AECOM

Environment

Submitted to:
Platte River Power Authority
Fort Collins, CO

Submitted by:
AECOM
Fort Collins, CO
60754415
January 31, 2026

2025 Annual Groundwater Monitoring and Corrective Action Report
Former Bottom Ash Transfer (BAT) Impoundments
Rawhide Station, Platte River Power Authority

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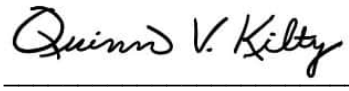

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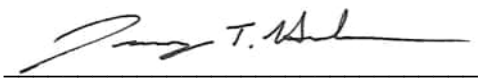

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Acronyms and Abbreviations

95% LCL	95 percent lower confidence limit
ACM	assessment of corrective measure
AECOM	AECOM Technical Services, Inc.
amsl	above mean sea level
BAT	Bottom Ash Transfer
bgs	below ground surface
CCR	Coal Combustion Residuals
CCR units	CCR landfills and surface impoundments
CFR	Code of Federal Regulations
EROP	Engineering Report and Operational Plan
ft/day	foot/feet per day
GWPS	groundwater protection standard
MCLs	maximum contaminant levels
mg/L	milligrams per liter
NTU	nephelometric turbidity unit
Platte River	Platte River Power Authority
PRS	Phosphorus Removal System
Rawhide Station or Site	Rawhide Energy Station
SSI	statistically significant increase
SSL	statistically significant level
TDS	total dissolved solids
UPL	upper prediction limit
USEPA	United States Environmental Protection Agency

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Executive Summary

This report summarizes groundwater monitoring and corrective action activities completed between January 1 and December 31, 2025 at the former Coal Combustion Residuals (CCR) Bottom Ash Transfer (BAT) Impoundments at the Platte River Power Authority (Platte River) Rawhide Energy Station (Rawhide Station or Site), as required by 40 Code of Federal Regulations (CFR) Section 257.90(e) of the United States Environmental Protection Agency (USEPA) CCR Rule. The location of the CCR unit and program monitoring network for the CCR unit, including supporting monitoring wells, are illustrated on **Figure 1**.

At the start of the 2025 reporting period, Platte River was monitoring the former BAT Impoundments under the Assessment monitoring program outlined in 40 CFR Section 257.95. The Assessment monitoring program for the former BAT Impoundments was initiated on January 15, 2018 upon identification of Appendix III statistically significant increases (SSIs) over background (AECOM 2018). In the 2025 reporting period, monitoring data reported the detections of the following Appendix III constituents in downgradient monitoring wells at concentrations that represent SSIs over background:

- Calcium in monitoring wells BAT-04R and BAT-05
- Chloride in monitoring well BAT-01

Per CCR rule requirements, groundwater protection standards (GWPSs) were developed for each detected Appendix IV constituent and the data were tested for whether the concentrations represented statistically significant levels (SSLs) above their respective GWPSs. Downgradient wells with a constituent or constituents reported above GWPSs at an SSL are as follows:

- Cobalt in monitoring well BAT-05

Other salient points for the 2025 annual reporting period include:

- Semiannual Assessment-mode groundwater monitoring events were conducted in April/May and September/October. Monitoring involved sampling of background monitoring wells and downgradient monitoring wells.
- No program transitions (Detection to Assessment or vice versa) were triggered.
- Monitoring wells BAT-01 and BAT-05 were redeveloped on April 29, 2025, to improve groundwater yield and reduce high turbidity observed during the 2024 reporting period. Well development forms are included in **Appendix A**.
- Two characterization wells to further characterize groundwater conditions between the former BAT Impoundments and Hamilton Reservoir were completed in 2025. BAT-14 and BAT-15 were successfully installed and developed in June 2025. Groundwater was not observed while drilling the third intended characterization well, BAT-16, and the boring was abandoned. Boring logs for BAT-14, BAT-15, and BAT-16, and well installation records for BAT-14 and BAT-15 are provided in **Appendix B**.
- Based on available groundwater flow data, Hamilton Reservoir water elevation data, and the base elevations of the former BAT Impoundments, AECOM has concluded that the former BAT Impoundment area has become a groundwater evaporation basin and hydraulic sink for groundwater. This hydrogeologic setting supports that groundwater and therefore constituents of concern are contained at the former impoundments within this evaporation basin.

Planned 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.
- Abandonment of monitoring well BAT-13 due to insufficient presence of water.

- Update of the assessment of corrective measure (ACM) that was prepared in June 2019 and presented at a public meeting in November 2019 (AECOM 2019a). Additional monitoring is planned for 2026 to confirm the new groundwater conceptual model with the inward flow towards the former BAT impoundments and evaporation basin. The ACM will then be updated in 2026 to summarize corrective action to date (i.e. source material removal during BAT Impoundment decommissioning), demonstrate the new groundwater conceptual model within the evaporation basin, and evaluate whether additional remedial action is warranted for final remedy selection.

1.0 Introduction

This is the 2025 Annual Groundwater Monitoring and Corrective Action Report for the former Coal Combustion Residuals (CCR) Bottom Ash Transfer (BAT) Impoundments at the Platte River Power Authority (Platte River) Rawhide Energy Station (Rawhide Station or Site) in Larimer County, Colorado. This report was developed by AECOM Technical Services, Inc. (AECOM) at the request of Platte River. The purpose of this report is to provide a summary of the groundwater monitoring activities performed in 2025 at the decommissioned BAT Impoundments to comply with the requirements of Title 40 of the Code of Federal Regulations (CFR) Part 257 Subpart D, known as the CCR Rule, which became effective on October 19, 2015. The rule provides standards for the disposal of CCR in landfills and surface impoundments (CCR units) and establishes groundwater monitoring requirements in 40 CFR §§ 257.90 - 257.95. In accordance with 40 CFR § 257.90(e), an annual report must be prepared to document the status of the groundwater monitoring and correction action program (as applicable) for the CCR unit, summarize the key actions completed the previous year, describe any problems encountered, discuss actions taken to resolve the problems, and project key activities for the upcoming year. The annual report will be considered complete when it is placed in the facility operating record by January 31, 2026.

1.1 Report Organization

This report is divided into eight sections as outlined below and includes text, tables, figures, and appendices. The sections include:

- Section 1.0 includes an introduction and report organization;
- Section 2.0 provides a facility description that includes the facility location and operational history, a description of the CCR unit and a summary of the site hydrogeology;
- Section 3.0 summarizes the groundwater monitoring activities performed in 2025, and references appendices to this report that contain detailed documentation of those activities;
- Section 4.0 summarizes the groundwater sampling; groundwater flow characterization; sampling data analysis and results; and problems encountered, and actions taken during groundwater sampling;
- Section 5.0 provides the statistical analysis and results;
- Section 6.0 provides a projection of the key activities anticipated in 2026;
- Section 7.0 provides a summary and findings; and
- Section 8.0 provides a list of references cited in the report.

The report also includes five appendices that provide supporting documentation of the groundwater monitoring and related activities conducted in 2025 that include:

- Appendix A Groundwater Sampling Forms and Development Forms
- Appendix B Well Installation Records
- Appendix C Laboratory Analytical and Data Validation Reports
- Appendix D Groundwater Velocity Calculation Sheet
- Appendix E Statistical Analysis Results and Input/Output Files

2.0 Facility Description

2.1 Facility Location and Operational History

The Rawhide Station encompasses approximately 4,560 acres north of Wellington in Larimer County, Colorado. In addition to the plant buildings, the major feature of the facility is an approximately 500-acre dry-land constructed reservoir of reclaimed wastewater from the City of Fort Collins, also known as Hamilton Reservoir, which contains approximately 15,000 acre-feet of water and is used for cooling processes at the station. The power block area contains the boiler and turbine buildings, the air quality control equipment, and the administrative offices. A rail spur along the northern edge of the Site connects the Rawhide Facility with the mainline of the Burlington Northern Santa Fe Railway Company and is used to deliver coal and construction materials for plant operations. Six generating units are located at the Rawhide Station. Units A, B, C, D, and F are fueled by natural gas, and Unit 1 is fueled by coal mined from the Powder River Basin in Wyoming.

2.2 BAT Impoundments Description

The BAT Impoundments were located northwest of the main plant, south of the coal stockpile, and north of Hamilton Reservoir (**Figure 1**). Bottom ash produced during the coal combustion process was hydraulically sluiced from the Unit 1 boiler to one of the two BAT Impoundments. These impoundments also received resin filter backwash water from the demineralizer at the wastewater treatment plant. The impoundments were constructed in the early 1980s by excavating below grade into the underlying Pierre Shale and then lining the bottom with 18 inches of compacted clay. Each of the two impoundments measured approximately 725 feet by 225 feet at the surface (approximately 7.5 acres total) with a bottom elevation of 5,660 feet above mean sea level (amsl), a normal water elevation of 5,674 feet amsl, and a top of berm elevation of between 5,678 and 5,679 feet amsl.

In 2020, the BAT Impoundments were decommissioned per the requirements of 40 CFR §§ 257.101 and 257.102. The two impoundments were taken out of service following a transfer of operations to the Concrete Setting Tank which was constructed and tested in 2018 and 2019 and is located to the south and east of the former BAT Impoundments. During decommissioning of the BAT Impoundments, the CCR material was removed from the impoundments and hauled to the Ash Monofill located at the northwest corner of the site for disposal. Water present in the impoundments was transferred to the phosphorus removal system (PRS) ponds located east of the Ash Monofill. Following CCR material removal, the area was regraded and vegetated. Details of the BAT Impoundments decommissioning can be found in the Bottom Ash Transfer Impoundment Construction Completion Certification Report (AECOM 2021a). Groundwater in this area is currently being monitored to establish post-decommissioning groundwater conditions. Current data suggest that there is an inward flow of groundwater in the former BAT Impoundment area towards monitoring well BAT-05 as discussed in more detail in Section 4.0.

2.3 Rawhide Station Hydrogeology

The hydrogeology of the Rawhide Station is discussed in the Engineering Report and Operational Plan (EROP) for the Solid Waste Disposal Facility (Platte River 1980), and in the Final Report Investigation of the Groundwater Monitoring Program for the Bottom Ash Disposal Site conducted by Lidstone and Anderson (1989). According to the 1980 EROP, hydrogeology of the Rawhide Station was originally investigated by drilling and installing 23 piezometers in conjunction with the original geotechnical investigation of the Site prior to construction of the facility. Data from the piezometers indicated that a groundwater table exists within the weathered and fractured Pierre Shale bedrock beneath the Site, and in alluvial deposits along Coal Creek. The report indicated that the depth to groundwater varied across the Site from 11 to 67 feet below ground surface (bgs), with groundwater generally flowing to the south-southeast. The shallow water table, as explained in the 1980 EROP, was reported to be directly recharged by infiltration from precipitation and surface runoff.

Following construction and operation of the Rawhide Station, Lidstone and Anderson (1989) concluded that sufficient groundwater data were collected to determine that a mound had formed in the shallow, weathered, and fractured Pierre Shale in the vicinity of Hamilton Reservoir. After a review of available groundwater level information for Rawhide Station, AECOM concluded that the CCR units present at the Site are located hydraulically upgradient of any groundwater mound created by Hamilton Reservoir.

2.4 Former BAT Impoundments Hydrogeology

The uppermost water-bearing stratum around the former BAT Impoundments is identified as the weathered and fractured Pierre Shale, which lies approximately 3 to 17 feet bgs. However, some locations screened within the Pierre Shale between the former BAT Impoundments and Hamilton Reservoir are dry (BAT-16) or are not hydraulically connected to the surrounding wells as is the case of BAT-13, which has a groundwater elevation approximately 20 to 25 feet lower than surrounding wells, with minimal recharge observed. As noted above, the impoundments were constructed by excavating into the Pierre Shale, which created an environment in which groundwater appears to have been largely recharged by leakage from the former impoundments. Groundwater beneath the former BAT Impoundments is present under water table conditions, where the depth to groundwater ranged from 10.42 feet bgs in BAT-15 in September 2025 to 35.73 feet bgs in BAT-13 in April 2025.

Prior to BAT closure, groundwater flow was generally from north to south across the unit towards Hamilton Reservoir, generally following the topographic slope. However, a groundwater depression developed within the BAT Impoundments as the impoundments were drained of water and decommissioned between July and October 2020. This depression was evidenced by the lowest water levels occurring in BAT-02 and BAT-05. The water levels have recovered partially but still suggest inward flow to the former impoundments. Following decommissioning activities for the BAT Impoundment closure, AECOM reviewed the available groundwater flow data and concluded that the former BAT Impoundment area has become an evaporation basin and hydraulic sink for groundwater. Groundwater flows to the excavated area from all directions slowly enough that it is lost to evaporation and the former BAT Impoundments remain relatively dry at an elevation below that of Hamilton Reservoir as discussed further in Section 4.0 below. Under the current observed groundwater flow condition, the previously designated downgradient wells are retained for compliance evaluation purposes and analytical results are compared statistically to upgradient designated wells to identify differences even though the downgradient designated wells are not strictly downgradient of the unit due to the inward observed flow.

Previous reports indicate that little to no groundwater was present in geotechnical boreholes completed in the area of the BAT Impoundments at the time of their construction (Black & Veatch Consulting Engineers 1979). The BAT Impoundments were constructed on a local topographic high, suggesting that groundwater, if present, likely flowed away from the area of the impoundments prior to construction. The previously observed water table beneath the former BAT Impoundments, prior to impoundment decommissioning, appears to have been a perched saturated zone in the underlying weathered and fractured Pierre Shale. The drop and rebound of groundwater elevations in the monitored wells observed in 2020 through 2021, suggests that groundwater drained toward and into the BAT Impoundment excavations until the wells returned to equilibrium with natural static levels. Current groundwater flow conditions (2025) are discussed in Section 4.0 below.

3.0 Groundwater Monitoring Activities

This section summarizes groundwater monitoring activities conducted during 2025 to comply with the CCR Rule. Activities included:

- Measuring groundwater levels at each monitoring well prior to purging for sampling to provide potentiometric data.
- Conducting semiannual Assessment-mode groundwater monitoring events in April/May and September/October. Monitoring involved sampling of background monitoring wells and downgradient monitoring wells for analysis of Appendix III and Appendix IV constituents to identify potential releases from the former BAT Impoundments and to collect supplemental data to update the background statistics as needed.
- Statistical analysis of the 2025 Appendix III and Appendix IV monitoring data to determine if there were any statistically significant increases (SSIs) over background and whether any of the SSIs were above groundwater protection standards (GWPS) at a statistically significant level (SSL).
- Installation of new characterization wells to further delineate groundwater flow conditions between the former BAT impoundments and Hamilton Reservoir in June 2025. Two of the planned characterization wells, BAT-14 and BAT-15, were successfully installed. A third well, BAT-16, was drilled but not installed due to the absence of groundwater at the boring location.
- Monitoring well redevelopment in April 2025 of BAT-01 and BAT-05 to reduce elevated turbidity levels in the wells.

Assessment-mode groundwater monitoring and statistical analysis was completed in accordance with the CCR BAT Impoundments Groundwater Detection Monitoring Plan (AECOM 2017).

3.1 Water Level Measurements

During each monitoring event, groundwater levels in BAT Impoundment monitoring network wells and characterization wells were measured using an electronic water level meter. **Table 1** presents monitoring well survey locations, and well construction details including surveyed top of casing elevation results. Groundwater level measurements were recorded to the nearest hundredth (0.01) of a foot. The water level meter cable and sensor were decontaminated at the start of field activities and after use at each well to limit the potential for cross-contamination between wells. Water level measurements were recorded on groundwater sampling forms, provided in **Appendix A**, and are tabulated in **Table 2** for the groundwater sampling events in April/May and September/October 2025.

3.2 Groundwater Sample Collection

Appendix III and Appendix IV Assessment monitoring groundwater samples were collected from BAT Impoundment monitoring wells BAT-01, BAT-02, BAT-03, BAT-04R, BAT-05, BAT-06, BAT-09, BAT-10, BAT-11, and BAT-12 from May 6 to May 14, 2025, and October 2 to October 7, 2025. BAT-13, BAT-14, and BAT-15 were considered characterization wells to help determine groundwater flow in the area of the former BAT Impoundments so groundwater samples were not collected during the 2025 monitoring year.

Groundwater samples were collected in accordance with the CCR BAT Impoundments Groundwater Detection Monitoring Plan (AECOM 2017). Each well was initially purged using a submersible bladder pump and dedicated polyethylene bonded tubing. Disposable bladder liners were replaced and the pump casing was decontaminated prior to purging and sampling each monitoring well to avoid cross-contamination between wells. The bladder pump and tubing were lowered into the well to a depth within the screen interval that was at least 1 to 2 feet off the bottom of the well to avoid disturbing accumulated

sediment in the lower part of the well screen. Monitoring wells were purged using low flow sampling techniques until field parameter measurements of pH, temperature, dissolved oxygen, oxidation reduction potential, turbidity, and conductivity stabilized within ±10 percent and drawdown in the well was less than 0.33 feet for three consecutive readings. If wells did not stabilize within 45 to 60 minutes of purging, notes were made regarding stabilization of the well on field forms and samples were collected. Purge water volumes were also recorded on groundwater sampling forms (**Appendix A**).

After purging, the groundwater samples were collected directly into laboratory-supplied sample containers from the discharge tube of the bladder pump. Sample water was slowly pumped into each laboratory sample container until the containers were appropriately filled, taking care not to spill the laboratory preservative contained in sample bottles. The sample containers were then labeled and placed on ice in a sample cooler. At the conclusion of the field day, the samples were delivered by overnight carrier (FedEx) to Pace Analytical in Greensburg, Pennsylvania (radium samples only) and Lenexa, Kansas (May samples only) or Minneapolis, Minnesota (October samples only) for analysis.

3.3 Analytical Program

Groundwater samples collected from the former BAT Impoundment wells were analyzed using United States Environmental Protection Agency (USEPA) SW-846 methods for Appendix III and IV constituents. All analytical results are reported as totals. **Table 3** summarizes the 2025 groundwater analytical results for each sampling event. The laboratory analytical reports are provided in **Appendix C**. Analytical methods switched from 6020 to 6010 in 2024 as the laboratory had equipment interference affecting reporting limits for metals results for method 6020. As laboratories were switched from Pace Kansas to Pace Minneapolis in 2025 after the August 2025 monitoring event, laboratory interference issues with method 6020 were resolved and metals analysis returned to method 6020 for the October monitoring event.

Appendix III constituents include:

Chemical Name	Analytical Method
Boron	6010C[1] / 6020B[2]
Chloride	9056A[1] / 300.0[2]
Calcium	6010C[1] / 6020B[2]
Fluoride	9056A[1] / 300.0[2]
pH	Field measurement
Sulfate	9056A[1] / 300.0[2]
TDS	TDS (American Public Health Association et al. [1998] standard method 2540C)

TDS = total dissolved solids.

[1] = analytical method used during May event only

[2] = analytical method used during October event only

Appendix IV constituents include:

Chemical Name	Analytical Method
Antimony	6020B
Arsenic	6010C[1] / 6020B[2]
Barium	6010C[1] / 6020B[2]
Beryllium	6010C[1] / 6020B[2]
Cadmium	6010C[1] / 6020B[2]
Chromium	6010C[1] / 6020B[2]
Cobalt	6010C[1] / 6020B[2]
Fluoride	9056A[1] / 300.0[2]
Lead	6010C[1] / 6020B[2]
Lithium	6010C[1] / 6020B[2]
Mercury	7470A
Molybdenum	6010C[1] / 6020B[2]
Selenium	6010C[1] / 6020B[2]
Thallium	6020B
Radium 226 and 228, combined	total radium calculation

[1] = analytical method used during May event only

[2] = analytical method used during October event only

Total radium calculation is based on radium-226 (Method 903.1) and radium-228 (Method 904.0) results.

3.4 Quality Control/Quality Assurance

Quality assurance and quality control samples collected during sampling activities included one field duplicate for each round of assessment monitoring, one equipment rinse blank, and one matrix spike/matrix spike duplicate sample. The field duplicate samples were collected by alternating filling sample bottles between the primary and duplicate sample. The equipment rinse blank samples were collected after decontaminating the bladder pump casing or fluid level meter using techniques outlined in the Sampling and Analysis Plan.

3.5 Data Validation

The laboratory data were validated by AECOM chemists using USEPA guidance. Data validation reports are provided in **Appendix C**.

3.6 Well Redevelopment and Installation

Monitoring wells BAT-01 and BAT-05 were redeveloped on April 29, 2025, in attempts to reduce sample turbidity in the wells as turbidity measurements in previous years showed increasing trends. Wells were surged and purged using a submersible pump. Each well was purged dry a minimum of two times before redevelopment was considered complete. While purging BAT-01, the submersible pump became stuck at the bottom of the well and separated from its connective wiring. The pump could not be recovered; however, the water column in the well was sufficient to collect a full sample during the September/October 2025 monitoring event. Well development forms are provided in **Appendix A**.

New characterization wells BAT-14 and BAT-15 and soil boring BAT-16 were installed between June 4 and June 9, 2025, between the former BAT Impoundments and Hamilton Reservoir to better characterize groundwater conditions between the two areas. The boring logs and installation details are provided in **Appendix B**. Wells were surged and purged using a bailer or submersible pump. Each well

was either purged dry during the process or had up to 10 well volumes of water removed before redevelopment was considered complete. Well development forms for BAT-14 and BAT-15 are provided in **Appendix A**. No indication of groundwater was observed during the drilling of BAT-16 and therefore, a monitoring well was not installed at this location. The boring was plugged with hydrated bentonite and abandoned.

4.0 Monitoring Results and Evaluation

This section discusses the characterization of groundwater flow between the former impoundments and Hamilton Reservoir, potentiometric surface elevations, groundwater flow rates, and groundwater analytical results for the former BAT Impoundments during 2025.

4.1 Groundwater Flow Characterization Between the Former BAT Impoundments and Hamilton Reservoir

As noted in Section 2.3, groundwater generally flows inward from all directions towards the former BAT Impoundments. Characterization wells BAT-14 and BAT-15 were newly installed to further characterize groundwater movement in the area between the former BAT Impoundments and Hamilton Reservoir. Fluid levels within BAT-14 and BAT-15 in September 2025 show groundwater levels higher than those in monitoring wells surrounding the perimeter of the former impoundments (i.e. BAT-02, BAT-03, BAT-05, and BAT-06). This data indicates that groundwater also flows towards the former BAT Impoundments from the direction of Hamilton Reservoir. Potentiometric surface maps depicting groundwater elevations in April 2025 and September 2025 are included as **Figure 2** and **Figure 3**, respectively.

Figure 4 presents hydrographs for the former BAT Impoundment well network. In general, the water levels in the BAT network wells have fluctuated over time. The fluctuations appear to be related to decreasing impoundment water levels during decommissioning as evidenced by decreasing water levels in several wells in September 2019 when dewatering operations of the former BAT Impoundments began. Groundwater elevations dropped significantly following the decommissioning and draining of the former BAT Impoundments between the July and October 2020 sampling events, as observed on the **Figure 4** hydrograph. Many of the BAT network compliance wells showed an increase in the second half of 2021 before beginning to display a pattern of seasonal fluctuations with a slight decreasing trend through the end of the 2025 reporting period (BAT-01, BAT-03, BAT-04R, and BAT-06). However, groundwater levels in BAT-02 and BAT-05 have remained at lower elevations post-decommissioning.

Cross-section A-A' further depicts groundwater data and geology across the former BAT Impoundments. **Figure 5a** shows the location of cross-section A-A' which is presented as **Figure 5b**. Cross-section A-A' includes geologic data from soil borings and monitoring wells, post-closure survey data of the former BAT Impoundments (AECOM 2021a), and groundwater elevation data from the surrounding monitoring wells. Groundwater in the area of the former BAT Impoundments is typically found in the weathered shale, although some locations between the former impoundments and Hamilton Reservoir are dry (BAT-16) or are not hydraulically connected to the surrounding wells as is the case of BAT-13, which has a groundwater elevation approximately 20 to 25 feet lower than surrounding wells, with minimal recharge observed. Groundwater levels in perimeter wells BAT-01, BAT-02, BAT-03, BAT-04R, BAT-05, and BAT-06 are higher than the base elevations of the former north and south impoundments which are 5662 feet amsl and 5660 feet amsl, respectively (AECOM 2021a). This elevation difference allows groundwater to flow inwards towards them and be exposed to the atmosphere. The atmospheric exposure and inward groundwater flow from all four directions effectively renders the former impoundments an evaporation basin and a hydraulic sink for groundwater.

4.1.1 Groundwater Potentiometric Surface

Groundwater elevations were used to prepare potentiometric surface maps for the April/May and September/October 2025 monitoring events (**Figure 2** and **Figure 3**). These maps indicate that groundwater in the uppermost aquifer beneath the former BAT Impoundments flows back into the impoundment area towards monitoring wells BAT-02 and BAT-05 at an average hydraulic gradient of 0.0153 foot per foot in 2025 between monitoring wells BAT-10 and BAT-05. Due to groundwater movement towards/into the former impoundment area and effectively being removed via evaporation associated with the arid climate of the Site, there is no traditional downgradient compliance point at

which groundwater can be monitored for release of contaminants. As an interim measure, all surrounding monitoring wells (BAT-01 through BAT-06) are treated as downgradient compliance wells. Groundwater elevations will continue to be monitored to see if flow patterns remain as observed generally flowing towards the BAT Impoundments area.

4.1.2 Groundwater Flow Rate

An average groundwater flow rate was calculated for the uppermost aquifer beneath the former BAT Impoundments using the average hydraulic gradient (0.0153 foot per foot) between monitoring wells BAT-10 and BAT-05 (furthest upgradient point to lowest downgradient point); the minimum (0.0002 foot per day [ft/day]) and maximum (0.33 ft/day), and geometric mean (0.029 ft/day) hydraulic conductivities determined from historic slug tests; and an assumed effective porosity of 15 percent for fractured Pierre Shale. The results indicate that groundwater in the uppermost aquifer beneath the former BAT Impoundments in 2025 flows at a rate ranging from approximately 2.039E-5 to 3.364E-2 ft/day and a geometric mean of 2.956E-3 ft/day towards the depression seen in groundwater in monitoring wells BAT-02 and BAT-05. **Appendix D** presents the calculation sheet for the groundwater velocity in 2025. These groundwater flow rates are higher than those reported prior to the decommissioning of the BAT Impoundments, which ranged from a minimum of 6.67E-6 ft/day between BAT-10 and BAT-12 in 2020 to a maximum of 1.279E-2 ft/day between monitoring wells BAT-11 and BAT-05 in 2021 (AECOM 2018, 2019b, 2020, 2021b, and 2022). Groundwater conditions in 2022 showed that groundwater was flowing inwards towards BAT-05 (AECOM 2023), while post-decommissioning conditions were still in flux. Similar conditions were observed between 2023 and 2025 as water continued to show inward flow towards BAT-05 (AECOM 2024, 2025).

4.2 Groundwater Analytical Results

Groundwater samples were collected from network monitoring wells and analyzed for Appendix III and Appendix IV parameters during the April/May and September/October 2025 sampling events and analyzed as specified in Section 3.3. The laboratory analytical reports are provided in **Appendix C**. The laboratory results were reviewed for completeness against the project-required analytical methods and the chain-of-custody forms and were subsequently validated by AECOM. The data were found to be valid and useable with qualification as outlined in the data validation reports provided in **Appendix C**. However, upon further review, laboratory reporting limits for several constituents including those for arsenic, cadmium, chromium, cobalt, and lead were provided above upper prediction limits (UPLs) for both the September/October 2024 and April/May 2025 sampling events. The decision was made to switch laboratories from Pace Analytical in Lenexa, Kansas to Pace Analytical in Minneapolis, Minnesota after the April/May 2025 sampling event in an effort to achieve reporting limits consistent with project needs.

Table 3 summarizes the groundwater analytical results for the April/May and September/October 2025 sampling events. Monitoring wells BAT-01, BAT-02, BAT-03, BAT-04R, BAT-05, BAT-06, BAT-09, BAT-10, BAT-11, and BAT-12 were sampled in May and October to fulfill the semiannual Assessment monitoring requirement. Final field parameter measurements prior to sample collection are presented on **Table 3**. Field forms are presented in **Appendix A** and present all field parameter measurements collected during the well purging process.

4.3 Groundwater Monitoring System Evaluation

Monitoring wells comprising the former BAT Impoundments groundwater monitoring network in 2025 were inspected during each sampling round and were found to be in good condition and capable of supplying a representative sample. Turbidity field measurements improved from May 2025 to October 2025 in wells that were redeveloped, including BAT-01 and BAT-05. Despite improved turbidity in well BAT-05, turbidity levels in this well were still considered elevated (greater than 300 nephelometric turbidity units [NTU]) during the October monitoring event.

Analysis of the 2025 potentiometric surface maps constructed using the groundwater elevation measurements from the monitoring events confirm that monitoring wells BAT-09 and BAT-10 are located upgradient of the former BAT Impoundments and represent background groundwater quality. Monitoring well BAT-11 was determined to be up- and cross-gradient of the former BAT Impoundments but not representative of background groundwater quality.

