported under 280-137307-1. All other analysis us reported under 280-137307-2

### **RECEIPT**

The samples were received on 6/4/2020 4:18 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 0.4° C, 1.2° C, 2.0° C, 2.1° C, 3.0° C, 3.5° C and 3.9° C.

### **Receipt Exceptions**

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC does not list the sample time or date for sample FB-01.

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): 280-137307-1, 280-137307-2, 280-137307-9 and 280-137307-12. The container labels list do not list the sample time for some containers:

MW-42B - No time on one 1L unpreserved plastic poly

MW-39B - No time on two 500mL plastic polys with nitric acid and one 250mL unpreserved plastic poly

Mw-20B - No time on one 1L plastic poly with nitric acid

MW-14BR - No time on all containers

### **RADIUM-226 (GFPC)**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B (280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for Radium-226 (GFPC) in accordance with SW 846 9315. The samples were prepared on 06/11/2020 and analyzed on 07/06/2020, 07/07/2020 and 07/08/2020.

Method PrecSep-21: Radium 226 Prep batch 160-473093:

Insufficient sample volume was available to perform a sample duplicate for the following samples: 280-137307-11, 280-137307-12, 280-137307-13, 280-137307-14, 280-137307-15, 280-137307-16, 280-137307-17, 280-137307-18, 280-137307-19, 280-137307-20, 280-137307-21 and 280-137307-22. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Job ID: 280-137307-1 (Continued)

### Laboratory: Eurofins TestAmerica, Denver (Continued)

to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-473093:

The following samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: 280-137307-11, 280-137307-12, 280-137307-13, 280-137307-14, 280-137307-15, 280-137307-16, 280-137307-17, 280-137307-18, 280-137307-19, 280-137307-20, 280-137307-21 and 280-137307-22.

Method PrecSep-21: Radium 226 Prep Batch 160-473104:

The following samples, 280-1370307-1, 280-1370307-2, 280-1370307-3, 280-1370307-4, 280-1370307-5, 280-1370307-6, 280-1370307-6 MS, 280-1370307-6 MSD, 280-1370307-7, 280-1370307-8, 280-1370307-9 and 280-1370307-10 were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: 280-137307-1, 280-137307-2, 280-137307-3, 280-137307-4, 280-137307-5, 280-137307-6, 280-137307-6[MS], 280-137307-6[MSD], 280-137307-7, 280-137307-8, 280-137307-9 and 280-137307-10.

Method PrecSep-21: Radium 226 Prep Batch 160-473104:

Insufficient sample volume was available to perform a sample duplicate for the following samples: 280-137307-1, 280-137307-2, 280-137307-3, 280-137307-4, 280-137307-5, 280-137307-6, 280-137307-6[MS], 280-137307-6[MSD], 280-137307-7, 280-137307-8, 280-137307-9 and 280-137307-10. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Methods 903.0, 9315: Radium-226 prep batch 160-473104:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

280-137307-1, 280-137307-2, 280-137307-3, 280-137307-4, 280-137307-5, 280-137307-6, 280-137307-6[MS], 280-137307-6[MSD], 280-137307-7, 280-137307-8, 280-137307-9 and 280-137307-10

Method 9315: Radium-226 prep batch 160-473093:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

280-137307-11, 280-137307-12, 280-137307-13, 280-137307-14, 280-137307-15, 280-137307-16, 280-137307-17, 280-137307-18 and MB 160-473093/15-A

Method 9315: Radium-226 prep batch 160-473093:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

280-137307-11, 280-137307-12, 280-137307-13, 280-137307-14, 280-137307-15, 280-137307-16, 280-137307-17, 280-137307-18, 280-137307-19, 280-137307-20, 280-137307-21, 280-137307-22, LCS 160-473093/1-A, LCSD 160-473093/2-A and MB 160-473093/15-A

Methods 903.0, 9315: Radium 226 Prep Batch:160-473104

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

280-137307-4, 280-137307-5, 280-137307-6, 280-137307-6[MS], 280-137307-6[MSD], 280-137307-7, 280-137307-8, 280-137307-9, 280-137307-10, LCS 160-473104/1-A, LCSD 160-473104/2-A and MB 160-473104/25-A

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **RADIUM-228**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B (280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for Radium-228 in accordance with 9320. The samples were prepared on 06/11/2020 and analyzed on 06/25/2020.

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Job ID: 280-137307-1 (Continued)

### Laboratory: Eurofins TestAmerica, Denver (Continued)

Method PrecSep\_0: Radium 228 Prep Batch 160-473094:

The following samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: 280-137307-11, 280-137307-12, 280-137307-13, 280-137307-14, 280-137307-15, 280-137307-16, 280-137307-17, 280-137307-18, 280-137307-19, 280-137307-20, 280-137307-21 and 280-137307-22.

Method PrecSep\_0: Radium 228 Prep Batch 160-473094:

Insufficient sample volume was available to perform a sample duplicate for the following samples: 280-137307-11, 280-137307-12, 280-137307-13, 280-137307-14, 280-137307-15, 280-137307-16, 280-137307-17, 280-137307-18, 280-137307-19, 280-137307-20, 280-137307-21 and 280-137307-22. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep\_0: Radium 228 Prep Batch 160-473146:

The following samples, 280-1370307-1, 280-1370307-2, 280-1370307-3, 280-1370307-4, 280-1370307-5, 280-1370307-6, 280-1370307-6 MS, 280-1370307-6 MSD, 280-1370307-7, 280-1370307-8, 280-1370307-9 and 280-1370307-10 were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: 280-137307-1, 280-137307-2, 280-137307-3, 280-137307-4, 280-137307-5, 280-137307-6, 280-137307-6[MS], 280-137307-6[MSD], 280-137307-7, 280-137307-8, 280-137307-9 and 280-137307-10.

Method PrecSep\_0: Radium 228 Prep Batch 160-473146:

Insufficient sample volume was available to perform a sample duplicate for the following samples: 280-137307-1, 280-137307-2, 280-137307-3, 280-137307-4, 280-137307-5, 280-137307-6, 280-137307-6[MS], 280-137307-6[MSD], 280-137307-7, 280-137307-8, 280-137307-9 and 280-137307-10. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method 9320: Radium-228 Prep Batch 160-473094

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

280-137307-11, 280-137307-12, 280-137307-13, 280-137307-14, 280-137307-15, 280-137307-16, 280-137307-17, 280-137307-18, 280-137307-19, 280-137307-20, 280-137307-21, 280-137307-22, LCS 160-473094/1-A, LCSD 160-473094/2-A and MB 160-473094/15-A

Methods 904.0, 9320: Radium-228 Prep Batch 160-473146

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

280-137307-1, 280-137307-2, 280-137307-3, 280-137307-4, 280-137307-5, 280-137307-6, 280-137307-6[MS], 280-137307-6[MSD], 280-137307-7, 280-137307-8, 280-137307-9, 280-137307-10, LCS 160-473146/1-A, LCSD 160-473146/2-A and MB 160-473146/25-A

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **RADIUM-226/RADIUM-228 (GFPC)**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B (280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for Radium-226/Radium-228 (GFPC) in accordance with 9315/9320. The samples were analyzed on 07/08/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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**Job ID: 280-137307-1 (Continued)**

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**Laboratory: Eurofins TestAmerica, Denver (Continued)**

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# Method Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

#### Protocol References:

None = None

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

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

#### Laboratory References:

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

# Sample Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137307-1	MW-14BR	Water	06/02/20 13:30	06/04/20 16:18	
280-137307-2	MW-20B	Water	06/02/20 12:10	06/04/20 16:18	
280-137307-3	MW-21B	Water	06/02/20 14:30	06/04/20 16:18	
280-137307-4	MW-32B	Water	06/02/20 17:10	06/04/20 16:18	
280-137307-5	MW-36B	Water	06/04/20 09:15	06/04/20 16:18	
280-137307-6	MW-37B	Water	06/04/20 08:00	06/04/20 16:18	
280-137307-7	MW-38B	Water	06/03/20 10:20	06/04/20 16:18	
280-137307-8	MW-38C	Water	06/02/20 15:30	06/04/20 16:18	
280-137307-9	MW-39B	Water	06/03/20 16:15	06/04/20 16:18	
280-137307-10	MW-40B	Water	06/03/20 15:30	06/04/20 16:18	
280-137307-11	MW-41B	Water	06/02/20 11:30	06/04/20 16:18	
280-137307-12	MW-42B	Water	06/03/20 09:30	06/04/20 16:18	
280-137307-13	MW-43B	Water	06/03/20 08:40	06/04/20 16:18	
280-137307-14	MW-44B	Water	06/02/20 09:30	06/04/20 16:18	
280-137307-15	MW-45B	Water	06/02/20 10:30	06/04/20 16:18	
280-137307-16	MW-46B	Water	06/02/20 16:15	06/04/20 16:18	
280-137307-17	MW-47B	Water	06/02/20 17:15	06/04/20 16:18	
280-137307-18	MW-49B	Water	06/03/20 12:15	06/04/20 16:18	
280-137307-19	MW-52B	Water	06/03/20 14:15	06/04/20 16:18	
280-137307-20	MW-53B	Water	06/03/20 13:15	06/04/20 16:18	
280-137307-21	DUP-01	Water	06/02/20 00:00	06/04/20 16:18	
280-137307-22	FB-01	Water	06/03/20 10:40	06/04/20 16:18	

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0470	U	0.0697	0.0698	1.00	0.120	pCi/L	06/11/20 08:16	07/06/20 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					06/11/20 08:16	07/06/20 07:57	1

**Client Sample ID: MW-20B**  
**Date Collected: 06/02/20 12:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-2**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0421	U	0.0663	0.0664	1.00	0.115	pCi/L	06/11/20 08:16	07/06/20 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/11/20 08:16	07/06/20 07:57	1

**Client Sample ID: MW-21B**  
**Date Collected: 06/02/20 14:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-3**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0381	U	0.0648	0.0649	1.00	0.115	pCi/L	06/11/20 08:16	07/06/20 07:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					06/11/20 08:16	07/06/20 07:57	1

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0600	U	0.0758	0.0760	1.00	0.126	pCi/L	06/11/20 08:16	07/08/20 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/11/20 08:16	07/08/20 09:52	1

**Client Sample ID: MW-36B**  
**Date Collected: 06/04/20 09:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-5**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0777	U	0.0695	0.0699	1.00	0.104	pCi/L	06/11/20 08:16	07/08/20 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/11/20 08:16	07/08/20 09:52	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Client Sample ID: MW-37B**  
**Date Collected: 06/04/20 08:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-6**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0296	U	0.0638	0.0639	1.00	0.116	pCi/L	06/11/20 08:16	07/08/20 09:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					06/11/20 08:16	07/08/20 09:52	1

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0610	U	0.0701	0.0703	1.00	0.113	pCi/L	06/11/20 08:16	07/08/20 05:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					06/11/20 08:16	07/08/20 05:47	1

**Client Sample ID: MW-38C**  
**Date Collected: 06/02/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-8**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0157	U	0.0675	0.0675	1.00	0.142	pCi/L	06/11/20 08:16	07/08/20 05:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					06/11/20 08:16	07/08/20 05:47	1

**Client Sample ID: MW-39B**  
**Date Collected: 06/03/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-9**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0402	U	0.0543	0.0544	1.00	0.0910	pCi/L	06/11/20 08:16	07/08/20 05:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.1		40 - 110					06/11/20 08:16	07/08/20 05:48	1

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<b>0.105</b>		0.0734	0.0740	1.00	0.0957	pCi/L	06/11/20 08:16	07/08/20 05:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.1		40 - 110					06/11/20 08:16	07/08/20 05:48	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Client Sample ID: MW-41B**  
**Date Collected: 06/02/20 11:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-11**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0519	U	0.0623	0.0625	1.00	0.101	pCi/L	06/11/20 06:37	07/07/20 11:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					06/11/20 06:37	07/07/20 11:12	1

**Client Sample ID: MW-42B**  
**Date Collected: 06/03/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-12**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00581	U	0.0392	0.0392	1.00	0.0932	pCi/L	06/11/20 06:37	07/07/20 11:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/11/20 06:37	07/07/20 11:12	1

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0202	U	0.0461	0.0461	1.00	0.0877	pCi/L	06/11/20 06:37	07/07/20 11:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					06/11/20 06:37	07/07/20 11:12	1

**Client Sample ID: MW-44B**  
**Date Collected: 06/02/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-14**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0457	U	0.0610	0.0611	1.00	0.102	pCi/L	06/11/20 06:37	07/07/20 11:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					06/11/20 06:37	07/07/20 11:12	1

**Client Sample ID: MW-45B**  
**Date Collected: 06/02/20 10:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-15**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0286	U	0.0640	0.0641	1.00	0.118	pCi/L	06/11/20 06:37	07/07/20 11:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					06/11/20 06:37	07/07/20 11:13	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00917	U	0.0740	0.0740	1.00	0.143	pCi/L	06/11/20 06:37	07/07/20 13:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					06/11/20 06:37	07/07/20 13:35	1

**Client Sample ID: MW-47B**  
**Date Collected: 06/02/20 17:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-17**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0895	U	0.0673	0.0678	1.00	0.0900	pCi/L	06/11/20 06:37	07/07/20 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					06/11/20 06:37	07/07/20 13:36	1

**Client Sample ID: MW-49B**  
**Date Collected: 06/03/20 12:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-18**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0372	U	0.0604	0.0605	1.00	0.106	pCi/L	06/11/20 06:37	07/07/20 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					06/11/20 06:37	07/07/20 13:36	1

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0952	U	0.0762	0.0767	1.00	0.108	pCi/L	06/11/20 06:37	07/06/20 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					06/11/20 06:37	07/06/20 14:28	1

**Client Sample ID: MW-53B**  
**Date Collected: 06/03/20 13:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-20**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.108	U	0.0877	0.0883	1.00	0.127	pCi/L	06/11/20 06:37	07/06/20 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		40 - 110					06/11/20 06:37	07/06/20 14:28	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Client Sample ID: DUP-01**  
**Date Collected: 06/02/20 00:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-21**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0568	U	0.0767	0.0769	1.00	0.129	pCi/L	06/11/20 06:37	07/06/20 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					06/11/20 06:37	07/06/20 14:32	1

**Client Sample ID: FB-01**  
**Date Collected: 06/03/20 10:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-22**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0832	U	0.0883	0.0886	1.00	0.141	pCi/L	06/11/20 06:37	07/06/20 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					06/11/20 06:37	07/06/20 14:33	1

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

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0180	U	0.269	0.269	1.00	0.485	pCi/L	06/11/20 09:02	06/25/20 13:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					06/11/20 09:02	06/25/20 13:17	1
Y Carrier	85.2		40 - 110					06/11/20 09:02	06/25/20 13:17	1

**Client Sample ID: MW-20B**  
**Date Collected: 06/02/20 12:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-2**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.106	U	0.256	0.256	1.00	0.444	pCi/L	06/11/20 09:02	06/25/20 13:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/11/20 09:02	06/25/20 13:17	1
Y Carrier	86.4		40 - 110					06/11/20 09:02	06/25/20 13:17	1

**Client Sample ID: MW-21B**  
**Date Collected: 06/02/20 14:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-3**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.142	U	0.296	0.296	1.00	0.508	pCi/L	06/11/20 09:02	06/25/20 13:17	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110	06/11/20 09:02	06/25/20 13:17	1
Y Carrier	86.7		40 - 110	06/11/20 09:02	06/25/20 13:17	1

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0396	U	0.262	0.262	1.00	0.480	pCi/L	06/11/20 09:02	06/25/20 13:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110	06/11/20 09:02	06/25/20 13:18	1
Y Carrier	85.6		40 - 110	06/11/20 09:02	06/25/20 13:18	1

**Client Sample ID: MW-36B**  
**Date Collected: 06/04/20 09:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-5**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.300	U	0.289	0.291	1.00	0.467	pCi/L	06/11/20 09:02	06/25/20 13:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110	06/11/20 09:02	06/25/20 13:18	1
Y Carrier	86.0		40 - 110	06/11/20 09:02	06/25/20 13:18	1

**Client Sample ID: MW-37B**  
**Date Collected: 06/04/20 08:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-6**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0524	U	0.347	0.347	1.00	0.622	pCi/L	06/11/20 09:02	06/25/20 13:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110	06/11/20 09:02	06/25/20 13:18	1
Y Carrier	85.2		40 - 110	06/11/20 09:02	06/25/20 13:18	1

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.265	U	0.284	0.285	1.00	0.465	pCi/L	06/11/20 09:02	06/25/20 13:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110	06/11/20 09:02	06/25/20 13:18	1
Y Carrier	86.0		40 - 110	06/11/20 09:02	06/25/20 13:18	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Client Sample ID: MW-38C**  
**Date Collected: 06/02/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-8**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.126	U	0.288	0.289	1.00	0.496	pCi/L	06/11/20 09:02	06/25/20 13:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					06/11/20 09:02	06/25/20 13:18	1
Y Carrier	88.6		40 - 110					06/11/20 09:02	06/25/20 13:18	1