As discussed above, monitoring wells BAT-01, BAT-02, BAT-03, BAT-04R, BAT-05, BAT-06, and BAT-12 do not appear to be hydraulically downgradient of the former BAT Impoundments as there is inward flow towards BAT-02 and BAT-05 but are designated as downgradient in the event that groundwater conditions return to an equilibrium that reflects groundwater flow that more closely approximates the local topography that grades toward Hamilton Reservoir and to the east.

4.4 Problems Encountered and Actions Taken

No new problems were encountered or actions taken during 2025 aside from the unrecoverable submersible pump in monitoring well BAT-01 and elevated laboratory reporting limits that persisted between the September/October 2024 and April/May 2025 sampling events. A summary of these occurrences and the mitigative actions taken in 2025 are as follows:

- Monitoring well, BAT-01, was redeveloped on April 29, 2025 in an attempt to reduce sample turbidity in the well. While purging BAT-01 with a submersible pump, the pump became stuck at the bottom of the well and separated from its connective wiring during a retrieval attempt. Though the pump could not be recovered, sufficient water column remains in the well for the collection of groundwater samples. Analytical data for BAT-01 will continue to be monitored closely and if constituent concentrations appear to deviate from historical trends, a replacement monitoring well may be installed to ensure data integrity.
- Based on further review of groundwater data, the laboratory reporting limits for several constituents including those for arsenic, cadmium, chromium, cobalt, and lead were provided above UPLs for both the September/October 2024 and April/May 2025 sampling events. In an effort to achieve lower reporting limits consistent with project needs, the decision was made to switch laboratories from Pace Analytical in Lenexa, Kansas to Pace Analytical in Minneapolis, Minnesota after the April/May 2025 sampling event. Laboratory reporting limits for the September/October 2025 sampling event were below UPLs and GWPSs and thus considered satisfactory for the assessment of SSIs. Reporting limits will continue to be evaluated for project suitability as laboratory data is received from future events.

5.0 Statistical Analysis Results

The Appendix III and Appendix IV groundwater quality data were evaluated using the certified statistical approach presented in the CCR BAT Impoundments Groundwater Detection Monitoring Plan (AECOM 2017). The Appendix III and IV groundwater quality data were evaluated using an interwell approach that statistically compared constituent concentrations at downgradient monitoring wells to those present at background monitoring wells. For the Platte River former BAT Impoundments, monitoring wells BAT-09 and BAT-10 are designated as background wells because they are located upgradient of the former impoundments, whereas monitoring wells BAT-01, BAT-02, BAT-03, BAT-4R, BAT-05, BAT-06, and BAT-12 are designated as compliance wells because they are located adjacent to the former waste boundary or previously downgradient of the former impoundments prior to decommissioning. BAT-11 was removed from the background data set after the 2023 annual report after further review of data but will continue to be sampled as a characterization well in case groundwater flow directions change in the future. BAT-13, BAT-14, and BAT-15 were considered groundwater flow characterization wells during the 2025 monitoring year and were not sampled for incorporation into the statistically evaluated monitoring well network. BAT-13, which was considered as a possible well replacement for BAT-05, has historically had insufficient water volume for sampling and is planned to be decommissioned in 2026.

The statistical analyses were performed in accordance with the USEPAs Final CCR Rule 40 CFR Parts 257.93(f), 257.93(g), and 257.93(h) and the Statistical Method Certification (AECOM 2017). Prediction limits (i.e., parametric or nonparametric) with retesting, were developed using ProUCL Version 5.1 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 background monitoring wells BAT-09 and BAT-10 collected between March 2016 and October 2024 were used to redevelop a UPL for the Appendix III and IV background data at 95 percent confidence. The background data set was updated to reflect observed changes in the upgradient/background chemical conditions and the removal of BAT-11 from the program.

Data from the downgradient monitoring wells for the reporting period were compared to the updated UPL to identify SSIs over background. The Appendix III and Appendix IV UPLs are provided in **Table 4** and **Table 5**, respectively. The ProUCL statistical analysis input files and output files are provided in **Appendix E**.

5.1 Appendix III SSI Determination

The Appendix III results were compared against their respective background UPLs (**Table 4**) to determine if they exhibited SSIs above background. The statistical analysis results indicate that the Appendix III constituents of calcium at monitoring wells BAT-04R and BAT-05, and chloride at BAT-01 have verified SSIs over background UPLs as shown below. Sulfate in BAT-03 also exceeded the UPL in October but has not been verified as an SSI by subsequent sampling events to date (**Table 3**). Boron, fluoride, pH, sulfate, and TDS did not have any verified Appendix III SSIs over background. Appendix III SSIs found during 2025 are generally consistent with those identified between 2020 and 2024. However, compared with the Appendix III SSIs found during 2024, calcium at BAT-03, chloride at BAT-02, and sulfate at BAT-03 are no longer verified SSIs in 2025 due to results below background UPLs for a minimum of two consecutive events. These results confirm that Assessment monitoring is required at the former BAT Impoundments. Specific events where exceedances were observed, and analytical concentrations of detections can be found on **Table 3**.

Well	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS
BAT-01	-----	----	SSI	-----	-----	-----	-----
BAT-02	-----	-----	-----	-----	-----	-----	-----
BAT-03	-----	-----	-----	-----	-----	-----	----
BAT-04R	-----	SSI	-----	-----	-----	-----	-----
BAT-05	-----	SSI	-----	-----	-----	-----	----
BAT-06	-----	-----	-----	-----	-----	-----	-----
BAT-12	-----	-----	-----	-----	-----	-----	-----

Notes:

----- = concentration below UPL.

SSI = statistically significant increase (Indicating concentrations above the background UPL).

TDS = total dissolved solids.

5.2 Appendix IV SSI Determination

The Appendix IV Assessment monitoring results were compared against their respective background UPLs (**Table 5**) to determine if they exhibited SSIs above background. This comparison indicates that barium at BAT-03 and barium, chromium, cobalt, and lead at BAT-05 were identified as having an SSIs above background as shown below. Cobalt in BAT-03 also exceeded the UPL in October but has not been verified as SSIs by subsequent sampling events to date (**Table 3**). No other Appendix IV constituents were identified as SSIs during the 2025 reporting period. SSLs were calculated for select constituents as described in Section 5.4 below.

Well	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Ra	Se	Th
BAT-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-03	----	----	SSI	----	----	----	----	----	----	----	----	----	----	----	----
BAT-04R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-05	----	----	SSI	----	----	SSI	SSI	----	SSI	----	----	----	----	----	----
BAT-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Notes:

---- = concentration below UPL.

SSI = statistically significant increase (Indicating concentrations above the background UPL).

5.3 Establishment of Groundwater Protection Standards

GWPSs were selected for the former BAT Impoundments using the criteria specified in 40 CFR 257.95(h). The GWPSs listed on **Tables 3**, **4**, and **5** were selected from the USEPA drinking water maximum contaminant levels (MCLs), groundwater standards provided in 40 CFR 257.95(h)(2), or the background UPLs where they exceed either of the regulatory standards.

5.4 Appendix IV SSL Determination

Appendix IV constituent cobalt at BAT-05, which exhibited an SSI over background, was further evaluated to determine whether those concentrations represent an SSL relative to the GWPS established under the CCR Rule [40 CFR 257.95(d)(2)]. SSLs are identified by calculating the 95 percent lower confidence limit (95% LCL) at each well where the Assessment monitoring constituents exhibited a verified SSI over background and comparing the 95% LCL to the GWPS. A constituent is present at an SSL over the GWPS if the 95% LCL is greater than the GWPS. Cobalt at monitoring well BAT-05 was

the only Appendix IV constituent found to be present at an SSL above its GWPS because its 95% LCL (0.00637 milligrams per liter [mg/L]) was greater than the GWPS of 0.006 mg/L as shown below. Appendix IV constituents that exceed the GWPS at an SSL require an alternate source demonstration or corrective action. No other Appendix IV constituents exhibited an SSL above the GWPS.

Post-decommissioning of the BAT Impoundments in 2020, groundwater levels and cobalt concentrations have generally decreased at BAT-05. Though the decreasing trend in cobalt concentrations appears to have slowed since May 2022, groundwater elevations recorded at BAT-05 continue to lower at a relatively consistent rate. BAT-05 will continue to be monitored closely to see how cobalt attenuates as groundwater levels continue to drop. A trend plot correlating the decreases in cobalt and groundwater elevations at BAT-05 after closure of the BAT Impoundments is presented as **Figure 6**.

Well	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Ra	Se	Th
BAT-01	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-04R	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-05	----	----	----	----	----	----	SSL	----	----	----	----	----	----	----	----
BAT-06	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
BAT-12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Notes:
---- = concentration below UPL.
SSL = statistically significant level (indicating 95% LCL exceeded GWPS).

Well No.	Parameter with SSI over background	95% LCL (mg/L)	GWPS (mg/L)
BAT-05	Cobalt	0.00637	0.006

Notes:
Red highlighted value exceeds GWPS.
95% LCL = 95 percent lower confidence limit.
GWPS = Groundwater Protection Standard.
mg/L = milligrams per liter.
SSI = statistically significant increase.

6.0 Projected Activities in 2026

The following activities are planned to be performed at the former BAT Impoundments in calendar year 2026:

- Platte River will continue groundwater monitoring on a semiannual basis for the Appendix III and IV constituents that were detected as specified in 40 CFR 257.95(d)(1) or 40 CFR 257.95(f). The full list of Appendix IV constituents also will be sampled annually.
- Monitoring wells will continue to be monitored for high turbidity conditions. Elevated turbidity wells (greater than 100 NTU or wells having problematic results) may be redeveloped as needed.
- Monitoring well BAT-13 was determined in 2024 as an unsuitable replacement for monitoring well BAT-05, due to consistent and anomalously low groundwater yield that inhibits the ability to collect a complete sample set using the same method (low flow bladder pump) as the rest of the monitoring network wells. Abandonment of BAT-13 is scheduled for the 2026 monitoring year.
- Complete additional monitoring to confirm the new groundwater conceptual site model.
- An assessment of corrective measure (ACM) was prepared in June 2019 to identify potential remedial alternatives for cobalt in groundwater at the former BAT Impoundments. The ACM included a range of cleanup options that included monitored natural attenuation, groundwater pump and treat, and a permeable reactive barrier (AECOM 2019a). The ACM options were presented at a public meeting in November 2019. The BAT Impoundments were subsequently decommissioned and CCR material was removed as a corrective action in 2020. In 2026, the ACM will be updated to summarize corrective action to date, demonstrate groundwater control via the evaporation basin present in this area, and evaluate whether additional remedial action is warranted. Remedy selection will be based on adequate monitoring data, the site hydrogeology, contaminant migration pathways and contaminant exposure pathways.

7.0 Summary and Findings

AECOM, on behalf of Platte River, completed the groundwater sampling and analysis of semi-annual Appendix III and Appendix IV Assessment monitoring at the former BAT Impoundments. Monitoring data and analytical results collected as part of the Assessment monitoring program were evaluated to determine the aquifer hydraulic conductivities at the new monitoring wells, potentiometric surface elevations, groundwater flow directions and rates, and whether any constituents are present at an SSI above background UPLs or exceeded GWPSs at an SSL.

In 2025, Appendix III constituents which were considered SSIs in October 2024 but are not considered SSIs in October 2025 include calcium and sulfate at BAT-03, and chloride at BAT-02. Appendix IV constituents which were not considered SSIs in October 2024 but are considered SSIs in October 2025 include barium at BAT-03, and barium, chromium, and lead at BAT-05. These Appendix IV SSIs have been noted as SSIs in years prior to 2024. Statistical analysis found that cobalt exceeded the GWPS at an SSL at BAT-05 in October 2025. Platte River will continue to obtain groundwater analytical data on a semi-annual basis.

Two characterization wells (BAT-14 and BAT-15) and one soil boring (BAT-16) were installed in June 2025 to better understand groundwater flow conditions between the former BAT Impoundments and Hamilton Reservoir. Based on the data from these locations, Site groundwater flow data, Hamilton Reservoir water elevation data, and the base elevations of the former BAT Impoundments, AECOM has concluded that groundwater is flowing towards the former impoundment area from all four directions. This hydrogeologic setting and the arid climate of the Site support that groundwater and therefore constituents of concern, are contained at the former impoundments which act as an evaporation basin.

An ACM was prepared in June 2019 to identify potential remedial alternatives for cobalt in groundwater at the BAT Impoundments. The ACM included a range of cleanup options that included monitored natural attenuation, groundwater pump and treat, and a permeable reactive barrier (AECOM 2019a). The ACM options were presented at a public meeting in November 2019. The BAT Impoundments were subsequently decommissioned in 2020. Additional monitoring is planned for 2026 to confirm the new groundwater conceptual model with the inward flow towards the former BAT impoundments and evaporation basin. The ACM will then be updated in 2026 to summarize corrective action to date (i.e. material removal during BAT Impoundment decommissioning), demonstrate the new groundwater conceptual model with the evaporation basin, and evaluate whether additional remedial action is warranted for final remedy selection.

8.0 References

AECOM Technical Services, Inc. (AECOM). 2017. Coal Combustion Residuals (CCR) BAT Impoundments Groundwater Detection Monitoring Plan Revision 0. Prepared for Platte River Power Authority Rawhide Energy Station Larimer County, Colorado. October 10, 2017.

AECOM. 2018. Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report 2016 – 2017. Prepared for Platte River Power Authority. January 31.

AECOM. 2019a. Assessment of Corrective Measures at the Bottom Ash Transfer (BAT) Impoundments Under the Coal Combustion Residuals (CCR) Rule. Prepared for Platte River Power Authority. June 13.

AECOM. 2019b. Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report For 2018. Prepared for Platte River Power Authority. January 31.

AECOM. 2020. Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report For 2019. Prepared for Platte River Power Authority. January 31.

AECOM. 2021a. Bottom Ash Transfer (BAT) Impoundment Construction Completion Certification Report. Rawhide Energy Station, Platte River Lower Authority, Fort Collins, Colorado. September 2, 2021.

AECOM). 2021b. Former Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report For 2020. Prepared for Platte River Power Authority. January 31.

AECOM. 2022. Former Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report For 2021. Prepared for Platte River Power Authority. January 31.

AECOM. 2023. Former Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report For 2022. Prepared for Platte River Power Authority. January 31.

AECOM. 2024. Former Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report For 2023. Prepared for Platte River Power Authority. January 31.

AECOM. 2025. Former Bottom Ash Transfer (BAT) Impoundments Annual Groundwater Monitoring and Corrective Action Report for 2024. Prepared for Platte River Power Authority. January 31.

American Public Health Association, American Water Works Association, and Water Environment Federation. 1998. Standard Methods for the Examination of Water and Wastewater, 20th Edition.

Black & Veatch Consulting Engineers. 1979. Geotechnical Analysis, Report Platte River Power Authority Rawhide Project, July 1979.

Lidstone and Anderson, Inc. 1989. Investigation of the Ground-Water Monitoring Program for the Bottom Ash Disposal Site. March 1989.

Platte River Power Authority (Platte River). 1980. Engineering Report and Operational Plan for the Solid Waste Disposal Facility, Rawhide Energy Project, December 1980.

Tables

Table 1
Former BAT Impoundments Monitoring Well Construction Details
PRPA Former BAT Impoundments Annual Report for 2025
PRPA Rawhide Facility, Colorado

Well Name	Location Relative to Waste Unit	Easting (ft)	Northing (ft)	Ground Surface Elevation (ft amsl)	Top of Casing Elevation (ft amsl)	Total Depth (ft bgs)	Well Screen Interval (ft bgs)	Well Screen Lithology
BAT-01	Downgradient	3129532.039	1557740.813	5683.12	5682.48	34.0	23-33	Shale
BAT-02	Downgradient	3129988.382	1557738.969	5682.95	5682.41	33.8	23.8-33.8	Shale
BAT-03	Downgradient	3130388.569	1557729.857	5682.96	5682.40	36.0	26-36	Shale
BAT-04R	Downgradient	3130456.241	1557262.480	5684.62	5686.98	34.0	24-34	Shale
BAT-05	Downgradient	3129956.757	1557217.374	5682.63	5682.13	39.0	23-38	Shale
BAT-06	Downgradient	3129515.003	1557233.002	5682.84	5685.46	49.0	25-35	Shale
BAT-09	Upgradient	3129552.166	1558136.308	5690.86	5693.03	36.5	26.5-36.5	Shale
BAT-10	Upgradient	3130029.322	1558338.258	5687.73	5690.59	29.0	12-27	Shale
BAT-11	Upgradient	3130022.498	1560138.622	5702.01	5704.87	37.0	20-35	Shale
BAT-12	Downgradient	3129941.937	1557014.170	5698.62	5701.60	42.0	25-40	Shale
BAT-13	Downgradient	3129968.59	1557214.37	5682.41	5682.00	39.0	29-39	Shale
BAT-14	Downgradient	3129679.86	1557088.48	5701.68	5704.72	38.0	26-36	Shale
BAT-15	Downgradient	3129461.15	1556925.02	5678.12	5681.44	24.5	14-24	Shale

Notes:

BAT = Bottom Ash Transfer

ft amsl = feet above mean sea level; ft bgs = feet below ground surface

Wells surveyed in North American Datum 1983 (NAD83) and North American Vertical Datum 1988 (NAVD88)

Table 2
Former BAT Impoundments Water Level Measurements 2025
PRPA Former BAT Impoundments Annual Report for 2025
PRPA Rawhide Facility, Colorado

Well ID	Sampling Event	Measurement Date	Measuring Point Elevation (ft amsl)	Depth to water (btoc)	Groundwater Elevation (ft amsl)
BAT-01	April/May 2025	4/28/2025	5682.48	14.00	5668.48
BAT-01	Sept./Oct. 2025	9/30/2025	5682.48	11.96	5670.52
BAT-02	April/May 2025	4/28/2025	5682.41	18.56	5663.85
BAT-02	Sept./Oct. 2025	9/29/2025	5682.41	16.66	5665.75
BAT-03	April/May 2025	4/28/2025	5682.40	12.78	5669.62
BAT-03	Sept./Oct. 2025	9/29/2025	5682.40	13.13	5669.27
BAT-04R	April/May 2025	4/28/2025	5686.98	16.03	5670.95
BAT-04R	Sept./Oct. 2025	9/29/2025	5686.98	16.39	5670.59
BAT-05	April/May 2025	4/28/2025	5682.13	20.94	5661.19
BAT-05	Sept./Oct. 2025	9/29/2025	5682.13	21.16	5660.97
BAT-06	April/May 2025	4/28/2025	5685.46	14.76	5670.70
BAT-06	Sept./Oct. 2025	9/29/2025	5685.46	16.76	5668.70
BAT-09	April/May 2025	4/28/2025	5693.03	20.70	5672.33
BAT-09	Sept./Oct. 2025	9/29/2025	5693.03	19.79	5673.24
BAT-10	April/May 2025	4/28/2025	5690.59	12.38	5678.21
BAT-10	Sept./Oct. 2025	9/29/2025	5690.59	12.39	5678.20
BAT-11	April/May 2025	4/28/2025	5704.87	28.35	5676.52
BAT-11	Sept./Oct. 2025	9/29/2025	5704.87	28.36	5676.51
BAT-12	April/May 2025	4/28/2025	5701.60	31.75	5669.85
BAT-12	Sept./Oct. 2025	9/29/2025	5701.60	32.25	5669.35
BAT-13	April/May 2025	4/28/2025	5682.00	35.73	5646.27
BAT-13	Sept./Oct. 2025	9/29/2025	5682.00	33.73	5648.27
BAT-14	Sept./Oct. 2025	9/29/2025	5704.72	34.68	5670.04
BAT-15	Sept./Oct. 2025	9/29/2025	5681.44	10.42	5671.02

Notes:
BAT = Bottom Ash Transfer
ft = feet
ft amsl = feet above mean sea level
ft btoc = feet below top of casing
ID = identification
New monitoring wells BAT-14 and BAT-15 installed in June 2025.

Table 3
Former BAT Impoundments Analytical Results and Statistical Summary 2025
PRPA Former BAT Impoundments Annual Report for 2025
PRPA Rawhide Facility, Colorado

				Sample Location	BAT-01	BAT-01	BAT-02	BAT-02	BAT-03	BAT-03	BAT-04R	BAT-04R	BAT-05	BAT-05	BAT-06	BAT-06
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
				Sample Date	5/8/2025	10/6/2025	5/8/2025	10/6/2025	5/7/2025	10/6/2025	5/7/2025	10/2/2025	5/7/2025	10/6/2025	5/6/2025	10/6/2025
Chemical Name	**Analytical Method**	**Background UPL**	**GWPS**	**Unit**												
Appendix III Parameters																
Boron	SW6010[1] / SW6020[2]	2.39	--	mg/L	**1.28**	**1.51**	**1.04**	**1.09**	**1.01**	**1.15**	**0.702**	**0.688**	**1.27**	**1.12**	**1.76**	**1.76**
Calcium	SW6010[1] / SW6020[2]	433	--	mg/L	**101**	**124**	**319**	**346**	**358**	**427**	**420**	**489**	**392**	**441**	**113**	**115**
Chloride	EPA9056[1] / EPA300.0[2]	190	--	mg/L	**346**	**396**	**180**	**184**	**26.2**	**49.3**	**53.4**	**32.9**	**58.6**	**60.8**	**11.0**	**11.9**
Fluoride	EPA9056[1] / EPA300.0[2]	0.93	--	mg/L	< 0.20	**0.16**	< 0.20	**0.17**	< 0.20	**0.13**	< 0.20	**0.16**	< 0.20	**0.12**	< 0.20	**0.24**
Sulfate	EPA9056[1] / EPA300.0[2]	2972	--	mg/L	**622**	**729**	**1650**	**1600**	**2060**	**3070**	**1920**	**2000**	**3040**	**2680**	**1720**	**1600**
Total Dissolved Solids	SM2540C	4482	--	mg/L	**1910**	**2070 J**	**2950**	**2840 J**	**3500**	**4000 J**	**3200**	**3260**	**4900**	**4150 J**	**2460**	**2500 J**
Appendix IV Parameters																
Antimony	SW6020	0.001	0.006	mg/L	<0.002	< 0.0005	<0.002	< 0.0005	<0.003	< 0.001	<0.002	< 0.001	<0.003	< 0.001	<0.002	< 0.0005
Arsenic	SW6010[1] / SW6020[2]	0.003	0.01	mg/L	<0.01	< 0.0005	<0.01	< 0.0005	<0.01	< 0.001	<0.01	< 0.001	**0.0128**	**0.0029**	<0.01	< 0.0005
Barium	SW6010[1] / SW6020[2]	0.038	2.0	mg/L	**0.0611**	**0.0347**	**0.0109**	**0.0124**	**0.102**	**0.0728**	**0.016**	**0.0125**	**0.155**	**0.0563**	**0.012**	**0.0142**
Beryllium	SW6010[1] / SW6020[2]	0.0005	0.004	mg/L	<0.001	< 0.0002	<0.001	< 0.0002	<0.001	< 0.0004	<0.001	< 0.0004	**0.0015**	< 0.0004	<0.001	< 0.0002
Cadmium	SW6010[1] / SW6020[2]	0.0005	0.005	mg/L	<0.005	< 0.00008	<0.005	< 0.00008	<0.005	< 0.00016	<0.005	< 0.00016	<0.005	< 0.00016	<0.005	< 0.00008
Chromium	SW6010[1] / SW6020[2]	0.002	0.10	mg/L	<0.005	< 0.002	<0.005	< 0.002	<0.005	< 0.004	<0.005	< 0.004	**0.0475**	**0.0108**	<0.005	< 0.002
Cobalt	SW6010[1] / SW6020[2]	0.002	0.006	mg/L	<0.005	**0.0016**	<0.005	**0.0011**	<0.005	**0.0023**	<0.005	< 0.0010	**0.0171**	**0.0072**	<0.005	**0.00061**
Fluoride	EPA9056[1] / EPA300.0[2]	0.93	4.0	mg/L	< 0.20	**0.16**	< 0.20	**0.17**	< 0.20	**0.13**	< 0.20	**0.16**	< 0.20	**0.12**	< 0.20	**0.24**
Lead	SW6010[1] / SW6020[2]	0.001	0.015	mg/L	<0.01	< 0.0005	<0.01	< 0.0005	<0.01	< 0.001	<0.01	< 0.001	**0.0277**	**0.0064**	<0.01	< 0.0005
Lithium	SW6010[1] / SW6020[2]	0.33	0.33 (0.040)	mg/L	**0.15**	**0.163**	**0.192**	**0.176**	**0.226**	**0.26**	**0.161**	**0.155**	**0.265**	**0.206**	**0.161**	**0.156**
Mercury	EPA7470	0.0002	0.002	mg/L	<0.0002	< 0.0002	<0.0002	< 0.0002	<0.0002	< 0.0002	<0.0002	< 0.0002	<0.0002	< 0.0002	<0.0002	< 0.0002
Molybdenum	SW6010[1] / SW6020[2]	0.032	0.10	mg/L	<0.020	**0.0021**	<0.020	**0.0013**	<0.020	< 0.001	<0.020	< 0.001	<0.020	**0.0021**	<0.020	**0.0068**
Radium, total	TRC	2.83	5.0	pCi/L	**0.326**	**0.780**	**1.72**	**1.47**	**1.24**	**0.784**	**0.630**	**0.984**	**3.07**	**1.70**	**1.34**	**1.02**
Radium-226	E903.1	2.83	5.0	pCi/L	**-0.723**	**0.166 J+**	**1.02 J**	**0.437 J+**	**0.0659 J**	**0.269 J+**	**0.0634**	**0.319**	**1.20**	**0.133 J+**	**0.121**	**0.553 J+**
Radium-228	E904.0	2.83	5.0	pCi/L	**0.326**	**0.614 J**	**0.703**	**1.03 J**	**1.17**	**0.515 J**	**0.567**	**0.665**	**1.87**	**1.57 J**	**1.22**	**0.469 J**
Selenium	SW6010[1] / SW6020[2]	0.188	0.188 (0.05)	mg/L	<0.015	< 0.0005	<0.015	< 0.0005	<0.015	< 0.001	**0.0248**	**0.0192**	<0.015	< 0.001	<0.015	< 0.0005
Thallium	SW6020	0.001	0.002	mg/L	<0.002	< 0.0001	<0.002	< 0.0001	<0.003	< 0.0002	<0.002	< 0.0002	<0.003	< 0.0002	<0.002	< 0.0001
Field Parameters																
Temperature	Field Measure	--	--	Degrees C	**12.3**	**11.8**	**13.2**	**12.3**	**13.0**	**12.4**	**12.6**	**13.4**	**11.8**	**11.8**	**11.2**	**11.6**
pH	Field Measure	7.77	--	SU	**7.18**	**7.24**	**6.86**	**6.97**	**6.71**	**6.78**	**6.85**	**7.08**	**6.80**	**7.07**	**7.37**	**7.67**
Specific Conductivity	Field Measure	--	--	µs/cm	**1792**	**3035**	**2670**	**3398**	**3562**	**4489**	**3171**	**3286**	**4302**	**4050**	**2584**	**2976**
ORP	Field Measure	--	--	mV	**122.2**	**-75.6**	**3.9**	**2.7**	**112.4**	**45.6**	**127.2**	**130.1**	**119.7**	**30.8**	**92.6**	**-83.1**
Dissolved Oxygen	Field Measure	--	--	mg/L	**4.21**	**0.57**	**0.35**	**0.26**	**1.88**	**0.18**	**0.49**	**0.22**	**461.59**	**0.68**	**82.23**	**0.76**
Turbidity	Field Measure	--	--	NTU	**120**	**6.19**	**6.68**	**0.02**	**50.4**	**88.6**	**10.7**	**31.9**	**492**	**354**	**5.16**	**5.25**

Notes:
C = Celsius
µs/cm = microSiemens per centimeter
mg/L = milligrams per liter
mV = millivolts
NTU = nephelometric turbidity units
pCi/L = picoCuries per liter
SU = standard units
FD = field duplicate
N = primary sample
< = less than reporting limit
-- = not analyzed
* = value inaccurate
J = estimated concentration (+ = biased high, - = biased low)
U = not detected
ORP = oxidation reduction potential
[1] = analytical method used during May event only
[2] = analytical method used during October event only
Bold **black** value is detected result
Bold **red** value exceeds groundwater protection standard (GWPS)
SSI = statistically significant increase over background upper prediction limit (UPL)
SSL = statistically significant level above the GWPS

The GWPS represents the maximum contaminant limits (MCLs) outlined by 40 CFR 257.95 (h), unless the background UPL exceeds the MCL, in which case the GWPS will be represented by the UPL. For GWPSs represented by the UPL, the MCL is presented next to it in parentheses.

Table 3
Former BAT Impoundments Analytical Results and Statistical Summary 2025
PRPA Former BAT Impoundments Annual Report for 2025
PRPA Rawhide Facility, Colorado

				Sample Location	BAT-09	BAT-09	BAT-10	BAT-10	BAT-11	BAT-11	BAT-12	BAT-12	BAT-12	BAT-12
				Sample Type	N	N	N	N	N	N	N	FD	N	FD
				Sample Date	5/6/2025	10/6/2025	5/8/2025	10/7/2025	5/14/2025	10/7/2025	5/6/2025	5/6/2025	10/7/2025	10/7/2025
Chemical Name	**Analytical Method**	**Background UPL**	**GWPS**	**Unit**										
Appendix III Parameters														
Boron	SW6010[1] / SW6020[2]	2.39	--	mg/L	**2.14**	**2.14**	**0.755**	**1.02**	**0.419**	**0.678**	**0.222**	**0.217**	**0.215**	**0.21**
Calcium	SW6010[1] / SW6020[2]	433	--	mg/L	**181**	**220**	**388**	**411**	**76.4**	**81.6**	**102**	**96.4**	**97.3**	**99.3**
Chloride	EPA9056[1] / EPA300.0[2]	190	--	mg/L	**121**	**96.6**	**24.3**	**25.0**	**5.2**	**13.4**	**157**	**148**	**164**	**165**
Fluoride	EPA9056[1] / EPA300.0[2]	0.93	--	mg/L	< 0.20	**0.11**	< 0.20	**0.47**	< 0.20	**0.14**	< 0.20	< 0.20	**0.61**	**0.61**
Sulfate	EPA9056[1] / EPA300.0[2]	2972	--	mg/L	**1750**	**1830**	**2730**	**3120**	**177**	**255**	**364**	**370**	**396**	**398**
Total Dissolved Solids	SM2540C	4482	--	mg/L	**2860**	**3280 J**	**4100**	**3930 J**	**751**	**769**	**990**	**984**	**973**	**970**
Appendix IV Parameters														
Antimony	SW6020	0.001	0.006	mg/L	<0.002	< 0.001	<0.002	< 0.001	<0.001	< 0.0005	<0.001	<0.001	< 0.0005	< 0.0005
Arsenic	SW6010[1] / SW6020[2]	0.003	0.01	mg/L	<0.01	< 0.001	<0.01	< 0.001	<0.01	< 0.0005	<0.01	<0.01	**0.00074**	**0.00076**
Barium	SW6010[1] / SW6020[2]	0.038	2.0	mg/L	**0.0116**	**0.0114**	**0.0141**	**0.0162**	**0.0294**	**0.0317**	**0.0387 J**	**0.0611 J**	**0.0371**	**0.0367**
Beryllium	SW6010[1] / SW6020[2]	0.0005	0.004	mg/L	<0.001	< 0.0004	<0.001	< 0.0004	<0.001	< 0.0002	<0.001	<0.001	< 0.0002	< 0.0002
Cadmium	SW6010[1] / SW6020[2]	0.0005	0.005	mg/L	<0.005	< 0.00016	<0.005	< 0.00016	<0.005	< 0.00008	<0.005	<0.005	< 0.00008	< 0.00008
Chromium	SW6010[1] / SW6020[2]	0.002	0.10	mg/L	<0.005	< 0.004	<0.005	< 0.004	<0.005	< 0.002	<0.005	<0.005	< 0.002	< 0.002
Cobalt	SW6010[1] / SW6020[2]	0.002	0.006	mg/L	<0.005	< 0.001	<0.005	< 0.001	<0.005	**0.00085**	<0.005	<0.005	< 0.00050	< 0.00050
Fluoride	EPA9056[1] / EPA300.0[2]	0.93	4.0	mg/L	< 0.20	**0.11**	< 0.20	**0.47**	< 0.20	**0.14**	< 0.20	< 0.20	**0.61**	**0.61**
Lead	SW6010[1] / SW6020[2]	0.001	0.015	mg/L	<0.01	< 0.001	<0.01	< 0.001	<0.01	< 0.0005	<0.01	<0.01	< 0.0005	< 0.0005
Lithium	SW6010[1] / SW6020[2]	0.33	0.33 (0.040)	mg/L	**0.203**	**0.208**	**0.209**	**0.172**	**0.0603**	**0.0769**	**0.0866**	**0.0903**	**0.0856**	**0.0841**
Mercury	EPA7470	0.0002	0.002	mg/L	<0.0002	< 0.0002	<0.0002	< 0.0002	<0.0002	< 0.0002	<0.0002	<0.0002	< 0.0002	< 0.0002
Molybdenum	SW6010[1] / SW6020[2]	0.032	0.10	mg/L	<0.020	**0.0019**	<0.020	**0.0041**	<0.020	**0.0048**	<0.020	<0.020	**0.0062**	**0.0062**
Radium, total	TRC	2.83	5.0	pCi/L	**1.60**	**1.94**	**1.47**	**0.895**	**1.13**	**0.365**	**1.14**	**1.36**	**0.740**	**0.767**
Radium-226	E903.1	2.83	5.0	pCi/L	**0.352**	**0.360 J+**	**0.843 J**	**0.359**	**0.195**	**0.0724 J**	**0.670 J**	**0.277**	**0.134 J**	**0.409**
Radium-228	E904.0	2.83	5.0	pCi/L	**1.25**	**1.58 J**	**0.623**	**0.536**	**0.939**	**0.293**	**0.472**	**1.08**	**0.606**	**0.358**
Selenium	SW6010[1] / SW6020[2]	0.188	0.188 (0.05)	mg/L	<0.015	< 0.001	**0.14**	**0.229**	<0.015	**0.0022**	<0.015	<0.015	**0.0032**	**0.0032**
Thallium	SW6020	0.001	0.002	mg/L	<0.002	< 0.0002	<0.002	< 0.0002	<0.001	< 0.0001	<0.001	<0.001	< 0.0001	< 0.0001
Field Parameters														
Temperature	Field Measure	--	--	Degrees C	**11.2**	**11.7**	**13.1**	**13.1**	**12.8**	**11.7**	**11.9**	**11.9**	**13.0**	**13.0**
pH	Field Measure	7.77	--	SU	**7.11**	**7.26**	**7.23**	**7.31**	**7.26**	**7.35**	**7.43**	**7.43**	**7.50**	**7.50**
Specific Conductivity	Field Measure	--	--	µs/cm	**2961**	**3620**	**3442**	**4579**	**664**	**1046**	**1172**	**1172**	**1450**	**1450**
ORP	Field Measure	--	--	mV	**51.9**	**26.8**	**130.5**	**102.3**	**80.2**	**118.2**	**116.7**	**116.7**	**108.8**	**108.8**
Dissolved Oxygen	Field Measure	--	--	mg/L	**-600.08***	**1.12**	**3.97**	**4.83**	**4.98**	**4.14**	**89.31***	**89.31***	**2.87**	**2.87**
Turbidity	Field Measure	--	--	NTU	**11.5**	**11.1**	**4.32**	**6.12**	**2.86**	**0.02**	**17.4**	**17.4**	**7.29**	**7.29**

Notes:
C = Celsius
µs/cm = microSiemens per centimeter
mg/L = milligrams per liter
mV = millivolts
NTU = nephelometric turbidity units
pCi/L = picoCuries per liter
SU = standard units
FD = field duplicate
N = primary sample
< = less than reporting limit
-- = not analyzed
* = value inaccurate
J = estimated concentration (+ = biased high, - = biased low)
U = not detected
ORP = oxidation reduction potential
[1] = analytical method used during May event only
[2] = analytical method used during October event only
Bold **black** value is detected result
Bold **red** value exceeds groundwater protection standard (GWPS)
SSI = statistically significant increase over background upper prediction limit (UPL)
SSL = statistically significant level above the GWPS

The GWPS represents the maximum contaminant limits (MCLs) outlined by 40 CFR 257.95 (h), unless the background UPL exceeds the MCL, in which case the GWPS will be represented by the UPL. For GWPSs represented by the UPL, the MCL is presented next to it in parentheses.

Table 4
Former BAT Impoundments Appendix III Background Upper Prediction Limits
PRPA Former BAT Impoundments Annual Report for 2025
PRPA Rawhide Facility, Colorado

Parameter (Units)	Number of Samples	Percent Non-detects	Normal or Lognormal Distribution?	Statistical Test	Background Upper Prediction Limit
Boron (mg/L)	38	0	No/No	Nonparametric	2.39
Calcium (mg/L)	38	0	No/No	Nonparametric	433
Chloride (mg/L)	38	0	No/No	Nonparametric	190
Fluoride (mg/L)	39	54	No/Yes	Parametric	0.93
pH (standard units)	34	0	Yes/Yes	Parametric	7.77
Sulfate (mg/L)	35	3	No/No	Nonparametric	2,972
Total Dissolved Solids (mg/L)	38	0	Yes/Yes	Nonparametric	4,482

Notes:
BAT = Bottom Ash Transfer
mg/L = milligrams per liter
Upper prediction limits calculated using data from September 2016 through October 2024

Table 5
Former BAT Impoundments Appendix IV Background Upper Prediction Limits
PRPA Former BAT Impoundments Annual Report for 2025
PRPA Rawhide Facility, Colorado

Parameter (Units)	Number of Samples	Percent Non-detects	Normal or Lognormal Distribution?	Statistical Test	Background Upper Prediction Limit	GWPS
Antimony (mg/L)	39	82	Yes/No	Parametric	0.001	0.006
Arsenic (mg/L)	39	67	Yes/Yes	Parametric	0.003	0.01
Barium (mg/L)	39	0	Yes/Yes	Parametric	0.038	2.0
Beryllium (mg/L)	39	100	No/No	RDL	0.0005	0.004
Cadmium (mg/L)	39	97	No/No	RDL	0.0005	0.005
Chromium (mg/L)	39	79	Yes/Yes	Parametric	0.002	0.1
Cobalt (mg/L)	39	64	Yes/Yes	Parametric	0.002	0.006
Fluoride (mg/L)	39	54	No/Yes	Parametric	0.93	4.0
Lead (mg/L)	39	92	Yes/Yes	Parametric	0.001	0.015
Lithium (mg/L)	39	0	No/No	Nonparametric	0.33	0.33 (0.04)
Mercury (mg/L)	39	100	No/No	RDL	0.0002	0.002
Molybdenum (mg/L)	39	10	Yes/Yes	Parametric	0.032	0.1
Selenium (mg/L)	39	36	Yes/No	Parametric	0.188	0.188 (0.05)
Thallium (mg/L)	39	100	No/No	RDL	0.001	0.002
Radium-226+228 Combined (pCi//L)	38	0	No/No	Nonparametric	2.83	5.0

Notes:
BAT = Bottom Ash Transfer
GWPS = Groundwater Protection Standard
RDL = background limit set at standard reporting detection limit
mg/L = milligrams per liter
pCi/L = picoCuries per liter
Background Upper Prediction Limit calculated with data from September 2016 through October 2024

All of the beryllium, mercury, and thallium results in the background monitoring wells were reported as not detected and cadmium was only detected 3% of the time. For these constituents, the standard reporting detection limit was selected as the upper prediction limit (UPL) per the double quantification rule in the U.S. Environmental Protection Agency's Unified Statistical Guidance (2009).

The GWPS represents the maximum contaminant limits (MCLs) outlined by 40 CFR 257.95 (h), unless the background UPL exceeds the MCL, in which case the GWPS will be represented by the UPL. For GWPSs represented by the UPL, the MCL is presented below it in parentheses.

Figures

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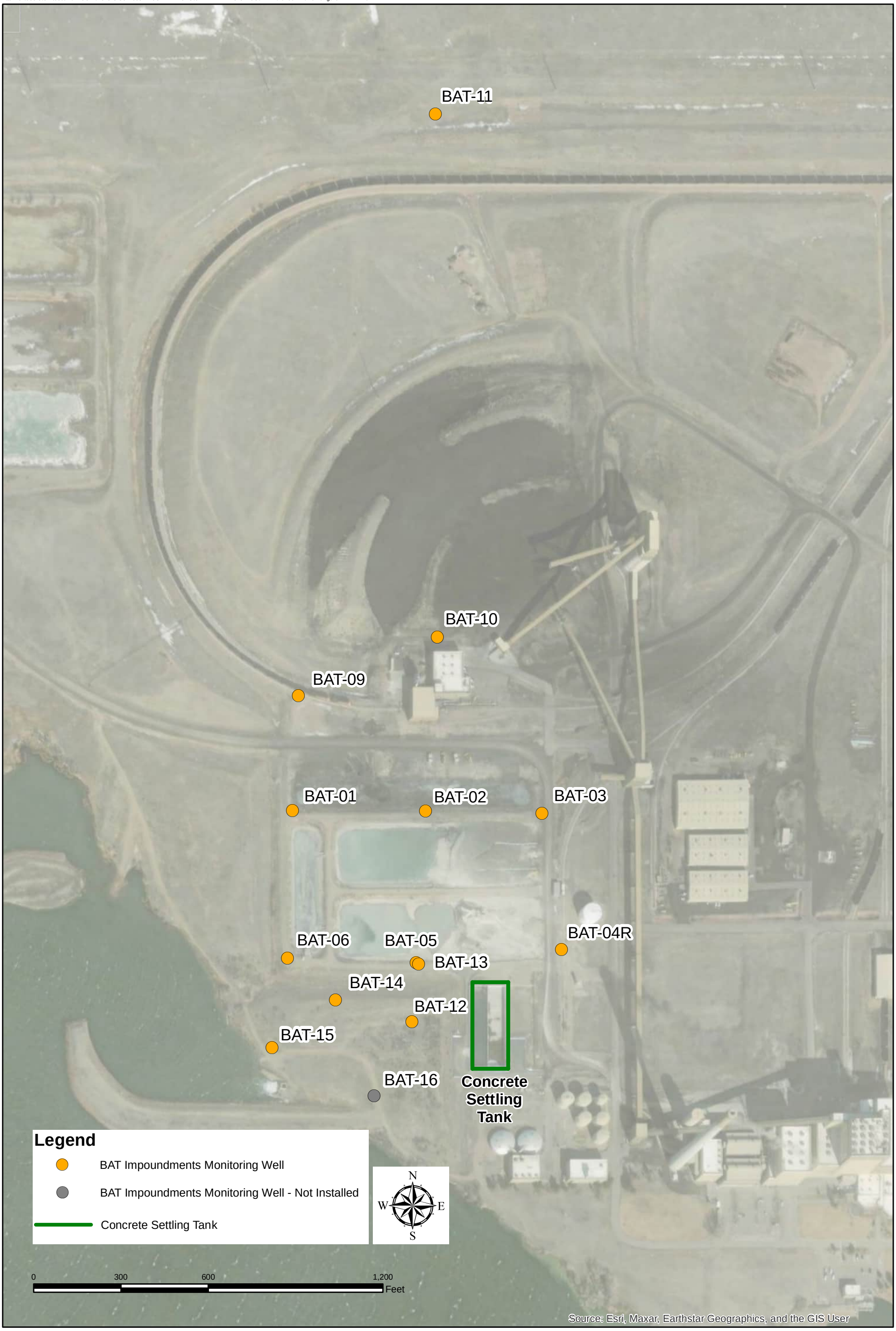

CCR 2025 Annual Groundwater Report
Platte River Power Authority Wellington, CO
Project No.: 60754415 Date: 2026-01-14

Rawhide Energy Station
BAT Monitoring Well Network

AECOM

Figure 1

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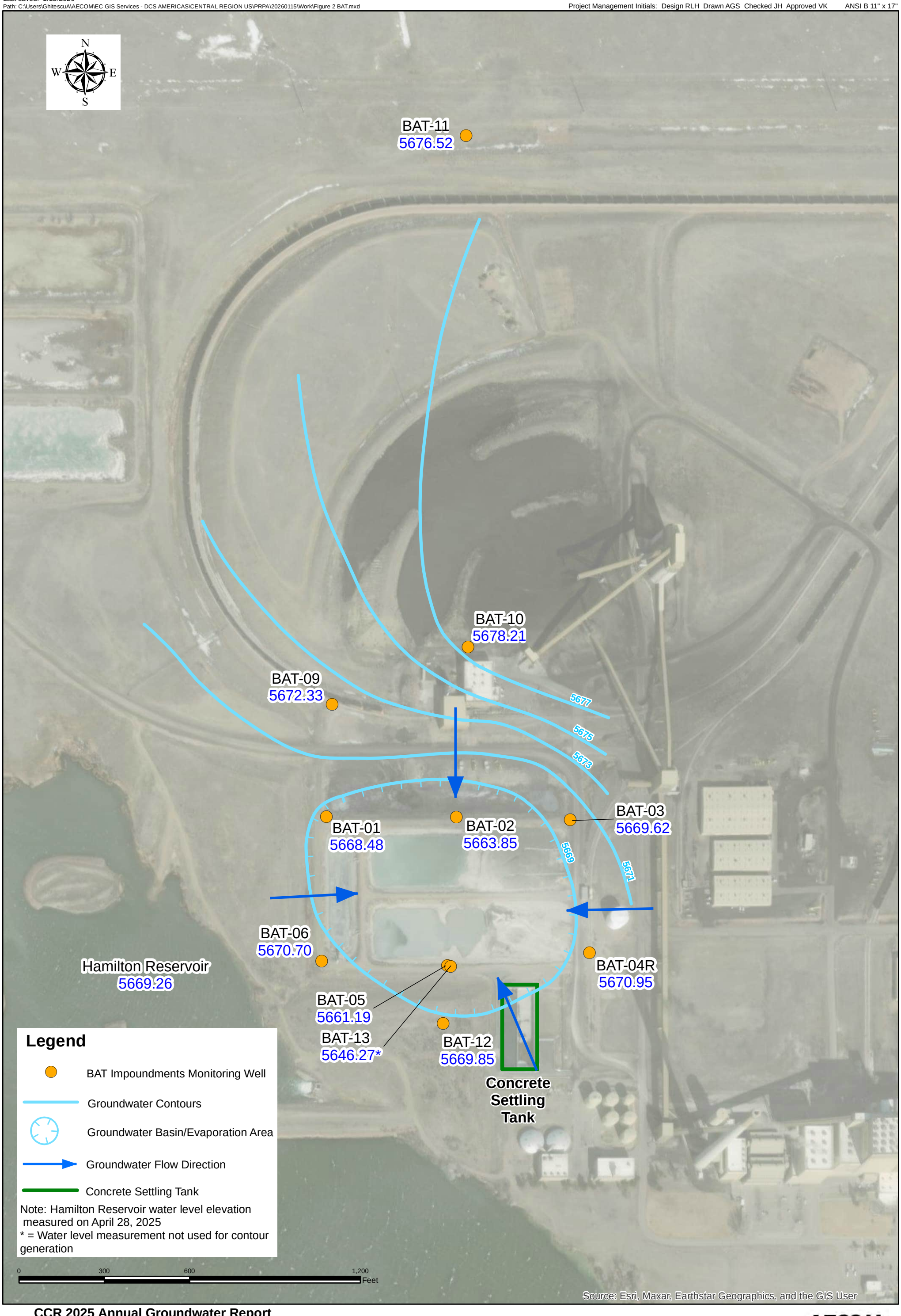
Project Management Initials: Design RLH Drawn AGS Checked JH Approved VK ANSI B 11" x 17"



CCR 2025 Annual Groundwater Report
Platte River Power Authority Wellington, CO
Project No.: 60754415 Date: 2026-01-15

Rawhide Energy Station
BAT Monitoring Well Networks
April 2025 Water Levels

AECOM

Figure 2

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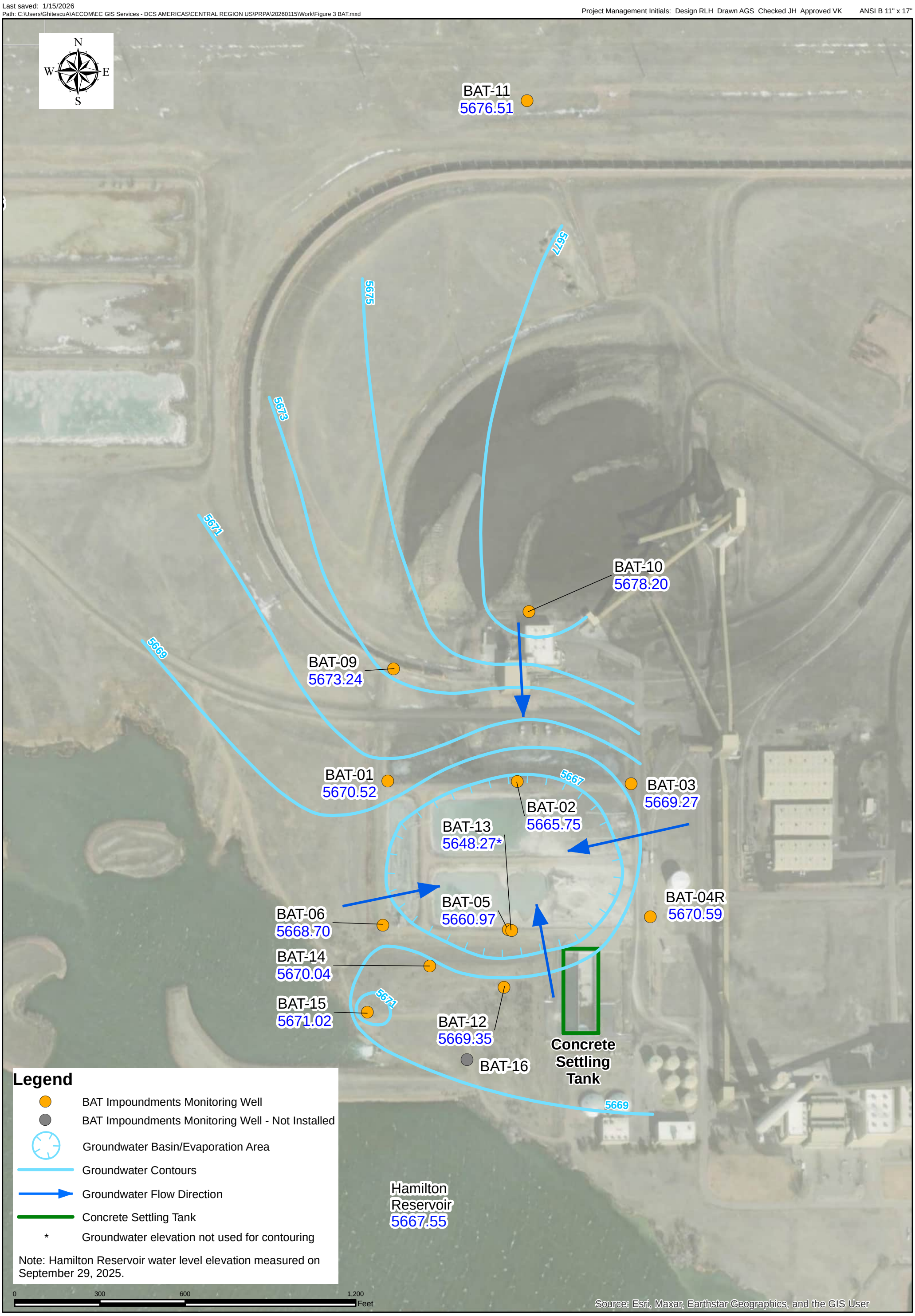
Project Management Initials: Design RLH Drawn AGS Checked JH Approved VK ANSI B 11" x 17"



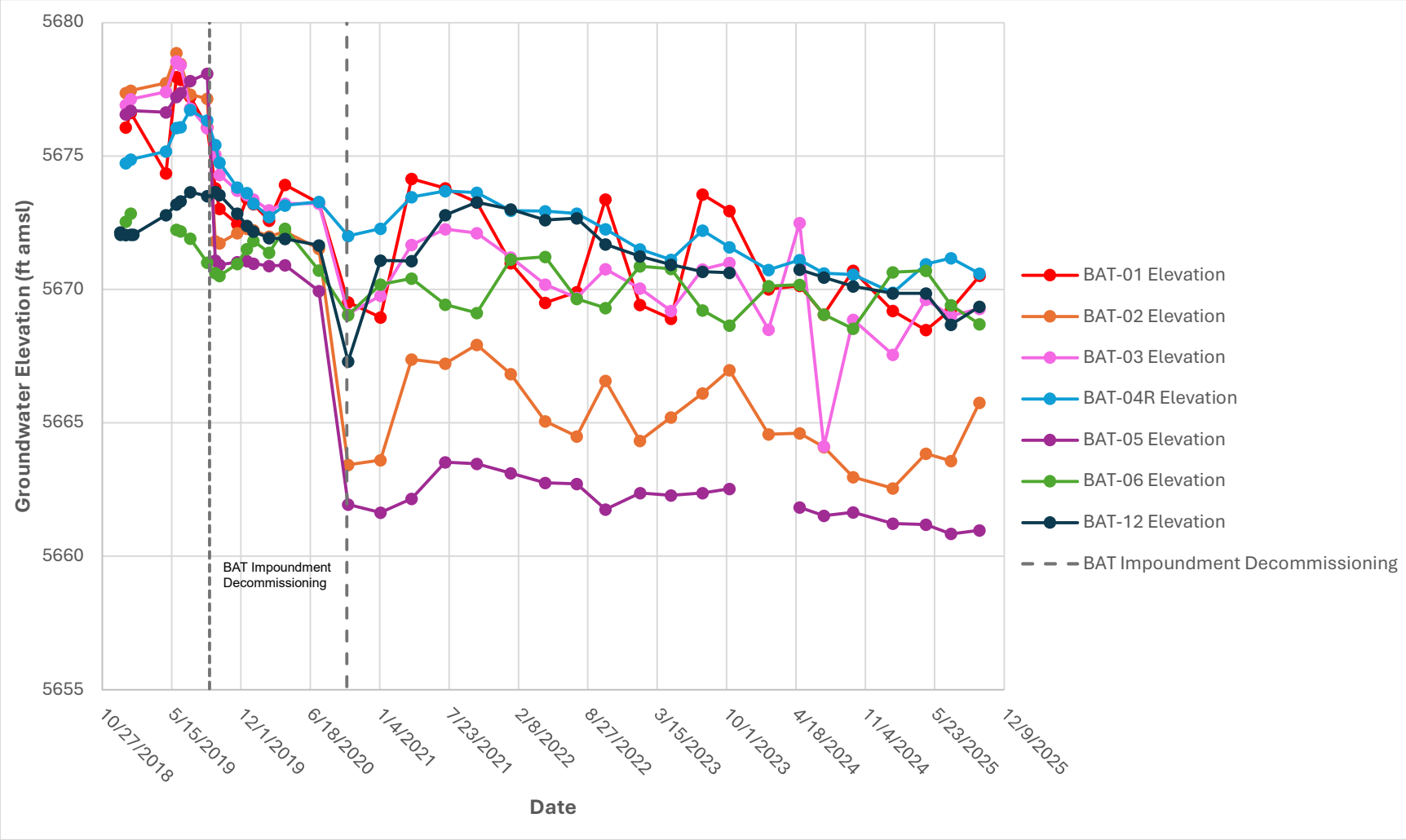
CCR 2025 Annual Groundwater Report
Platte River Power Authority Wellington, CO
Project No.: 60754415 Date: 2026-01-15

Rawhide Energy Station
BAT Monitoring Well Networks
September 2025 Water Levels

AECOM

Figure 3

Figure 4: Former BAT Impoundments Groundwater Elevation Hydrographs



Notes:

BAT = Bottom Ash Transfer
ft amsl = feet above mean sea level
Outliers were removed for wells BAT-05, BAT-06, and BAT-12.