**Client Sample ID: MW-39B**  
**Date Collected: 06/03/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-9**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.512	U	0.342	0.345	1.00	0.529	pCi/L	06/11/20 09:02	06/25/20 13:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.1		40 - 110					06/11/20 09:02	06/25/20 13:19	1
Y Carrier	87.1		40 - 110					06/11/20 09:02	06/25/20 13:19	1

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.341	U	0.300	0.301	1.00	0.479	pCi/L	06/11/20 09:02	06/25/20 13:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.1		40 - 110					06/11/20 09:02	06/25/20 13:19	1
Y Carrier	87.9		40 - 110					06/11/20 09:02	06/25/20 13:19	1

**Client Sample ID: MW-41B**  
**Date Collected: 06/02/20 11:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-11**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.274	U	0.297	0.298	1.00	0.486	pCi/L	06/11/20 06:51	06/25/20 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					06/11/20 06:51	06/25/20 12:55	1
Y Carrier	87.5		40 - 110					06/11/20 06:51	06/25/20 12:55	1

**Client Sample ID: MW-42B**  
**Date Collected: 06/03/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-12**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0717	U	0.271	0.271	1.00	0.475	pCi/L	06/11/20 06:51	06/25/20 12:55	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110	06/11/20 06:51	06/25/20 12:55	1
Y Carrier	87.5		40 - 110	06/11/20 06:51	06/25/20 12:55	1

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0472	U	0.268	0.268	1.00	0.474	pCi/L	06/11/20 06:51	06/25/20 12:55	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110	06/11/20 06:51	06/25/20 12:55	1
Y Carrier	86.0		40 - 110	06/11/20 06:51	06/25/20 12:55	1

**Client Sample ID: MW-44B**  
**Date Collected: 06/02/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-14**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0690	U	0.281	0.281	1.00	0.517	pCi/L	06/11/20 06:51	06/25/20 12:55	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110	06/11/20 06:51	06/25/20 12:55	1
Y Carrier	88.6		40 - 110	06/11/20 06:51	06/25/20 12:55	1

**Client Sample ID: MW-45B**  
**Date Collected: 06/02/20 10:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-15**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.221	U	0.329	0.330	1.00	0.553	pCi/L	06/11/20 06:51	06/25/20 12:55	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110	06/11/20 06:51	06/25/20 12:55	1
Y Carrier	85.2		40 - 110	06/11/20 06:51	06/25/20 12:55	1

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.218	U	0.299	0.300	1.00	0.499	pCi/L	06/11/20 06:51	06/25/20 12:55	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110	06/11/20 06:51	06/25/20 12:55	1
Y Carrier	88.6		40 - 110	06/11/20 06:51	06/25/20 12:55	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Client Sample ID: MW-47B**  
**Date Collected: 06/02/20 17:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-17**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.284	U	0.282	0.284	1.00	0.458	pCi/L	06/11/20 06:51	06/25/20 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					06/11/20 06:51	06/25/20 12:55	1
Y Carrier	88.6		40 - 110					06/11/20 06:51	06/25/20 12:55	1

**Client Sample ID: MW-49B**  
**Date Collected: 06/03/20 12:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-18**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.392	U	0.319	0.321	1.00	0.507	pCi/L	06/11/20 06:51	06/25/20 12:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					06/11/20 06:51	06/25/20 12:55	1
Y Carrier	87.9		40 - 110					06/11/20 06:51	06/25/20 12:55	1

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.574		0.335	0.339	1.00	0.507	pCi/L	06/11/20 06:51	06/25/20 12:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					06/11/20 06:51	06/25/20 12:56	1
Y Carrier	88.6		40 - 110					06/11/20 06:51	06/25/20 12:56	1

**Client Sample ID: MW-53B**  
**Date Collected: 06/03/20 13:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-20**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0672	U	0.285	0.285	1.00	0.505	pCi/L	06/11/20 06:51	06/25/20 12:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		40 - 110					06/11/20 06:51	06/25/20 12:56	1
Y Carrier	87.5		40 - 110					06/11/20 06:51	06/25/20 12:56	1

**Client Sample ID: DUP-01**  
**Date Collected: 06/02/20 00:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-21**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.183	U	0.309	0.310	1.00	0.523	pCi/L	06/11/20 06:51	06/25/20 12:56	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110	06/11/20 06:51	06/25/20 12:56	1
Y Carrier	86.7		40 - 110	06/11/20 06:51	06/25/20 12:56	1

**Client Sample ID: FB-01**  
**Date Collected: 06/03/20 10:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-22**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.135	U	0.290	0.290	1.00	0.496	pCi/L	06/11/20 06:51	06/25/20 12:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110	06/11/20 06:51	06/25/20 12:56	1
Y Carrier	85.2		40 - 110	06/11/20 06:51	06/25/20 12:56	1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0650	U	0.278	0.278	5.00	0.485	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-20B**  
**Date Collected: 06/02/20 12:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-2**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.148	U	0.264	0.264	5.00	0.444	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-21B**  
**Date Collected: 06/02/20 14:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-3**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.180	U	0.303	0.303	5.00	0.508	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0204	U	0.273	0.273	5.00	0.480	pCi/L		07/08/20 07:53	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Client Sample ID: MW-36B**  
**Date Collected: 06/04/20 09:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-5**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.378	U	0.297	0.299	5.00	0.467	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-37B**  
**Date Collected: 06/04/20 08:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-6**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0228	U	0.353	0.353	5.00	0.622	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.326	U	0.293	0.294	5.00	0.465	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-38C**  
**Date Collected: 06/02/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-8**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.110	U	0.296	0.297	5.00	0.496	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-39B**  
**Date Collected: 06/03/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-9**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>0.552</b>		0.346	0.349	5.00	0.529	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.446	U	0.309	0.310	5.00	0.479	pCi/L		07/08/20 07:53	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Client Sample ID: MW-41B**  
**Date Collected: 06/02/20 11:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-11**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.326	U	0.303	0.304	5.00	0.486	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-42B**  
**Date Collected: 06/03/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-12**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0659	U	0.274	0.274	5.00	0.475	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0675	U	0.272	0.272	5.00	0.474	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-44B**  
**Date Collected: 06/02/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-14**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0233	U	0.288	0.288	5.00	0.517	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-45B**  
**Date Collected: 06/02/20 10:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-15**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.249	U	0.335	0.336	5.00	0.553	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.227	U	0.308	0.309	5.00	0.499	pCi/L		07/08/20 07:53	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Client Sample ID: MW-47B**  
**Date Collected: 06/02/20 17:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-17**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.373	U	0.290	0.292	5.00	0.458	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-49B**  
**Date Collected: 06/03/20 12:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-18**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.429	U	0.325	0.327	5.00	0.507	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.669		0.344	0.348	5.00	0.507	pCi/L		07/08/20 07:53	1

**Client Sample ID: MW-53B**  
**Date Collected: 06/03/20 13:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-20**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.175	U	0.298	0.298	5.00	0.505	pCi/L		07/08/20 07:53	1

**Client Sample ID: DUP-01**  
**Date Collected: 06/02/20 00:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-21**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.239	U	0.318	0.319	5.00	0.523	pCi/L		07/08/20 07:53	1

**Client Sample ID: FB-01**  
**Date Collected: 06/03/20 10:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-22**  
**Matrix: Water**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.218	U	0.303	0.303	5.00	0.496	pCi/L		07/08/20 07:53	1

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Lab Sample ID: MB 160-473093/15-A**  
**Matrix: Water**  
**Analysis Batch: 475373**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 473093**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.0000	U	0.0566	0.0566	1.00	0.118	pCi/L	06/11/20 06:37	07/06/20 14:33	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					06/11/20 06:37	07/06/20 14:33	1

**Lab Sample ID: LCS 160-473093/1-A**  
**Matrix: Water**  
**Analysis Batch: 475699**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 473093**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.1	13.44		1.39	1.00	0.145	pCi/L	89	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.4		40 - 110						

**Lab Sample ID: LCSD 160-473093/2-A**  
**Matrix: Water**  
**Analysis Batch: 475699**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 473093**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium-226	15.1	12.89		1.33	1.00	0.0865	pCi/L	85	75 - 125	0.20	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	104		40 - 110								

**Lab Sample ID: MB 160-473104/25-A**  
**Matrix: Water**  
**Analysis Batch: 475732**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 473104**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.02746	U	0.0470	0.0470	1.00	0.0840	pCi/L	06/11/20 08:16	07/08/20 05:48	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110					06/11/20 08:16	07/08/20 05:48	1

**Lab Sample ID: LCS 160-473104/1-A**  
**Matrix: Water**  
**Analysis Batch: 475699**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 473104**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.1	13.06		1.35	1.00	0.144	pCi/L	86	75 - 125

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Lab Sample ID: LCS 160-473104/1-A**  
**Matrix: Water**  
**Analysis Batch: 475699**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 473104**

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.3		40 - 110

**Lab Sample ID: LCSD 160-473104/2-A**  
**Matrix: Water**  
**Analysis Batch: 475699**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 473104**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	15.1	12.49		1.29	1.00	0.0868	pCi/L	83	75 - 125	0.21	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	103		40 - 110

**Lab Sample ID: 280-137307-6 MS**  
**Matrix: Water**  
**Analysis Batch: 475732**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**  
**Prep Batch: 473104**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.0296	U	15.1	12.70		1.32	1.00	0.130	pCi/L	84	75 - 138

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	96.4		40 - 110

**Lab Sample ID: 280-137307-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 475732**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**  
**Prep Batch: 473104**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	0.0296	U	15.1	12.66		1.31	1.00	0.108	pCi/L	83	75 - 138	0.02	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	96.1		40 - 110

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

**Lab Sample ID: MB 160-473094/15-A**  
**Matrix: Water**  
**Analysis Batch: 474543**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 473094**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.09899	U	0.364	0.364	1.00	0.627	pCi/L	06/11/20 06:51	06/25/20 12:58	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110	06/11/20 06:51	06/25/20 12:58	1

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Lab Sample ID: MB 160-473094/15-A**  
**Matrix: Water**  
**Analysis Batch: 474543**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 473094**

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	84.9		40 - 110	06/11/20 06:51	06/25/20 12:58	1

**Lab Sample ID: LCS 160-473094/1-A**  
**Matrix: Water**  
**Analysis Batch: 474569**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 473094**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.6	10.62		1.27	1.00	0.498	pCi/L	91	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.4		40 - 110
Y Carrier	87.5		40 - 110

**Lab Sample ID: LCSD 160-473094/2-A**  
**Matrix: Water**  
**Analysis Batch: 474569**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 473094**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	11.6	10.92		1.28	1.00	0.476	pCi/L	94	75 - 125	0.12	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	88.6		40 - 110

**Lab Sample ID: MB 160-473146/25-A**  
**Matrix: Water**  
**Analysis Batch: 474544**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 473146**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3757	U	0.283	0.285	1.00	0.442	pCi/L	06/11/20 09:02	06/25/20 13:19	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110	06/11/20 09:02	06/25/20 13:19	1
Y Carrier	87.5		40 - 110	06/11/20 09:02	06/25/20 13:19	1

**Lab Sample ID: LCS 160-473146/1-A**  
**Matrix: Water**  
**Analysis Batch: 474543**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 473146**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.6	10.93		1.32	1.00	0.519	pCi/L	94	75 - 125

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# QC Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Lab Sample ID: LCS 160-473146/1-A**  
**Matrix: Water**  
**Analysis Batch: 474543**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 473146**

Carrier	LCS		Limits
	%Yield	Qualifier	
Ba Carrier	97.3		40 - 110
Y Carrier	86.4		40 - 110

**Lab Sample ID: LCSD 160-473146/2-A**  
**Matrix: Water**  
**Analysis Batch: 474543**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 473146**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	RER Limit
									75 - 125	0.18	1	
Radium-228	11.6	10.46		1.27	1.00	0.513	pCi/L	90	75 - 125	0.18	1	

Carrier	LCSD		Limits
	%Yield	Qualifier	
Ba Carrier	103		40 - 110
Y Carrier	83.4		40 - 110

**Lab Sample ID: 280-137307-6 MS**  
**Matrix: Water**  
**Analysis Batch: 474544**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**  
**Prep Batch: 473146**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
											45 - 150	
Radium-228	-0.0524	U	11.6	10.50		1.30	1.00	0.610	pCi/L	90	45 - 150	

Carrier	MS		Limits
	%Yield	Qualifier	
Ba Carrier	96.4		40 - 110
Y Carrier	84.5		40 - 110

**Lab Sample ID: 280-137307-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 474544**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**  
**Prep Batch: 473146**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	RER Limit
											45 - 150	0.05	1	
Radium-228	-0.0524	U	11.6	10.37		1.28	1.00	0.585	pCi/L	89	45 - 150	0.05	1	

Carrier	MSD		Limits
	%Yield	Qualifier	
Ba Carrier	96.1		40 - 110
Y Carrier	83.7		40 - 110

# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Rad

### Prep Batch: 473093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-11	MW-41B	Total/NA	Water	PrecSep-21	
280-137307-12	MW-42B	Total/NA	Water	PrecSep-21	
280-137307-13	MW-43B	Total/NA	Water	PrecSep-21	
280-137307-14	MW-44B	Total/NA	Water	PrecSep-21	
280-137307-15	MW-45B	Total/NA	Water	PrecSep-21	
280-137307-16	MW-46B	Total/NA	Water	PrecSep-21	
280-137307-17	MW-47B	Total/NA	Water	PrecSep-21	
280-137307-18	MW-49B	Total/NA	Water	PrecSep-21	
280-137307-19	MW-52B	Total/NA	Water	PrecSep-21	
280-137307-20	MW-53B	Total/NA	Water	PrecSep-21	
280-137307-21	DUP-01	Total/NA	Water	PrecSep-21	
280-137307-22	FB-01	Total/NA	Water	PrecSep-21	
MB 160-473093/15-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-473093/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-473093/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 473094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-11	MW-41B	Total/NA	Water	PrecSep_0	
280-137307-12	MW-42B	Total/NA	Water	PrecSep_0	
280-137307-13	MW-43B	Total/NA	Water	PrecSep_0	
280-137307-14	MW-44B	Total/NA	Water	PrecSep_0	
280-137307-15	MW-45B	Total/NA	Water	PrecSep_0	
280-137307-16	MW-46B	Total/NA	Water	PrecSep_0	
280-137307-17	MW-47B	Total/NA	Water	PrecSep_0	
280-137307-18	MW-49B	Total/NA	Water	PrecSep_0	
280-137307-19	MW-52B	Total/NA	Water	PrecSep_0	
280-137307-20	MW-53B	Total/NA	Water	PrecSep_0	
280-137307-21	DUP-01	Total/NA	Water	PrecSep_0	
280-137307-22	FB-01	Total/NA	Water	PrecSep_0	
MB 160-473094/15-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-473094/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-473094/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

### Prep Batch: 473104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total/NA	Water	PrecSep-21	
280-137307-2	MW-20B	Total/NA	Water	PrecSep-21	
280-137307-3	MW-21B	Total/NA	Water	PrecSep-21	
280-137307-4	MW-32B	Total/NA	Water	PrecSep-21	
280-137307-5	MW-36B	Total/NA	Water	PrecSep-21	
280-137307-6	MW-37B	Total/NA	Water	PrecSep-21	
280-137307-7	MW-38B	Total/NA	Water	PrecSep-21	
280-137307-8	MW-38C	Total/NA	Water	PrecSep-21	
280-137307-9	MW-39B	Total/NA	Water	PrecSep-21	
280-137307-10	MW-40B	Total/NA	Water	PrecSep-21	
MB 160-473104/25-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-473104/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-473104/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
280-137307-6 MS	MW-37B	Total/NA	Water	PrecSep-21	
280-137307-6 MSD	MW-37B	Total/NA	Water	PrecSep-21	

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# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Rad

### Prep Batch: 473146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total/NA	Water	PrecSep_0	
280-137307-2	MW-20B	Total/NA	Water	PrecSep_0	
280-137307-3	MW-21B	Total/NA	Water	PrecSep_0	
280-137307-4	MW-32B	Total/NA	Water	PrecSep_0	
280-137307-5	MW-36B	Total/NA	Water	PrecSep_0	
280-137307-6	MW-37B	Total/NA	Water	PrecSep_0	
280-137307-7	MW-38B	Total/NA	Water	PrecSep_0	
280-137307-8	MW-38C	Total/NA	Water	PrecSep_0	
280-137307-9	MW-39B	Total/NA	Water	PrecSep_0	
280-137307-10	MW-40B	Total/NA	Water	PrecSep_0	
MB 160-473146/25-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-473146/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-473146/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
280-137307-6 MS	MW-37B	Total/NA	Water	PrecSep_0	
280-137307-6 MSD	MW-37B	Total/NA	Water	PrecSep_0	