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Project Management Initials: Design RLH Drawn KLH Checked JH Approved VK ANSI B 11" x 17"

CCR 2025 Annual Groundwater Report
Platte River Power Authority Wellington, CO
Project No.: 60754415 Date: 2026-01-09

Rawhide Energy Station
Cross-Section Location Map

AECOM

Figure 5a

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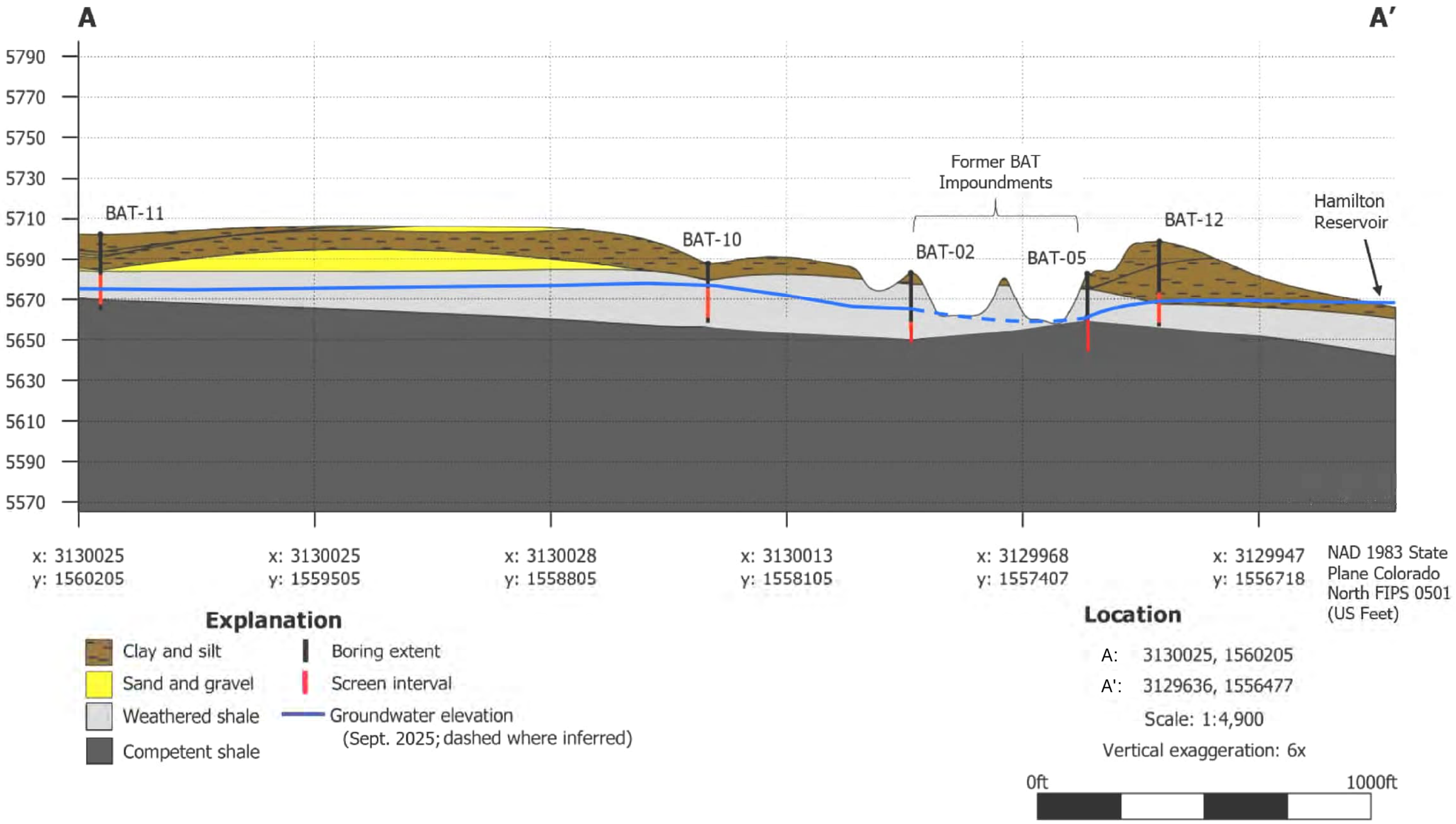
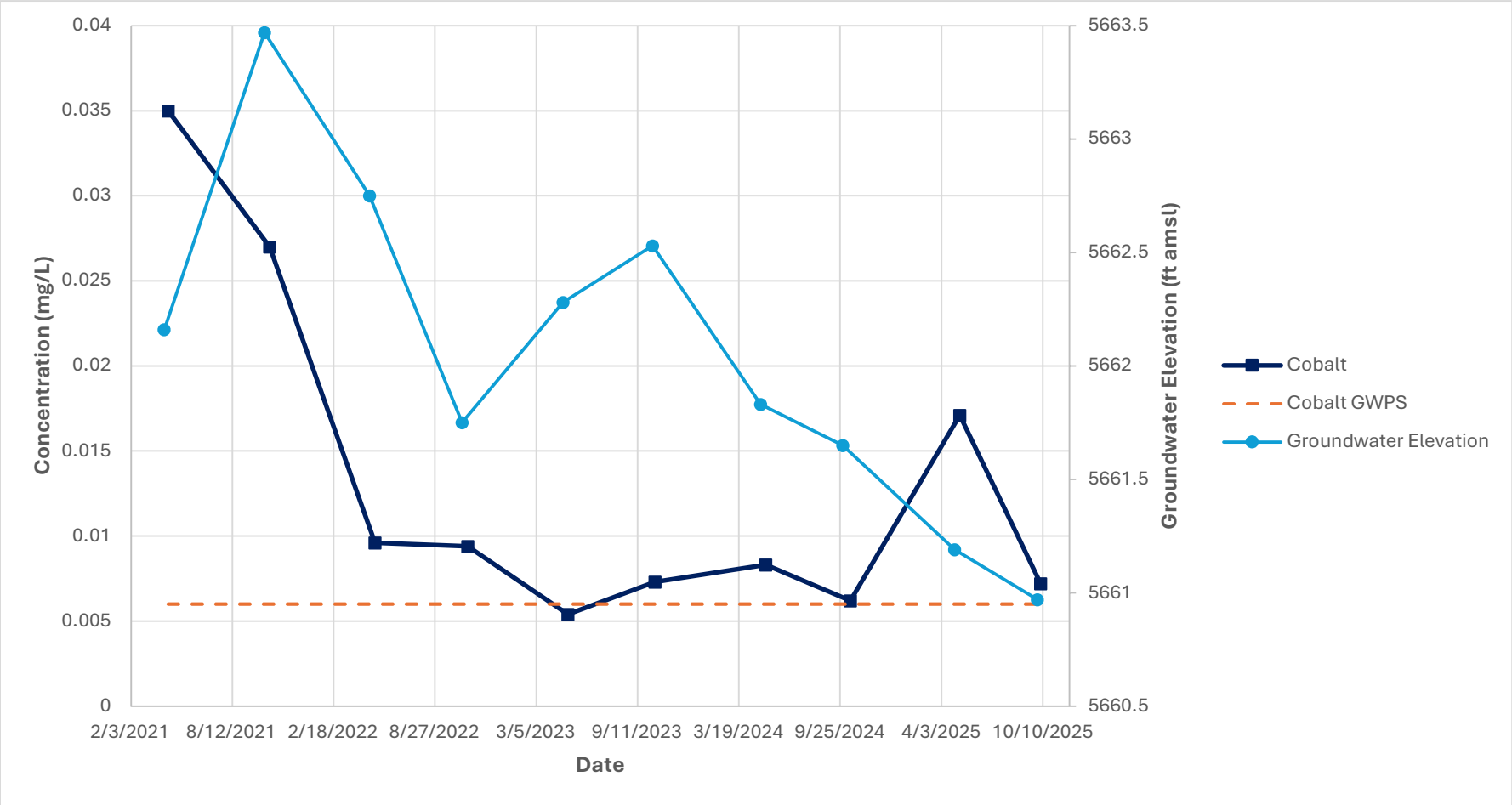


CCR 2025 Annual Groundwater Report
Platte River Power Authority Wellington, Colorado
Project No.: 60754415 Date: 1/9/2026

RAWHIDE ENERGY STATION
CROSS-SECTION A-A'

AECOM
Figure 5b

Figure 6: Cobalt Concentrations and Groundwater Elevations in BAT-05 Post-BAT Impoundment Decommissioning



Notes:

BAT = Bottom Ash Transfer
ft amsl = feet above mean sea level
GWPS = Groundwater Protection Standard
mg/L = milligrams per liter
The GWPS for cobalt is 0.006 mg/L.

Appendix A

Groundwater Sampling & Development Forms

April/May 2025

Event: 2025 Groundwater Sampling
MP: Top of Casing

Date: 4/28 - 5/12/25
Recorder: O. Heljinski & D. Buhl

Location	Group	DTW	TD	Notes
*PZ-3	Piezometer	32.82	NM	*
*PZ-4	Piezometer	23.36		*
*PZ-5	Piezometer	36.19		*
4/30 ASH-01	ASH	14.29		Buffalo Area - Need Escort *
ASH-02	ASH	4.71		*
ASH-03	ASH	40.48		*
ASH-04	ASH	15.96		*
ASH-05	ASH	22.87		*
ASH-06	ASH	62.69		*
ASH-07	ASH	15.55		*
ASH-08	ASH	10.49		*
ASH-09	ASH	4.19		*
BAT-01	BAT	14.00		missing 1 bolt
BAT-02	BAT	18.56		* broken bolt tab
BAT-03	BAT	12.78		broken bolt tabs (2)
BAT-04R	BAT	16.03		*
BAT-05	BAT	20.94		2 missing bolts; one bolt tab broken
BAT-06	BAT	14.76		*
BAT-09	BAT	20.70		*
BAT-10	BAT	12.38		*
BAT-11	BAT	28.35		*
BAT-12	BAT	31.75		*
BAT-13	BAT	35.73		*
PRS-01	PRS	30.94		*
PRS-03	PRS	48.92		*
PRS-02	PRS	28.33		*
PRS-04	PRS	29.91		*
PRS-05	PRS	29.93		*
PRS-06	PRS	22.64		*
PRS-07	PRS	25.81		*
MW-3	Sitewide	25.33		*
MW-4	Sitewide	20.07		*
4/30 4/29 MW-5	Sitewide	21.69		Buffalo Area - Need Escort no lock
5/12 MW-6	Sitewide	1.75		~~Cross Barbed Wire Fence and Access by Foot~~ STUCK 4/28
MW-7	Sitewide	2.31		~~Cross Barbed Wire Fence and Access by Foot~~ *
MW-8	Sitewide	10.71		*
FTP-1	FTP	30.33		*
FTP-2	FTP	8.66		no lock
FTP-3	FTP	27.16		no lock
FTP-4	FTP	18.50		no lock
FTP-5	FTP	11.71		no lock

could not release cap but were able to dislodge it to sample. Do not use for PS unless until resurveyed

Acronyms:
DTW - Depth to Water
MP - Measuring Point
TD - Total Depth
** Fluid levels only, no sample*
* = well in good condition

AECOM

Well/Piezo ID	BAT-01

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date	5/8/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	0825
Site Location:	Rawhide Generating Station	Finish	1015
Weather Conds:	sunny, 48 degrees, warm Collector(s)	O. Helinski	

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length 28.56 c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 13.64 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
0833	0.0	12.5	7.56	1884	45.7	3.73	153	sl. cloudy	13.64
0838	2.1	12.1	7.17	2396	110.8	2.80	321	cloudy	15.50
0845	3.1	12.2	7.21	2296	112.1	2.94	191	sl. cloudy	16.81
0848	4.2	12.1	7.23	1961	112.8	3.43	314	cloudy	18.19
0853	5.9	12.1	7.28	1356	110.1	4.59	405	cloudy	19.52
0858	6.9	12.3	7.30	1043	110.2	5.24	430	cloudy	20.17
0903	7.2	12.3	7.30	1008	111.7	5.35	416	cloudy	20.93
0908	8.1	12.2	7.29	970	113.3	5.43	393	cloudy	21.68
0913	9.2	12.2	7.30	936	113.8	5.46	352	cloudy	21.52
0918	10.1	12.2	7.23	1162	118.4	5.26	273	cloudy	21.50
0923	11.2	12.3	7.18	1510	121.4	4.71	193	cloudy	21.55
0928	12.2	12.3	7.18	1792	122.2	4.21	120	cloudy	21.52

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	☐	■	☐
Have parameters stabilized	☐	■	☐

If no or N/A - Explain below.

sp conductivity, DO, turbidity, and DTW did not stabilize within reasonable amount of time

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-01-CDPHE	See CoC	9	See CoC	See CoC	0930
BAT-01-CCR	See CoC	5	See CoC	See CoC	0930
ERB-01-CCR	See CoC	5	See CoC	See CoC	0935

Comments: ERB collected by clipping FL meter in lab provided DI

Signature: [signature] Date 5/8/2025

AECOM

Well/Piezo ID	BAT-02

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	5/8/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1246
Site Location:	Rawhide Generating Station	Finish	1450
Weather Conds:	Breezy, 60 degrees, sunny Collector(s)	K. Hoppes, O. Helinski	

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 18.56 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
1247	0.0	15.3	7.04	2926	117.5	2.21	"++++"	grey-brown	16.26
1252	0.3	13.9	7.04	3117	-93.6	0.59	23.90	greyish	17.35
1257	2.0	13.2	7.00	3034	-105.1	0.41	26.40	clearish	18.26
1302	3.6	13.0	6.88	2710	-77.3	0.37	27.70	clear	14.61
1307	5.2	13.9	6.86	2660	-49.3	0.55	17.00	clear	20.36
1312	6.5	13.0	6.85	2657	-32.7	0.33	12.80	clear	21.09
1317	8.0	13.0	6.85	2643	-14.8	0.35	11.20	clear	21.20
1302	9.5	13.0	6.85	2653	-9.0	0.36	8.68	clear	22.24
1325	10.7	13.1	6.85	2658	-3.7	0.35	8.33	clear	22.38
1328	11.8	13.0	6.86	2668	1.7	0.36	7.60	clear	22.54
1331	12.2	13.2	6.86	2670	3.9	0.35	6.68	clear	22.57

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	■	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-02-CDPHE	See CoC	9	See CoC	See CoC	1335
BAT-02-CCR	See CoC	5	See CoC	See CoC	1335

Comments:

Signature Date 5/8/2025

AECOM

Well/Piezo ID	BAT-03

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	5/7/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1034
Site Location:	Rawhide Generating Station	Finish	1210
Weather Conds:	cloudy, 46 degrees	Collector(s)	K. Hoppes, O. Helinski

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 12.78 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
1037	1.0	12.4	6.77	3973	113.0	1.53	861	brownish	13.85
1042	3.1	12.6	6.75	3874	110.3	1.46	334	cloudy	15.40
1047	5.5	12.5	6.75	3629	109.5	1.46	248	cloudy	17.25
1052	6.9	12.6	6.75	3421	109.6	1.89	160	cloudy	17.68
1057	7.9	12.6	6.74	3353	109.9	2.07	118	sl. cloudy	18.13
1102	8.3	12.5	6.74	3338	110.1	2.12	85.8	sl. cloudy	18.02
1107	9.0	12.7	6.73	3390	111.3	2.16	73.1	sl. cloudy	18.22
1112	9.8	12.9	6.72	3470	112.0	2.04	53.0	clearish	18.33
1117	10.0	12.9	6.71	3508	112.2	1.97	50.6	clearish	18.43
1122	10.8	13.0	6.71	3562	112.4	1.88	50.4	clearish	18.55

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	■	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-03-CDPHE	See CoC	9	See CoC	See CoC	1125
BAT-03-CCR	See CoC	5	See CoC	See CoC	1125

Comments: Replaced tubing

Signature Date 5/7/2025

AECOM

Well/Piezo ID: BAT-04R

Ground Water Sample Collection Record

Client: Platte River Power Authority
Project No: 60754422 (CDPHE), 60754415 (CCR)
Site Location: Rawhide Generating Station
Weather Conds: 46 degrees, sunny, breeze Collector(s) O. Helinski

Date: 5/7/2025
Time: Start 1220
Finish 1400

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 16.03 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
1229	0.0	13.6	7.06	2852	132.1	4.11	45.9	clear	16.69
1234	2.1	12.6	6.94	2894	132.6	1.39	46.2	clear	17.15
1237	3.5	12.5	6.96	2821	131.2	1.26	39.5	clear	17.58
1240	4.9	12.5	6.94	2875	130.3	1.01	27.5	clear	17.61
1243	6.1	12.4	6.93	2993	129.9	0.90	24.1	clear	17.77
1246	7.2	12.4	6.90	3001	129.2	0.75	14.8	clear	17.98
1249	8.1	12.4	6.88	3084	128.6	0.62	12.0	clear	18.03
1252	10.0	12.4	6.86	3131	128.0	0.55	11.5	clear	18.11
1255	11.1	12.6	6.85	3171	127.2	0.49	10.7	clear	18.24

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	■	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-04R-CDPHE	See CoC	23	See CoC	See CoC	1300
BAT-04R-CCR	See CoC	13	See CoC	See CoC	1300

Comments: MS/MSD

Signature Date 5/7/2025

AECOM

Well/Piezo ID BAT-05

Ground Water Sample Collection Record

Client: Platte River Power Authority
Project No: 60754422 (CDPHE), 60754415 (CCR)
Site Location: Rawhide Generating Station
Weather Conds: 48 degreesm overcast Collector(s) O. Helinski

Date: 5/7/2025
Time: Start 0830
Finish 1025

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 20.94 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
0837	0.0	11.6	7.14	4241	113.3	336.74	983	cloudy	22.09
0842	1.9	11.7	6.83	4290	119.9	448.19	308	cloudy	23.09
0847	3.9	11.6	6.82	4270	119.8	459.60	164	cloudy	24.01
0852	5.9	11.6	6.79	4261	129.7	464.59	223	cloudy	25.16
0857	7.2	11.6	6.78	4261	121.1	465.20	374	cloudy	26.32
0902	8.1	11.4	6.78	4267	121.2	466.74	778	cloudy	26.92
0907	8.9	11.4	6.78	4274	121.2	464.27	++++	tan	27.28
0912	9.5	11.2	6.78	4273	121.3	465.89	++++	tan	27.68
0917	10.1	11.2	6.79	4280	121.3	469.62	++++	tan	28.04
0922	10.9	11.3	6.79	4283	121.2	467.08	600	cloudy	28.34
0927	12.0	11.7	6.79	4293	120.5	464.68	570	cloudy	29.20
0932	13.4	11.8	6.80	4302	119.7	461.59	492	cloudy	30.25

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	☐	■	☐
Have parameters stabilized	☐	■	☐

If no or N/A - Explain below.
DO readings inaccurate; DTW and turbidity did not stabilize in reasonable amount of time

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-05-CDPHE	See CoC	9	See CoC	See CoC	0935
BAT-05-CCR	See CoC	5	See CoC	See CoC	0935
ERB-02-CDPHE	See CoC	9	See CoC	See CoC	0940

Comments: ERB collected by dipping FL meter in lab-provided DI

Signature Date 5/7/2025

AECOM

Well/Piezo ID	BAT-06

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	5/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1001
Site Location:	Rawhide Generating Station	Finish	1240
Weather Conds:	drizzling, cloudy, 43 degree	Collector(s)	K. Hoppes, O. Helinski

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 14.76 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
1001	0.0	PAUSE TO RECALIBRATE DO SENSOR FOR YSI							
1025	0.0	4.2	7.47	2583	104.2	76.78	11.70	clear	16.67
1030	2.1	11.3	7.44	2583	105.1	79.07	8.83	clear	18.26
1035	3.3	10.8	7.43	2583	105.5	81.53	8.50	clear	19.42
1040	4.2	10.7	7.43	2582	104.8	82.04	7.18	clear	20.26
1053	4.5	10.4	7.44	2584	103.1	83.11	6.63	clear	20.65
1058	5.4	11.1	7.42	2581	102.4	80.81	6.59	clear	22.23
1103	7.0	11.2	7.41	2583	102.3	81.52	11.9	clear	23.31
1108	7.3	11.2	7.42	2581	98.6	82.38	13.6	clear	23.55
1113	7.8	10.6	7.41	2578	95.4	83.35	8.55	clear	23.91
1116	8.1	10.8	7.39	2584	94.2	82.85	7.11	clear	24.22
1119	8.4	10.9	7.38	2584	93.4	82.82	6.42	clear	24.51
1122	8.8	11.2	7.37	2584	92.6	82.23	5.16	clear	25.10

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	☐	■	☐

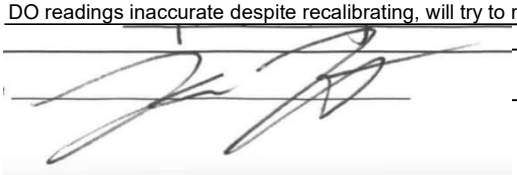
If no or N/A - Explain below.

Temps and DTW did not stabilize within reasonable amount of time; DO readings inaccurate

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-06-CDPHE	See CoC	9	See CoC	See CoC	1125
BAT-06-CCR	See CoC	5	See CoC	See CoC	1125

Comments: DO readings inaccurate despite recalibrating, will try to read again after this well

Signature  Date 5/6/2025

AECOM

Well/Piezo ID	BAT-09

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	5/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	0745
Site Location:	Rawhide Generating Station	Finish	0940
Weather Conds:	pouring rain	Collector(s)	K. Hoppes, O. Helinski

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 20.70 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
0819	0.0	11.6	7.38	2965	81.6	-510.32	61.4	clear	20.97
0824	1.8	11.6	7.29	2952	36.0	-559.12	8.73	clear	23.22
0829	3.0	11.6	7.18	2951	39.1	-564.84	5.72	clear	23.99
0832	4.0	11.5	7.17	2956	42.2	-563.45	5.55	clear	24.85
0835	5.0	11.5	7.16	2955	44.3	-564.83	7.36	clear	26.18
0840	5.9	11.4	7.16	2957	45.6	-570.34	6.74	clear	26.28
0843	6.7	11.5	7.16	2954	46.6	-571.84	6.39	clear	26.62
0846	7.0	11.4	7.15	2961	47.6	-579.62	6.31	clear	26.80
0849	7.4	11.2	7.13	2961	48.8	-591.91	10.6	clear	26.94
0852	7.9	11.2	7.12	2962	50.7	-598.54	12.3	clear	27.10
0855	8.2	11.2	7.12	2959	51.4	-598.84	12.2	clear	27.29
0858	8.7	11.2	7.11	2961	51.9	-600.08	11.5	clear	27.41

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	■	☐	☐

If no or N/A - Explain below.

DO readings inaccurate, likely due to weather interference

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-09-CDPHE	See CoC	9	See CoC	See CoC	0900
BAT-09-CCR	See CoC	5	See CoC	See CoC	0900

Comments:

Signature Date 5/6/2025

AECOM

Well/Piezo ID	BAT-10

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	5/8/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1030
Site Location:	Rawhide Generating Station	Finish	1230
Weather Conds:	Sunny, warm	Collector(s)	O. Helinski

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 12.38 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
1037	0.0	13.5	7.25	3487	129.7	4.43	32.1	clear	12.92
1042	1.0	13.0	7.20	3479	132.8	3.41	16.9	clear	13.92
1047	2.1	12.9	7.20	3480	132.8	3.38	13.6	clear	14.38
1050	3.0	12.8	7.20	3475	132.6	3.31	13.1	clear	14.61
1053	3.9	12.7	7.20	3476	133.2	3.34	11.6	clear	14.85
1056	4.1	12.5	7.20	3499	132.0	3.40	9.61	clear	14.93
1059	4.9	12.5	7.21	3472	131.9	3.53	12.3	clear	15.16
1102	6.0	12.5	7.20	3467	131.7	3.49	12.9	clear	15.43
1105	6.8	12.7	7.20	3466	131.4	3.55	9.53	clear	15.70
1108	7.1	13.2	7.21	3451	131.2	3.65	6.99	clear	15.85
1111	7.5	13.3	7.21	3456	130.8	3.72	14.7	clear	15.96
1114	8.0	13.3	7.22	3451	130.7	3.80	8.98	clear	16.08
1117	8.5	13.2	7.22	3444	130.6	3.88	5.05	clear	16.20
1120	8.9	13.1	7.23	3442	130.5	3.97	4.32	clear	16.31

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	■	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-10-CDPHE	See CoC	9	See CoC	See CoC	1125
BAT-10-CCR	See CoC	5	See CoC	See CoC	1125

Comments: Note to samplers, well stabilizes at 16 ft

Signature Date 5/8/2025

AECOM

Well/Piezo ID	BAT-11

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	5/14/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1243
Site Location:	Rawhide Generating Station	Finish	1425
Weather Conds:	Sunny, breezy, 65 degrees Collector(s)	K. Hoppes, M. Swift	

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 28.35 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
1243	0.0	14.0	7.44	26.0	85.1	4.59	34.3	greyish	28.55
1248	2.1	12.3	7.22	29.2	34.1	3.76	61.3	clearish	29.22
1253	4.0	12.3	7.21	793	36.7	3.13	44.7	clearish	29.64
1258	6.1	12.1	7.33	643	52.9	5.82	20.3	clearish	30.16
1303	7.8	12.5	7.33	648	64.5	6.12	11.1	clear	30.60
1308	8.3	14.2	7.30	650	70.1	5.92	11.2	clear	30.75
1311	8.4	14.4	7.29	656	72.3	5.76	7.52	clear	30.82
1314	8.8	13.2	7.29	662	74.8	5.62	5.35	clear	30.96
1317	9.4	13.1	7.27	663	76.5	5.33	3.56	clear	31.18
1320	10.0	13.0	7.26	664	78.5	5.12	3.36	clear	31.33
1323	10.4	12.8	7.26	664	80.2	4.98	2.86	clear	31.46

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	■	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-11-CDPHE	See CoC	9	See CoC	See CoC	1325
BAT-11-CCR	See CoC	5	See CoC	See CoC	1325

Comments:

Signature Date 5/14/2025

AECOM

Well/Piezo ID	BAT-12

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	5/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1253
Site Location:	Rawhide Generating Station	Finish	1430
Weather Conds:	wind gusts, raining	Collector(s)	O. Helinski

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column -- (a-b)

b. Water Table Depth 31.75 d. Casing Diameter 2" f. Calculated Well Volume (see back) --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	21070D000185
YSI	ProDSS	23400379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.33 ft
1253	0.0	11.9	7.46	1136	118.3	83.59	146	sl cloudy	32.08
1258	2.3	11.9	7.43	1127	118.6	92.56	73.8	sl cloudy	32.60
1303	4.8	11.8	7.42	1120	118.3	91.53	67.6	sl cloudy	32.98
1306	5.8	11.9	7.41	1115	118.2	87.36	50.4	sl cloudy	33.08
1311	8.0	11.8	7.41	1153	118.5	84.92	24.3	clear	33.28
1314	9.1	11.8	7.42	1167	118.0	87.03	20.1	clear	33.37
1317	10.3	11.9	7.42	1173	117.4	88.24	16.2	clear	33.54
1320	11.9	11.9	7.43	1172	116.7	89.31	17.4	clear	33.68

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	■
Has required turbidity been reached	■	☐	☐
Have parameters stabilized	■	☐	☐

If no or N/A - Explain below.

DO readings inaccurate

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-12-CDPHE	See CoC	9	See CoC	See CoC	1325
BAT-12-CCR	See CoC	5	See CoC	See CoC	1325
DUP-02-CDPHE	See CoC	9	See CoC	See CoC	--
DUP-01-CCR	See CoC	5	See CoC	See CoC	--

Comments:

Signature Date 5/6/2025

AECOM

WELL DEVELOPMENT LOG

PROJECT NAME:	PRPA CDPHE / CCR	PREPARED		CHECKED	
PROJECT NUMBER:	60754422 / 60754415	BY: OH/DB	DATE: 4-29-25	BY: OH	DATE: 6-24-25

SAMPLE ID: BAT-01	WELL DIAMETER: 2"
WELL MATERIAL: PVC	

PUMPING	Time: 1300	DATE: 4-29-25
TIME SPENT DEVELOPING WELL: 16 MINUTES	VOLUME OF WATER IN WELL CASING: 10.2 LITERS	
VOLUME REMOVED: 20.8 Liters		
CAN THIS WELL BE PUMPED DRY? Yes	VOLUME OF WATER ADDED (IF ANY): NA	
WELL DEVELOPMENT: Surged with pump and pumped	SOURCE OF WATER ADDED: NA	
DEPTH TO BOTTOM: 30.88 T/PVC	DEPTH TO WATER (START OF DEVELOPMENT): 14.00 T/PVC	
SEDIMENT IN WELL BOTTOM: NA	DEPTH TO WATER (END OF DEVELOPMENT): 23.78 T/PVC	

TIME	PUMP RATE (L/min)	PH (SU)	TURBIDITY (NTU)	CONDUCTIVITY (mS/cm)	TEMPERATURE (°C)	CUMULATIVE PUMP VOLUME (L)
1306	--	--	++++			0.0
1308				PURGED DRY		1.9
1313	--		++++			1.9
1317				PURGED DRY		13.2
1319	--		++++			13.2
1322				PURGED DRY		20.8

COMMENTS: Agitated with pump. Purged dry 3 times, water did not clear. Submersible pump became suctioned/dug into sediment and became stuck. Tubing pulled out during removal, pump lost down well.