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Client Sample ID: MW-14BR

Lab Sample ID: 280-137307-1

Date Collected: 06/02/20 13:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.31 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475151	07/06/20 07:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.31 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:17	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-20B

Lab Sample ID: 280-137307-2

Date Collected: 06/02/20 12:10

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.89 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475151	07/06/20 07:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.89 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:17	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-21B

Lab Sample ID: 280-137307-3

Date Collected: 06/02/20 14:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.07 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475151	07/06/20 07:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.07 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:17	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-32B

Lab Sample ID: 280-137307-4

Date Collected: 06/02/20 17:10

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.20 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475732	07/08/20 09:52	JLW	TAL SL
Total/NA	Prep	PrecSep_0			750.20 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:18	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Client Sample ID: MW-36B

Lab Sample ID: 280-137307-5

Date Collected: 06/04/20 09:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.27 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475732	07/08/20 09:52	JLW	TAL SL
Total/NA	Prep	PrecSep_0			750.27 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:18	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-37B

Lab Sample ID: 280-137307-6

Date Collected: 06/04/20 08:00

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.00 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475732	07/08/20 09:52	JLW	TAL SL
Total/NA	Prep	PrecSep_0			750.00 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:18	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-38B

Lab Sample ID: 280-137307-7

Date Collected: 06/03/20 10:20

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.18 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475732	07/08/20 05:47	JLW	TAL SL
Total/NA	Prep	PrecSep_0			750.18 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:18	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-38C

Lab Sample ID: 280-137307-8

Date Collected: 06/02/20 15:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.16 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475732	07/08/20 05:47	JLW	TAL SL
Total/NA	Prep	PrecSep_0			750.16 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:18	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Client Sample ID: MW-39B

Lab Sample ID: 280-137307-9

Date Collected: 06/03/20 16:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.37 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1			475732	07/08/20 05:48	JLW	TAL SL
Total/NA	Prep	PrecSep_0			750.37 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:19	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-40B

Lab Sample ID: 280-137307-10

Date Collected: 06/03/20 15:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.40 mL	1.0 g	473104	06/11/20 08:16	RBR	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	475732	07/08/20 05:48	JLW	TAL SL
Total/NA	Prep	PrecSep_0			750.40 mL	1.0 g	473146	06/11/20 09:02	RBR	TAL SL
Total/NA	Analysis	9320		1			474544	06/25/20 13:19	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-41B

Lab Sample ID: 280-137307-11

Date Collected: 06/02/20 11:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.43 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 11:12	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.43 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-42B

Lab Sample ID: 280-137307-12

Date Collected: 06/03/20 09:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.09 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 11:12	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.09 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Client Sample ID: MW-43B

Lab Sample ID: 280-137307-13

Date Collected: 06/03/20 08:40

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.58 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 11:12	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.58 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-44B

Lab Sample ID: 280-137307-14

Date Collected: 06/02/20 09:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.42 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 11:12	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.42 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-45B

Lab Sample ID: 280-137307-15

Date Collected: 06/02/20 10:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.73 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 11:13	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.73 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-46B

Lab Sample ID: 280-137307-16

Date Collected: 06/02/20 16:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.92 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 13:35	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.92 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Client Sample ID: MW-47B

Lab Sample ID: 280-137307-17

Date Collected: 06/02/20 17:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.92 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 13:36	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.92 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-49B

Lab Sample ID: 280-137307-18

Date Collected: 06/03/20 12:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.15 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475699	07/07/20 13:36	JLC	TAL SL
Total/NA	Prep	PrecSep_0			750.15 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:55	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-52B

Lab Sample ID: 280-137307-19

Date Collected: 06/03/20 14:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.97 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475151	07/06/20 14:28	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.97 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: MW-53B

Lab Sample ID: 280-137307-20

Date Collected: 06/03/20 13:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.37 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475151	07/06/20 14:28	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.37 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

# Lab Chronicle

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Client Sample ID: DUP-01

Date Collected: 06/02/20 00:00

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.02 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475373	07/06/20 14:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.02 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

## Client Sample ID: FB-01

Date Collected: 06/03/20 10:40

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.07 mL	1.0 g	473093	06/11/20 06:37	RBR	TAL SL
Total/NA	Analysis	9315		1			475373	07/06/20 14:33	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.07 mL	1.0 g	473094	06/11/20 06:51	RBR	TAL SL
Total/NA	Analysis	9320		1			474569	06/25/20 12:56	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			475733	07/08/20 07:53	SMP	TAL SL

### Laboratory References:

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

# Accreditation/Certification Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

## Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	07-01-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20







# Chain of Custody Record



Environmental Testing  
 America

<b>Client Information (Sub Contract Lab)</b>		Lab PM: <b>McEntee, Patrick J</b>		Carrier Tracking No(s):		COC No: <b>280-527840.2</b>	
Client Contact:		E-Mail: <b>patrick.mcEntee@testamericainc.com</b>		State of Origin: <b>Colorado</b>		Page: <b>Page 2 of 3</b>	
Shipping/Receiving		Accreditations Required (See note):		Job #:		280-137307-1	
Company: <b>TestAmerica Laboratories, Inc.</b>		Address:		Preservation Codes:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Address: <b>13715 Rider Trail North,</b>		Due Date Requested: <b>7/2/2020</b>		Analysis Requested:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
City: <b>Earth City</b>		TAT Requested (days):		Field Filtered Sample (Yes or No)		Total Number of Containers	
State, Zip: <b>MO, 63045</b>		PO #:		Perform MS/MSD (Yes or No)		<input checked="" type="checkbox"/> 9315_Ra226/Precep_21 Standard Target List <input checked="" type="checkbox"/> 9320_Ra226/Precep_0 Standard Target List <input checked="" type="checkbox"/> Ra226Ra228_GFPc	
Phone: <b>314-298-8566(Tel) 314-298-8757(Fax)</b>		WO #:		Matrix		Special Instructions/Note:	
Email:		Project #:		Sample Type (C=Comp, G=grab)			
Project Name: <b>CCR - Basin Electric 2020 - LRS</b>		SSOW#:		Sample Time			
Site:		Sample Date		Preservation Code:			
<b>Sample Identification - Client ID (Lab ID)</b>							
MW-38C (280-137307-8)	6/2/20	15:30 Mountain	Water	X	X	X	
MW-39B (280-137307-9)	6/3/20	16:15 Mountain	Water	X	X	X	
MW-40B (280-137307-10)	6/3/20	15:30 Mountain	Water	X	X	X	
MW-41B (280-137307-11)	6/2/20	11:30 Mountain	Water	X	X	X	
MW-42B (280-137307-12)	6/3/20	09:30 Mountain	Water	X	X	X	
MW-43B (280-137307-13)	6/3/20	08:40 Mountain	Water	X	X	X	
MW-44B (280-137307-14)	6/2/20	09:30 Mountain	Water	X	X	X	
MW-45B (280-137307-15)	6/2/20	10:30 Mountain	Water	X	X	X	
MW-46B (280-137307-16)	6/2/20	16:15 Mountain	Water	X	X	X	

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

**Possible Hazard Identification**

Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_  
 Primary Deliverable Rank: 2  
 Date: \_\_\_\_\_

Empty Kit Relinquished by: \_\_\_\_\_  
 Relinquished by: *[Signature]* Date: **6/1/2020**  
 Relinquished by: **FED EX** Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_  
 Custody Seal No.: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_

Special Instructions/QC Requirements: \_\_\_\_\_  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)



**Chain of Custody Record**



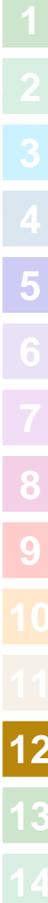
<b>Client Information (Sub Contract Lab)</b>		Lab PM: McEntee, Patrick J	Carrier Tracking No(s):	COC No: 280-527840.1						
Shipping/Receiving		E-Mail: patrick.mcEntee@testamericainc.com	State of Origin: Colorado	Page: Page 1 of 3						
TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Oregon	Job #:	280-137307-1						
Address: 13715 Rider Trail North,		Due Date Requested: 7/2/2020	Preservation Codes: A - HCL B - NaOH N - None O - AsNaO2 C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:							
City: Earth City		IAI Requested (days):	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - HZSO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)							
State, Zip: MO, 63045		PO #:	Total Number of containers							
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:	Special Instructions/Note:							
Email:		Project #: 28020759								
Project Name: CCR - Basin Electric 2020 - LRS		SSOW#:								
Site:										
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=swab, BT=issue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PreSep_21 Standard Target List	9320_Ra228/PreSep_0 Standard Target List	Ra226Ra228_GFPc	Analysis Requested
MW-14BR (280-137307-1)	6/2/20	13:30 Mountain		Water	X	X	X	X	X	
MW-20B (280-137307-2)	6/2/20	12:10 Mountain		Water	X	X	X	X	X	
MW-21B (280-137307-3)	6/2/20	14:30 Mountain		Water	X	X	X	X	X	
MW-32B (280-137307-4)	6/2/20	17:10 Mountain		Water	X	X	X	X	X	
MW-36B (280-137307-5)	6/4/20	09:15 Mountain		Water	X	X	X	X	X	
MW-37B (280-137307-6)	6/4/20	08:00 Mountain		Water	X	X	X	X	X	
MW-37B (280-137307-6MS)	6/4/20	08:00 Mountain	MS	Water	X	X	X	X	X	
MW-37B (280-137307-6MSD)	6/4/20	08:00 Mountain	MSD	Water	X	X	X	X	X	
MW-38B (280-137307-7)	6/3/20	10:20 Mountain		Water	X	X	X	X	X	

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

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2  
 Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: 6/19/2020 1445  
 Relinquished by: **FED EX** Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements: \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Received by: **FED EX** Date/Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: 6/10/2020 0846  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Company: **FCA STL**  
 Company: \_\_\_\_\_





# Chain of Custody Record

<b>Client Information (Sub Contract Lab)</b>		Lab PM: <b>McEntee, Patrick J</b>	Carrier Tracking No(s): <b>280-527840,3</b>
Client Contact: <b>Shipping/Receiving</b>		E-Mail: <b>patrick.mcEntee@testamericamc.com</b>	Page: <b>Page 3 of 3</b>
Company: <b>TestAmerica Laboratories, Inc.</b>		State of Origin: <b>Colorado</b>	Job #: <b>280-137307-1</b>
Address: <b>13715 Rider Trail North,</b>		Preservation Codes: A - HCL B - NaOH N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Z - other (specify) Other:	
City: <b>Earth City</b>		Accreditations Required (See note): <b>NELAP - Oregon</b>	
State, Zip: <b>MO, 63045</b>		<b>Analysis Requested</b>	
Phone: <b>314-298-8566(Tel) 314-298-8757(Fax)</b>		Due Date Requested: <b>7/2/2020</b>	
Email:		TAT Requested (days):	
Project Name: <b>CCR - Basin Electric 2020 - LRS</b>		PO #:	
Site: <b>CCR - Basin Electric 2020 - LRS</b>		WO #:	
SSOW#:		Project #: <b>28020759</b>	

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=AP)	Field Filled Sample (Yes or No)	Perform MSM/SD (Yes or No)	9315_Ra226/PreSep_21 Standard Target List	9320_Ra226/PreSep_0 Standard Target List	Ra226Ra228_GFPc	Total Number of Containers	Special Instructions/Note:
MW-47B (280-137307-17)	6/2/20	17:15 Mountain	Water	Water	X	X	X	X	X	1	
MW-49B (280-137307-18)	6/3/20	12:15 Mountain	Water	Water	X	X	X	X	X	1	
MW-52B (280-137307-19)	6/3/20	14:15 Mountain	Water	Water	X	X	X	X	X	1	
MW-53B (280-137307-20)	6/3/20	13:15 Mountain	Water	Water	X	X	X	X	X	1	
DUP-01 (280-137307-21)	6/2/20	10:40 Mountain	Water	Water	X	X	X	X	X	1	
FB-01 (280-137307-22)	6/3/20	Mountain	Water	Water	X	X	X	X	X	1	

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

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_ Primary Deliverable Rank: 2  
 Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_  
 Relinquished by: *[Signature]* Date/Time: **6/10/2020 0846** Company: **ETA STL**  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_ (Custody Seal No.: \_\_\_\_\_)  
 Δ Yes Δ No  
 Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_



**Eurofins TestAmerica, Denver**  
 4955 Yarrow Street  
 Arvada, CO 80002  
 Phone: 303-736-0100 Fax: 303-431-7171

**Chain of Custody Record**



176/18.5

**Client Information (Sub Contract Lab)**  
 Client Contact: McEntee, Patrick J  
 Shipping/Receiving: patrick.mcEntee@testamericainc.com  
 Company: TestAmerica Laboratories, Inc.  
 Address: 4101 Shuffel Street NW, North Canton, OH, 44720  
 Phone: 330-497-9396(Tel) 330-497-0772(Fax)  
 Email:  
 Project Name: CCR - Basin Electric 2020 - LRS  
 Site:

Lab PM: McEntee, Patrick J  
 E-Mail: patrick.mcEntee@testamericainc.com  
 Carrier Tracking No(s): 280-527839.1  
 State of Origin: Colorado  
 Page: Page 1 of 3  
 Job #: 280-137307-1  
 Accreditations Required (See note): NELAP - Oregon

**Analysis Requested**

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, G=soil, BT=Tissue, A=urine)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 13 Metals	Total Number of Containers	Special Instructions/Note:
MW-14BR (280-137307-1)	6/2/20	13:30 Mountain		Water	X	X		1	Use Collision Cell
MW-20B (280-137307-2)	6/2/20	12:10 Mountain		Water	X	X		1	Use Collision Cell
MW-21B (280-137307-3)	6/2/20	14:30 Mountain		Water	X	X		1	Use Collision Cell
MW-32B (280-137307-4)	6/2/20	17:10 Mountain		Water	X	X		1	Use Collision Cell
MW-36B (280-137307-5)	6/4/20	09:15 Mountain		Water	X	X		1	Use Collision Cell
MW-37B (280-137307-6)	6/4/20	08:00 Mountain		Water	X	X		1	Use Collision Cell
MW-37B (280-137307-6MS)	6/4/20	08:00 Mountain	MS	Water	X	X		1	Use Collision Cell
MW-37B (280-137307-6MSD)	6/4/20	08:00 Mountain	MSD	Water	X	X		1	Use Collision Cell
MW-38B (280-137307-7)	6/3/20	10:20 Mountain		Water	X	X		1	Use Collision Cell

Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2B4O5  
 Q - Na2SO3  
 R - Na2SO4  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCA  
 W - pH 8-5  
 X - other (specify)  
 Other:

Due Date Requested: 6/17/2020  
 TAT Requested (days):  
 Project #: 28020759  
 SSOW#:

**Sample Identification - Client ID (Lab ID)**

Special Instructions/Note: SGO

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:  
 Method of Shipment:  
 Date:  
 Time:

Relinquished by: [Signature] Date/Time: 6/9/2020 1430  
 Relinquished by: [Signature] Date/Time:  
 Relinquished by: [Signature] Date/Time:

Company: [Signature] Date/Time: 6/10/20 1000  
 Company:  
 Company:

Custody Seal No.:  
 Δ Yes Δ No  
 Cooler Temperature(s) °C and Other Remarks:

**Eurofins TestAmerica, Denver**  
 4955 Yarrow Street  
 Arvada, CO 80002  
 Phone: 303-736-0100 Fax: 303-431-7171

## Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b>		Sampler: <b>McEntee, Patrick J</b>		Lab PM: <b>McEntee, Patrick J</b>		Carrier Tracking No(s): <b>280-527839.2</b>	
Client Contact: <b>Shipping/Receiving</b>		Phone: <b>patrick.mcEntee@testamericainc.com</b>		E-Mail: <b>patrick.mcEntee@testamericainc.com</b>		Page: <b>Page 2 of 3</b>	
Company: <b>TestAmerica Laboratories, Inc.</b>		Accreditations Required (See note): <b>NELAP - Oregon</b>		Job #: <b>280-137307-1</b>		COC No: <b>280-527839.2</b>	
Address: <b>4101 Shuffel Street NW,</b>		Due Date Requested: <b>6/17/2020</b>		State of Origin: <b>Colorado</b>		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)	
City: <b>North Canton</b>		TAT Requested (days):		Analysis Requested		Total Number of containers	
State, Zip: <b>OH, 44720</b>		PO #:		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
Phone: <b>330-497-9396(Tel) 330-497-0772(Fax)</b>		WO #:		6020A/3005A (MOD) 13 Metals		Special Instructions/Note:	
Email:		Project #:		X		X	
Project Name: <b>CCR - Basin Electric 2020 - LRS</b>		SSOW#:		X		X	
Site:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
MW-38C (280-137307-8)		6/2/20		15:30 Mountain		Water	
MW-39B (280-137307-9)		6/3/20		16:15 Mountain		Water	
MW-40B (280-137307-10)		6/3/20		15:30 Mountain		Water	
MW-41B (280-137307-11)		6/2/20		11:30 Mountain		Water	
MW-42B (280-137307-12)		6/3/20		09:30 Mountain		Water	
MW-43B (280-137307-13)		6/3/20		08:40 Mountain		Water	
MW-44B (280-137307-14)		6/2/20		09:30 Mountain		Water	
MW-45B (280-137307-15)		6/2/20		10:30 Mountain		Water	
MW-46B (280-137307-16)		6/2/20		16:15 Mountain		Water	

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

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) **Primary Deliverable Rank: 2**  
 Empty Kit Relinquished by: **Adam F. Judson** Date: **6/19/2020 14:30**  
 Relinquished by: **Adam F. Judson** Date/Time: **6/10/20 10:01** Company: **ETA**  
 Relinquished by: Date/Time: Company:  
 Relinquished by: Date/Time: Company:  
 Custody Seals Intact: **Δ Yes Δ No** Custody Seal No.:  
 Cooler Temperature(s) °C and Other Remarks:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:





<b>Eurofins TestAmerica Canton Sample Receipt Form/Narrative</b>		Login # : _____
<b>Canton Facility</b>		
Client <u>ETA</u>	Site Name _____	Cooler unpacked by: <u>Adam S. Judson</u>
Cooler Received on <u>6/10/20</u>	Opened on <u>6/10/20</u>	
FedEx: 1 <sup>st</sup> Grd <input checked="" type="checkbox"/> Exp <input type="checkbox"/> UPS <input type="checkbox"/> FAS <input type="checkbox"/> Clipper <input type="checkbox"/> Client Drop Off <input type="checkbox"/> TestAmerica Courier <input type="checkbox"/> Other <input type="checkbox"/>		
<b>Receipt After-hours: Drop-off Date/Time</b>		<b>Storage Location</b>
TestAmerica Cooler # <u>TA</u>	Foam Box <input type="checkbox"/>	Client Cooler <input type="checkbox"/>
Packing material used: <u>Bubble Wrap</u>	Foam <input type="checkbox"/>	Plastic Bag <input checked="" type="checkbox"/>
COOLANT: <u>Wet Ice</u>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
	Water <input type="checkbox"/>	None <input checked="" type="checkbox"/>
<input type="checkbox"/> See Multiple Cooler Form		
1. Cooler temperature upon receipt	IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C	
	IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. <u>17.6</u> °C Corrected Cooler Temp. <u>18.5</u> °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
-Were the seals on the outside of the cooler(s) signed & dated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
-Were tamper/custody seals intact and uncompromised?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	
3. Shippers' packing slip attached to the cooler(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4. Did custody papers accompany the sample(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Were the custody papers relinquished & signed in the appropriate place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
7. Did all bottles arrive in good condition (Unbroken)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
8. Could all bottle labels be reconciled with the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
9. Were correct bottle(s) used for the test(s) indicated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10. Sufficient quantity received to perform indicated analyses?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11. Are these work share samples?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	pH Strip Lot# <u>HC902937</u>
13. Were VOAs on the COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Were air bubbles >6 mm in any VOA vials?  Larger than this.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
16. Was a LL Hg or Me Hg trip blank present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		
Concerning _____		

<b>17. CHAIN OF CUSTODY &amp; SAMPLE DISCREPANCIES</b>	Samples processed by: _____
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	

<b>18. SAMPLE CONDITION</b>
Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

<b>19. SAMPLE PRESERVATION</b>
Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____
VOA Sample Preservation - Date/Time VOAs Frozen: _____

# Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 280-137307-1

**Login Number: 137307**

**List Source: Eurofins TestAmerica, Denver**

**List Number: 1**

**Creator: Lubin, Julius C**

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

## Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 280-137307-1

**Login Number: 137307**

**List Number: 2**

**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**

**List Creation: 06/10/20 02:55 PM**

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

# Tracer/Carrier Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	
280-137307-1	MW-14BR	95.3	
280-137307-2	MW-20B	101	
280-137307-3	MW-21B	95.0	
280-137307-4	MW-32B	100	
280-137307-5	MW-36B	101	
280-137307-6	MW-37B	99.7	
280-137307-6 MS	MW-37B	96.4	
280-137307-6 MSD	MW-37B	96.1	
280-137307-7	MW-38B	103	
280-137307-8	MW-38C	97.6	
280-137307-9	MW-39B	96.1	
280-137307-10	MW-40B	96.1	
280-137307-11	MW-41B	99.7	
280-137307-12	MW-42B	101	
280-137307-13	MW-43B	97.6	
280-137307-14	MW-44B	91.7	
280-137307-15	MW-45B	94.1	
280-137307-16	MW-46B	97.6	
280-137307-17	MW-47B	98.5	
280-137307-18	MW-49B	94.7	
280-137307-19	MW-52B	94.7	
280-137307-20	MW-53B	87.8	
280-137307-21	DUP-01	92.3	
280-137307-22	FB-01	104	
LCS 160-473093/1-A	Lab Control Sample	96.4	
LCS 160-473104/1-A	Lab Control Sample	97.3	
LCSD 160-473093/2-A	Lab Control Sample Dup	104	
LCSD 160-473104/2-A	Lab Control Sample Dup	103	
MB 160-473093/15-A	Method Blank	102	
MB 160-473104/25-A	Method Blank	101	

**Tracer/Carrier Legend**

Ba = Ba Carrier

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
280-137307-1	MW-14BR	95.3	85.2
280-137307-2	MW-20B	101	86.4
280-137307-3	MW-21B	95.0	86.7
280-137307-4	MW-32B	100	85.6
280-137307-5	MW-36B	101	86.0
280-137307-6	MW-37B	99.7	85.2
280-137307-6 MS	MW-37B	96.4	84.5
280-137307-6 MSD	MW-37B	96.1	83.7
280-137307-7	MW-38B	103	86.0
280-137307-8	MW-38C	97.6	88.6

Eurofins TestAmerica, Denver

# Tracer/Carrier Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-1

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

**Matrix: Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
280-137307-9	MW-39B	96.1	87.1
280-137307-10	MW-40B	96.1	87.9
280-137307-11	MW-41B	99.7	87.5
280-137307-12	MW-42B	101	87.5
280-137307-13	MW-43B	97.6	86.0
280-137307-14	MW-44B	91.7	88.6
280-137307-15	MW-45B	94.1	85.2
280-137307-16	MW-46B	97.6	88.6
280-137307-17	MW-47B	98.5	88.6
280-137307-18	MW-49B	94.7	87.9
280-137307-19	MW-52B	94.7	88.6
280-137307-20	MW-53B	87.8	87.5
280-137307-21	DUP-01	92.3	86.7
280-137307-22	FB-01	104	85.2
LCS 160-473094/1-A	Lab Control Sample	96.4	87.5
LCS 160-473146/1-A	Lab Control Sample	97.3	86.4
LCSD 160-473094/2-A	Lab Control Sample Dup	104	88.6
LCSD 160-473146/2-A	Lab Control Sample Dup	103	83.4
MB 160-473094/15-A	Method Blank	102	84.9
MB 160-473146/25-A	Method Blank	101	87.5

**Tracer/Carrier Legend**

Ba = Ba Carrier

Y = Y Carrier



## ANALYTICAL REPORT

Eurofins TestAmerica, Denver  
4955 Yarrow Street  
Arvada, CO 80002  
Tel: (303)736-0100

Laboratory Job ID: 280-137307-2  
Client Project/Site: CCR - Basin Electric 2020 - LRS

For:  
AECOM Technical Services Inc.  
6200 S. Quebec Street  
Greenwood Village, Colorado 80111

Attn: Ms. Katie Abbott



Authorized for release by:  
8/6/2020 6:04:23 PM

Patrick McEntee, Client Service Manager  
(303)736-0107  
[Patrick.McEntee@Eurofinset.com](mailto:Patrick.McEntee@Eurofinset.com)

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

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

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# Definitions/Glossary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Qualifiers

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

## Glossary

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

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

**Job ID: 280-137307-2**

**Laboratory: Eurofins TestAmerica, Denver**

**Narrative**

## CASE NARRATIVE

**Client: AECOM Technical Services Inc.**

**Project: CCR - Basin Electric 2020 - LRS**

**Report Number: 280-137307-2**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **REVISION 1, AUGUST 6, 2020**

Deliverables revised to report results to three significant figures.

Radiochemical analysis is not reported under 280-137307-1. All other analysis us reported under 280-137307-2

### **RECEIPT**

The samples were received on 6/4/2020 4:18 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 7 coolers at receipt time were 0.4° C, 1.2° C, 2.0° C, 2.1° C, 3.0° C, 3.5° C and 3.9° C.

### **Receipt Exceptions**

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC does not list the sample time or date for sample FB-01.

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): 280-137307-1, 280-137307-2, 280-137307-9 and 280-137307-12. The container labels list do not list the sample time for some containers:

MW-42B - No time on one 1L unpreserved plastic poly  
MW-39B - No time on two 500mL plastic polys with nitric acid and one 250mL unpreserved plastic poly  
Mw-20B - No time on one 1L plastic poly with nitric acid  
MW-14BR - No time on all containers

### **TOTAL RECOVERABLE METALS (ICP)**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B (280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 06/11/2020 and analyzed on 06/14/2020 and 06/15/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **TOTAL RECOVERABLE METALS (ICPMS)**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Job ID: 280-137307-2 (Continued)

### Laboratory: Eurofins TestAmerica, Denver (Continued)

(280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 06/11/2020 and analyzed on 06/12/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **TOTAL MERCURY**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B (280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 06/12/2020.

Mercury was detected in method blank MB 280-498530/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Mercury was detected in method blank MB 280-498533/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **TOTAL DISSOLVED SOLIDS**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B (280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 06/09/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **ANIONS (28 DAYS)**

Samples MW-14BR (280-137307-1), MW-20B (280-137307-2), MW-21B (280-137307-3), MW-32B (280-137307-4), MW-36B (280-137307-5), MW-37B (280-137307-6), MW-38B (280-137307-7), MW-38C (280-137307-8), MW-39B (280-137307-9), MW-40B (280-137307-10), MW-41B (280-137307-11), MW-42B (280-137307-12), MW-43B (280-137307-13), MW-44B (280-137307-14), MW-45B (280-137307-15), MW-46B (280-137307-16), MW-47B (280-137307-17), MW-49B (280-137307-18), MW-52B (280-137307-19), MW-53B (280-137307-20), DUP-01 (280-137307-21) and FB-01 (280-137307-22) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 06/15/2020, 06/16/2020 and 06/17/2020.

Fluoride failed the recovery criteria low for the MS of sample MW-37BMS (280-137307-6) in batch 280-498733. Fluoride failed the recovery criteria low for the MSD of sample MW-37BMSD (280-137307-6) in batch 280-498733. Refer to the QC report for details.

Samples MW-14BR (280-137307-1)[5X], MW-20B (280-137307-2)[5X], MW-21B (280-137307-3)[5X], MW-32B (280-137307-4)[10X], MW-36B (280-137307-5)[5X], MW-37B (280-137307-6)[5X], MW-38B (280-137307-7)[5X], MW-38C (280-137307-7)[50X], MW-38C (280-137307-8)[5X], MW-39B (280-137307-9)[5X], MW-40B (280-137307-10)[5X], MW-41B (280-137307-11)[10X], MW-42B (280-137307-12)[10X], MW-43B (280-137307-13)[5X], MW-44B (280-137307-14)[5X], MW-45B (280-137307-15)[5X], MW-46B (280-137307-16)[5X], MW-47B (280-137307-17)[5X], MW-49B (280-137307-18)[5X], MW-52B (280-137307-19)[5X], MW-53B (280-137307-20)[5X] and DUP-01 (280-137307-21)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Case Narrative

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

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**Job ID: 280-137307-2 (Continued)**

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**Laboratory: Eurofins TestAmerica, Denver (Continued)**

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# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-14BR

## Lab Sample ID: 280-137307-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	173		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.151		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0420		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.0104		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0289		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00980		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	80.5		3.00		mg/L	1		9056A	Total/NA
Sulfate	336		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	928		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-20B

## Lab Sample ID: 280-137307-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	152		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.231		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0579		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0351		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	45.0		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.511		0.500		mg/L	1		9056A	Total/NA
Sulfate	410		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1010		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-21B

## Lab Sample ID: 280-137307-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	281		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.208		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0464		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.0197		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0419		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0185		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.0404		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	261		15.0		mg/L	5		9056A	Total/NA
Sulfate	635		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1700		20.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-32B

## Lab Sample ID: 280-137307-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	203		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.305		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0351		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0734		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	85.2		3.00		mg/L	1		9056A	Total/NA
Sulfate	820		50.0		mg/L	10		9056A	Total/NA
Total Dissolved Solids (TDS)	1820		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-36B

## Lab Sample ID: 280-137307-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	140		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0655		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0318		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00643		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	39.2		3.00		mg/L	1		9056A	Total/NA
Sulfate	361		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	918		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-37B

## Lab Sample ID: 280-137307-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	207		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.156		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0664		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0380		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0344		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.00835		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	97.1		3.00		mg/L	1		9056A	Total/NA
Sulfate	521		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1260		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-38B

## Lab Sample ID: 280-137307-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	556		0.200		mg/L	1		6010C	Total Recoverable
Boron	3.85		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0176		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00731		0.00200		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-38B (Continued)

## Lab Sample ID: 280-137307-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.130		0.00800		mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.221		0.0100		mg/L	1		6020A	Total
									Recoverable
Selenium	0.0100		0.00500		mg/L	1		6020A	Total
									Recoverable
Chloride	385		15.0		mg/L	5		9056A	Total/NA
Fluoride	1.68		0.500		mg/L	1		9056A	Total/NA
Sulfate	5100		250		mg/L	50		9056A	Total/NA
Total Dissolved Solids (TDS)	8640		100		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-38C

## Lab Sample ID: 280-137307-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	99.2		0.200		mg/L	1		6010C	Total
									Recoverable
Barium	0.0484		0.00500		mg/L	1		6020A	Total
									Recoverable
Lithium	0.0270		0.00800		mg/L	1		6020A	Total
									Recoverable
Selenium	0.00597		0.00500		mg/L	1		6020A	Total
									Recoverable
Chloride	24.2		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.512		0.500		mg/L	1		9056A	Total/NA
Sulfate	212		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	634		10.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-39B

## Lab Sample ID: 280-137307-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	195		0.200		mg/L	1		6010C	Total
									Recoverable
Boron	0.185		0.100		mg/L	1		6010C	Total
									Recoverable
Barium	0.0356		0.00500		mg/L	1		6020A	Total
									Recoverable
Lithium	0.0588		0.00800		mg/L	1		6020A	Total
									Recoverable
Chloride	40.7		3.00		mg/L	1		9056A	Total/NA
Sulfate	537		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1360		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-40B

## Lab Sample ID: 280-137307-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	138		0.200		mg/L	1		6010C	Total
									Recoverable
Boron	0.165		0.100		mg/L	1		6010C	Total
									Recoverable
Barium	0.0293		0.00500		mg/L	1		6020A	Total
									Recoverable
Lithium	0.0508		0.00800		mg/L	1		6020A	Total
									Recoverable
Chloride	25.0		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.653		0.500		mg/L	1		9056A	Total/NA
Sulfate	315		25.0		mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-40B (Continued)

## Lab Sample ID: 280-137307-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids (TDS)	896		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-41B

## Lab Sample ID: 280-137307-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	284		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.972		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0254		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00327		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0541		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.140		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.00562		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	172		3.00		mg/L	1		9056A	Total/NA
Sulfate	1300		50.0		mg/L	10		9056A	Total/NA
Total Dissolved Solids (TDS)	2590		40.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-42B

## Lab Sample ID: 280-137307-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	173		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.733		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0219		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00220		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0428		0.00800		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0772		0.0100		mg/L	1		6020A	Total Recoverable
Selenium	0.0124		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	133		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.536		0.500		mg/L	1		9056A	Total/NA
Sulfate	980		50.0		mg/L	10		9056A	Total/NA
Total Dissolved Solids (TDS)	1940		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-43B

## Lab Sample ID: 280-137307-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	149		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.316		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0371		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0353		0.00800		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-43B (Continued)

## Lab Sample ID: 280-137307-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0192		0.0100		mg/L	1		6020A	Total Recoverable
Chloride	52.9		3.00		mg/L	1		9056A	Total/NA
Sulfate	550		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1200		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-44B

## Lab Sample ID: 280-137307-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	173		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0507		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00741		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0321		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	52.6		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.540		0.500		mg/L	1		9056A	Total/NA
Sulfate	405		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1060		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-45B

## Lab Sample ID: 280-137307-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	150		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.182		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0463		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00326		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0321		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00872		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	40.1		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.626		0.500		mg/L	1		9056A	Total/NA
Sulfate	333		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	892		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-46B

## Lab Sample ID: 280-137307-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	89.7		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0626		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.0104		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0239		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	28.4		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.517		0.500		mg/L	1		9056A	Total/NA
Sulfate	211		25.0		mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-46B (Continued)

## Lab Sample ID: 280-137307-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids (TDS)	615		10.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-47B