Final FL = 23.78 ft; Final TD = 28.56 ft

POROSITY OF MATERIAL	
MATERIAL	POROSITY(%)
WELL-SORTED SAND OR GRAVEL	25-50
SAND AND GRAVEL MIXED	20-35

WATER VOLUME / FT OF CASING	
CASING DIAMETER	VOLUME (GALLONS/FOOT)
2"	0.16
4"	0.65
6"	1.47
8"	2.62
10"	4.09
12"	5.89

SV = (30.88-14.00)ft * 0.16 gal/ft
SV = 2.70 gal
10SV = 27 gal = 102 L

AECOM

WELL DEVELOPMENT LOG

PROJECT NAME:	PRPA CDPHE / CCR	PREPARED		CHECKED	
PROJECT NUMBER:	60754422 / 60754415	BY: OH/DB	DATE: 4-29-25	BY: OH	DATE: 6-24-25

SAMPLE ID: BAT-05	WELL DIAMETER: 2"
WELL MATERIAL: PVC	

PUMPING	Time: 1415	DATE: 4/29/2025
TIME SPENT DEVELOPING WELL: 36 MINUTES		VOLUME OF WATER IN WELL CASING: 9.98 LITERS
VOLUME REMOVED: 18.9 Liters		
CAN THIS WELL BE PUMPED DRY? Yes		VOLUME OF WATER ADDED (IF ANY): NA
WELL DEVELOPMENT: Surged with pump and pumped		SOURCE OF WATER ADDED: NA
DEPTH TO BOTTOM: 37.10 T/PVC		DEPTH TO WATER (START OF DEVELOPMENT): 20.94 T/PVC
SEDIMENT IN WELL BOTTOM:		DEPTH TO WATER (END OF DEVELOPMENT): DRY

TIME	PUMP RATE (gal/min)	PH (SU)	TURBIDITY (NTU)	CONDUCTIVITY (mS/cm)	TEMPERATURE (°C)	CUMULATIVE PUMP VOLUME (L)
1418	--	--	++++	--	--	0.0
1428	--	--	++++	--	--	3.8
1434	--	--	++++	--	--	5.7
1435	Pause - switch to submersible pump					5.7
1444	Purged dry					11.4
1454	--	--	++++	Purged dry		18.9

COMMENTS

Agitated and purged with bladder pump initially. Switched to submersible pump and purged dry twice.

POROSITY OF MATERIAL	
MATERIAL	POROSITY(%)
WELL-SORTED SAND OR GRAVEL	25-50
SAND AND GRAVEL MIXED	20-35

WATER VOLUME / FT OF CASING	
CASING DIAMETER	VOLUME (GALLONS/FOOT)
2"	0.16
4"	0.65
6"	1.47
8"	2.62
10"	4.09
12"	5.89

SV = (37.10-20.94)ft * 0.16 gal/ft
SV = 2.59 gal
10SV = 25.9 gal / 98.0 L

AECOM

WELL DEVELOPMENT LOG

PROJECT NAME:	PRPA 6/2025 Well Installations	PREPARED		CHECKED	
PROJECT NUMBER:	60754422 / 60754415	BY: D. Buhl	DATE: 6-13-25	BY: OH	DATE: 6-24-25

SAMPLE ID: BAT-14	WELL DIAMETER: 2"
WELL MATERIAL: PVC	

PUMPING	Time: 1020	DATE: 6-13-2025
TIME SPENT DEVELOPING WELL: MINUTES	VOLUME OF WATER IN WELL CASING: 0.04 GALLONS	
VOLUME REMOVED: 0.0 Gallons		
CAN THIS WELL BE PUMPED DRY? Yes	VOLUME OF WATER ADDED (IF ANY): 0 GALLONS	
WELL DEVELOPMENT: Surged with bailer and bailed	SOURCE OF WATER ADDED: NA	
DEPTH TO BOTTOM: 39.00 T/PVC	DEPTH TO WATER (START OF DEVELOPMENT): 38.78 T/PVC	
SEDIMENT IN WELL BOTTOM: 0 INCHES	DEPTH TO WATER (END OF DEVELOPMENT): 38.78	

TIME	PUMP RATE (gal/min)	PH (SU)	TURBIDITY (NTU)	CONDUCTIVITY (mS/cm)	TEMPERATURE (°C)	CUMULATIVE PUMP VOLUME (gallons)
1020			Brown			0

COMMENTS Attempted to bail with pencil bailer, but was unable to produce any meaningful quantity of water.

POROSITY OF MATERIAL	
MATERIAL	POROSITY(%)
WELL-SORTED SAND OR GRAVEL	25-50
SAND AND GRAVEL MIXED	20-35

WATER VOLUME / FT OF CASING	
CASING DIAMETER	VOLUME (GALLONS/FOOT)
2"	0.16
4"	0.65
6"	1.47
8"	2.62
10"	4.09
12"	5.89

AECOM

WELL DEVELOPMENT LOG

PROJECT NAME:	PRPA 6/2025 Well Installations	PREPARED		CHECKED	
PROJECT NUMBER:	60754422 / 60754415	BY: M. Swift	DATE: 6-11-25	BY: OH	DATE: 6-24-25

SAMPLE ID: BAT-15	WELL DIAMETER: 2"
WELL MATERIAL: PVC	

PUMPING		Time: 1030	DATE: 6-11-2025
TIME SPENT DEVELOPING WELL:	60 MINUTES	VOLUME OF WATER IN WELL CASING:	3 GALLONS
VOLUME REMOVED:	30 GALLONS		
CAN THIS WELL BE PUMPED DRY? No		VOLUME OF WATER ADDED (IF ANY):	NA
WELL DEVELOPMENT: Surged with bailer and pumped		SOURCE OF WATER ADDED:	NA
DEPTH TO BOTTOM:	27.55 T/PVC	DEPTH TO WATER (START OF DEVELOPMENT):	9.15 T/PVC
SEDIMENT IN WELL BOTTOM:		DEPTH TO WATER (END OF DEVELOPMENT):	10.50 T/PVC

TIME	PUMP RATE (gal/min)	PH (SU)	TURBIDITY (NTU)	CONDUCTIVITY (mS/cm)	TEMPERATURE (°C)	CUMULATIVE PUMP VOLUME (gallons)

COMMENTS Parameters not measured.

POROSITY OF MATERIAL	
MATERIAL	POROSITY(%)
WELL-SORTED SAND OR GRAVEL	25-50
SAND AND GRAVEL MIXED	20-35

WATER VOLUME / FT OF CASING	
CASING DIAMETER	VOLUME (GALLONS/FOOT)
2"	0.16
4"	0.65
6"	1.47
8"	2.62
10"	4.09
12"	5.89

AECOM

WELL DEVELOPMENT LOG

PROJECT NAME:	PRPA 6/2025 Well Installations	PREPARED		CHECKED	
PROJECT NUMBER:	60754422 / 60754415	BY: D. Buhl	DATE: 6-13-25	BY: OH	DATE: 6-24-25

SAMPLE ID: BAT-15	WELL DIAMETER: 2"
WELL MATERIAL: PVC	

PUMPING	Time: 0900	DATE: 6-13-2025
TIME SPENT DEVELOPING WELL: 63 MINUTES	VOLUME OF WATER IN WELL CASING: 2.9 GALLONS	
VOLUME REMOVED: 100 GALLONS		
CAN THIS WELL BE PUMPED DRY? No	VOLUME OF WATER ADDED (IF ANY): 0 GALLONS	
WELL DEVELOPMENT: Surged with pump and pumped	SOURCE OF WATER ADDED: NA	
DEPTH TO BOTTOM: 27.56 T/PVC	DEPTH TO WATER (START OF DEVELOPMENT): 9.15 T/PVC	
SEDIMENT IN WELL BOTTOM: 0 INCHES	DEPTH TO WATER (END OF DEVELOPMENT): 9.64 T/PVC	

TIME	PUMP RATE (gal/min)	PH (SU)	TURBIDITY (NTU)	CONDUCTIVITY (mS/cm)	TEMPERATURE (°C)	CUMULATIVE PUMP VOLUME (gallons)
0915	--	--	Brown	--	--	25
0930	--	--	Clear	--	--	50
0945	--	--	Clear	--	--	85
1000	--	--	Clear	--	--	90
1003	--	--	Clear	--	--	100

COMMENTS: Surged every 10 gallons, water turned brown but cleared up very quickly.

POROSITY OF MATERIAL	
MATERIAL	POROSITY(%)
WELL-SORTED SAND OR GRAVEL	25-50
SAND AND GRAVEL MIXED	20-35

WATER VOLUME / FT OF CASING	
CASING DIAMETER	VOLUME (GALLONS/FOOT)
2"	0.16
4"	0.65
6"	1.47
8"	2.62
10"	4.09
12"	5.89

September/October 2025

Event: 4Q GW Sampling
MP: Top of Casing

Date: 9/29/25 - started 10/2/25
Recorder: M. Swift, ~~Brennan~~ O. Helinski, E. Yonker,

Switch FL values 10/1

Location	Group	DTW	TD	Notes
*PZ-3	Piezometer	23.75	NM	
*PZ-4	Piezometer	33.15		PZ-4 cap labeled as P2-3
*PZ-5	Piezometer	37.22		
ASH-01	ASH	14.08		Buffalo Area - Need Escort
ASH-02	ASH	7.21		
ASH-03	ASH	41.10		
ASH-04	ASH	17.02		
ASH-05	ASH	23.66		
ASH-06	ASH	62.77		
ASH-07	ASH	18.29		
ASH-08	ASH	12.46		
ASH-09	ASH	6.63		
ASH-10	ASH	14.79		
ASH-11	ASH	28.18		
9/30 BAT-01	BAT	11.96		
BAT-02	BAT	16.66		
BAT-03	BAT	13.13		
BAT-04R	BAT	16.39		
BAT-05	BAT	21.16		
BAT-06	BAT	16.76		
BAT-09	BAT	19.79		
BAT-10	BAT	12.39		
BAT-11	BAT	28.36		
BAT-12	BAT	32.25		
BAT-13	BAT	33.73		
BAT-14	BAT	34.68		
BAT-15	BAT	10.47		
PRS-01	PRS	32.55		
9/30 PRS-02	PRS	29.73		* replaced lock
PRS-03	PRS	49.50		
PRS-04	PRS	30.26		
PRS-05	PRS	31.82		
PRS-06	PRS	23.91		
PRS-07	PRS	27.34		
MW-3	Sitewide	24.~~88~~78		
MW-4	Sitewide	20.18		
10/2 MW-5	Sitewide	22.75		Buffalo Area - Need Escort
MW-6	Sitewide	2.74		Access by Foot; needs new lid + to be resurveyed
MW-7	Sitewide	5.64		
MW-8	Sitewide	10.81		
FTP-1	FTP	29.18		
FTP-2	FTP	8.68		
FTP-3	FTP	27.26		
FTP-4	FTP	18.99		
FTP-5	FTP	12.47		

Acronyms:
DTW - Depth to Water
MP - Measuring Point
TD - Total Depth
** Fluid levels only, no sample*

AECOM

Well/Piezo ID: BAT-01

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	0857
Site Location:	Rawhide Generating Station	Finish	1100
Weather Conds:	cloudy, misty, 40's	Collector(s)	M. Swift

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length	--	c. Casing Material	PVC	e. Length of Water Column (a-b)	--
b. Water Table Depth	11.96	d. Casing Diameter	2"	f. Calculated Well Volume	--

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	8525
YSI	ProQuatro	47156

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (gal)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
0905	3.5	12.2	7.30	3092	-114.0	1.46	31.10	clear	15.92
0910	5.0	12.2	7.29	3087	-112.4	1.23	17.60	clear	17.27
0915	7.0	12.2	7.24	3054	-99.7	0.89	2.97	clear	19.27
0920	7.8	10.8	7.26	3090	-93.6	0.86	1.46	clear	19.35
0925	8.1	11.9	7.25	3041	-89.5	0.81	0.27	clear	19.7
0930	8.7	11.9	7.26	3037	-85.5	0.68	3.86	clear	20.52
0935	9.3	11.9	7.26	3034	-81.6	0.60	4.07	clear	21.08
0940	9.9	11.9	7.25	3035	-79.7	0.55	4.97	clear	21.4
0945	10.1	11.9	7.25	3034	-78.3	0.54	6.63	clear	21.6
0950	11.0	11.8	7.24	3035	-75.6	0.57	6.19	clear	21.53

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-01-CCR	see CoC	6	see CoC	see CoC	1000
BAT-01-CDPHE	see CoC	7	see CoC	see CoC	1000

Comments:

Signature: Mackensie Swift Date: 10/6/2025

AECOM

Well/Piezo ID: BAT-02

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1333
Site Location:	Rawhide Generating Station	Finish	1530
Weather Conds:	rainy, misty, 40s	Collector(s)	M. Swift

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer □

a. Total Well Length	--	c. Casing Material	PVC	e. Length of Water Column (a-b)	--
b. Water Table Depth	16.66	d. Casing Diameter	2"	f. Calculated Well Volume	--

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	8525
YSI	ProQuatro	47156

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (gal)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1340	2.5	12.4	7.09	3516	-48.3	0.46	37	clear	19.3
1345	3.6	12.4	6.88	3395	-25.0	0.39	40.0	clear	19.78
1350	4.7	12.4	6.91	3383	-15.8	0.35	25.5	clear	20.32
1355	5.6	12.4	6.91	3382	-9.0	0.31	9.0	clear	20.68
1400	6.8	12.4	6.84	3373	-3.0	0.38	1.4	clear	21.05
1405	7.9	12.4	6.90	3376	0.3	0.31	0.1	clear	21.35
1410	8.8	12.4	6.90	3380	1.2	0.30	0.0	clear	21.59
1415	9.8	12.4	6.87	3386	2.5	0.30	0.0	clear	21.82
1420	10.8	12.4	6.89	3388	3.2	0.29	0.0	clear	21.90
1425	11.8	12.3	6.97	3398	2.7	0.26	0.0	clear	22.03

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-02-CCR	See CoC	6	See CoC	See CoC	1430
BAT-02-CDPHE	See CoC	7	See CoC	See CoC	1430

Comments:

Signature: Mackensie Swift Date: 10/6/2025

AECOM

Well/Piezo ID: BAT-03

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1135
Site Location:	Rawhide Generating Station	Finish	1320
Weather Conds:	rainy, misty, 40s Collector(s) M. Swift		

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column (a-b) --

b. Water Table Depth 13.13 d. Casing Diameter 2" f. Calculated Well Volume --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	8525
YSI	ProQuatro	47156

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (gal)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1140	0.25	12.7	6.83	4100	67.7	1.26	142	cloudy	13.34
1145	2.30	12.5	6.77	4590	36.1	0.37	171	cloudy	14.45
1150	3.40	12.6	6.77	4540	30.3	0.26	144	cloudy	15.15
1155	4.40	12.5	6.77	4539	30.4	0.29	133	cloudy	15.93
1200	5.60	12.5	6.79	4500	34.4	0.25	130	cloudy	16.65
1205	6.50	12.5	6.78	4486	37.5	0.22	125	cloudy	17.18
1210	7.90	12.5	6.78	4476	39.7	0.21	123	cloudy	17.91
1215	8.80	12.4	6.78	4472	41.3	0.21	118	cloudy	18.53
1220	10.00	12.4	6.78	4475	43.6	0.20	102	cloudy	19.24
1225	11.10	12.4	6.78	4480	43.7	0.19	93.0	cloudy	19.78
1230	12.20	12.4	6.78	4489	45.6	0.18	88.6	cloudy	20.11

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been remov	☐	☐	☑
Has required turbidity been reach	☐	☑	☐
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below.

DTW and turbidity did not stabilize within a reasonable amount of time.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-03-CCR	See CoC	6	See CoC	See CoC	1240
BAT-03-CDPHE	See CoC	7	See CoC	See CoC	1240

Comments:

Signature Mackensie Swift Date 10/6/2025

AECOM

Well/Piezo ID: BAT-04R

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/2/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1320
Site Location:	Rawhide Generating Station	Finish	1430
Weather Conds:	Warm, 79 degrees F Collector(s) O. Helinksi		

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length -- c. Casing Material PVC e. Length of Water Column (a-b) --

b. Water Table Depth 16.39 d. Casing Diameter 2" f. Calculated Well Volume --

WELL PURGING DATA

a. Purge Method low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	44143
YSI	ProDSS	37379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1329	0.0	14.5	7.07	3215	70.2	2.01	38.4	Clearish	16.40
1334	2.9	13.3	7.08	3280	118.4	0.36	35.6	Clearish	17.52
1337	4.1	13.5	7.08	3275	127.0	0.27	34.7	Clearish	17.54
1340	5.1	13.4	7.08	3284	130.1	0.25	36.7	Clearish	17.59
1343	6.1	13.4	7.08	3286	130.1	0.22	31.9	Clearish	17.70

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-04R-CDPHE	See CoC	25	See CoC	See CoC	1345
BAT-04R-CCR	See CoC	12	See CoC	See CoC	1345

Comments: MS/MSD here

Signature Date 10/2/2025

AECOM

Well/Piezo ID: BAT-05

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1243
Site Location:	Rawhide Generating Station	Finish	1500
Weather Conds:	45 degrees F, cloudy	Collector(s)	K. Hoppes

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length: NM
b. Water Table Depth: 21.16
c. Casing Material: PVC
d. Casing Diameter: 2"
e. Length of Water Column (a-b): --
f. Calculated Well Volume: --

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	44143
YSI	ProPlus	37379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1245	0.0	11.9	7.18	3981	31.1	4.77	268	Brownish	21.33
1250	1.0	11.7	7.16	4169	10.5	1.40	188	Sl. cloudy	22.33
1255	2.2	11.7	7.16	4165	11.0	0.83	113	Clearish	23.00
1300	3.5	11.7	7.14	4145	15.7	0.75	55.5	Clearish	23.46
1305	4.3	11.8	7.12	4135	15.9	0.83	47.9	Clearish	24.19
1310	5.5	11.8	7.09	4103	16.2	0.69	49.3	Clear	24.81
1315	6.8	11.7	7.06	4037	17.3	1.18	57.8	Clear	25.64
1320	7.9	11.7	7.03	3935	21.9	0.99	126	Sl. cloudy	26.78
1325	8.9	11.8	7.03	3952	25.8	0.82	189	Cloudy	27.70
1330	10.0	11.7	7.04	3975	28.0	0.82	246	Cloudy	28.53
1335	11.0	11.8	7.05	4010	29.8	0.73	321	Cloudy	29.22
1340	12.8	11.8	7.07	4050	30.8	0.68	354	Brownish	29.91

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☑	☐
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below.

DO, turbidity and DTW did not stabilize within reasonable amount of time

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-05-CCR	See CoC	4	See CoC	See CoC	1345
BAT-05-CDPHE	See CoC	9	See CoC	See CoC	1345
ERB-02-CCR	See CoC	4	See CoC	See CoC	1440
ERB-02-CDPHE	See CoC	9	See CoC	See CoC	1440

Comments: ERB-02 used with deconned bladder pump dipped in lab provided DI water

Signature: Kara Hoppes Date: 10/6/2025

AECOM

Well/Piezo ID: BAT-06

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	0834
Site Location:	Rawhide Generating Station	Finish	0955
Weather Conds:	Rainy, 50 degrees F	Collector(s)	K. Hoppes

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length: NM
b. Water Table Depth: 16.76
c. Casing Material: PVC
d. Casing Diameter: 2"
e. Length of Water Column (a-b): --
f. Calculated Well Volume: --

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	44143
YSI	ProPlus	37379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
0835	0.0	11.8	7.74	2997	-35.8	4.42	429	Grey	17.49
0840	3.0	11.7	7.72	2971	-73.1	1.62	111	Cloudy	20
0845	3.9	11.8	7.71	2987	-81.7	1.50	678	Grey	20.89
0850	4.8	11.6	7.70	2978	-89.7	1.46	32.9	Clear	21.88
0855	5.8	11.6	7.69	2971	-96.7	1.41	14.3	Clear	22.92
0900	6.9	11.7	7.68	2967	-101.2	1.26	5.74	Clear	24.1
0905	7.9	11.6	7.67	2969	-101.1	1.07	6.34	Clear	25.18
0910	8.8	11.6	7.66	2968	-99.7	1.00	4.34	Clear	26.06
0915	9.9	11.6	7.67	2966	-96.8	0.87	5.29	Clear	27.33
0920	10.9	11.6	7.67	2965	-93.1	0.69	3.29	Clear	27.89
0925	12.0	11.6	7.67	2976	-87.8	0.71	4.57	Clear	28.43
0930	13.0	11.6	7.67	2976	-83.1	0.76	5.25	Clear	28.92

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below.

DTW did not stabilize within reasonable amount of time

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-06-CCR	See CoC	4	See CoC	See CoC	0935
BAT-06-CDPHE	See CoC	9	See CoC	See CoC	0935

Comments:

Signature Date 10/6/2025

AECOM

Well/Piezo ID: BAT-09

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/6/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1032
Site Location:	Rawhide Generating Station	Finish	1145
Weather Conds:	Rainy, 42 degrees F Collector(s) K. Hoppes		

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer □

a. Total Well Length: NM
b. Water Table Depth: 19.79
c. Casing Material: PVC
d. Casing Diameter: 2"
e. Length of Water Column (a-b): --
f. Calculated Well Volume: --

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	44143
YSI	ProPlus	37379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1032	0.0	11.5	7.31	3590	4.6	4.04	113	Clearish	19.79
1037	1.8	11.6	7.26	3610	10.3	1.42	15.8	Clearish	21.05
1042	2.9	11.6	7.26	3608	13.0	0.79	6.22	Clear	22.42
1047	3.9	11.6	7.25	3605	15.3	0.69	5.49	Clear	23.70
1052	4.9	11.7	7.25	3604	17.3	0.65	3.36	Clear	24.90
1057	6.0	11.7	7.25	3603	19.3	0.70	3.49	Clear	25.71
1102	6.6	11.1	7.26	3610	20.9	0.74	2.89	Clear	25.70
1105	6.9	11.7	7.26	3608	21.7	0.77	2.65	Clear	26.09
1110	7.5	11.7	7.26	3604	23.2	0.88	5.31	Clear	26.66
1115	8.0	11.7	7.26	3619	25.0	1.04	11.6	Clear	26.92
1118	8.4	11.7	7.26	3619	25.8	1.04	10.9	Clear	27.10
1121	8.8	11.7	7.26	3620	26.8	1.12	11.1	Clear	27.16

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-09-CDPHE	See CoC	4	See CoC	See CoC	1125
BAT-09-CCR	See CoC	9	See CoC	See CoC	1125

Comments:

Signature Date 10/6/2025

AECOM

Well/Piezo ID: BAT-10

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/7/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1323
Site Location:	Rawhide Generating Station	Finish	1445
Weather Conds:	Windy, warm	Collector(s)	K. Hoppes

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length: NM
b. Water Table Depth: 12.39
c. Casing Material: PVC
d. Casing Diameter: 2"
e. Length of Water Column (a-b): --
f. Calculated Well Volume: --

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	44143
YSI	ProPlus	37379

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1323	0.0	13.0	7.37	1774	69.0	1.51	71000.00	Brown	12.78
1328	2.8	12.8	7.30	4767	67.3	0.59	212.00	Cloudy	14.50
1333	3.8	13.2	7.29	4768	67.4	0.56	32.30	Clearish	14.78
1338	4.5	13.2	7.28	4765	68.3	0.64	24.30	Clear	15.07
1343	5.0	13.1	7.28	4764	69.7	0.77	24.30	Clear	15.25
1348	5.9	13.1	7.29	4755	72.9	1.34	25.40	Clear	15.78
1353	6.6	13.1	7.30	4739	77.0	2.11	19.00	Clear	15.79
1358	7.3	13.1	7.31	4713	81.7	3.04	15.10	Clear	16.03
1403	8.1	13.1	7.32	4675	87.1	3.85	14.30	Clear	16.35
1408	9.0	13.1	7.32	4633	92.1	4.43	11.70	Clear	16.60
1413	10.0	13.1	7.31	4597	97.2	4.86	9.16	Clear	16.92
1418	10.8	13.1	7.31	4584	100.4	4.76	8.57	Clear	17.17
1421	11.3	13.1	7.31	4579	102.3	4.83	6.12	Clear	17.32

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below.

DTW did not stabilize within reasonable amount of time.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-10-CCR	See CoC	4	See CoC	See CoC	1425
BAT-10-CDPHE	See CoC	9	See CoC	See CoC	1425

Comments:

Signature: Kara Hoppes Date: 10/7/2025

AECOM

Well/Piezo ID: BAT-11

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/7/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1305
Site Location:	Rawhide Generating Station	Finish	1450
Weather Conds:	Windy, cloudy	Collector(s)	M. Swift

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length: NM
b. Water Table Depth: 28.18
c. Casing Material: PVC
d. Casing Diameter: 2"
e. Length of Water Column (a-b): --
f. Calculated Well Volume: --

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	8525
YSI	ProQuatro	47156

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1310	2.7	11.6	7.44	1167	46.3	2.10	9.33	Clear	28.92
1315	3.7	11.8	7.30	1120	51.1	3.13	4.72	Clear	29.34
1320	4.9	11.9	7.36	1070	64.6	4.25	4.13	Clear	29.52
1325	5.8	11.8	7.42	1033	74.8	5.11	2.13	Clear	29.77
1330	7.0	11.8	7.51	989	87.7	5.91	0.02	Clear	29.96
1335	7.8	11.8	7.50	996	98.6	5.98	0.02	Clear	30.36
1340	8.7	11.8	7.48	1005	103.8	5.91	0.02	Clear	30.51
1345	9.7	11.8	7.46	1016	110.0	5.67	0.02	Clear	30.93
1350	10.4	11.7	7.47	1022	112.2	5.48	0.02	Clear	31.09
1355	11.1	11.7	7.41	1032	114.8	5.22	0.02	Clear	31.41
1400	11.9	11.7	7.37	1039	116.8	4.82	0.02	Clear	31.70
1405	13.0	11.7	7.35	1046	118.2	4.14	0.02	Clear	32.04

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below.

DTW and DO did not stabilize in a reasonable amount of time

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
BAT-11-CCR	See CoC	6	See CoC	See CoC	1410
BAT-11-CDPHE	See CoC	7	See CoC	See CoC	1410

Comments:

Signature Mackensie Swift Date 10/7/2025

AECOM

Well/Piezo ID: BAT-12

Ground Water Sample Collection Record

Client:	Platte River Power Authority	Date:	10/7/2025
Project No:	60754422 (CDPHE), 60754415 (CCR)	Time: Start	1008
Site Location:	Rawhide Generating Station	Finish	1200
Weather Conds:	Warm, sunny	Collector(s)	M. Swift

WATER LEVEL DATA: (measured from Top of Casing) Well ■ Piezometer ☐

a. Total Well Length: NM
b. Water Table Depth: 32.25
c. Casing Material: PVC
d. Casing Diameter: 2"
e. Length of Water Column (a-b): --
f. Calculated Well Volume: --

WELL PURGING DATA

a. Purge Method: low flow bladder pump

c. Field Testing Equipment Used:

Make	Model	Serial Number
HACH	2100Q	8525
YSI	ProQuatro	47156

c. Field Testing Equipment Calibration Documentation Found in Project Folder

Time	Volume Removed (L)	T° (C)	pH	Spec. Cond (µs/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Color	DTW (ft)
Stabilization	--	+/- 3%	+/- 0.1	+/- 3%	+/- 10	+/- 10%	+/-5 , 10%		0.3 ft
1015	3.0	12.6	7.51	1437	130.8	2.48	65.3	Clear	33.33
1020	5.2	12.6	7.52	1455	126.8	2.87	23.6	Clear	33.34
1025	7.1	12.6	7.53	1514	121.8	2.66	12.0	Clear	33.60
1030	10.0	12.6	7.52	1515	118.0	2.64	8.84	Clear	34.01
1035	12.0	12.9	7.52	1510	113.5	2.63	12.2	Clear	34.15
1040	13.0	13.0	7.51	1488	110.7	2.64	12.4	Clear	34.17
1045	14.0	13.0	7.51	1463	109.1	2.64	12.9	Clear	34.15
1050	15.0	13.0	7.50	1450	108.8	2.87	7.29	Clear	34.22

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: low flow bladder pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
FD-02 / BAT-12-CCR	See CoC	6	See CoC	See CoC	1100
FD-02 / BAT-12-CDPHE	See CoC	7	See CoC	See CoC	1100

Comments: FD-02-CCR / CDPHE here

Signature: Mackensie Swift Date: 10/7/2025

Appendix B

Well Installation Records

AECOM
Boring Log

Project Name:	**Rawhide Energy Station**
Client:	**Platte River Power Authority**
Project Number:	**60754422**

Boring ID: **BAT-14**

Date(s) Drilled	6/4/2025 and 6/9/2025	**Logged By**	Jeremy Hurshman	**Checked By**		**Total Depth of Borehole (ft)**	38	**Depth to Water (bgs)**	31
Drilling Method	Hollow Stem Auger	**Diameter of Borehole (in)**	8 1/4 inch outer diameter			**Ground Surface Elevation (ft-msl)**	5701.68		
Drill Rig Type	CME 75	**Drilling Company**	Terracon			**Groundwater Elevation (ft-msl)**			
Driller's Name	Albert Sera, Alex Beals	**Sampler Type**	Continuous core barrel			**Measuring Point Elevation (ft-msl)**			
Description of Sample Location						**Northing**	1557088.48		
						Easting	3129679.86		

Depth (ft-bgs)	SAMPLES: Run Number	SAMPLES: Recovery (%)	SAMPLES: Sample ID	USCS Symbol	PID (ppm)	MATERIAL DESCRIPTION	Well Construction
0						**0-5ft** - no recovery	Portland Cement
1							
2	1	0%		No recovery		Pea gravel backfill from hydro-vac.	
3							
4							
5						**5-9ft** - poor recovery	
6						Some gravel. Transition to fine silt. Light tan color, no sand, homogeneous, dry.	
7	2	10%					
8							
9						1 ft recovery, silt mainly	
10			No samples collected	ML	NA	**9-14ft** Continued silt with minor clay, soft, crumbles easily, low moisture, homogeneous, no sand or gravel, light tan to orangish color.	
11	3	100%					
12							
13							
14						Grades to very fine sand, soft, dry, homogeneous.	
15						**14-19ft**	
16						Silty clay, crumbles, moist to dry, light tan color, no sand, no gravel.	
17	4	100%		CL			
18						**18-19ft**	
19						Increased clay, medium brown color, more stiff than above.	
20	5	75%				**19-24ft** Silty clay, moist, cooler to touch on core; crumbles, medium brown color.	Portland Cement

AECOM

Boring Log

Project Name:	**Rawhide Energy Station**
Client:	**Platte River Power Authority**
Project Number:	**60754422**

Boring ID: BAT-14

Date(s) Drilled	6/4/2025 and 6/9/2025	**Logged By**	Jeremy Hurshman	**Checked By**	**Total Depth of Borehole (ft)**	38	**Depth to Water (bgs)** 31
Drilling Method	Hollow Stem Auger	**Diameter of Borehole (in)**	8 1/4 inch outer diameter		**Ground Surface Elevation (ft-msl)**	5701.68	
Drill Rig Type	CME 75	**Drilling Company**	Terracon		**Groundwater Elevation (ft-msl)**		
Driller's Name	Albert Sera, Alex Beals	**Sampler Type**	Continuous core barrel		**Measuring Point Elevation (ft-msl)**		
Description of Sample Location					**Northing**	1557088.48	
					Easting	3129679.86	

Depth (ft-bgs)	SAMPLES: Run Number	SAMPLES: Recovery (%)	SAMPLES: Sample ID	USCS Symbol	PID (ppm)	MATERIAL DESCRIPTION	Well Construction
21						**19-24ft**	
22	5	75%		CL		Silty clay, moist, cooler to touch on core; crumbles, medium brown color.	3/8" bentonite chips
23						**23-24ft**	
24				CL-SC		Increased sand and 10% gravel interbedded, stiff, increased moisture, poorly sorted. Gravel up to 1cm in size.	10/20 silica sand
25						**24-26ft**	
26						As above. Increased course sand and approximately 5-10% gravel with silt/clay mixture.	
27	6	100%	No samples collected		NA	**26-29ft**	
28						Grades to weathered Pierre shale, brownish, crumbles, oxidation in thin zones, no gravel or sands, moist 26-28ft, low plasticity.	
29							
30						**29-34ft**	
31	7	100%		Shale		Weathered shale, crumbles, brown to light gray, oxidation along fractures, slight moisture/water in fractures near 31-33ft.	
32							
33						**33.5 ft**	
34						Transition to harder shale, thin 1cm thick hard zone, reddish brown oxidation, low moisture in this zone.	
35	8	100%				**34-36.5 ft** Weathered shale.	
36						**36.5-38 ft** Dark grey hard shale, dry tight.	
37						Oxidized fracture at 36.5ft, crumbles slightly above 36.5ft. thinly bedded, brown to grey.	
38						**Total Depth: ~38 ft**	
39						Casing --> SCH 40 PVC Screen --> 0.010 slotted SCH 40 PVC	3/8" bentonite chips 10/20 silica sand
40							

AECOM
Boring Log

Project Name:	**Rawhide Energy Station**
Client:	**Platte River Power Authority**
Project Number:	**60754422**

Boring ID: BAT-15

Date(s) Drilled	6/9/2025	**Logged By**	Mackensie Swift	**Checked By**		**Total Depth of Borehole (ft)**	24.5	**Depth to Water (bgs)**	17
Drilling Method	Hollow Stem Auger	**Diameter of Borehole (in)**	8 1/4 inch outer diameter			**Ground Surface Elevation (ft-msl)**	5678.12		
Drill Rig Type	CME 75	**Drilling Company**	Terracon			**Groundwater Elevation (ft-msl)**			
Driller's Name	Alex B.	**Sampler Type**	Continuous core barrel			**Measuring Point Elevation (ft-msl)**			
Description of Sample Location						**Northing**	1556925.02		
						Easting	3129461.15		

Depth (ft-bgs)	SAMPLES: Run Number	SAMPLES: Recovery (%)	SAMPLES: Sample ID	USCS Symbol	PID (ppm)	MATERIAL DESCRIPTION	Well Construction
0						**0-4.5ft** - no recovery	Portland Cement
1							
2	1	NA		NA		Pea gravel.	
3							
4							
5						**4.5-5ft** Pea gravel.	
6						**5-9.5ft**	
7	2	50%		CL		Orange/brown, silty clay, hard, very fine.	
8							
9							
10			No samples collected		NA	**9.5-14.5ft**	3/8" bentonite chips
11							
12	3	100%				Weathered shale; orange/brown crumbles; orange oxidization in fractures; thin bedding starting around 10 ft; dry.	
13							
14							10/20 silica sand
15				Shale		**14.5-16.5ft**	
16						Same as above but brown/gray.	
17	4	100%				**16.5-17ft** Same as above; moist. **17-17.5ft** Wet; approximately 2 inches of brown/orange layer.	
18						**17.5-19.5ft**	
19						Weathered shale, brown/gray, dry.	
20	5	100%				**19.5-24.5ft** Same as above; but moist from 19.5-20.5 ft then dry from 20.5-24.5ft.	

AECOM

Boring Log

Project Name:	Rawhide Energy Station
Client:	Platte River Power Authority
Project Number:	60754422

Boring ID: **BAT-15**

Date(s) Drilled	09-Jun-25	**Logged By**	Mackensie Swift	**Checked By**		**Total Depth of Borehole (ft)**	24.5	**Depth to Water (bgs)** 17
Drilling Method	Hollow Stem Auger	**Diameter of Borehole (in)**	8 1/4 inch outer diameter			**Ground Surface Elevation (ft-msl)**	5678.12	
Drill Rig Type	CME 75	**Drilling Company**	Terracon			**Groundwater Elevation (ft-msl)**		
Driller's Name	Alex B.	**Sampler Type**	Continuous core barrel			**Measuring Point Elevation (ft-msl)**		
Description of Sample Location						**Northing**	1556925.02	
						Easting	3129461.15	

Depth (ft-bgs)	SAMPLES: Run Number	SAMPLES: Recovery (%)	SAMPLES: Sample ID	USCS Symbol	PID (ppm)	MATERIAL DESCRIPTION	Well Construction
21						**19.5-24.5ft**	
22	5	100%	No samples collected	Shale	NA	Same as above; but moist from 19.5-20.5 ft then dry from 20.5-24.5ft.	
23							
24							
25						**Total Depth: 24.5ft**	
26						Casing --> SCH 40 PVC	
27						Screen --> 0.010 slotted SCH 40 PVC	
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

AECOM

Boring Log

Project Name:	**Rawhide Energy Station**
Client:	**Platte River Power Authority**
Project Number:	**60754422**

Boring ID: BAT-16

Date(s) Drilled	6/9/2025	**Logged By**	Mackensie Swift	**Checked By**		**Total Depth of Borehole (ft)**	34
Drilling Method	Hollow Stem Auger	**Diameter of Borehole (in)**	8 1/4 inch outer diameter			**Ground Surface Elevation (ft-msl)**	5684.19
Drill Rig Type	CME 75	**Drilling Company**	Terracon			**Groundwater Elevation (ft-msl)**	
Driller's Name	Alex B.	**Sampler Type**	Continuous core barrel			**Measuring Point Elevation (ft-msl)**	
Description of Sample Location						**Northing**	1556757.85
						Easting	3129811.55

Depth (ft-bgs) | **SAMPLES: Run Number** | **Recovery (%)** | **Sample ID** | **USCS Symbol** | **PID (ppm)** | **MATERIAL DESCRIPTION** | **Well Construction**

0-4ft - no recovery

Run Number	Recovery (%)	Sample ID	USCS Symbol	PID (ppm)	MATERIAL DESCRIPTION	Well Construction
1	0%	No samples collected	NA	NA	Pea gravel.	3/8" bentonite chips
2	20%				**4-9ft** Pea gravel.	
3	30%				**9-10ft** Pea gravel. **10-11ft** Yellow brown, poorly sorted, gravelly clay, dry, stiff. **11-14ft** Brown, dry, stiff, low plasticity, silty clay.	
4	90%		CL		**14-19ft** Same as above, crumbles, occasional gravels. Transitions to weathered shale	
5	100%		Shale		**19-21.5ft** Weathered shale; brown to gray; orange oxidization in fractures, crumbles; dry.	

AECOM
Boring Log

Project Name:	**Rawhide Energy Station**
Client:	**Platte River Power Authority**
Project Number:	**60754422**

Boring ID: BAT-16

Date(s) Drilled	6/9/2025	**Logged By**	Mackensie Swift	**Checked By**		**Total Depth of Borehole (ft)**	34
Drilling Method	Hollow Stem Auger	**Diameter of Borehole (in)**	8 1/4 inch outer diameter			**Ground Surface Elevation (ft-msl)**	5684.19
Drill Rig Type	CME 75	**Drilling Company**	Terracon			**Groundwater Elevation (ft-msl)**	
Driller's Name	Alex B.	**Sampler Type**	Continuous core barrel			**Measuring Point Elevation (ft-msl)**	
Description of Sample Location						**Northing**	1556757.85
						Easting	3129811.55

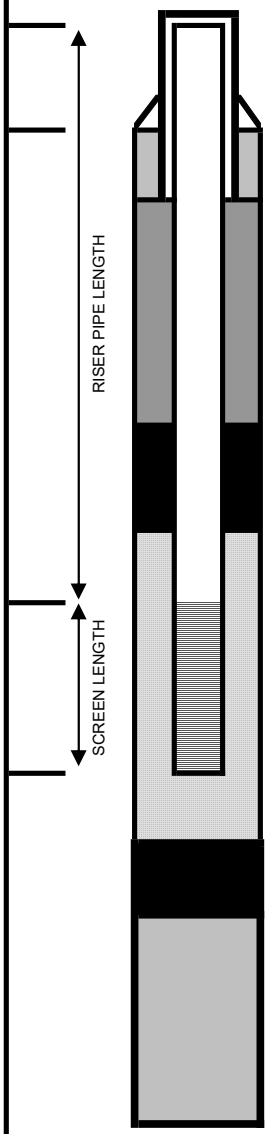
Depth to Water (bgs): not encountered

Depth (ft-bgs)	SAMPLES: Run Number	SAMPLES: Recovery (%)	SAMPLES: Sample ID	USCS Symbol	PID (ppm)	MATERIAL DESCRIPTION	Well Construction
21	5	100%	No samples collected	Shale	NA	**19-21.5ft** Weathered shale; brown to gray; orange oxidization in fractures, crumbles; dry.	**3/8" bentonite chips**
22						**21.5-24ft**	
23	6	100%				Same as above.	
24						**24-29ft**	
25						Same as above.	
26						Small silty clay lens around 25.5-26'	
27	7	90%					
28						At 28' transitions into dark grey, competent shale, dry, shell fossils.	
29						**29-34ft**	
30							
31							
32	8	100%				Dark grey shale.	
33							
34						**Total Depth: 34ft**	
35						Boring abandoned with bentonite chips on 6/11/25 due to a lack of water present in the boring.	
36							
37							
38							
39							
40							

WELL CONSTRUCTION DATA

PROJECT NAME:	PRPA Rawhide Energy Station	WELL ID:	BAT-14
PROJECT NO:	60754422	DATE INSTALLED: 06/04 and 06/09/25	INSTALLED BY: J. Hurshman CHECKED BY: OH/MS

ELEVATION (BENCHMARK: USGS)	DEPTH BELOW OR ABOVE GROUND SURFACE (FEET)
	3 TOP OF CASING
	0 GROUND SURFACE
	5 CEMENT SURFACE PLUG
	GROUT/BACKFILL MATERIAL: Portland Cement
	GROUT/BACKFILL METHOD:
	21 GROUT
	BENTONITE SEAL MATERIAL: 3/8" bentonite chips
	23 BENTONITE SEAL
	26 TOP OF SCREEN
	FILTER PACK MATERIAL: 10/20 silica sand
	36 BOTTOM OF SCREEN
	38 BOTTOM OF FILTER PACK
	NA BENTONITE PLUG
	BACKFILL MATERIAL: 10/20 silica sand
	38 HOLE BOTTOM



CASING AND SCREEN DETAILS

TYPE OF RISER:	Solid PVC
PIPE SCHEDULE:	Schedule 40 PVC
PIPE JOINTS:	Schedule 40 PVC
SOLVENT USED:	NA
SCREEN TYPE:	Slotted Schedule 40 PVC
SCR. SLOT SIZE:	0.01 INCH
BOREHOLE DIAMETER	8.25 IN. FROM 0 TO 38 FT.
	IN. FROM TO FT.
SURF. CASING DIAMETER	2 IN. FROM 0 TO 3.04 FT.
	IN. FROM TO FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD:	Surged with bailer and bailed
TIME DEVELOPING:	0 HOURS
WATER REMOVED:	0 GALLONS
WATER ADDED:	0 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE:	Turbid
COLOR BEFORE:	Brown
CLARITY AFTER:	NA
COLOR AFTER:	NA
ODOR (IF PRESENT):	NA

WATER LEVEL SUMMARY

SWE MEASUREMENT		DATE	TIME
BEFORE DEVELOPING	38.78 T/PVC	6/13/2025	1018
AFTER DEVELOPING:	38.78 T/PVC	6/13/2025	1020
OTHER	T/PVC		
OTHER	T/PVC		

PROTECTIVE COVER AND LOCK INSTALLED? ☑ YES ☐ NO

PERMANENT, LEGIBLE WELL LABEL ADDED? ☐ YES ☑ NO

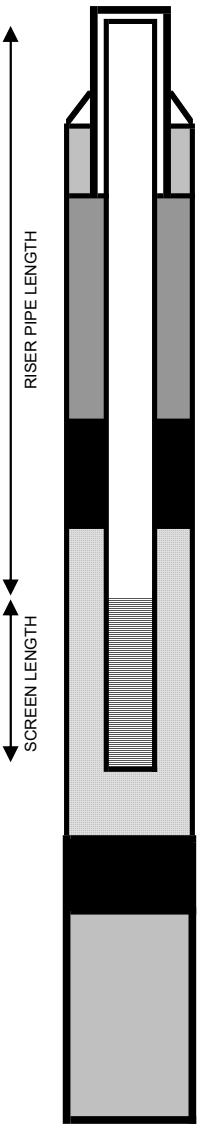
NOTES:

Well development - attempt to bail with pencil bailer was made, but was ultimately unable to produce any meaningful quantity of water.

WELL CONSTRUCTION DATA

PROJECT NAME:	PRPA Rawhide Energy Station			WELL ID:	BAT-15
PROJECT NO:	60754422	DATE INSTALLED:	6/9/2025	INSTALLED BY: M. Swift	CHECKED BY: OH/MS

ELEVATION (BENCHMARK: USGS)	DEPTH BELOW OR ABOVE GROUND SURFACE (FEET)
	3.3 TOP OF CASING
	0 GROUND SURFACE
	NA CEMENT SURFACE PLUG
	GROUT/BACKFILL MATERIAL: Portland Cement
	GROUT/BACKFILL METHOD: NA
	10 GROUT
	BENTONITE SEAL MATERIAL: 3/8" bentonite chips
	12 BENTONITE SEAL
	14 TOP OF SCREEN
	FILTER PACK MATERIAL: 10/20 silica sand
	24 BOTTOM OF SCREEN
	24.5 BOTTOM OF FILTER PACK
	NA BENTONITE PLUG
	BACKFILL MATERIAL: 10/20 silica sand
	24.5 HOLE BOTTOM



NOTES:

CASING AND SCREEN DETAILS

TYPE OF RISER:	Solid PVC
PIPE SCHEDULE:	Schedule 40
PIPE JOINTS:	Schedule 40 PVC
SOLVENT USED:	NA
SCREEN TYPE:	Slotted
SCR. SLOT SIZE:	0.01 INCH
BOREHOLE DIAMETER	8.25 IN. FROM 0 TO 24.5 FT.
	IN. FROM TO FT.
SURF. CASING DIAMETER	2 IN. FROM 0 TO 3.32 FT.
	IN. FROM TO FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD:	Surged with bailer/pump and bailed
TIME DEVELOPING:	1.75 HOURS
WATER REMOVED:	130 GALLONS
WATER ADDED:	0 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE:	NA
COLOR BEFORE:	Brown
CLARITY AFTER:	NA
COLOR AFTER:	Clear
ODOR (IF PRESENT):	NA

WATER LEVEL SUMMARY

SWE MEASUREMENT		DATE	TIME
BEFORE DEVELOPING	9.15 T/PVC	6/11/2025	915
AFTER DEVELOPING:	9.64 T/PVC	6/13/2025	1003
OTHER	T/PVC		
OTHER	T/PVC		

PROTECTIVE COVER AND LOCK INSTALLED?	☑ YES ☐ NO
PERMANENT, LEGIBLE WELL LABEL ADDED?	☐ YES ☑ NO

Appendix C

Laboratory Analytical and Data Validation Reports

April/May 2025

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

July 09, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

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

Sincerely,

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

Pace Analytical Services, LLC
2025.07.09 14:36:52 -07'00'
Document is certified

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60474660001	**BAT-09-CCR**	Water	05/06/25 09:00	05/07/25 09:40
60474660002	**BAT-06-CCR**	Water	05/06/25 11:25	05/07/25 09:40
60474660003	**BAT-12-CCR**	Water	05/06/25 13:25	05/07/25 09:40
60474660004	**DUP-01-CCR**	Water	05/06/25 08:00	05/07/25 09:40

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60474660001	**BAT-09-CCR**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474660002	**BAT-06-CCR**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474660003	**BAT-12-CCR**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474660004	**DUP-01-CCR**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Sample: BAT-09-CCR **Lab ID: 60474660001** Collected: 05/06/25 09:00 Received: 05/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.352 ± 0.588 (1.02) C:NA T:91%**	pCi/L	05/23/25 16:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.25 ± 0.562 (0.952) C:83% T:83%**	pCi/L	05/23/25 14:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.60 ± 1.15 (1.97)**	pCi/L	05/28/25 12:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Sample: BAT-06-CCR **Lab ID: 60474660002** Collected: 05/06/25 11:25 Received: 05/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.121 ± 0.337 (0.653) C:NA T:88%**	pCi/L	05/23/25 16:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.22 ± 0.489 (0.775) C:82% T:86%**	pCi/L	05/23/25 14:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.34 ± 0.826 (1.43)**	pCi/L	05/28/25 12:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Sample: BAT-12-CCR **Lab ID: 60474660003** Collected: 05/06/25 13:25 Received: 05/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.670 ± 0.730 (1.19) C:NA T:89%**	pCi/L	05/23/25 16:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.472 ± 0.449 (0.927) C:82% T:83%**	pCi/L	05/23/25 14:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.14 ± 1.18 (2.12)**	pCi/L	05/28/25 12:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Sample: DUP-01-CCR **Lab ID: 60474660004** Collected: 05/06/25 08:00 Received: 05/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Collection time on sample 004 bottles does not match; sample logged per COC direction and client notified via SAF.
• The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.277 ± 0.545 (0.966) C:NA T:89%**	pCi/L	05/23/25 16:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.08 ± 0.524 (0.915) C:78% T:85%**	pCi/L	05/23/25 14:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.36 ± 1.07 (1.88)**	pCi/L	05/28/25 12:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

QC Batch: 744614
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60474660001, 60474660002, 60474660003, 60474660004

METHOD BLANK: 3624924 Matrix: Water
Associated Lab Samples: 60474660001, 60474660002, 60474660003, 60474660004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.109 ± 0.352 (0.797) C:83% T:72%	pCi/L	05/23/25 14:13	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

QC Batch: 744612
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60474660001, 60474660002, 60474660003, 60474660004

METHOD BLANK: 3624919 Matrix: Water
Associated Lab Samples: 60474660001, 60474660002, 60474660003, 60474660004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.538 ± 0.444 (0.641) C:NA T:89%	pCi/L	05/23/25 16:08	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 60474660

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60474660001	**BAT-09-CCR**	EPA 903.1	744612		
60474660002	**BAT-06-CCR**	EPA 903.1	744612		
60474660003	**BAT-12-CCR**	EPA 903.1	744612		
60474660004	**DUP-01-CCR**	EPA 903.1	744612		
60474660001	**BAT-09-CCR**	EPA 904.0	744614		
60474660002	**BAT-06-CCR**	EPA 904.0	744614		
60474660003	**BAT-12-CCR**	EPA 904.0	744614		
60474660004	**DUP-01-CCR**	EPA 904.0	744614		
60474660001	**BAT-09-CCR**	Total Radium Calculation	748332		
60474660002	**BAT-06-CCR**	Total Radium Calculation	748332		
60474660003	**BAT-12-CCR**	Total Radium Calculation	748332		
60474660004	**DUP-01-CCR**	Total Radium Calculation	748332		

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CCR FA BAT

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A — Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D — Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BAT-09-CCR	WT	G	—	—	5/6/25	0900		2			X							X	X	X	N	
2	BAT-06-CCR	WT	G	—	—	5/6/25	1125		2			X							X	X	X	N	
3	BAT-12-CCR	WT	G	—	—	5/6/25	1325		2			X							X	X	X	N	
4	DUP-01-CCR	WT	G	—	—	5/6/25	—		2			X							X	X	X	N	
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature] / AECOM	5/6/25	1700	[signature]	5.7.25	0940	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kam Hoppes & Olivia Helinski

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 05/06/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

updated COC received via 5/8/25 - ps

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: CO
Cert. Needed: ☐ Yes ☒ No
Owner Received Date: 5/7/2025 Results Requested By: 5/29/2025

Workorder: 60474660 **Workorder Name:** 60754422 PRPA CCR

Report To	Subcontract To
Heather Wilson Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 1(913)563-1407	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Total Radium-226, Total Sum Radium	Requested Analysis: Total Radium-228	LAB USE ONLY
1	BAT-09-CCR	PS	5/6/2025 09:00	60474660001	Water	2	X	X	001
2	BAT-06-CCR	PS	5/6/2025 11:25	60474660002	Water	2	X	X	002
3	BAT-12-CCR	PS	5/6/2025 13:25	60474660003	Water	2	X	X	003
4	DUP-01-CCR	PS	5/6/2025 08:00	60474660004	Water	2	X	X	004
5									

Transfers	Released By	Date/Time	Received By	Date/Time
1			Matthew Swisher	5/7/25 9:40
2				
3				

Comments: IR30- Radium QC Sheets Required

Cooler Temperature on Receipt — °C | **Custody Seal** (Y) or N | **Received on Ice** Y or (N) | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO# : 30777558

30777558

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CHAIN-OF-CUSTODY / Analytical Request Docume

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

WO# : 30777558

PM: CMC Due Date: 05/29/25

CLIENT: PACE_60_LEKS

Page: 1 of 1

Section A
Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B
Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C
Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	Section D Required Client Information	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME											N	N	N	N		
1	BAT-09-CCR	WT	G	—	—	5/6/25	0900		2			X							X	X	X	N	009
2	BAT-06-CCR	WT	G	—	—	5/6/25	1125		2			X							X	X	X	N	006
3	BAT-12-CCR	WT	G	—	—	5/6/25	1325		2			X							X	X	X	N	012
4	DUP-01-CCR	WT	G	—	—	5/6/25	—		2			X							X	X	X	N	061
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] / AECOM	5/6/25	1700	[signature]	5.7.25	0940	—	N	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Hopes & Olivia Helinski

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 05/06/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO# : 30777558

PM: CMC Due Date: 05/29/25

CLIENT: PACE_60_LEKS

Client Name: AECOM Project

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Initial / Date

Tracking Number: 4453 8930 3280

Examined By: MS 5/7/25

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No Seals Intact: ☑ Yes ☐ No

Labeled By: MS 5/8/25

Thermometer Used: — Type of Ice: Wet Blue (None)

Temped By: —

Cooler Temperature: Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 10D3241 D.P.D. Residual Chlorine Lot # —

Comments:	Yes	No	NA	
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC:		✓		5. ~~No time on Sample 001 bottles~~ MS 5/8/25 Time does not match on Sample 004 bottles
-Includes date/time/ID				
Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dichlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH < 2
All containers meet method preservation requirements:	✓			Initial when completed MS Date/Time of Preservation
				Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed MS Date: 5/7/25 Survey Meter SN: 250 (03380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	CLM
Date:	5/13/2025
Batch ID:	85025
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3624919
MB concentration:	0.538
M/B 2 Sigma CSU:	0.444
MB MDC:	0.641
MB Numerical Performance Indicator:	2.38
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS85025	LCSD85025
Count Date:	5/23/2025	
Spike I.D.:	24-046	
Spike Concentration (pCi/mL):	31.831	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.653	
Target Conc. (pCi/L, g, F):	4.875	
Uncertainty (Calculated):	0.229	
Result (pCi/L, g, F):	3.793	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.101	
Numerical Performance Indicator:	-1.89	
Percent Recovery:	77.81%	
Status vs Numerical Indicator:	Pass	
Status vs Recovery:	N/A	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/5/2025	
Sample I.D.	30777456005	
Sample MS I.D.	30777456006	
Sample MSD I.D.	30777456007	
Spike I.D.:	24-046	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	31.831	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.055	
MS Target Conc.(pCi/L, g, F):	116.025	
MSD Aliquot (L, g, F):	0.055	
MSD Target Conc. (pCi/L, g, F):	115.540	
MS Spike Uncertainty (calculated):	5.453	
MSD Spike Uncertainty (calculated):	5.430	
Sample Result:	13.980	
Sample Result 2 Sigma CSU (pCi/L, g, F):	7.034	
Sample Matrix Spike Result:	144.444	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	24.818	
Sample Matrix Spike Duplicate Result:	127.704	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	21.917	
MS Numerical Performance Indicator:	1.073	
MSD Numerical Performance Indicator:	-0.151	
MS Percent Recovery:	112.44%	
MSD Percent Recovery:	98.43%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	N/A	
MSD Status vs Recovery:	N/A	
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	30777456005	
Sample MS I.D.	30777456006	
Sample MSD I.D.	30777456007	
Sample Matrix Spike Result:	144.444	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	24.818	
Sample Matrix Spike Duplicate Result:	127.704	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	21.917	
Duplicate Numerical Performance Indicator:	0.991	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	13.29%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	N/A	
% RPD Limit:	32%	

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

Comments:
The batch must be reprepped due to an unacceptable blank result

CLM

5/27/25

W052725

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	ZPC
Date:	5/14/2025
Worklist:	85026
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3624924
MB concentration:	0.109
M/B 2 Sigma CSU:	0.352
MB MDC:	0.797
MB Numerical Performance Indicator:	0.61
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS85026	LCSD85026
Count Date:	5/23/2025	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	32.489	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.816	
Target Conc. (pCi/L, g, F):	3.982	
Uncertainty (Calculated):	0.195	
Result (pCi/L, g, F):	3.675	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.886	
Numerical Performance Indicator:	-0.66	
Percent Recovery:	92.28%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/5/2025	
Sample I.D.	30777456005	
Sample MS I.D.	30777456006	
Sample MSD I.D.	30777456007	
Spike I.D.:	23-043	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.684	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.102	
MS Target Conc.(pCi/L, g, F):	64.370	
MSD Aliquot (L, g, F):	0.103	
MSD Target Conc. (pCi/L, g, F):	63.286	
MS Spike Uncertainty (calculated):	3.154	
MSD Spike Uncertainty (calculated):	3.101	
Sample Result:	40.424	
Sample Result 2 Sigma CSU (pCi/L, g, F):	9.249	
Sample Matrix Spike Result:	102.085	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	19.987	
Sample Matrix Spike Duplicate Result:	98.503	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	19.512	
MS Numerical Performance Indicator:	-0.239	
MSD Numerical Performance Indicator:	-0.468	
MS Percent Recovery:	95.79%	
MSD Percent Recovery:	91.77%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	30777456005	
Sample MS I.D.	30777456006	
Sample MSD I.D.	30777456007	
Sample Matrix Spike Result:	102.085	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	19.987	
Sample Matrix Spike Duplicate Result:	98.503	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	19.512	
Duplicate Numerical Performance Indicator:	0.251	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	4.28%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

Comments:

Aust27/25

CT
5.27.25

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July 09, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

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

Sincerely,

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60474705001	**BAT-05-CCR**	Water	05/07/25 09:35	05/08/25 08:30
60474705002	**BAT-03-CCR**	Water	05/07/25 11:25	05/08/25 08:30
60474705003	**BAT-04R-CCR**	Water	05/07/25 13:00	05/08/25 08:30