## Lab Sample ID: 280-137307-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	127		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.124		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0715		0.00500		mg/L	1		6020A	Total Recoverable
Chromium	0.00490		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0267		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	26.8		3.00		mg/L	1		9056A	Total/NA
Sulfate	306		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	744		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-49B

## Lab Sample ID: 280-137307-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	141		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.155		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0695		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0450		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	30.6		3.00		mg/L	1		9056A	Total/NA
Sulfate	419		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	168		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-52B

## Lab Sample ID: 280-137307-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	167		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.149		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0715		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0426		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	34.8		3.00		mg/L	1		9056A	Total/NA
Sulfate	450		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1890		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: MW-53B

## Lab Sample ID: 280-137307-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	101		0.200		mg/L	1		6010C	Total Recoverable
Barium	0.0504		0.00500		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Detection Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-53B (Continued)

## Lab Sample ID: 280-137307-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.00240		0.00200		mg/L	1		6020A	Total Recoverable
Lithium	0.0378		0.00800		mg/L	1		6020A	Total Recoverable
Selenium	0.00951		0.00500		mg/L	1		6020A	Total Recoverable
Chloride	41.2		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.939		0.500		mg/L	1		9056A	Total/NA
Sulfate	220		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	697		10.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-01

## Lab Sample ID: 280-137307-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	144		0.200		mg/L	1		6010C	Total Recoverable
Boron	0.224		0.100		mg/L	1		6010C	Total Recoverable
Barium	0.0598		0.00500		mg/L	1		6020A	Total Recoverable
Lithium	0.0346		0.00800		mg/L	1		6020A	Total Recoverable
Chloride	44.7		3.00		mg/L	1		9056A	Total/NA
Fluoride	0.551		0.500		mg/L	1		9056A	Total/NA
Sulfate	415		25.0		mg/L	5		9056A	Total/NA
Total Dissolved Solids (TDS)	1020		20.0		mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-01

## Lab Sample ID: 280-137307-22

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

# Method Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN

#### Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

#### Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

# Sample Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-137307-1	MW-14BR	Water	06/02/20 13:30	06/04/20 16:18	
280-137307-2	MW-20B	Water	06/02/20 12:10	06/04/20 16:18	
280-137307-3	MW-21B	Water	06/02/20 14:30	06/04/20 16:18	
280-137307-4	MW-32B	Water	06/02/20 17:10	06/04/20 16:18	
280-137307-5	MW-36B	Water	06/04/20 09:15	06/04/20 16:18	
280-137307-6	MW-37B	Water	06/04/20 08:00	06/04/20 16:18	
280-137307-7	MW-38B	Water	06/03/20 10:20	06/04/20 16:18	
280-137307-8	MW-38C	Water	06/02/20 15:30	06/04/20 16:18	
280-137307-9	MW-39B	Water	06/03/20 16:15	06/04/20 16:18	
280-137307-10	MW-40B	Water	06/03/20 15:30	06/04/20 16:18	
280-137307-11	MW-41B	Water	06/02/20 11:30	06/04/20 16:18	
280-137307-12	MW-42B	Water	06/03/20 09:30	06/04/20 16:18	
280-137307-13	MW-43B	Water	06/03/20 08:40	06/04/20 16:18	
280-137307-14	MW-44B	Water	06/02/20 09:30	06/04/20 16:18	
280-137307-15	MW-45B	Water	06/02/20 10:30	06/04/20 16:18	
280-137307-16	MW-46B	Water	06/02/20 16:15	06/04/20 16:18	
280-137307-17	MW-47B	Water	06/02/20 17:15	06/04/20 16:18	
280-137307-18	MW-49B	Water	06/03/20 12:15	06/04/20 16:18	
280-137307-19	MW-52B	Water	06/03/20 14:15	06/04/20 16:18	
280-137307-20	MW-53B	Water	06/03/20 13:15	06/04/20 16:18	
280-137307-21	DUP-01	Water	06/02/20 00:00	06/04/20 16:18	
280-137307-22	FB-01	Water	06/03/20 10:40	06/04/20 16:18	

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6010C - Metals (ICP) - Total Recoverable

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	173		0.200		mg/L		06/11/20 15:15	06/14/20 23:39	1
Boron	0.151		0.100		mg/L		06/11/20 15:15	06/14/20 23:39	1

**Client Sample ID: MW-20B**  
**Date Collected: 06/02/20 12:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	152		0.200		mg/L		06/11/20 15:15	06/14/20 23:56	1
Boron	0.231		0.100		mg/L		06/11/20 15:15	06/14/20 23:56	1

**Client Sample ID: MW-21B**  
**Date Collected: 06/02/20 14:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	281		0.200		mg/L		06/11/20 15:15	06/15/20 00:00	1
Boron	0.208		0.100		mg/L		06/11/20 15:15	06/15/20 00:00	1

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	203		0.200		mg/L		06/11/20 15:15	06/15/20 00:03	1
Boron	0.305		0.100		mg/L		06/11/20 15:15	06/15/20 00:03	1

**Client Sample ID: MW-36B**  
**Date Collected: 06/04/20 09:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	140		0.200		mg/L		06/11/20 15:15	06/15/20 00:06	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/15/20 00:06	1

**Client Sample ID: MW-37B**  
**Date Collected: 06/04/20 08:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	207		0.200		mg/L		06/11/20 15:15	06/14/20 23:23	1
Boron	0.156		0.100		mg/L		06/11/20 15:15	06/14/20 23:23	1

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	556		0.200		mg/L		06/11/20 15:15	06/15/20 00:10	1
Boron	3.85		0.100		mg/L		06/11/20 15:15	06/15/20 00:10	1

**Client Sample ID: MW-38C**  
**Date Collected: 06/02/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	99.2		0.200		mg/L		06/11/20 15:15	06/15/20 00:13	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/15/20 00:13	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6010C - Metals (ICP) - Total Recoverable

**Client Sample ID: MW-39B**  
**Date Collected: 06/03/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	195		0.200		mg/L		06/11/20 15:15	06/15/20 00:16	1
Boron	0.185		0.100		mg/L		06/11/20 15:15	06/15/20 00:16	1

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	138		0.200		mg/L		06/11/20 15:15	06/15/20 00:20	1
Boron	0.165		0.100		mg/L		06/11/20 15:15	06/15/20 00:20	1

**Client Sample ID: MW-41B**  
**Date Collected: 06/02/20 11:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	284		0.200		mg/L		06/11/20 15:15	06/15/20 00:43	1
Boron	0.972		0.100		mg/L		06/11/20 15:15	06/15/20 00:43	1

**Client Sample ID: MW-42B**  
**Date Collected: 06/03/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	173		0.200		mg/L		06/11/20 15:15	06/15/20 01:00	1
Boron	0.733		0.100		mg/L		06/11/20 15:15	06/15/20 01:00	1

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	149		0.200		mg/L		06/11/20 15:15	06/15/20 01:03	1
Boron	0.316		0.100		mg/L		06/11/20 15:15	06/15/20 01:03	1

**Client Sample ID: MW-44B**  
**Date Collected: 06/02/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	173		0.200		mg/L		06/11/20 15:15	06/15/20 01:20	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/15/20 01:20	1

**Client Sample ID: MW-45B**  
**Date Collected: 06/02/20 10:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	150		0.200		mg/L		06/11/20 15:15	06/15/20 01:24	1
Boron	0.182		0.100		mg/L		06/11/20 15:15	06/15/20 01:24	1

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	89.7		0.200		mg/L		06/11/20 15:15	06/15/20 01:27	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/15/20 01:27	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6010C - Metals (ICP) - Total Recoverable

**Client Sample ID: MW-47B**  
**Date Collected: 06/02/20 17:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	127		0.200		mg/L		06/11/20 15:15	06/15/20 01:30	1
Boron	0.124		0.100		mg/L		06/11/20 15:15	06/15/20 01:30	1

**Client Sample ID: MW-49B**  
**Date Collected: 06/03/20 12:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	141		0.200		mg/L		06/11/20 15:15	06/15/20 01:34	1
Boron	0.155		0.100		mg/L		06/11/20 15:15	06/15/20 01:34	1

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	167		0.200		mg/L		06/11/20 15:15	06/15/20 01:37	1
Boron	0.149		0.100		mg/L		06/11/20 15:15	06/15/20 01:37	1

**Client Sample ID: MW-53B**  
**Date Collected: 06/03/20 13:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	101		0.200		mg/L		06/11/20 15:15	06/15/20 01:40	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/15/20 01:40	1

**Client Sample ID: DUP-01**  
**Date Collected: 06/02/20 00:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	144		0.200		mg/L		06/11/20 15:15	06/15/20 01:44	1
Boron	0.224		0.100		mg/L		06/11/20 15:15	06/15/20 01:44	1

**Client Sample ID: FB-01**  
**Date Collected: 06/03/20 10:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		0.200		mg/L		06/11/20 15:15	06/15/20 01:47	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/15/20 01:47	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 13:57	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 13:57	1
Barium	0.0420		0.00500		mg/L		06/11/20 14:00	06/12/20 13:57	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:57	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:57	1
Chromium	0.0104		0.00200		mg/L		06/11/20 14:00	06/12/20 13:57	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:57	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:57	1
<b>Lithium</b>	<b>0.0289</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 13:57	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 13:57	1
<b>Selenium</b>	<b>0.00980</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 13:57	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:57	1

**Client Sample ID: MW-20B**  
**Date Collected: 06/02/20 12:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:00	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:00	1
<b>Barium</b>	<b>0.0579</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:00	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:00	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:00	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:00	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:00	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:00	1
<b>Lithium</b>	<b>0.0351</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:00	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:00	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:00	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:00	1

**Client Sample ID: MW-21B**  
**Date Collected: 06/02/20 14:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:07	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:07	1
<b>Barium</b>	<b>0.0464</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:07	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:07	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:07	1
<b>Chromium</b>	<b>0.0197</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:07	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:07	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:07	1
<b>Lithium</b>	<b>0.0419</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:07	1
<b>Molybdenum</b>	<b>0.0185</b>		0.0100		mg/L		06/11/20 14:00	06/12/20 14:07	1
<b>Selenium</b>	<b>0.0404</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:07	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:07	1

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:10	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:10	1
<b>Barium</b>	<b>0.0351</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:10	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:10	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:10	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:10	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:10	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:10	1
<b>Lithium</b>	<b>0.0734</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:10	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:10	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:10	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:10	1

**Client Sample ID: MW-36B**  
**Date Collected: 06/04/20 09:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:12	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:12	1
<b>Barium</b>	<b>0.0655</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:12	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:12	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:12	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:12	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:12	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:12	1
<b>Lithium</b>	<b>0.0318</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:12	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:12	1
<b>Selenium</b>	<b>0.00643</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:12	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:12	1

**Client Sample ID: MW-37B**  
**Date Collected: 06/04/20 08:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 13:45	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 13:45	1
<b>Barium</b>	<b>0.0664</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 13:45	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:45	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:45	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 13:45	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:45	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:45	1
<b>Lithium</b>	<b>0.0380</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 13:45	1
<b>Molybdenum</b>	<b>0.0344</b>		0.0100		mg/L		06/11/20 14:00	06/12/20 13:45	1
<b>Selenium</b>	<b>0.00835</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 13:45	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:45	1

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:15	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:15	1
<b>Barium</b>	<b>0.0176</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:15	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:15	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:15	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chromium</b>	<b>0.00731</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:15	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:15	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:15	1
<b>Lithium</b>	<b>0.130</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:15	1
<b>Molybdenum</b>	<b>0.221</b>		0.0100		mg/L		06/11/20 14:00	06/12/20 14:15	1
<b>Selenium</b>	<b>0.0100</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:15	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:15	1

**Client Sample ID: MW-38C**  
**Date Collected: 06/02/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:17	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:17	1
<b>Barium</b>	<b>0.0484</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:17	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:17	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:17	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:17	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:17	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:17	1
<b>Lithium</b>	<b>0.0270</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:17	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:17	1
<b>Selenium</b>	<b>0.00597</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:17	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:17	1

**Client Sample ID: MW-39B**  
**Date Collected: 06/03/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:20	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:20	1
<b>Barium</b>	<b>0.0356</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:20	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:20	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:20	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:20	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:20	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:20	1
<b>Lithium</b>	<b>0.0588</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:20	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:20	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:20	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:20	1

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:22	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:22	1
<b>Barium</b>	<b>0.0293</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:22	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:22	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:22	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:22	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:22	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:22	1
<b>Lithium</b>	<b>0.0508</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:22	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:22	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:22	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:22	1

**Client Sample ID: MW-41B**  
**Date Collected: 06/02/20 11:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:25	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:25	1
<b>Barium</b>	<b>0.0254</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:25	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:25	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:25	1
<b>Chromium</b>	<b>0.00327</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:25	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:25	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:25	1
<b>Lithium</b>	<b>0.0541</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:25	1
<b>Molybdenum</b>	<b>0.140</b>		0.0100		mg/L		06/11/20 14:00	06/12/20 14:25	1
<b>Selenium</b>	<b>0.00562</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:25	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:25	1

**Client Sample ID: MW-42B**  
**Date Collected: 06/03/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:27	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:27	1
<b>Barium</b>	<b>0.0219</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:27	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:27	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:27	1
<b>Chromium</b>	<b>0.00220</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:27	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:27	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:27	1
<b>Lithium</b>	<b>0.0428</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:27	1
<b>Molybdenum</b>	<b>0.0772</b>		0.0100		mg/L		06/11/20 14:00	06/12/20 14:27	1
<b>Selenium</b>	<b>0.0124</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:27	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:27	1

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:30	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:30	1
<b>Barium</b>	<b>0.0371</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:30	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:30	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:30	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:30	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:30	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:30	1
<b>Lithium</b>	<b>0.0353</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:30	1
<b>Molybdenum</b>	<b>0.0192</b>		0.0100		mg/L		06/11/20 14:00	06/12/20 14:30	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:30	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:30	1

**Client Sample ID: MW-44B**  
**Date Collected: 06/02/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:37	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:37	1
<b>Barium</b>	<b>0.0507</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:37	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:37	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:37	1
<b>Chromium</b>	<b>0.00741</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:37	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:37	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:37	1
<b>Lithium</b>	<b>0.0321</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:37	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:37	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:37	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:37	1

**Client Sample ID: MW-45B**  
**Date Collected: 06/02/20 10:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:40	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:40	1
<b>Barium</b>	<b>0.0463</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:40	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:40	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:40	1
<b>Chromium</b>	<b>0.00326</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:40	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:40	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:40	1
<b>Lithium</b>	<b>0.0321</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:40	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:40	1
<b>Selenium</b>	<b>0.00872</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:40	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:40	1

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:42	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:42	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.0626</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:42	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:42	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:42	1
<b>Chromium</b>	<b>0.0104</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:42	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:42	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:42	1
<b>Lithium</b>	<b>0.0239</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:42	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:42	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:42	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:42	1

**Client Sample ID: MW-47B**  
**Date Collected: 06/02/20 17:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:45	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:45	1
<b>Barium</b>	<b>0.0715</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:45	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:45	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:45	1
<b>Chromium</b>	<b>0.00490</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:45	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:45	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:45	1
<b>Lithium</b>	<b>0.0267</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:45	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:45	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:45	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:45	1

**Client Sample ID: MW-49B**  
**Date Collected: 06/03/20 12:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:47	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:47	1
<b>Barium</b>	<b>0.0695</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:47	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:47	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:47	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:47	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:47	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:47	1
<b>Lithium</b>	<b>0.0450</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:47	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:47	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:47	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:47	1

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:50	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:50	1
<b>Barium</b>	<b>0.0715</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:50	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:50	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:50	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:50	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:50	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:50	1
<b>Lithium</b>	<b>0.0426</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:50	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:50	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:50	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:50	1

**Client Sample ID: MW-53B**  
**Date Collected: 06/03/20 13:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 14:52	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 14:52	1
<b>Barium</b>	<b>0.0504</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:52	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:52	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:52	1
<b>Chromium</b>	<b>0.00240</b>		0.00200		mg/L		06/11/20 14:00	06/12/20 14:52	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:52	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:52	1
<b>Lithium</b>	<b>0.0378</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 14:52	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 14:52	1
<b>Selenium</b>	<b>0.00951</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 14:52	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 14:52	1

**Client Sample ID: DUP-01**  
**Date Collected: 06/02/20 00:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 12:26	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:26	1
<b>Barium</b>	<b>0.0598</b>		0.00500		mg/L		06/11/20 14:00	06/12/20 12:26	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:26	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:26	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 12:26	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:26	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:26	1
<b>Lithium</b>	<b>0.0346</b>		0.00800		mg/L		06/11/20 14:00	06/12/20 12:26	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 12:26	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:26	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:26	1

# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

**Client Sample ID: FB-01**  
**Date Collected: 06/03/20 10:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 12:38	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:38	1
Barium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:38	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:38	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:38	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 12:38	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:38	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:38	1
Lithium	ND		0.00800		mg/L		06/11/20 14:00	06/12/20 12:38	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 12:38	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:38	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:38	1