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60474705001	**BAT-05-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474705002	**BAT-03-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474705003	**BAT-04R-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Sample: BAT-05-CCR **Lab ID: 60474705001** Collected: 05/07/25 09:35 Received: 05/08/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	**12.8**	ug/L	10.0	1	05/16/25 07:20	05/28/25 18:54	7440-38-2	
Barium	**155**	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:54	7440-39-3	
Beryllium	**1.5**	ug/L	1.0	1	05/16/25 07:20	05/28/25 18:54	7440-41-7	
Boron	**1270**	ug/L	100	1	05/16/25 07:20	05/28/25 18:54	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:54	7440-43-9	
Calcium	**392000**	ug/L	200	1	05/16/25 07:20	05/28/25 18:54	7440-70-2	
Chromium	**47.5**	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:54	7440-47-3	
Cobalt	**17.1**	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:54	7440-48-4	
Lead	**27.7**	ug/L	10.0	1	05/16/25 07:20	05/28/25 18:54	7439-92-1	
Lithium	**265**	ug/L	10.0	1	05/16/25 07:20	05/28/25 18:54	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/16/25 07:20	05/28/25 18:54	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/16/25 07:20	05/28/25 18:54	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	3.0	3	05/12/25 11:18	06/10/25 11:18	7440-36-0	D3
Thallium	ND	ug/L	3.0	3	05/12/25 11:18	06/10/25 11:18	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:44	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**4900**	mg/L	125	1		05/13/25 15:25		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**58.6**	mg/L	10.0	10		06/02/25 13:04	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 12:50	16984-48-8	
Sulfate	**3040**	mg/L	400	400		06/02/25 13:18	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Sample: BAT-03-CCR **Lab ID: 60474705002** Collected: 05/07/25 11:25 Received: 05/08/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/16/25 07:20	05/28/25 18:56	7440-38-2	
Barium	**102**	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:56	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/16/25 07:20	05/28/25 18:56	7440-41-7	
Boron	**1010**	ug/L	100	1	05/16/25 07:20	05/28/25 18:56	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:56	7440-43-9	
Calcium	**358000**	ug/L	200	1	05/16/25 07:20	05/28/25 18:56	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:56	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/16/25 07:20	05/28/25 18:56	7440-48-4	
Lead	ND	ug/L	10.0	1	05/16/25 07:20	05/28/25 18:56	7439-92-1	
Lithium	**226**	ug/L	10.0	1	05/16/25 07:20	05/28/25 18:56	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/16/25 07:20	05/28/25 18:56	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/16/25 07:20	05/28/25 18:56	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	3.0	3	05/12/25 11:18	06/10/25 11:21	7440-36-0	D3
Thallium	ND	ug/L	3.0	3	05/12/25 11:18	06/10/25 11:21	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:46	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**3500**	mg/L	100	1		05/13/25 15:25		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**26.2**	mg/L	5.0	5		06/03/25 21:29	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 13:31	16984-48-8	
Sulfate	**2060**	mg/L	200	200		06/02/25 13:45	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Sample: BAT-04R-CCR **Lab ID: 60474705003** Collected: 05/07/25 13:00 Received: 05/08/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/16/25 07:20	05/28/25 19:03	7440-38-2	
Barium	**16.0**	ug/L	5.0	1	05/16/25 07:20	05/28/25 19:03	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/16/25 07:20	05/28/25 19:03	7440-41-7	
Boron	**702**	ug/L	100	1	05/16/25 07:20	05/28/25 19:03	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/16/25 07:20	05/28/25 19:03	7440-43-9	
Calcium	**420000**	ug/L	200	1	05/16/25 07:20	05/28/25 19:03	7440-70-2	M1,P6
Chromium	ND	ug/L	5.0	1	05/16/25 07:20	05/28/25 19:03	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/16/25 07:20	05/28/25 19:03	7440-48-4	
Lead	ND	ug/L	10.0	1	05/16/25 07:20	05/28/25 19:03	7439-92-1	
Lithium	**161**	ug/L	10.0	1	05/16/25 07:20	05/28/25 19:03	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/16/25 07:20	05/28/25 19:03	7439-98-7	
Selenium	**24.8**	ug/L	15.0	1	05/16/25 07:20	05/28/25 19:03	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 11:33	7440-36-0	D3
Thallium	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 11:33	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:48	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**3200**	mg/L	100	1		05/13/25 15:25		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**53.4**	mg/L	10.0	10		06/02/25 15:22	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 13:59	16984-48-8	
Sulfate	**1920**	mg/L	200	200		06/02/25 16:17	14808-79-8	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

QC Batch: 935966
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474705001, 60474705002, 60474705003

METHOD BLANK: 3710066 Matrix: Water
Associated Lab Samples: 60474705001, 60474705002, 60474705003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/22/25 11:28	

LABORATORY CONTROL SAMPLE: 3710067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3710068 3710069

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.7	4.7	94	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

QC Batch: 935317
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474705001, 60474705002, 60474705003

METHOD BLANK: 3707144 Matrix: Water
Associated Lab Samples: 60474705001, 60474705002, 60474705003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	05/28/25 19:59	
Barium	ug/L	ND	5.0	05/28/25 19:59	
Beryllium	ug/L	ND	1.0	05/28/25 19:59	
Boron	ug/L	ND	100	05/28/25 19:59	
Cadmium	ug/L	ND	5.0	05/28/25 19:59	
Calcium	ug/L	ND	200	05/28/25 19:59	
Chromium	ug/L	ND	5.0	05/28/25 19:59	
Cobalt	ug/L	ND	5.0	05/28/25 19:59	
Lead	ug/L	ND	10.0	05/28/25 19:59	
Lithium	ug/L	ND	10.0	05/28/25 19:59	
Molybdenum	ug/L	ND	20.0	05/28/25 19:59	
Selenium	ug/L	ND	15.0	05/28/25 19:59	

LABORATORY CONTROL SAMPLE: 3707145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	868	87	80-120	
Barium	ug/L	1000	928	93	80-120	
Beryllium	ug/L	1000	951	95	80-120	
Boron	ug/L	1000	880	88	80-120	
Cadmium	ug/L	1000	944	94	80-120	
Calcium	ug/L	10000	9540	95	80-120	
Chromium	ug/L	1000	950	95	80-120	
Cobalt	ug/L	1000	979	98	80-120	
Lead	ug/L	1000	955	96	80-120	
Lithium	ug/L	1000	943	94	80-120	
Molybdenum	ug/L	1000	933	93	80-120	
Selenium	ug/L	1000	920	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3707146 3707147

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	1000	1000	921	914	92	91	75-125	1	20	
Barium	ug/L	16.0	1000	1000	942	939	93	92	75-125	0	20	
Beryllium	ug/L	ND	1000	1000	967	953	97	95	75-125	2	20	
Boron	ug/L	702	1000	1000	1600	1580	90	88	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3707146 3707147

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	914	907	91	91	75-125	1	20	
Calcium	ug/L	420000	10000	10000	429000	424000	88	40	75-125	1	20	M1
Chromium	ug/L	ND	1000	1000	941	927	94	93	75-125	1	20	
Cobalt	ug/L	ND	1000	1000	950	938	95	94	75-125	1	20	
Lead	ug/L	ND	1000	1000	904	899	90	90	75-125	1	20	
Lithium	ug/L	161	1000	1000	1110	1090	94	93	75-125	2	20	
Molybdenum	ug/L	ND	1000	1000	955	949	95	95	75-125	1	20	
Selenium	ug/L	24.8	1000	1000	977	971	95	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

QC Batch: 934737
QC Batch Method: EPA 3010
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474705001, 60474705002

METHOD BLANK: 3704327 Matrix: Water
Associated Lab Samples: 60474705001, 60474705002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	06/09/25 15:29	
Thallium	ug/L	ND	1.0	06/09/25 15:29	

LABORATORY CONTROL SAMPLE: 3704328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	38.1	95	80-120	
Thallium	ug/L	40	39.3	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3704329 3704330

Parameter	Units	60474669005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	38.3	29.3	95	73	75-125	27	20	M1,R1
Thallium	ug/L	ND	40	40	38.7	29.1	97	73	75-125	28	20	M1,R1

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

QC Batch: 934855
QC Batch Method: EPA 3010
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60474705003

METHOD BLANK: 3704892 Matrix: Water
Associated Lab Samples: 60474705003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	06/10/25 11:29	
Thallium	ug/L	ND	1.0	06/10/25 11:29	

LABORATORY CONTROL SAMPLE: 3704893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	38.2	95	80-120	
Thallium	ug/L	40	39.1	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3704894 3704895

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	38.1	37.8	95	94	75-125	1	20	
Thallium	ug/L	ND	40	40	41.9	41.6	105	104	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

QC Batch: 934869
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474705001, 60474705002, 60474705003

METHOD BLANK: 3704937 Matrix: Water
Associated Lab Samples: 60474705001, 60474705002, 60474705003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	05/13/25 15:23	

LABORATORY CONTROL SAMPLE: 3704938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 3704939

Parameter	Units	60474415002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	7220	7100	2	10	

SAMPLE DUPLICATE: 3704940

Parameter	Units	60474705003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3200	3170	1	10	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

QC Batch: 937094
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474705001, 60474705002, 60474705003

METHOD BLANK: 3715153 Matrix: Water
Associated Lab Samples: 60474705001, 60474705002, 60474705003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/02/25 09:20	
Fluoride	mg/L	ND	0.20	06/02/25 09:20	
Sulfate	mg/L	ND	1.0	06/02/25 09:20	

LABORATORY CONTROL SAMPLE: 3715154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	80-120	
Fluoride	mg/L	2.5	2.6	104	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3715155 3715156

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	53.4	50	50	110	107	112	107	80-120	3	15	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	95	98	80-120	2	15	
Sulfate	mg/L	1920	1000	1000	2820	2790	90	87	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3715158 3715159

Parameter	Units	60475296001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	237	5	5	238	239	30	36	80-120	0	15	E,M1
Fluoride	mg/L	0.33	2.5	2.5	3.0	2.1	105	71	80-120	34	15	M1,R1
Sulfate	mg/L	161	5	5	164	165	69	72	80-120	0	15	E,M1

SAMPLE DUPLICATE: 3715157

Parameter	Units	60474705003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	53.4	50.9	5	15	
Fluoride	mg/L	ND	ND		15	
Sulfate	mg/L	1920	1840	4	15	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

SAMPLE DUPLICATE: 3715160

Parameter	Units	60475296001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	237	237	0	15	E
Fluoride	mg/L	0.33	0.32	3	15	
Sulfate	mg/L	161	161	0	15	E

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 60474705

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60474705001	**BAT-05-CCR**	EPA 3010	935317	EPA 6010	935341
60474705002	**BAT-03-CCR**	EPA 3010	935317	EPA 6010	935341
60474705003	**BAT-04R-CCR**	EPA 3010	935317	EPA 6010	935341
60474705001	**BAT-05-CCR**	EPA 3010	934737	EPA 6020	934829
60474705002	**BAT-03-CCR**	EPA 3010	934737	EPA 6020	934829
60474705003	**BAT-04R-CCR**	EPA 3010	934855	EPA 6020	934953
60474705001	**BAT-05-CCR**	EPA 7470	935966	EPA 7470	935996
60474705002	**BAT-03-CCR**	EPA 7470	935966	EPA 7470	935996
60474705003	**BAT-04R-CCR**	EPA 7470	935966	EPA 7470	935996
60474705001	**BAT-05-CCR**	SM 2540C	934869		
60474705002	**BAT-03-CCR**	SM 2540C	934869		
60474705003	**BAT-04R-CCR**	SM 2540C	934869		
60474705001	**BAT-05-CCR**	EPA 9056	937094		
60474705002	**BAT-03-CCR**	EPA 9056	937094		
60474705003	**BAT-04R-CCR**	EPA 9056	937094		

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WO# : 60474705

60474705

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample C		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Aecom

Courier: FedEx ☑ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 449351203636 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☑ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: T301 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 1.0 **Corr. Factor** +0.1 **Corrected** 1.1

Date and initials of person examining contents: AF 5/8

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WS	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 168556	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CCR BAT KS

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

60474705

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	AECOM	Report To:	Vasanta Kalluri	Attention:	Accounts Payable
Address:	6200 South Quebec St	Copy To:	Jamie Herman	Company Name:	AECOM
	Greenwood Village, CO 80111			Address:	Same as Section A
Email To:	jamie.herman@aecom.com	Purchase Order No.:	NEED PO #	Pace Quote Reference:	42700
Phone:	(303) 740-2614 Fax:	Project Name:	~~60709371~~ PRPA CCR 60754422	Pace Project Manager:	Heather Wilson
Requested Due Date/TAT:	Standard	Project Number:	~~60709371~~ 60754422	Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	9056 Cl, F, SO4	6020 Total Metals*	6010 Total Metals**	7470 Total Mercury	2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BAT-05-CCR	WT	G	—	—	5/7/25	0935		3	2		1						N	X	X	X	X	X	N	
2	BAT-03-CCR	WT	G	—	—	5/7/25	1125		3	2		1						N	X	X	X	X	X	N	
3	BAT-04R-CCR	WT	G	—	—	5/7/25	1300		7	4		3						N	X	X	X	X	X	N	
4	~~BAT-04R-CCR~~																								
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Sb, Tl	AECOM	5/7/25	1700	JAPace	5/8/25	0830	1-1 Y Y
**As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se							
Please perform MS/MSD on BAT-04R-CCR							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Hoppes & Olivia Helinski

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 05/07/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Client: Accom

Profile/EZ #: 11033-3

Site: PRPA CCR 60754422

Notes: Line 3 is RQS

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	1										
2																			1		1	1										
3																			1		3	3										
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60474705

Pace Analytical Services, LLC
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July 09, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

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

Sincerely,

Heather M. Wilson

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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2025.07.09 14:51:11 -07'00'
Document is certified

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60474710001	**BAT-09-CCR**	Water	05/06/25 09:00	05/07/25 08:30
60474710002	**BAT-06-CCR**	Water	05/06/25 11:25	05/07/25 08:30
60474710003	**BAT-12-CCR**	Water	05/06/25 13:25	05/07/25 08:30
60474710004	**DUP-01-CCR**	Water	05/06/25 00:00	05/07/25 08:30

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60474710001	**BAT-09-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474710002	**BAT-06-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474710003	**BAT-12-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474710004	**DUP-01-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Sample: BAT-09-CCR **Lab ID: 60474710001** Collected: 05/06/25 09:00 Received: 05/07/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:18	7440-38-2	
Barium	**11.6**	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:18	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/15/25 14:40	05/28/25 19:18	7440-41-7	
Boron	**2140**	ug/L	100	1	05/15/25 14:40	05/28/25 19:18	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:18	7440-43-9	
Calcium	**181000**	ug/L	200	1	05/15/25 14:40	05/28/25 19:18	7440-70-2	M1,P6
Chromium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:18	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:18	7440-48-4	
Lead	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:18	7439-92-1	
Lithium	**203**	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:18	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/15/25 14:40	05/28/25 19:18	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/15/25 14:40	05/28/25 19:18	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	2.0	2	05/12/25 11:18	06/10/25 11:04	7440-36-0	D3
Thallium	ND	ug/L	2.0	2	05/12/25 11:18	06/10/25 11:04	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:51	05/22/25 11:25	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2860**	mg/L	100	1		05/13/25 15:24		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**121**	mg/L	50.0	50		06/02/25 12:22	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 11:40	16984-48-8	
Sulfate	**1750**	mg/L	200	200		06/02/25 12:36	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Sample: BAT-06-CCR **Lab ID: 60474710002** Collected: 05/06/25 11:25 Received: 05/07/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:24	7440-38-2	
Barium	**12.0**	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:24	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/15/25 14:40	05/28/25 19:24	7440-41-7	
Boron	**1760**	ug/L	100	1	05/15/25 14:40	05/28/25 19:24	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:24	7440-43-9	
Calcium	**113000**	ug/L	200	1	05/15/25 14:40	05/28/25 19:24	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:24	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:24	7440-48-4	
Lead	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:24	7439-92-1	
Lithium	**161**	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:24	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/15/25 14:40	05/28/25 19:24	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/15/25 14:40	05/28/25 19:24	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	2.0	2	05/12/25 11:18	06/10/25 11:07	7440-36-0	D3
Thallium	ND	ug/L	2.0	2	05/12/25 11:18	06/10/25 11:07	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2460**	mg/L	100	1		05/13/25 15:24		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**11.0**	mg/L	1.0	1		06/02/25 11:13	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 11:13	16984-48-8	
Sulfate	**1720**	mg/L	200	200		06/02/25 11:27	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Sample: BAT-12-CCR **Lab ID: 60474710003** Collected: 05/06/25 13:25 Received: 05/07/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:26	7440-38-2	
Barium	**38.7**	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:26	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/15/25 14:40	05/28/25 19:26	7440-41-7	
Boron	**222**	ug/L	100	1	05/15/25 14:40	05/28/25 19:26	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:26	7440-43-9	
Calcium	**102000**	ug/L	200	1	05/15/25 14:40	05/28/25 19:26	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:26	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:26	7440-48-4	
Lead	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:26	7439-92-1	
Lithium	**86.6**	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:26	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/15/25 14:40	05/28/25 19:26	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/15/25 14:40	05/28/25 19:26	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	1.0	1	05/12/25 11:18	06/10/25 12:48	7440-36-0	
Thallium	ND	ug/L	1.0	1	05/12/25 11:18	06/10/25 12:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:39	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**990**	mg/L	20.0	1		05/13/25 15:24		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**157**	mg/L	50.0	50		06/02/25 10:59	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 10:45	16984-48-8	
Sulfate	**364**	mg/L	50.0	50		06/02/25 10:59	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Sample: DUP-01-CCR **Lab ID: 60474710004** Collected: 05/06/25 00:00 Received: 05/07/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:28	7440-38-2	
Barium	**61.1**	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:28	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/15/25 14:40	05/28/25 19:28	7440-41-7	
Boron	**217**	ug/L	100	1	05/15/25 14:40	05/28/25 19:28	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:28	7440-43-9	
Calcium	**96400**	ug/L	200	1	05/15/25 14:40	05/28/25 19:28	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:28	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/15/25 14:40	05/28/25 19:28	7440-48-4	
Lead	ND	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:28	7439-92-1	
Lithium	**90.3**	ug/L	10.0	1	05/15/25 14:40	05/28/25 19:28	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/15/25 14:40	05/28/25 19:28	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/15/25 14:40	05/28/25 19:28	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	1.0	1	05/12/25 11:18	06/10/25 12:09	7440-36-0	
Thallium	ND	ug/L	1.0	1	05/12/25 11:18	06/10/25 12:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:41	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**984**	mg/L	20.0	1		05/13/25 15:24		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**148**	mg/L	20.0	20		06/02/25 10:17	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 10:04	16984-48-8	
Sulfate	**370**	mg/L	20.0	20		06/02/25 10:17	14808-79-8	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

QC Batch: 935965
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60474710001

METHOD BLANK: 3710062 Matrix: Water
Associated Lab Samples: 60474710001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/22/25 10:28	

LABORATORY CONTROL SAMPLE: 3710063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3710064 3710065

Parameter	Units	60474364021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	4.9	4.9	97	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

QC Batch: 935966
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474710002, 60474710003, 60474710004

METHOD BLANK: 3710066 Matrix: Water
Associated Lab Samples: 60474710002, 60474710003, 60474710004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/22/25 11:28	

LABORATORY CONTROL SAMPLE: 3710067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3710068 3710069

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.7	4.7	94	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

QC Batch: 935258
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

METHOD BLANK: 3706837 Matrix: Water
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	05/28/25 19:15	
Barium	ug/L	ND	5.0	05/28/25 19:15	
Beryllium	ug/L	ND	1.0	05/28/25 19:15	
Boron	ug/L	ND	100	05/28/25 19:15	
Cadmium	ug/L	ND	5.0	05/28/25 19:15	
Calcium	ug/L	ND	200	05/28/25 19:15	
Chromium	ug/L	ND	5.0	05/28/25 19:15	
Cobalt	ug/L	ND	5.0	05/28/25 19:15	
Lead	ug/L	ND	10.0	05/28/25 19:15	
Lithium	ug/L	ND	10.0	05/28/25 19:15	
Molybdenum	ug/L	ND	20.0	05/28/25 19:15	
Selenium	ug/L	ND	15.0	05/28/25 19:15	

LABORATORY CONTROL SAMPLE: 3706838

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	883	88	80-120	
Barium	ug/L	1000	940	94	80-120	
Beryllium	ug/L	1000	969	97	80-120	
Boron	ug/L	1000	889	89	80-120	
Cadmium	ug/L	1000	956	96	80-120	
Calcium	ug/L	10000	9610	96	80-120	
Chromium	ug/L	1000	968	97	80-120	
Cobalt	ug/L	1000	1000	100	80-120	
Lead	ug/L	1000	969	97	80-120	
Lithium	ug/L	1000	959	96	80-120	
Molybdenum	ug/L	1000	948	95	80-120	
Selenium	ug/L	1000	939	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3706839 3706840

Parameter	Units	60474710001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	1000	1000	926	930	93	93	75-125	0	20	
Barium	ug/L	11.6	1000	1000	946	945	93	93	75-125	0	20	
Beryllium	ug/L	ND	1000	1000	986	979	99	98	75-125	1	20	
Boron	ug/L	2140	1000	1000	3060	3020	92	88	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3706839 3706840

Parameter	Units	60474710001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	928	933	93	93	75-125	1	20	
Calcium	ug/L	181000	10000	10000	192000	187000	108	59	75-125	3	20	M1
Chromium	ug/L	ND	1000	1000	942	929	94	93	75-125	1	20	
Cobalt	ug/L	ND	1000	1000	963	956	96	96	75-125	1	20	
Lead	ug/L	ND	1000	1000	919	921	92	92	75-125	0	20	
Lithium	ug/L	203	1000	1000	1150	1140	94	93	75-125	1	20	
Molybdenum	ug/L	ND	1000	1000	954	951	95	95	75-125	0	20	
Selenium	ug/L	ND	1000	1000	957	966	95	96	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

QC Batch: 934737
QC Batch Method: EPA 3010
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

METHOD BLANK: 3704327 Matrix: Water
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	06/09/25 15:29	
Thallium	ug/L	ND	1.0	06/09/25 15:29	

LABORATORY CONTROL SAMPLE: 3704328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	38.1	95	80-120	
Thallium	ug/L	40	39.3	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3704329 3704330

Parameter	Units	60474669005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	38.3	29.3	95	73	75-125	27	20	M1,R1
Thallium	ug/L	ND	40	40	38.7	29.1	97	73	75-125	28	20	M1,R1

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

QC Batch: 934869
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

METHOD BLANK: 3704937 Matrix: Water
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	05/13/25 15:23	

LABORATORY CONTROL SAMPLE: 3704938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 3704939

Parameter	Units	60474415002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	7220	7100	2	10	

SAMPLE DUPLICATE: 3704940

Parameter	Units	60474705003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3200	3170	1	10	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

QC Batch: 937094
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

METHOD BLANK: 3715153 Matrix: Water
Associated Lab Samples: 60474710001, 60474710002, 60474710003, 60474710004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/02/25 09:20	
Fluoride	mg/L	ND	0.20	06/02/25 09:20	
Sulfate	mg/L	ND	1.0	06/02/25 09:20	

LABORATORY CONTROL SAMPLE: 3715154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	80-120	
Fluoride	mg/L	2.5	2.6	104	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3715155 3715156

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	53.4	50	50	110	107	112	107	80-120	3	15	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	95	98	80-120	2	15	
Sulfate	mg/L	1920	1000	1000	2820	2790	90	87	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3715158 3715159

Parameter	Units	60475296001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	237	5	5	238	239	30	36	80-120	0	15	E,M1
Fluoride	mg/L	0.33	2.5	2.5	3.0	2.1	105	71	80-120	34	15	M1,R1
Sulfate	mg/L	161	5	5	164	165	69	72	80-120	0	15	E,M1

SAMPLE DUPLICATE: 3715157

Parameter	Units	60474705003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	53.4	50.9	5	15	
Fluoride	mg/L	ND	ND		15	
Sulfate	mg/L	1920	1840	4	15	

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

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

SAMPLE DUPLICATE: 3715160

Parameter	Units	60475296001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	237	237	0	15	E
Fluoride	mg/L	0.33	0.32	3	15	
Sulfate	mg/L	161	161	0	15	E

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

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 60474710

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60474710001	**BAT-09-CCR**	EPA 3010	935258	EPA 6010	935290
60474710002	**BAT-06-CCR**	EPA 3010	935258	EPA 6010	935290
60474710003	**BAT-12-CCR**	EPA 3010	935258	EPA 6010	935290
60474710004	**DUP-01-CCR**	EPA 3010	935258	EPA 6010	935290
60474710001	**BAT-09-CCR**	EPA 3010	934737	EPA 6020	934829
60474710002	**BAT-06-CCR**	EPA 3010	934737	EPA 6020	934829
60474710003	**BAT-12-CCR**	EPA 3010	934737	EPA 6020	934829
60474710004	**DUP-01-CCR**	EPA 3010	934737	EPA 6020	934829
60474710001	**BAT-09-CCR**	EPA 7470	935965	EPA 7470	935995
60474710002	**BAT-06-CCR**	EPA 7470	935966	EPA 7470	935996
60474710003	**BAT-12-CCR**	EPA 7470	935966	EPA 7470	935996
60474710004	**DUP-01-CCR**	EPA 7470	935966	EPA 7470	935996
60474710001	**BAT-09-CCR**	SM 2540C	934869		
60474710002	**BAT-06-CCR**	SM 2540C	934869		
60474710003	**BAT-12-CCR**	SM 2540C	934869		
60474710004	**DUP-01-CCR**	SM 2540C	934869		
60474710001	**BAT-09-CCR**	EPA 9056	937094		
60474710002	**BAT-06-CCR**	EPA 9056	937094		
60474710003	**BAT-12-CCR**	EPA 9056	937094		
60474710004	**DUP-01-CCR**	EPA 9056	937094		

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WO# : 60474710

60474710

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: AECOM

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 449389303658 Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☒ Other ☐

Thermometer Used: T301 2.2 **Type of Ice:** (Wet) Blue None 2.3

Cooler Temperature (°C): **As-read** 2.0 **Corr. Factor** +0.1 **Corrected** 2.1

Date and initials of person examining contents: DFS/8

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☐No ☒N/A	
Rush Turn Around Time requested:	☐Yes ☐No ☒N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 96888	☒Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☒N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CCR KS BAT

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	9056 Cl, F, SO_4	6020 Total Metals*	6010 Total Metals**	7470 Total Mercury	2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME											Y/N	N	N	N	N	N		
1	BAT-09-CCR	WT	G	—	—	5/6/25	0900		3	2		1						X	X	X	X	X	N	
2	BAT-06-CCR	WT	G	—	—	5/6/25	1125		3	2		1						X	X	X	X	X	N	
3	BAT-12-CCR	WT	G	—	—	5/6/25	1325		3	2		1						X	X	X	X	X		
4	DUP-01-CCR	WT	G	—	—	5/6/25	—		3	2		1						X	X	X	X	X		
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Sb, Tl	[signature] / AECOM	5/6/25	1700	JAPAC	5/7/25	0830	2-2	Y	Y	
**As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se							2-3	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPL: Kara Hoppes & Olivia Helinski

SIGNATURE of SAMPL: [signature]

DATE Signed (MM/DD/YY): 05/06/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month any invoices not paid within 30 days.