## Method: 7470A - Mercury (CVAA)

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:03	1

**Client Sample ID: MW-20B**  
**Date Collected: 06/02/20 12:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:06	1

**Client Sample ID: MW-21B**  
**Date Collected: 06/02/20 14:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:08	1

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:10	1

**Client Sample ID: MW-36B**  
**Date Collected: 06/04/20 09:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:17	1

**Client Sample ID: MW-37B**  
**Date Collected: 06/04/20 08:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:19	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 7470A - Mercury (CVAA)

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:26	1

**Client Sample ID: MW-38C**  
**Date Collected: 06/02/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:28	1

**Client Sample ID: MW-39B**  
**Date Collected: 06/03/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:30	1

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:32	1

**Client Sample ID: MW-41B**  
**Date Collected: 06/02/20 11:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:35	1

**Client Sample ID: MW-42B**  
**Date Collected: 06/03/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:37	1

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:44	1

**Client Sample ID: MW-44B**  
**Date Collected: 06/02/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:46	1

**Client Sample ID: MW-45B**  
**Date Collected: 06/02/20 10:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:48	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 7470A - Mercury (CVAA)

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:50	1

**Client Sample ID: MW-47B**  
**Date Collected: 06/02/20 17:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:52	1

**Client Sample ID: MW-49B**  
**Date Collected: 06/03/20 12:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:55	1

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:57	1

**Client Sample ID: MW-53B**  
**Date Collected: 06/03/20 13:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 20:59	1

**Client Sample ID: DUP-01**  
**Date Collected: 06/02/20 00:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 18:35	1

**Client Sample ID: FB-01**  
**Date Collected: 06/03/20 10:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 18:37	1

## General Chemistry

**Client Sample ID: MW-14BR**  
**Date Collected: 06/02/20 13:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80.5		3.00		mg/L			06/15/20 16:26	1
Fluoride	ND		0.500		mg/L			06/15/20 16:26	1
Sulfate	336		25.0		mg/L			06/16/20 17:19	5
Total Dissolved Solids (TDS)	928		20.0		mg/L			06/09/20 09:56	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## General Chemistry

**Client Sample ID: MW-20B**  
**Date Collected: 06/02/20 12:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.0		3.00		mg/L			06/15/20 16:42	1
Fluoride	0.511		0.500		mg/L			06/15/20 16:42	1
Sulfate	410		25.0		mg/L			06/16/20 17:35	5
Total Dissolved Solids (TDS)	1010		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-21B**  
**Date Collected: 06/02/20 14:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	261		15.0		mg/L			06/16/20 17:52	5
Fluoride	ND		0.500		mg/L			06/15/20 18:37	1
Sulfate	635		25.0		mg/L			06/16/20 17:52	5
Total Dissolved Solids (TDS)	1700		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-32B**  
**Date Collected: 06/02/20 17:10**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85.2		3.00		mg/L			06/15/20 18:54	1
Fluoride	ND		0.500		mg/L			06/15/20 18:54	1
Sulfate	820		50.0		mg/L			06/16/20 18:08	10
Total Dissolved Solids (TDS)	1820		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-36B**  
**Date Collected: 06/04/20 09:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	39.2		3.00		mg/L			06/15/20 19:10	1
Fluoride	ND		0.500		mg/L			06/15/20 19:10	1
Sulfate	361		25.0		mg/L			06/16/20 20:03	5
Total Dissolved Solids (TDS)	918		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-37B**  
**Date Collected: 06/04/20 08:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	97.1		3.00		mg/L			06/15/20 16:59	1
Fluoride	ND	F1	0.500		mg/L			06/15/20 16:59	1
Sulfate	521		25.0		mg/L			06/16/20 18:25	5
Total Dissolved Solids (TDS)	1260		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-38B**  
**Date Collected: 06/03/20 10:20**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	385		15.0		mg/L			06/16/20 20:20	5
Fluoride	1.68		0.500		mg/L			06/15/20 19:27	1
Sulfate	5100		250		mg/L			06/16/20 20:36	50
Total Dissolved Solids (TDS)	8640		100		mg/L			06/09/20 09:56	1

Eurofins TestAmerica, Denver

# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## General Chemistry

**Client Sample ID: MW-38C**  
**Date Collected: 06/02/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.2		3.00		mg/L			06/15/20 19:43	1
Fluoride	0.512		0.500		mg/L			06/15/20 19:43	1
Sulfate	212		25.0		mg/L			06/16/20 20:52	5
Total Dissolved Solids (TDS)	634		10.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-39B**  
**Date Collected: 06/03/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.7		3.00		mg/L			06/15/20 19:59	1
Fluoride	ND		0.500		mg/L			06/15/20 19:59	1
Sulfate	537		25.0		mg/L			06/16/20 21:09	5
Total Dissolved Solids (TDS)	1360		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-40B**  
**Date Collected: 06/03/20 15:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.0		3.00		mg/L			06/15/20 20:16	1
Fluoride	0.653		0.500		mg/L			06/15/20 20:16	1
Sulfate	315		25.0		mg/L			06/16/20 21:25	5
Total Dissolved Solids (TDS)	896		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-41B**  
**Date Collected: 06/02/20 11:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-11**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	172		3.00		mg/L			06/15/20 20:32	1
Fluoride	ND		0.500		mg/L			06/15/20 20:32	1
Sulfate	1300		50.0		mg/L			06/16/20 21:42	10
Total Dissolved Solids (TDS)	2590		40.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-42B**  
**Date Collected: 06/03/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-12**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	133		3.00		mg/L			06/15/20 20:49	1
Fluoride	0.536		0.500		mg/L			06/15/20 20:49	1
Sulfate	980		50.0		mg/L			06/16/20 21:58	10
Total Dissolved Solids (TDS)	1940		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-43B**  
**Date Collected: 06/03/20 08:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-13**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.9		3.00		mg/L			06/15/20 21:05	1
Fluoride	ND		0.500		mg/L			06/15/20 21:05	1
Sulfate	550		25.0		mg/L			06/16/20 22:15	5
Total Dissolved Solids (TDS)	1200		20.0		mg/L			06/09/20 09:56	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## General Chemistry

**Client Sample ID: MW-44B**  
**Date Collected: 06/02/20 09:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-14**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.6		3.00		mg/L			06/15/20 21:54	1
Fluoride	0.540		0.500		mg/L			06/15/20 21:54	1
Sulfate	405		25.0		mg/L			06/16/20 22:31	5
Total Dissolved Solids (TDS)	1060		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-45B**  
**Date Collected: 06/02/20 10:30**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-15**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.1		3.00		mg/L			06/15/20 22:11	1
Fluoride	0.626		0.500		mg/L			06/15/20 22:11	1
Sulfate	333		25.0		mg/L			06/16/20 23:20	5
Total Dissolved Solids (TDS)	892		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-46B**  
**Date Collected: 06/02/20 16:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-16**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.4		3.00		mg/L			06/15/20 22:27	1
Fluoride	0.517		0.500		mg/L			06/15/20 22:27	1
Sulfate	211		25.0		mg/L			06/16/20 23:37	5
Total Dissolved Solids (TDS)	615		10.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-47B**  
**Date Collected: 06/02/20 17:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-17**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.8		3.00		mg/L			06/15/20 22:44	1
Fluoride	ND		0.500		mg/L			06/15/20 22:44	1
Sulfate	306		25.0		mg/L			06/16/20 23:53	5
Total Dissolved Solids (TDS)	744		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-49B**  
**Date Collected: 06/03/20 12:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-18**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.6		3.00		mg/L			06/15/20 23:00	1
Fluoride	ND		0.500		mg/L			06/15/20 23:00	1
Sulfate	419		25.0		mg/L			06/17/20 00:09	5
Total Dissolved Solids (TDS)	168		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: MW-52B**  
**Date Collected: 06/03/20 14:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-19**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.8		3.00		mg/L			06/15/20 23:16	1
Fluoride	ND		0.500		mg/L			06/15/20 23:16	1
Sulfate	450		25.0		mg/L			06/17/20 00:26	5
Total Dissolved Solids (TDS)	1890		20.0		mg/L			06/09/20 09:56	1

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# Client Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## General Chemistry

**Client Sample ID: MW-53B**  
**Date Collected: 06/03/20 13:15**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-20**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.2		3.00		mg/L			06/15/20 23:33	1
Fluoride	0.939		0.500		mg/L			06/15/20 23:33	1
Sulfate	220		25.0		mg/L			06/17/20 00:42	5
Total Dissolved Solids (TDS)	697		10.0		mg/L			06/09/20 09:56	1

**Client Sample ID: DUP-01**  
**Date Collected: 06/02/20 00:00**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-21**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.7		3.00		mg/L			06/16/20 01:11	1
Fluoride	0.551		0.500		mg/L			06/16/20 01:11	1
Sulfate	415		25.0		mg/L			06/17/20 01:00	5
Total Dissolved Solids (TDS)	1020		20.0		mg/L			06/09/20 09:56	1

**Client Sample ID: FB-01**  
**Date Collected: 06/03/20 10:40**  
**Date Received: 06/04/20 16:18**

**Lab Sample ID: 280-137307-22**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			06/16/20 01:28	1
Fluoride	ND		0.500		mg/L			06/16/20 01:28	1
Sulfate	ND		5.00		mg/L			06/16/20 01:28	1
Total Dissolved Solids (TDS)	ND		10.0		mg/L			06/09/20 09:57	1

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 280-498284/1-A**  
**Matrix: Water**  
**Analysis Batch: 498770**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498284**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		0.200		mg/L		06/11/20 15:15	06/14/20 23:16	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/14/20 23:16	1

**Lab Sample ID: LCS 280-498284/2-A**  
**Matrix: Water**  
**Analysis Batch: 498770**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498284**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50.0	53.00		mg/L		106	90 - 111
Boron	1.00	1.058		mg/L		106	86 - 110

**Lab Sample ID: 280-137307-6 MS**  
**Matrix: Water**  
**Analysis Batch: 498770**

**Client Sample ID: MW-37B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498284**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	207		50.0	256.2	4	mg/L		98	48 - 153
Boron	0.156		1.00	1.214		mg/L		106	87 - 113

**Lab Sample ID: 280-137307-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 498770**

**Client Sample ID: MW-37B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498284**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Calcium	207		50.0	262.4	4	mg/L		111	48 - 153	2	20
Boron	0.156		1.00	1.245		mg/L		109	87 - 113	3	20

**Lab Sample ID: MB 280-498285/1-A**  
**Matrix: Water**  
**Analysis Batch: 498788**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498285**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		0.200		mg/L		06/11/20 15:15	06/15/20 00:36	1
Boron	ND		0.100		mg/L		06/11/20 15:15	06/15/20 00:36	1

**Lab Sample ID: LCS 280-498285/2-A**  
**Matrix: Water**  
**Analysis Batch: 498788**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498285**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50.0	52.69		mg/L		105	90 - 111
Boron	1.00	1.056		mg/L		106	86 - 110

**Lab Sample ID: 280-137307-11 MS**  
**Matrix: Water**  
**Analysis Batch: 498788**

**Client Sample ID: MW-41B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498285**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	284		50.0	338.6	4	mg/L		108	48 - 153
Boron	0.972		1.00	2.077		mg/L		111	87 - 113

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6010C - Metals (ICP)

**Lab Sample ID: 280-137307-11 MSD**  
**Matrix: Water**  
**Analysis Batch: 498788**

**Client Sample ID: MW-41B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 498285**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Calcium	284		50.0	338.9	4	mg/L		109	48 - 153	0	20
Boron	0.972		1.00	2.103		mg/L		113	87 - 113	1	20

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 240-437887/1-A**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437887**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 12:21	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:21	1
Barium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:21	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:21	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:21	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 12:21	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:21	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:21	1
Lithium	ND		0.00800		mg/L		06/11/20 14:00	06/12/20 12:21	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 12:21	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 12:21	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 12:21	1

**Lab Sample ID: LCS 240-437887/2-A**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437887**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Antimony	0.100	0.1012		mg/L		101	80 - 120
Arsenic	1.00	0.9551		mg/L		96	80 - 120
Barium	1.00	0.9605		mg/L		96	80 - 120
Beryllium	0.500	0.4727		mg/L		95	80 - 120
Cadmium	0.500	0.4815		mg/L		96	80 - 120
Chromium	0.500	0.4772		mg/L		95	80 - 120
Cobalt	0.500	0.4953		mg/L		99	80 - 120
Lead	0.500	0.4830		mg/L		97	80 - 120
Lithium	0.500	0.4757		mg/L		95	80 - 120
Molybdenum	0.500	0.4703		mg/L		94	80 - 120
Selenium	1.00	0.9068		mg/L		91	80 - 120
Thallium	1.00	0.9522		mg/L		95	80 - 120

**Lab Sample ID: 280-137307-21 MS**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: DUP-01**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437887**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Antimony	ND		0.100	0.1083		mg/L		108	75 - 125
Arsenic	ND		1.00	1.024		mg/L		102	75 - 125
Barium	0.0598		1.00	1.070		mg/L		101	75 - 125

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 280-137307-21 MS**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: DUP-01**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437887**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		0.500	0.4950		mg/L		99	75 - 125
Cadmium	ND		0.500	0.5019		mg/L		100	75 - 125
Chromium	ND		0.500	0.4862		mg/L		97	75 - 125
Cobalt	ND		0.500	0.5179		mg/L		104	75 - 125
Lead	ND		0.500	0.5008		mg/L		100	75 - 125
Lithium	0.0346		0.500	0.5413		mg/L		101	75 - 125
Molybdenum	ND		0.500	0.5164		mg/L		102	75 - 125
Selenium	ND		1.00	0.9484		mg/L		95	75 - 125
Thallium	ND		1.00	0.9845		mg/L		98	75 - 125

**Lab Sample ID: 280-137307-21 MSD**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: DUP-01**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437887**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.100	0.1093		mg/L		109	75 - 125	1	20
Arsenic	ND		1.00	1.028		mg/L		102	75 - 125	0	20
Barium	0.0598		1.00	1.085		mg/L		103	75 - 125	1	20
Beryllium	ND		0.500	0.5024		mg/L		100	75 - 125	1	20
Cadmium	ND		0.500	0.5064		mg/L		101	75 - 125	1	20
Chromium	ND		0.500	0.4931		mg/L		99	75 - 125	1	20
Cobalt	ND		0.500	0.5239		mg/L		105	75 - 125	1	20
Lead	ND		0.500	0.5052		mg/L		101	75 - 125	1	20
Lithium	0.0346		0.500	0.5494		mg/L		103	75 - 125	1	20
Molybdenum	ND		0.500	0.5230		mg/L		103	75 - 125	1	20
Selenium	ND		1.00	0.9716		mg/L		97	75 - 125	2	20
Thallium	ND		1.00	0.9995		mg/L		100	75 - 125	2	20

**Lab Sample ID: MB 240-437888/1-A**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437888**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 13:40	1
Arsenic	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 13:40	1
Barium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 13:40	1
Beryllium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:40	1
Cadmium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:40	1
Chromium	ND		0.00200		mg/L		06/11/20 14:00	06/12/20 13:40	1
Cobalt	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:40	1
Lead	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:40	1
Lithium	ND		0.00800		mg/L		06/11/20 14:00	06/12/20 13:40	1
Molybdenum	ND		0.0100		mg/L		06/11/20 14:00	06/12/20 13:40	1
Selenium	ND		0.00500		mg/L		06/11/20 14:00	06/12/20 13:40	1
Thallium	ND		0.00100		mg/L		06/11/20 14:00	06/12/20 13:40	1

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# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 240-437888/2-A**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437888**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.100	0.1028		mg/L		103	80 - 120
Arsenic	1.00	0.9497		mg/L		95	80 - 120
Barium	1.00	0.9671		mg/L		97	80 - 120
Beryllium	0.500	0.4791		mg/L		96	80 - 120
Cadmium	0.500	0.4876		mg/L		98	80 - 120
Chromium	0.500	0.4866		mg/L		97	80 - 120
Cobalt	0.500	0.5000		mg/L		100	80 - 120
Lead	0.500	0.4889		mg/L		98	80 - 120
Lithium	0.500	0.4820		mg/L		96	80 - 120
Molybdenum	0.500	0.4746		mg/L		95	80 - 120
Selenium	1.00	0.9195		mg/L		92	80 - 120
Thallium	1.00	0.9635		mg/L		96	80 - 120

**Lab Sample ID: 280-137307-6 MS**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: MW-37B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437888**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	ND		0.100	0.1096		mg/L		110	75 - 125
Arsenic	ND		1.00	1.021		mg/L		102	75 - 125
Barium	0.0664		1.00	1.100		mg/L		103	75 - 125
Beryllium	ND		0.500	0.5050		mg/L		101	75 - 125
Cadmium	ND		0.500	0.5062		mg/L		101	75 - 125
Chromium	ND		0.500	0.4989		mg/L		100	75 - 125
Cobalt	ND		0.500	0.5277		mg/L		106	75 - 125
Lead	ND		0.500	0.4982		mg/L		100	75 - 125
Lithium	0.0380		0.500	0.5538		mg/L		103	75 - 125
Molybdenum	0.0344		0.500	0.5498		mg/L		103	75 - 125
Selenium	0.00835		1.00	0.9561		mg/L		95	75 - 125
Thallium	ND		1.00	0.9906		mg/L		99	75 - 125

**Lab Sample ID: 280-137307-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 438311**

**Client Sample ID: MW-37B**  
**Prep Type: Total Recoverable**  
**Prep Batch: 437888**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		0.100	0.1105		mg/L		111	75 - 125	1	20
Arsenic	ND		1.00	1.030		mg/L		103	75 - 125	1	20
Barium	0.0664		1.00	1.105		mg/L		104	75 - 125	0	20
Beryllium	ND		0.500	0.4997		mg/L		100	75 - 125	1	20
Cadmium	ND		0.500	0.5100		mg/L		102	75 - 125	1	20
Chromium	ND		0.500	0.4957		mg/L		99	75 - 125	1	20
Cobalt	ND		0.500	0.5193		mg/L		104	75 - 125	2	20
Lead	ND		0.500	0.5037		mg/L		101	75 - 125	1	20
Lithium	0.0380		0.500	0.5528		mg/L		103	75 - 125	0	20
Molybdenum	0.0344		0.500	0.5492		mg/L		103	75 - 125	0	20
Selenium	0.00835		1.00	0.9622		mg/L		95	75 - 125	1	20
Thallium	ND		1.00	0.9960		mg/L		100	75 - 125	1	20

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# QC Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 280-498530/1-A**  
**Matrix: Water**  
**Analysis Batch: 498745**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 498530**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 18:23	1

**Lab Sample ID: LCS 280-498530/2-A**  
**Matrix: Water**  
**Analysis Batch: 498745**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 498530**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00500	0.005140		mg/L		103	84 - 120

**Lab Sample ID: LCSD 280-498530/3-A**  
**Matrix: Water**  
**Analysis Batch: 498745**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 498530**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.00500	0.004880		mg/L		98	84 - 120	5	15

**Lab Sample ID: MB 280-498533/1-A**  
**Matrix: Water**  
**Analysis Batch: 498745**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 498533**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		06/12/20 13:55	06/12/20 19:59	1

**Lab Sample ID: LCS 280-498533/2-A**  
**Matrix: Water**  
**Analysis Batch: 498745**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 498533**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00500	0.005072		mg/L		101	84 - 120

**Lab Sample ID: 280-137307-6 MS**  
**Matrix: Water**  
**Analysis Batch: 498745**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**  
**Prep Batch: 498533**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		0.00500	0.005107		mg/L		101	75 - 125

**Lab Sample ID: 280-137307-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 498745**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**  
**Prep Batch: 498533**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00500	0.005098		mg/L		101	75 - 125	0	20

# QC Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 280-498733/6**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			06/15/20 11:43	1
Fluoride	ND		0.500		mg/L			06/15/20 11:43	1
Sulfate	ND		5.00		mg/L			06/15/20 11:43	1

**Lab Sample ID: LCS 280-498733/4**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.12		mg/L		98	90 - 110
Fluoride	5.00	5.046		mg/L		101	90 - 110
Sulfate	100	96.11		mg/L		96	90 - 110

**Lab Sample ID: LCSD 280-498733/5**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.00		mg/L		98	90 - 110	0	10
Fluoride	5.00	5.004		mg/L		100	90 - 110	1	10
Sulfate	100	96.03		mg/L		96	90 - 110	0	10

**Lab Sample ID: MRL 280-498733/3**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.102		mg/L		82	50 - 150
Fluoride	0.500	0.5077		mg/L		102	50 - 150
Sulfate	5.00	ND		mg/L		88	50 - 150

**Lab Sample ID: 280-137307-6 MS**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	97.1		50.0	152.7		mg/L		111	80 - 120
Fluoride	ND	F1	5.00	4.091	F1	mg/L		74	80 - 120

**Lab Sample ID: 280-137307-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	97.1		50.0	152.5		mg/L		111	80 - 120	0	20
Fluoride	ND	F1	5.00	4.070	F1	mg/L		74	80 - 120	1	20

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# QC Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 280-137307-20 MS**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: MW-53B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	41.2		50.0	95.87		mg/L		109	80 - 120
Fluoride	0.939		5.00	5.888		mg/L		99	80 - 120
Sulfate	237	E	50.0	295.2	E 4	mg/L		117	80 - 120

**Lab Sample ID: 280-137307-20 MSD**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: MW-53B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	41.2		50.0	96.05		mg/L		110	80 - 120	0	20
Fluoride	0.939		5.00	5.880		mg/L		99	80 - 120	0	20
Sulfate	237	E	50.0	295.1	E 4	mg/L		117	80 - 120	0	20

**Lab Sample ID: 280-137307-6 DU**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	97.1		97.22		mg/L		0.1	15
Fluoride	ND	F1	ND		mg/L		NC	15

**Lab Sample ID: 280-137307-20 DU**  
**Matrix: Water**  
**Analysis Batch: 498733**

**Client Sample ID: MW-53B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	41.2		41.23		mg/L		0	15
Fluoride	0.939		0.9482		mg/L		1	15
Sulfate	237	E	235.8	E	mg/L		0.3	15

**Lab Sample ID: MB 280-498916/6**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.00		mg/L			06/16/20 11:41	1
Sulfate	ND		5.00		mg/L			06/16/20 11:41	1

**Lab Sample ID: LCS 280-498916/4**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.10		mg/L		98	90 - 110
Sulfate	100	99.50		mg/L		100	90 - 110

# QC Sample Results

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 280-498916/5**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.65		mg/L		99	90 - 110	1	10
Sulfate	100	99.47		mg/L		99	90 - 110	0	10

**Lab Sample ID: MRL 280-498916/3**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.00	4.920		mg/L		98	50 - 150		
Sulfate	5.00	5.289		mg/L		106	50 - 150		

**Lab Sample ID: 280-137307-6 MS**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	521		250	761.7		mg/L		96	80 - 120		

**Lab Sample ID: 280-137307-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	521		250	762.8		mg/L		97	80 - 120	0	20

**Lab Sample ID: 280-137307-21 MS**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: DUP-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	51.3		250	300.5		mg/L		100	80 - 120		
Sulfate	415		250	655.8		mg/L		96	80 - 120		

**Lab Sample ID: 280-137307-21 MSD**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: DUP-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	51.3		250	309.0		mg/L		103	80 - 120	3	20
Sulfate	415		250	658.7		mg/L		97	80 - 120	0	20

**Lab Sample ID: 280-137307-6 DU**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: MW-37B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	521		250	519.1		mg/L				0.4	15

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# QC Sample Results

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Method: 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 280-137307-21 DU**  
**Matrix: Water**  
**Analysis Batch: 498916**

**Client Sample ID: DUP-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	51.3		50.52		mg/L		1	15
Sulfate	415		407.3		mg/L		2	15

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 280-497974/1**  
**Matrix: Water**  
**Analysis Batch: 497974**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10.0		mg/L			06/09/20 09:56	1

**Lab Sample ID: LCS 280-497974/2**  
**Matrix: Water**  
**Analysis Batch: 497974**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	500.0		mg/L		100	93 - 110

**Lab Sample ID: LCSD 280-497974/3**  
**Matrix: Water**  
**Analysis Batch: 497974**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids (TDS)	500	488.0		mg/L		98	93 - 110	2	20

**Lab Sample ID: 280-137307-1 DU**  
**Matrix: Water**  
**Analysis Batch: 497974**

**Client Sample ID: MW-14BR**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	928		896.0		mg/L		4	10

**Lab Sample ID: 280-137307-22 DU**  
**Matrix: Water**  
**Analysis Batch: 497974**

**Client Sample ID: FB-01**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	ND		ND		mg/L		NC	10

# QC Association Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Metals

### Prep Batch: 437887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-21	DUP-01	Total Recoverable	Water	3005A	
280-137307-22	FB-01	Total Recoverable	Water	3005A	
MB 240-437887/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-437887/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-137307-21 MS	DUP-01	Total Recoverable	Water	3005A	
280-137307-21 MSD	DUP-01	Total Recoverable	Water	3005A	

### Prep Batch: 437888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total Recoverable	Water	3005A	
280-137307-2	MW-20B	Total Recoverable	Water	3005A	
280-137307-3	MW-21B	Total Recoverable	Water	3005A	
280-137307-4	MW-32B	Total Recoverable	Water	3005A	
280-137307-5	MW-36B	Total Recoverable	Water	3005A	
280-137307-6	MW-37B	Total Recoverable	Water	3005A	
280-137307-7	MW-38B	Total Recoverable	Water	3005A	
280-137307-8	MW-38C	Total Recoverable	Water	3005A	
280-137307-9	MW-39B	Total Recoverable	Water	3005A	
280-137307-10	MW-40B	Total Recoverable	Water	3005A	
280-137307-11	MW-41B	Total Recoverable	Water	3005A	
280-137307-12	MW-42B	Total Recoverable	Water	3005A	
280-137307-13	MW-43B	Total Recoverable	Water	3005A	
280-137307-14	MW-44B	Total Recoverable	Water	3005A	
280-137307-15	MW-45B	Total Recoverable	Water	3005A	
280-137307-16	MW-46B	Total Recoverable	Water	3005A	
280-137307-17	MW-47B	Total Recoverable	Water	3005A	
280-137307-18	MW-49B	Total Recoverable	Water	3005A	
280-137307-19	MW-52B	Total Recoverable	Water	3005A	
280-137307-20	MW-53B	Total Recoverable	Water	3005A	
MB 240-437888/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-437888/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-137307-6 MS	MW-37B	Total Recoverable	Water	3005A	
280-137307-6 MSD	MW-37B	Total Recoverable	Water	3005A	

### Analysis Batch: 438311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total Recoverable	Water	6020A	437888
280-137307-2	MW-20B	Total Recoverable	Water	6020A	437888
280-137307-3	MW-21B	Total Recoverable	Water	6020A	437888
280-137307-4	MW-32B	Total Recoverable	Water	6020A	437888
280-137307-5	MW-36B	Total Recoverable	Water	6020A	437888
280-137307-6	MW-37B	Total Recoverable	Water	6020A	437888
280-137307-7	MW-38B	Total Recoverable	Water	6020A	437888
280-137307-8	MW-38C	Total Recoverable	Water	6020A	437888
280-137307-9	MW-39B	Total Recoverable	Water	6020A	437888
280-137307-10	MW-40B	Total Recoverable	Water	6020A	437888
280-137307-11	MW-41B	Total Recoverable	Water	6020A	437888
280-137307-12	MW-42B	Total Recoverable	Water	6020A	437888
280-137307-13	MW-43B	Total Recoverable	Water	6020A	437888
280-137307-14	MW-44B	Total Recoverable	Water	6020A	437888
280-137307-15	MW-45B	Total Recoverable	Water	6020A	437888

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# QC Association Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Metals (Continued)

### Analysis Batch: 438311 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-16	MW-46B	Total Recoverable	Water	6020A	437888
280-137307-17	MW-47B	Total Recoverable	Water	6020A	437888
280-137307-18	MW-49B	Total Recoverable	Water	6020A	437888
280-137307-19	MW-52B	Total Recoverable	Water	6020A	437888
280-137307-20	MW-53B	Total Recoverable	Water	6020A	437888
280-137307-21	DUP-01	Total Recoverable	Water	6020A	437887
280-137307-22	FB-01	Total Recoverable	Water	6020A	437887
MB 240-437887/1-A	Method Blank	Total Recoverable	Water	6020A	437887
MB 240-437888/1-A	Method Blank	Total Recoverable	Water	6020A	437888
LCS 240-437887/2-A	Lab Control Sample	Total Recoverable	Water	6020A	437887
LCS 240-437888/2-A	Lab Control Sample	Total Recoverable	Water	6020A	437888
280-137307-6 MS	MW-37B	Total Recoverable	Water	6020A	437888
280-137307-6 MSD	MW-37B	Total Recoverable	Water	6020A	437888
280-137307-21 MS	DUP-01	Total Recoverable	Water	6020A	437887
280-137307-21 MSD	DUP-01	Total Recoverable	Water	6020A	437887

### Prep Batch: 498284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total Recoverable	Water	3005A	
280-137307-2	MW-20B	Total Recoverable	Water	3005A	
280-137307-3	MW-21B	Total Recoverable	Water	3005A	
280-137307-4	MW-32B	Total Recoverable	Water	3005A	
280-137307-5	MW-36B	Total Recoverable	Water	3005A	
280-137307-6	MW-37B	Total Recoverable	Water	3005A	
280-137307-7	MW-38B	Total Recoverable	Water	3005A	
280-137307-8	MW-38C	Total Recoverable	Water	3005A	
280-137307-9	MW-39B	Total Recoverable	Water	3005A	
280-137307-10	MW-40B	Total Recoverable	Water	3005A	
MB 280-498284/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-498284/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-137307-6 MS	MW-37B	Total Recoverable	Water	3005A	
280-137307-6 MSD	MW-37B	Total Recoverable	Water	3005A	

### Prep Batch: 498285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-11	MW-41B	Total Recoverable	Water	3005A	
280-137307-12	MW-42B	Total Recoverable	Water	3005A	
280-137307-13	MW-43B	Total Recoverable	Water	3005A	
280-137307-14	MW-44B	Total Recoverable	Water	3005A	
280-137307-15	MW-45B	Total Recoverable	Water	3005A	
280-137307-16	MW-46B	Total Recoverable	Water	3005A	
280-137307-17	MW-47B	Total Recoverable	Water	3005A	
280-137307-18	MW-49B	Total Recoverable	Water	3005A	
280-137307-19	MW-52B	Total Recoverable	Water	3005A	
280-137307-20	MW-53B	Total Recoverable	Water	3005A	
280-137307-21	DUP-01	Total Recoverable	Water	3005A	
280-137307-22	FB-01	Total Recoverable	Water	3005A	
MB 280-498285/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-498285/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-137307-11 MS	MW-41B	Total Recoverable	Water	3005A	
280-137307-11 MSD	MW-41B	Total Recoverable	Water	3005A	

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# QC Association Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Metals

### Prep Batch: 498530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-21	DUP-01	Total/NA	Water	7470A	
280-137307-22	FB-01	Total/NA	Water	7470A	
MB 280-498530/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-498530/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-498530/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

### Prep Batch: 498533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total/NA	Water	7470A	
280-137307-2	MW-20B	Total/NA	Water	7470A	
280-137307-3	MW-21B	Total/NA	Water	7470A	
280-137307-4	MW-32B	Total/NA	Water	7470A	
280-137307-5	MW-36B	Total/NA	Water	7470A	
280-137307-6	MW-37B	Total/NA	Water	7470A	
280-137307-7	MW-38B	Total/NA	Water	7470A	
280-137307-8	MW-38C	Total/NA	Water	7470A	
280-137307-9	MW-39B	Total/NA	Water	7470A	
280-137307-10	MW-40B	Total/NA	Water	7470A	
280-137307-11	MW-41B	Total/NA	Water	7470A	
280-137307-12	MW-42B	Total/NA	Water	7470A	
280-137307-13	MW-43B	Total/NA	Water	7470A	
280-137307-14	MW-44B	Total/NA	Water	7470A	
280-137307-15	MW-45B	Total/NA	Water	7470A	
280-137307-16	MW-46B	Total/NA	Water	7470A	
280-137307-17	MW-47B	Total/NA	Water	7470A	
280-137307-18	MW-49B	Total/NA	Water	7470A	
280-137307-19	MW-52B	Total/NA	Water	7470A	
280-137307-20	MW-53B	Total/NA	Water	7470A	
MB 280-498533/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-498533/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-137307-6 MS	MW-37B	Total/NA	Water	7470A	
280-137307-6 MSD	MW-37B	Total/NA	Water	7470A	

### Analysis Batch: 498745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total/NA	Water	7470A	498533
280-137307-2	MW-20B	Total/NA	Water	7470A	498533
280-137307-3	MW-21B	Total/NA	Water	7470A	498533
280-137307-4	MW-32B	Total/NA	Water	7470A	498533
280-137307-5	MW-36B	Total/NA	Water	7470A	498533
280-137307-6	MW-37B	Total/NA	Water	7470A	498533
280-137307-7	MW-38B	Total/NA	Water	7470A	498533
280-137307-8	MW-38C	Total/NA	Water	7470A	498533
280-137307-9	MW-39B	Total/NA	Water	7470A	498533
280-137307-10	MW-40B	Total/NA	Water	7470A	498533
280-137307-11	MW-41B	Total/NA	Water	7470A	498533
280-137307-12	MW-42B	Total/NA	Water	7470A	498533
280-137307-13	MW-43B	Total/NA	Water	7470A	498533
280-137307-14	MW-44B	Total/NA	Water	7470A	498533
280-137307-15	MW-45B	Total/NA	Water	7470A	498533
280-137307-16	MW-46B	Total/NA	Water	7470A	498533

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# QC Association Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Metals (Continued)

### Analysis Batch: 498745 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-17	MW-47B	Total/NA	Water	7470A	498533
280-137307-18	MW-49B	Total/NA	Water	7470A	498533
280-137307-19	MW-52B	Total/NA	Water	7470A	498533
280-137307-20	MW-53B	Total/NA	Water	7470A	498533
280-137307-21	DUP-01	Total/NA	Water	7470A	498530
280-137307-22	FB-01	Total/NA	Water	7470A	498530
MB 280-498530/1-A	Method Blank	Total/NA	Water	7470A	498530
MB 280-498533/1-A	Method Blank	Total/NA	Water	7470A	498533
LCS 280-498530/2-A	Lab Control Sample	Total/NA	Water	7470A	498530
LCS 280-498533/2-A	Lab Control Sample	Total/NA	Water	7470A	498533
LCSD 280-498530/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	498530
280-137307-6 MS	MW-37B	Total/NA	Water	7470A	498533
280-137307-6 MSD	MW-37B	Total/NA	Water	7470A	498533

### Analysis Batch: 498770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total Recoverable	Water	6010C	498284
280-137307-2	MW-20B	Total Recoverable	Water	6010C	498284
280-137307-3	MW-21B	Total Recoverable	Water	6010C	498284
280-137307-4	MW-32B	Total Recoverable	Water	6010C	498284
280-137307-5	MW-36B	Total Recoverable	Water	6010C	498284
280-137307-6	MW-37B	Total Recoverable	Water	6010C	498284
280-137307-7	MW-38B	Total Recoverable	Water	6010C	498284
280-137307-8	MW-38C	Total Recoverable	Water	6010C	498284
280-137307-9	MW-39B	Total Recoverable	Water	6010C	498284
280-137307-10	MW-40B	Total Recoverable	Water	6010C	498284
MB 280-498284/1-A	Method Blank	Total Recoverable	Water	6010C	498284
LCS 280-498284/2-A	Lab Control Sample	Total Recoverable	Water	6010C	498284
280-137307-6 MS	MW-37B	Total Recoverable	Water	6010C	498284
280-137307-6 MSD	MW-37B	Total Recoverable	Water	6010C	498284

### Analysis Batch: 498788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-11	MW-41B	Total Recoverable	Water	6010C	498285
280-137307-12	MW-42B	Total Recoverable	Water	6010C	498285
280-137307-13	MW-43B	Total Recoverable	Water	6010C	498285
280-137307-14	MW-44B	Total Recoverable	Water	6010C	498285
280-137307-15	MW-45B	Total Recoverable	Water	6010C	498285
280-137307-16	MW-46B	Total Recoverable	Water	6010C	498285
280-137307-17	MW-47B	Total Recoverable	Water	6010C	498285
280-137307-18	MW-49B	Total Recoverable	Water	6010C	498285
280-137307-19	MW-52B	Total Recoverable	Water	6010C	498285
280-137307-20	MW-53B	Total Recoverable	Water	6010C	498285
280-137307-21	DUP-01	Total Recoverable	Water	6010C	498285
280-137307-22	FB-01	Total Recoverable	Water	6010C	498285
MB 280-498285/1-A	Method Blank	Total Recoverable	Water	6010C	498285
LCS 280-498285/2-A	Lab Control Sample	Total Recoverable	Water	6010C	498285
280-137307-11 MS	MW-41B	Total Recoverable	Water	6010C	498285
280-137307-11 MSD	MW-41B	Total Recoverable	Water	6010C	498285

# QC Association Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## General Chemistry

### Analysis Batch: 497974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total/NA	Water	SM 2540C	
280-137307-2	MW-20B	Total/NA	Water	SM 2540C	
280-137307-3	MW-21B	Total/NA	Water	SM 2540C	
280-137307-4	MW-32B	Total/NA	Water	SM 2540C	
280-137307-5	MW-36B	Total/NA	Water	SM 2540C	
280-137307-6	MW-37B	Total/NA	Water	SM 2540C	
280-137307-7	MW-38B	Total/NA	Water	SM 2540C	
280-137307-8	MW-38C	Total/NA	Water	SM 2540C	
280-137307-9	MW-39B	Total/NA	Water	SM 2540C	
280-137307-10	MW-40B	Total/NA	Water	SM 2540C	
280-137307-11	MW-41B	Total/NA	Water	SM 2540C	
280-137307-12	MW-42B	Total/NA	Water	SM 2540C	
280-137307-13	MW-43B	Total/NA	Water	SM 2540C	
280-137307-14	MW-44B	Total/NA	Water	SM 2540C	
280-137307-15	MW-45B	Total/NA	Water	SM 2540C	
280-137307-16	MW-46B	Total/NA	Water	SM 2540C	
280-137307-17	MW-47B	Total/NA	Water	SM 2540C	
280-137307-18	MW-49B	Total/NA	Water	SM 2540C	
280-137307-19	MW-52B	Total/NA	Water	SM 2540C	
280-137307-20	MW-53B	Total/NA	Water	SM 2540C	
280-137307-21	DUP-01	Total/NA	Water	SM 2540C	
280-137307-22	FB-01	Total/NA	Water	SM 2540C	
MB 280-497974/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-497974/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 280-497974/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
280-137307-1 DU	MW-14BR	Total/NA	Water	SM 2540C	
280-137307-22 DU	FB-01	Total/NA	Water	SM 2540C	

### Analysis Batch: 498733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total/NA	Water	9056A	
280-137307-2	MW-20B	Total/NA	Water	9056A	
280-137307-3	MW-21B	Total/NA	Water	9056A	
280-137307-4	MW-32B	Total/NA	Water	9056A	
280-137307-5	MW-36B	Total/NA	Water	9056A	
280-137307-6	MW-37B	Total/NA	Water	9056A	
280-137307-7	MW-38B	Total/NA	Water	9056A	
280-137307-8	MW-38C	Total/NA	Water	9056A	
280-137307-9	MW-39B	Total/NA	Water	9056A	
280-137307-10	MW-40B	Total/NA	Water	9056A	
280-137307-11	MW-41B	Total/NA	Water	9056A	
280-137307-12	MW-42B	Total/NA	Water	9056A	
280-137307-13	MW-43B	Total/NA	Water	9056A	
280-137307-14	MW-44B	Total/NA	Water	9056A	
280-137307-15	MW-45B	Total/NA	Water	9056A	
280-137307-16	MW-46B	Total/NA	Water	9056A	
280-137307-17	MW-47B	Total/NA	Water	9056A	
280-137307-18	MW-49B	Total/NA	Water	9056A	
280-137307-19	MW-52B	Total/NA	Water	9056A	
280-137307-20	MW-53B	Total/NA	Water	9056A	
280-137307-21	DUP-01	Total/NA	Water	9056A	

Eurofins TestAmerica, Denver

# QC Association Summary

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## General Chemistry (Continued)

### Analysis Batch: 498733 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-22	FB-01	Total/NA	Water	9056A	
MB 280-498733/6	Method Blank	Total/NA	Water	9056A	
LCS 280-498733/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-498733/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-498733/3	Lab Control Sample	Total/NA	Water	9056A	
280-137307-6 MS	MW-37B	Total/NA	Water	9056A	
280-137307-6 MSD	MW-37B	Total/NA	Water	9056A	
280-137307-20 MS	MW-53B	Total/NA	Water	9056A	
280-137307-20 MSD	MW-53B	Total/NA	Water	9056A	
280-137307-6 DU	MW-37B	Total/NA	Water	9056A	
280-137307-20 DU	MW-53B	Total/NA	Water	9056A	

### Analysis Batch: 498916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-137307-1	MW-14BR	Total/NA	Water	9056A	
280-137307-2	MW-20B	Total/NA	Water	9056A	
280-137307-3	MW-21B	Total/NA	Water	9056A	
280-137307-4	MW-32B	Total/NA	Water	9056A	
280-137307-5	MW-36B	Total/NA	Water	9056A	
280-137307-6	MW-37B	Total/NA	Water	9056A	
280-137307-7	MW-38B	Total/NA	Water	9056A	
280-137307-7	MW-38B	Total/NA	Water	9056A	
280-137307-8	MW-38C	Total/NA	Water	9056A	
280-137307-9	MW-39B	Total/NA	Water	9056A	
280-137307-10	MW-40B	Total/NA	Water	9056A	
280-137307-11	MW-41B	Total/NA	Water	9056A	
280-137307-12	MW-42B	Total/NA	Water	9056A	
280-137307-13	MW-43B	Total/NA	Water	9056A	
280-137307-14	MW-44B	Total/NA	Water	9056A	
280-137307-15	MW-45B	Total/NA	Water	9056A	
280-137307-16	MW-46B	Total/NA	Water	9056A	
280-137307-17	MW-47B	Total/NA	Water	9056A	
280-137307-18	MW-49B	Total/NA	Water	9056A	
280-137307-19	MW-52B	Total/NA	Water	9056A	
280-137307-20	MW-53B	Total/NA	Water	9056A	
280-137307-21	DUP-01	Total/NA	Water	9056A	
MB 280-498916/6	Method Blank	Total/NA	Water	9056A	
LCS 280-498916/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-498916/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-498916/3	Lab Control Sample	Total/NA	Water	9056A	
280-137307-6 MS	MW-37B	Total/NA	Water	9056A	
280-137307-6 MSD	MW-37B	Total/NA	Water	9056A	
280-137307-21 MS	DUP-01	Total/NA	Water	9056A	
280-137307-21 MSD	DUP-01	Total/NA	Water	9056A	
280-137307-6 DU	MW-37B	Total/NA	Water	9056A	
280-137307-21 DU	DUP-01	Total/NA	Water	9056A	

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-14BR

## Lab Sample ID: 280-137307-1

Date Collected: 06/02/20 13:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/14/20 23:39	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 13:57	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:03	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 16:26	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 17:19	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-20B

## Lab Sample ID: 280-137307-2

Date Collected: 06/02/20 12:10

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/14/20 23:56	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:00	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:06	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 16:42	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 17:35	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-21B

## Lab Sample ID: 280-137307-3

Date Collected: 06/02/20 14:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/15/20 00:00	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:07	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:08	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 18:37	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 17:52	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

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# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-32B

## Lab Sample ID: 280-137307-4

Date Collected: 06/02/20 17:10

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/15/20 00:03	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:10	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:10	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 18:54	JAP	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	498916	06/16/20 18:08	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-36B

## Lab Sample ID: 280-137307-5

Date Collected: 06/04/20 09:15

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/15/20 00:06	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:12	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:17	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 19:10	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 20:03	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-37B

## Lab Sample ID: 280-137307-6

Date Collected: 06/04/20 08:00

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/14/20 23:23	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 13:45	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:19	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 16:59	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 18:25	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-38B

Date Collected: 06/03/20 10:20

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/15/20 00:10	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:15	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:26	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 19:27	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 20:20	JAP	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	498916	06/16/20 20:36	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-38C

Date Collected: 06/02/20 15:30

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/15/20 00:13	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:17	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:28	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 19:43	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 20:52	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-39B

Date Collected: 06/03/20 16:15

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/15/20 00:16	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:20	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:30	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 19:59	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 21:09	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-40B

## Lab Sample ID: 280-137307-10

Date Collected: 06/03/20 15:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498284	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498770	06/15/20 00:20	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:22	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:32	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 20:16	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 21:25	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-41B

## Lab Sample ID: 280-137307-11

Date Collected: 06/02/20 11:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 00:43	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:25	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:35	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 20:32	JAP	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	498916	06/16/20 21:42	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-42B

## Lab Sample ID: 280-137307-12

Date Collected: 06/03/20 09:30

Matrix: Water

Date Received: 06/04/20 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:00	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:27	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:37	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 20:49	JAP	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	498916	06/16/20 21:58	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-43B

Date Collected: 06/03/20 08:40

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:03	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:30	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:44	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 21:05	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 22:15	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-44B

Date Collected: 06/02/20 09:30

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:20	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:37	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:46	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 21:54	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 22:31	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-45B

Date Collected: 06/02/20 10:30

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:24	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:40	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:48	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 22:11	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 23:20	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-46B

Date Collected: 06/02/20 16:15

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:27	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:42	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:50	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 22:27	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 23:37	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-47B

Date Collected: 06/02/20 17:15

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:30	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:45	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:52	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 22:44	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/16/20 23:53	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-49B

Date Collected: 06/03/20 12:15

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:34	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:47	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:55	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 23:00	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/17/20 00:09	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Client Sample ID: MW-52B

Date Collected: 06/03/20 14:15

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:37	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:50	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:57	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 23:16	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/17/20 00:26	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: MW-53B

Date Collected: 06/03/20 13:15

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:40	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437888	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 14:52	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498533	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 20:59	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/15/20 23:33	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/17/20 00:42	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

## Client Sample ID: DUP-01

Date Collected: 06/02/20 00:00

Date Received: 06/04/20 16:18

## Lab Sample ID: 280-137307-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:44	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437887	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 12:26	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498530	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 18:35	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/16/20 01:11	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	498916	06/17/20 01:00	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	497974	06/09/20 09:56	FRG	TAL DEN

Eurofins TestAmerica, Denver

# Lab Chronicle

Client: AECOM Technical Services Inc.  
 Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

**Client Sample ID: FB-01**

**Lab Sample ID: 280-137307-22**

**Date Collected: 06/03/20 10:40**

**Matrix: Water**

**Date Received: 06/04/20 16:18**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	498285	06/11/20 15:15	EC	TAL DEN
Total Recoverable	Analysis	6010C		1			498788	06/15/20 01:47	LMT	TAL DEN
Total Recoverable	Prep	3005A			50 mL	50 mL	437887	06/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			438311	06/12/20 12:38	DSH	TAL CAN
Total/NA	Prep	7470A			30 mL	50 mL	498530	06/12/20 13:55	AL	TAL DEN
Total/NA	Analysis	7470A		1			498745	06/12/20 18:37	AL	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	498733	06/16/20 01:28	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497974	06/09/20 09:57	FRG	TAL DEN

**Laboratory References:**

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100



# Accreditation/Certification Summary

Client: AECOM Technical Services Inc.  
Project/Site: CCR - Basin Electric 2020 - LRS

Job ID: 280-137307-2

## Laboratory: Eurofins TestAmerica, Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4025-011	01-08-21

## Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20



**Eurofins TestAmerica, Denver**  
 4955 Yarrow Street  
 Arvada, CO 80002  
 Phone (303) 736-0100 Fax (303) 431-7171

# Denver #280

## Chain of Custody Record



<b>Client Information</b> Client Contact: Ms. Katie Abbott Company: AECOM Technical Services Inc. Address: 6200 S. Quebec Street City: Greenwood Village State/Zip: CO, 80111 Phone: [blank] Email: katie.abbott@aecom.com Project Name: CCR - Basin Electric 2020 - LRS Site: [blank]		Lab PM: McEntee, Patrick J E-Mail: patrick.mcEntee@testamericainc.com Sampler: Chris Howard Phone: 612-202-5465		Carrier Tracking No(s): BY Sample COC No: 2 of 2 Page: 12 Job #: [blank]			
Due Date Requested: [blank] TAT Requested (days): Standard PO #: [blank] Purchase Order Requested: [blank] WO #: [blank]		<b>Analysis Requested</b> 6101C - Total Calcium and Boron, 7470A - Mercury 2540C - Calc'd - TDS 9056A_28D - Chloride, Fluoride, Sulfate 6020A - (MOD) 12 Total Metals 9315_Ra226_9320_Ra228_Ra228Ra228_GFPc					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, On-surface, etc.)	Field Filtered Sample (Yes or No)	Preservation Code:	Special Instructions/Note:
MW-42B	6/3/2020	0930	G	W			
MW-43B	6/3/2020	0840	G	W			
MW-44B	6/2/2020	0930	G	W			
MW-45B	6/2/2020	1030	G	W			
MW-46B	6/2/2020	1615	G	W			
MW-47B	6/2/2020	1715	G	W			
MW-49B	6/3/2020	1215	G	W			
MW-52B	6/3/2020	1415	G	W			
MW-53B	6/3/2020	1315	G	W			
DUP-01	6/2/2020	-	G	W			
FB-01			G	W			

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: [blank] Date: [blank]

Relinquished by: [signature] Date/Time: 6/4/2020 16:16 Company: AECOM

Relinquished by: [signature] Date/Time: 6-4-20 1619 Company: EIA

Relinquished by: [signature] Date/Time: [blank] Company: [blank]

Custody Seal No.: [blank] (Yes, Δ, No)

Special Instructions/OC Requirements: [blank]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For [blank] Months



## Login Sample Receipt Checklist

Client: AECOM Technical Services Inc.

Job Number: 280-137307-2

**Login Number: 137307**

**List Source: Eurofins TestAmerica, Denver**

**List Number: 1**

**Creator: Lubin, Julius C**

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