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024
Client: AECOM

Profile/EZ # 11033,2

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																															
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 10477710

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

July 09, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

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

Sincerely,

Heather M. Wilson

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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2025.07.09 15:01:01 -07'00'
Document is certified

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60474729001	**BAT-05-CCR**	Water	05/07/25 09:35	05/08/25 09:30
60474729002	**BAT-03-CCR**	Water	05/07/25 11:25	05/08/25 09:30
60474729003	**BAT-04R-CCR**	Water	05/07/25 13:00	05/08/25 09:30
60474729004	**BAT-04R-CCR MS**	Water	05/07/25 13:00	05/08/25 09:30
60474729005	**BAT-04R-CCR MSD**	Water	05/07/25 13:00	05/08/25 09:30

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60474729001	**BAT-05-CCR**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474729002	**BAT-03-CCR**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474729003	**BAT-04R-CCR**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474729004	**BAT-04R-CCR MS**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
60474729005	**BAT-04R-CCR MSD**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Sample: BAT-05-CCR **Lab ID: 60474729001** Collected: 05/07/25 09:35 Received: 05/08/25 09:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.20 ± 0.797 (1.07) C:NA T:84%**	pCi/L	05/24/25 13:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.87 ± 0.568 (0.706) C:81% T:85%**	pCi/L	05/23/25 11:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**3.07 ± 1.37 (1.78)**	pCi/L	05/27/25 13:53	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Sample: BAT-03-CCR **Lab ID: 60474729002** Collected: 05/07/25 11:25 Received: 05/08/25 09:30 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0659 ± 0.735 (1.18) C:NA T:98%**	pCi/L	05/24/25 13:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.17 ± 0.455 (0.674) C:79% T:81%**	pCi/L	05/23/25 11:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.24 ± 1.19 (1.85)**	pCi/L	05/27/25 13:53	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Sample: BAT-04R-CCR **Lab ID: 60474729003** Collected: 05/07/25 13:00 Received: 05/08/25 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0634 ± 0.381 (0.628) C:NA T:96%**	pCi/L	05/24/25 13:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.567 ± 0.351 (0.645) C:74% T:91%**	pCi/L	05/23/25 11:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.630 ± 0.732 (1.27)**	pCi/L	05/27/25 13:53	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Sample: BAT-04R-CCR MS **Lab ID: 60474729004** Collected: 05/07/25 13:00 Received: 05/08/25 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**112.69 %REC ± NA (NA) C:NA T:NA**	pCi/L	05/24/25 13:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**111.41 %REC ± NA (NA) C:NA T:NA**	pCi/L	05/23/25 11:06	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Sample: BAT-04R-CCR MSD **Lab ID: 60474729005** Collected: 05/07/25 13:00 Received: 05/08/25 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**103.04 %REC 8.95RPD ± NA (NA) C:NA T:NA**	pCi/L	05/24/25 13:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**112.73 %REC 1.18RPD ± NA (NA) C:NA T:NA**	pCi/L	05/23/25 11:06	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

QC Batch: 745050
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60474729001, 60474729002, 60474729003, 60474729004, 60474729005

METHOD BLANK: 3627280 Matrix: Water
Associated Lab Samples: 60474729001, 60474729002, 60474729003, 60474729004, 60474729005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.729 ± 0.497 (0.958) C:80% T:70%	pCi/L	05/23/25 11:04	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

QC Batch: 745049
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60474729001, 60474729002, 60474729003, 60474729004, 60474729005

METHOD BLANK: 3627279 Matrix: Water
Associated Lab Samples: 60474729001, 60474729002, 60474729003, 60474729004, 60474729005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0572 ± 0.231 (0.403) C:NA T:92%	pCi/L	05/24/25 13:38	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 60474729

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60474729001	**BAT-05-CCR**	EPA 903.1	745049		
60474729002	**BAT-03-CCR**	EPA 903.1	745049		
60474729003	**BAT-04R-CCR**	EPA 903.1	745049		
60474729004	**BAT-04R-CCR MS**	EPA 903.1	745049		
60474729005	**BAT-04R-CCR MSD**	EPA 903.1	745049		
60474729001	**BAT-05-CCR**	EPA 904.0	745050		
60474729002	**BAT-03-CCR**	EPA 904.0	745050		
60474729003	**BAT-04R-CCR**	EPA 904.0	745050		
60474729004	**BAT-04R-CCR MS**	EPA 904.0	745050		
60474729005	**BAT-04R-CCR MSD**	EPA 904.0	745050		
60474729001	**BAT-05-CCR**	Total Radium Calculation	748065		
60474729002	**BAT-03-CCR**	Total Radium Calculation	748065		
60474729003	**BAT-04R-CCR**	Total Radium Calculation	748065		

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CCR PM BAT1

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A — Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D — Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BAT-05-CCR	WT	G	—	—	5/7/25	0935		2			2						X	X	X	N	
2	BAT-03-CCR	WT	G	—	—	5/7/25	1125		2			2						X	X	X	N	
3	BAT-04R-CCR	WT	G	—	—	5/7/25	1300		6			6						X	X	X	N	
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please perform MS/MSD on BAT-04R-CCR	AECOM	5/7/25	1700		5-8-25	0930	—	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Hoppes & Olivia Helinski

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 05/07/25

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Updated CoC received via email on: 5-9-25

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: CO
Cert. Needed: ☐ Yes ☐ No

Workorder: 60474729 **Workorder Name:** 60754422 PRPA CCR

Owner Received Date: 5/8/2025 **Results Requested By:** 5/30/2025

Report To	Subcontract To
Heather Wilson Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 1(913)563-1407	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Total Radium-226, Total Sum Radium	Total Radium-228	LAB USE ONLY
1	BAT-05-CCR	PS	5/7/2025 09:35	60474729001	Water	2	X	X	001
2	BAT-03-CCR	PS	5/7/2025 11:25	60474729002	Water	2	X	X	002
3	BAT-04R-CCR	PS	5/7/2025 13:00	60474729003	Water	2	X	X	003
4	BAT-04R-CCR MS	PS	5/7/2025 13:00	60474729004	Water	1	X	X	004
5	BAT-04R-CCR MSD	PS	5/7/2025 13:00	60474729005	Water	1	X	X	005

Transfers	Released By	Date/Time	Received By	Date/Time
1			Heather Smith	5/8/25 09:30
2				
3				

Comments
IR30- Radium QC Sheets Required

Cooler Temperature on Receipt ___ °C | **Custody Seal** (Y) or N | **Received on Ice** Y or (N) | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO# : 30778269

30778269

CCR PM BAT

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

WO# : 30778269

PM: CMC Due Date: 05/30/25

CLIENT: PACE_60_LEKS

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	AECOM	Report To:	Vasanta Kalluri	Attention:	Accounts Payable
Address:	6200 South Quebec St	Copy To:	Jamie Herman	Company Name:	AECOM
	Greenwood Village, CO 80111			Address:	Same as Section A
Email To:	jamie.herman@aecom.com	Purchase Order No.:	NEED PO #	Pace Quote Reference:	42700
Phone:	(303) 740-2614 Fax:	Project Name:	~~60709371~~ PRPA CCR 60754422	Pace Project Manager:	Heather Wilson
Requested Due Date/TAT:	Standard	Project Number:	~~60709371~~ 60754422	Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				Requested Analysis Filtered (Y/N)														Y/N	N	N	N		
1	BAT-05-CCR	WT	G	—	—	5/7/25	0935		2			2							X	X	X	N	
2	BAT-03-CCR	WT	G	—	—	5/7/25	1125		2			2							X	X	X	N	
3	BAT-04R-CCR	WT	G	—	—	5/7/25	1300		6			6							X	X	X	N	
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please perform MS/MSD on BAT-04R-CCR	AECOM	5/7/25	1200	FEDEX	5.8.25	0930	—	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Hoppes & Olivia Helinski

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 05/07/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO# : 30778269

PM: CMC Due Date: 05/30/25

CLIENT: PACE_60_LEKS

Client Name: AECOM

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 4453 8930 3290

Initial / Date

Examined By: MS 5/8/25

Labeled By: MS 5/10/25

Temped By: —

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No Seals Intact: ☑ Yes ☐ No

Thermometer Used: — Type of Ice: Wet Blue (None)

Cooler Temperature: Observed Temp ~ °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 10D3241 / D.P.D. Residual Chlorine Lot # —
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID				
Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dichlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH < 2
All containers meet method preservation requirements:	✓			Initial when completed MS / Date/Time of Preservation
				Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed BR / Date: 5.8.25 / Survey Meter SN: 25014380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Page 1 of 1

Qualtrax ID: 55680

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	ZPC
Date:	5/15/2025
Worklist:	85077
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3627280
MB concentration:	0.729
M/B 2 Sigma CSU:	0.497
MB MDC:	0.958
MB Numerical Performance Indicator:	2.88
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS85077	LCSD85077
Count Date:	5/23/2025	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	32.490	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.821	
Target Conc. (pCi/L, g, F):	3.957	
Uncertainty (Calculated):	0.194	
Result (pCi/L, g, F):	4.258	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.999	
Numerical Performance Indicator:	0.58	
Percent Recovery:	107.60%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/7/2025	5/7/2025
Sample I.D.	60474729003	60474728004
Sample MS I.D.	60474729004	60474728006
Sample MSD I.D.	60474729005	60474728007
Spike I.D.:	23-043	23-043
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.661	32.661
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.809	0.810
MS Target Conc.(pCi/L, g, F):	8.078	8.069
MSD Aliquot (L, g, F):	0.806	0.801
MSD Target Conc. (pCi/L, g, F):	8.103	8.151
MS Spike Uncertainty (calculated):	0.396	0.395
MSD Spike Uncertainty (calculated):	0.397	0.399
Sample Result:	0.567	0.674
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.351	0.367
Sample Matrix Spike Result:	9.566	7.822
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.916	1.615
Sample Matrix Spike Duplicate Result:	9.701	8.175
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.943	1.657
MS Numerical Performance Indicator:	0.909	-1.060
MSD Numerical Performance Indicator:	1.004	-0.730
MS Percent Recovery:	111.41%	88.59%
MSD Percent Recovery:	112.73%	92.03%
MS Status vs Numerical Indicator:	Pass	Pass
MSD Status vs Numerical Indicator:	Pass	Pass
MS Status vs Recovery:	Pass	Pass
MSD Status vs Recovery:	Pass	Pass
MS/MSD Upper % Recovery Limits:	135%	135%
MS/MSD Lower % Recovery Limits:	60%	60%

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	60474729003	60474728004
Sample MS I.D.	60474729004	60474728006
Sample MSD I.D.	60474729005	60474728007
Sample Matrix Spike Result:	9.566	7.822
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.916	1.615
Sample Matrix Spike Duplicate Result:	9.701	8.175
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.943	1.657
Duplicate Numerical Performance Indicator:	-0.097	-0.299
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	1.18%	3.81%
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/ MSD Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

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

Comments:

5/27/25

ET 5-27-25

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LL1
Date:	5/14/2025
Batch ID:	85076
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3627279
MB concentration:	0.057
MB 2 Sigma CSU:	0.231
MB MDC:	0.403
MB Numerical Performance Indicator:	0.48
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS85076	LCSD85076
Count Date:	5/24/2025	
Spike I.D.:	24-046	
Spike Concentration (pCi/mL):	31.831	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.651	
Target Conc. (pCi/L, g, F):	4.892	
Uncertainty (Calculated):	0.230	
Result (pCi/L, g, F):	5.553	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.203	
Numerical Performance Indicator:	1.06	
Percent Recovery:	113.52%	
Status vs Numerical Indicator:	Pass	
Status vs Recovery:	N/A	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/7/2025	5/7/2025
Sample I.D.	60474729003	60474728004
Sample MS I.D.	60474729004	60474728006
Sample MSD I.D.	60474729005	60474728007
Spike I.D.:	24-046	24-046
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	31.831	31.831
Spike Volume Used in MS (mL):	0.20	0.20
Spike Volume Used in MSD (mL):	0.20	0.20
MS Aliquot (L, g, F):	0.652	0.657
MS Target Conc.(pCi/L, g, F):	9.765	9.694
MSD Aliquot (L, g, F):	0.655	0.654
MSD Target Conc. (pCi/L, g, F):	9.716	9.735
MS Spike Uncertainty (calculated):	0.459	0.456
MSD Spike Uncertainty (calculated):	0.457	0.458
Sample Result:	0.063	0.221
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.381	0.632
Sample Matrix Spike Result:	11.068	7.407
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.774	1.289
Sample Matrix Spike Duplicate Result:	10.074	8.666
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.628	1.397
MS Numerical Performance Indicator:	1.298	-3.263
MSD Numerical Performance Indicator:	0.334	-1.580
MS Percent Recovery:	112.69%	74.13%
MSD Percent Recovery:	103.04%	86.75%
MS Status vs Numerical Indicator:	Pass	Fail****
MSD Status vs Numerical Indicator:	Pass	Pass
MS Status vs Recovery:	N/A	N/A
MSD Status vs Recovery:	N/A	N/A
MS/MSD Upper % Recovery Limits:	136%	136%
MS/MSD Lower % Recovery Limits:	71%	71%

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	60474729003	60474728004
Sample MS I.D.	60474729004	60474728006
Sample MSD I.D.	60474729005	60474728007
Sample Matrix Spike Result:	11.068	7.407
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.774	1.289
Sample Matrix Spike Duplicate Result:	10.074	8.666
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.628	1.397
Duplicate Numerical Performance Indicator:	0.809	-1.298
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	8.95%	15.69%
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	Pass
MS/ MSD Duplicate Status vs RPD:	N/A	N/A
% RPD Limit:	32%	32%

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

Comments:

5/25/25

CM 5/24/25

Pace Analytical Services, LLC
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(913)599-5665

July 09, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 09, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

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

Sincerely,

Heather M. Wilson

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

Pace Analytical Services, LLC
2025.07.09 14:55:41 -07'00'
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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60474878001	**BAT-01-CCR**	Water	05/08/25 09:30	05/09/25 08:30
60474878002	**ERB-01-CCR**	Water	05/08/25 09:35	05/09/25 08:30
60474878003	**BAT-10-CCR**	Water	05/08/25 11:25	05/09/25 08:30
60474878004	**BAT-02-CCR**	Water	05/08/25 13:35	05/09/25 08:30

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60474878001	**BAT-01-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474878002	**ERB-01-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474878003	**BAT-10-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K
60474878004	**BAT-02-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Sample: BAT-01-CCR **Lab ID: 60474878001** Collected: 05/08/25 09:30 Received: 05/09/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:05	7440-38-2	
Barium	**61.1**	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:05	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/19/25 14:28	06/04/25 19:05	7440-41-7	
Boron	**1280**	ug/L	100	1	05/19/25 14:28	06/04/25 19:05	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:05	7440-43-9	
Calcium	**101000**	ug/L	200	1	05/19/25 14:28	06/04/25 19:05	7440-70-2	M1,P6
Chromium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:05	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:05	7440-48-4	
Lead	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:05	7439-92-1	
Lithium	**150**	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:05	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/19/25 14:28	06/04/25 19:05	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/19/25 14:28	06/04/25 19:05	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 13:39	7440-36-0	D3
Thallium	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 13:39	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:55	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1910**	mg/L	66.7	1		05/14/25 16:08		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**346**	mg/L	50.0	50		06/02/25 18:22	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 18:08	16984-48-8	
Sulfate	**622**	mg/L	50.0	50		06/02/25 18:22	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Sample: ERB-01-CCR **Lab ID: 60474878002** Collected: 05/08/25 09:35 Received: 05/09/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:11	7440-38-2	
Barium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:11	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/19/25 14:28	06/04/25 19:11	7440-41-7	
Boron	ND	ug/L	100	1	05/19/25 14:28	06/04/25 19:11	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:11	7440-43-9	
Calcium	ND	ug/L	200	1	05/19/25 14:28	06/04/25 19:11	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:11	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:11	7440-48-4	
Lead	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:11	7439-92-1	
Lithium	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:11	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/19/25 14:28	06/04/25 19:11	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/19/25 14:28	06/04/25 19:11	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	1.0	1	05/13/25 09:18	06/10/25 13:42	7440-36-0	
Thallium	ND	ug/L	1.0	1	05/13/25 09:18	06/10/25 13:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 11:57	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	ND	mg/L	5.0	1		05/14/25 16:08		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	ND	mg/L	1.0	1		06/02/25 17:54	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 17:54	16984-48-8	
Sulfate	ND	mg/L	1.0	1		06/02/25 17:54	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Sample: BAT-10-CCR **Lab ID: 60474878003** Collected: 05/08/25 11:25 Received: 05/09/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:13	7440-38-2	
Barium	**14.1**	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:13	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/19/25 14:28	06/04/25 19:13	7440-41-7	
Boron	**755**	ug/L	100	1	05/19/25 14:28	06/04/25 19:13	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:13	7440-43-9	
Calcium	**388000**	ug/L	200	1	05/19/25 14:28	06/04/25 19:13	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:13	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:13	7440-48-4	
Lead	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:13	7439-92-1	
Lithium	**209**	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:13	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/19/25 14:28	06/04/25 19:13	7439-98-7	
Selenium	**140**	ug/L	15.0	1	05/19/25 14:28	06/04/25 19:13	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 13:47	7440-36-0	D3
Thallium	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 13:47	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 12:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**4100**	mg/L	125	1		05/14/25 16:08		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**24.3**	mg/L	5.0	5		06/03/25 21:40	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 19:17	16984-48-8	
Sulfate	**2730**	mg/L	200	200		06/02/25 19:31	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Sample: BAT-02-CCR **Lab ID: 60474878004** Collected: 05/08/25 13:35 Received: 05/09/25 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:15	7440-38-2	
Barium	**10.9**	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:15	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/19/25 14:28	06/04/25 19:15	7440-41-7	
Boron	**1040**	ug/L	100	1	05/19/25 14:28	06/04/25 19:15	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:15	7440-43-9	
Calcium	**319000**	ug/L	200	1	05/19/25 14:28	06/04/25 19:15	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:15	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/19/25 14:28	06/04/25 19:15	7440-48-4	
Lead	ND	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:15	7439-92-1	
Lithium	**192**	ug/L	10.0	1	05/19/25 14:28	06/04/25 19:15	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/19/25 14:28	06/04/25 19:15	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/19/25 14:28	06/04/25 19:15	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 13:50	7440-36-0	D3
Thallium	ND	ug/L	2.0	2	05/13/25 09:18	06/10/25 13:50	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/21/25 14:19	05/22/25 12:06	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2950**	mg/L	100	1		05/14/25 16:08		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**180**	mg/L	50.0	50		06/02/25 18:49	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/02/25 18:35	16984-48-8	
Sulfate	**1650**	mg/L	200	200		06/02/25 19:03	14808-79-8	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

QC Batch: 935966
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

METHOD BLANK: 3710066 Matrix: Water
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/22/25 11:28	

LABORATORY CONTROL SAMPLE: 3710067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3710068 3710069

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.7	4.7	94	95	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

QC Batch: 935602
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

METHOD BLANK: 3708648 Matrix: Water
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	06/04/25 19:02	
Barium	ug/L	ND	5.0	06/04/25 19:02	
Beryllium	ug/L	ND	1.0	06/04/25 19:02	
Boron	ug/L	ND	100	06/04/25 19:02	
Cadmium	ug/L	ND	5.0	06/04/25 19:02	
Calcium	ug/L	ND	200	06/04/25 19:02	
Chromium	ug/L	ND	5.0	06/04/25 19:02	
Cobalt	ug/L	ND	5.0	06/04/25 19:02	
Lead	ug/L	ND	10.0	06/04/25 19:02	
Lithium	ug/L	ND	10.0	06/04/25 19:02	
Molybdenum	ug/L	ND	20.0	06/04/25 19:02	
Selenium	ug/L	ND	15.0	06/04/25 19:02	

LABORATORY CONTROL SAMPLE: 3708649

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	870	87	80-120	
Barium	ug/L	1000	961	96	80-120	
Beryllium	ug/L	1000	947	95	80-120	
Boron	ug/L	1000	891	89	80-120	
Cadmium	ug/L	1000	953	95	80-120	
Calcium	ug/L	10000	9730	97	80-120	
Chromium	ug/L	1000	963	96	80-120	
Cobalt	ug/L	1000	988	99	80-120	
Lead	ug/L	1000	964	96	80-120	
Lithium	ug/L	1000	972	97	80-120	
Molybdenum	ug/L	1000	949	95	80-120	
Selenium	ug/L	1000	924	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3708650 3708651

Parameter	Units	60474878001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	1000	1000	951	949	95	95	75-125	0	20	
Barium	ug/L	61.1	1000	1000	1060	1060	100	100	75-125	0	20	
Beryllium	ug/L	ND	1000	1000	1010	1010	101	101	75-125	0	20	
Boron	ug/L	1280	1000	1000	2250	2270	97	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3708650 3708651

Parameter	Units	60474878001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	969	957	97	96	75-125	1	20	
Calcium	ug/L	101000	10000	10000	113000	115000	119	138	75-125	2	20	M1
Chromium	ug/L	ND	1000	1000	983	990	98	99	75-125	1	20	
Cobalt	ug/L	ND	1000	1000	999	1010	100	101	75-125	1	20	
Lead	ug/L	ND	1000	1000	956	944	95	94	75-125	1	20	
Lithium	ug/L	150	1000	1000	1140	1160	99	101	75-125	1	20	
Molybdenum	ug/L	ND	1000	1000	999	1010	99	100	75-125	1	20	
Selenium	ug/L	ND	1000	1000	982	973	98	97	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

QC Batch: 934855
QC Batch Method: EPA 3010
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

METHOD BLANK: 3704892 Matrix: Water
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	06/10/25 11:29	
Thallium	ug/L	ND	1.0	06/10/25 11:29	

LABORATORY CONTROL SAMPLE: 3704893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	38.2	95	80-120	
Thallium	ug/L	40	39.1	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3704894 3704895

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	38.1	37.8	95	94	75-125	1	20	
Thallium	ug/L	ND	40	40	41.9	41.6	105	104	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

QC Batch: 935019
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

METHOD BLANK: 3705708 Matrix: Water
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	05/14/25 16:07	

LABORATORY CONTROL SAMPLE: 3705709

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 3705710

Parameter	Units	60474942001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	466	477	2	10	

SAMPLE DUPLICATE: 3705711

Parameter	Units	60474802006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	431	423	2	10	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

QC Batch: 937094
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

METHOD BLANK: 3715153 Matrix: Water
Associated Lab Samples: 60474878001, 60474878002, 60474878003, 60474878004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/02/25 09:20	
Fluoride	mg/L	ND	0.20	06/02/25 09:20	
Sulfate	mg/L	ND	1.0	06/02/25 09:20	

LABORATORY CONTROL SAMPLE: 3715154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	80-120	
Fluoride	mg/L	2.5	2.6	104	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3715155 3715156

Parameter	Units	60474705003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	53.4	50	50	110	107	112	107	80-120	3	15	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	95	98	80-120	2	15	
Sulfate	mg/L	1920	1000	1000	2820	2790	90	87	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3715158 3715159

Parameter	Units	60475296001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	237	5	5	238	239	30	36	80-120	0	15	E,M1
Fluoride	mg/L	0.33	2.5	2.5	3.0	2.1	105	71	80-120	34	15	M1,R1
Sulfate	mg/L	161	5	5	164	165	69	72	80-120	0	15	E,M1

SAMPLE DUPLICATE: 3715157

Parameter	Units	60474705003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	53.4	50.9	5	15	
Fluoride	mg/L	ND	ND		15	
Sulfate	mg/L	1920	1840	4	15	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

SAMPLE DUPLICATE: 3715160

Parameter	Units	60475296001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	237	237	0	15	E
Fluoride	mg/L	0.33	0.32	3	15	
Sulfate	mg/L	161	161	0	15	E

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 60474878

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60474878001	**BAT-01-CCR**	EPA 3010	935602	EPA 6010	935624
60474878002	**ERB-01-CCR**	EPA 3010	935602	EPA 6010	935624
60474878003	**BAT-10-CCR**	EPA 3010	935602	EPA 6010	935624
60474878004	**BAT-02-CCR**	EPA 3010	935602	EPA 6010	935624
60474878001	**BAT-01-CCR**	EPA 3010	934855	EPA 6020	934953
60474878002	**ERB-01-CCR**	EPA 3010	934855	EPA 6020	934953
60474878003	**BAT-10-CCR**	EPA 3010	934855	EPA 6020	934953
60474878004	**BAT-02-CCR**	EPA 3010	934855	EPA 6020	934953
60474878001	**BAT-01-CCR**	EPA 7470	935966	EPA 7470	935996
60474878002	**ERB-01-CCR**	EPA 7470	935966	EPA 7470	935996
60474878003	**BAT-10-CCR**	EPA 7470	935966	EPA 7470	935996
60474878004	**BAT-02-CCR**	EPA 7470	935966	EPA 7470	935996
60474878001	**BAT-01-CCR**	SM 2540C	935019		
60474878002	**ERB-01-CCR**	SM 2540C	935019		
60474878003	**BAT-10-CCR**	SM 2540C	935019		
60474878004	**BAT-02-CCR**	SM 2540C	935019		
60474878001	**BAT-01-CCR**	EPA 9056	937094		
60474878002	**ERB-01-CCR**	EPA 9056	937094		
60474878003	**BAT-10-CCR**	EPA 9056	937094		
60474878004	**BAT-02-CCR**	EPA 9056	937094		

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WO# : 60474878

60474878

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co		
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Aecom

Courier: FedEx ☑ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 449384307647 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☑ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: T301 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): As-read 0.9 **Corr. Factor** +0.1 **Corrected** 1.0

Date and initials of person examining contents: AF 5/9

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 466866	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CCR ES BAT

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

60474876

Page: 1 of 1

Section A — **Required** Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B — **Required** Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D — **Required** Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	9056 Cl, F, SO4	6020 Total Metals*	6010 Total Metals**	7470 Total Mercury	2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BAT-01-CCR	WT	G	—	—	5/8/25	0930		3	2		1						X	X	X	X	X	N	
2	ERB-01-CCR	WT	G	—	—	5/8/25	0935		3	2		1						X	X	X	X	X	N	
3	BAT-10-CCR	WT	G	—	—	5/8/25	1125		3	2		1						X	X	X	X	X	N	
4	BAT-02-CCR	WT	G	—	—	5/8/25	1335		3	2		1						X	X	X	X	X	N	
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Sb, Tl	[signature] / AECOM	5/8/25	1700	JAPace	5/9/25	0830	1.0	Y	Y	
**As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Hoppes & Olivia Helinski

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 05/08/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Client: Aecom

Profile/EZ # 11033-3

Site: PRPH CCR 60754422

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	1										
2																			1		1	1										
3																			1		1	1										
4																			1		1	1										
5																			1		1	1										
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number: 60474878

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

July 09, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 10, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

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

Sincerely,

Heather M. Wilson

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

Pace Analytical Services, LLC
2025.07.09 15:02:53 -07'00'
Document is certified

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60474978001	**BAT-01-CCR**	Water	05/08/25 09:30	05/10/25 11:30
60474978002	**ERB-01-CCR**	Water	05/08/25 09:35	05/10/25 11:30
60474978003	**BAT-10-CCR**	Water	05/08/25 11:25	05/10/25 11:30
60474978004	**BAT-02-CCR**	Water	05/08/25 13:35	05/10/25 11:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60474978001	**BAT-01-CCR**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474978002	**ERB-01-CCR**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474978003	**BAT-10-CCR**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60474978004	**BAT-02-CCR**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Sample: BAT-01-CCR **Lab ID: 60474978001** Collected: 05/08/25 09:30 Received: 05/10/25 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.723 ± 0.830 (1.77) C:NA T:94%**	pCi/L	05/28/25 14:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.326 ± 0.384 (0.809) C:76% T:88%**	pCi/L	05/29/25 15:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.326 ± 1.21 (2.58)**	pCi/L	05/30/25 14:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Sample: ERB-01-CCR **Lab ID: 60474978002** Collected: 05/08/25 09:35 Received: 05/10/25 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.595 ± 0.832 (1.41) C:NA T:94%**	pCi/L	05/28/25 14:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0182 ± 0.308 (0.716) C:81% T:82%**	pCi/L	05/29/25 15:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.613 ± 1.14 (2.13)**	pCi/L	05/30/25 14:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Sample: BAT-10-CCR **Lab ID: 60474978003** Collected: 05/08/25 11:25 Received: 05/10/25 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.843 ± 0.897 (1.46) C:NA T:92%**	pCi/L	05/28/25 14:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.623 ± 0.394 (0.744) C:76% T:94%**	pCi/L	05/29/25 15:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.47 ± 1.29 (2.20)**	pCi/L	05/30/25 14:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Sample: BAT-02-CCR **Lab ID: 60474978004** Collected: 05/08/25 13:35 Received: 05/10/25 11:30 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.02 ± 1.06 (1.72) C:NA T:87%**	pCi/L	05/28/25 14:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.703 ± 0.397 (0.717) C:77% T:89%**	pCi/L	05/29/25 15:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.72 ± 1.46 (2.44)**	pCi/L	05/30/25 14:28	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

QC Batch: 747346
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60474978001, 60474978002, 60474978003, 60474978004

METHOD BLANK: 3639832 Matrix: Water
Associated Lab Samples: 60474978001, 60474978002, 60474978003, 60474978004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.275 (0.616) C:NA T:91%	pCi/L	05/28/25 14:27	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

QC Batch: 747350
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60474978001, 60474978002, 60474978003, 60474978004

METHOD BLANK: 3639834 Matrix: Water
Associated Lab Samples: 60474978001, 60474978002, 60474978003, 60474978004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.995 ± 0.443 (0.727) C:77% T:88%	pCi/L	05/29/25 12:09	

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

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 60474978

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60474978001	**BAT-01-CCR**	EPA 903.1	747346		
60474978002	**ERB-01-CCR**	EPA 903.1	747346		
60474978003	**BAT-10-CCR**	EPA 903.1	747346		
60474978004	**BAT-02-CCR**	EPA 903.1	747346		
60474978001	**BAT-01-CCR**	EPA 904.0	747350		
60474978002	**ERB-01-CCR**	EPA 904.0	747350		
60474978003	**BAT-10-CCR**	EPA 904.0	747350		
60474978004	**BAT-02-CCR**	EPA 904.0	747350		
60474978001	**BAT-01-CCR**	Total Radium Calculation	748986		
60474978002	**ERB-01-CCR**	Total Radium Calculation	748986		
60474978003	**BAT-10-CCR**	Total Radium Calculation	748986		
60474978004	**BAT-02-CCR**	Total Radium Calculation	748986		

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CCR XH BAT

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A — Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER

Site Location STATE: CO

Section D — Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		
1	BAT-01-CCR	WT	G	—	—	5/8/25	0930		2			X							X	X	X	N	
2	ERB-01-CCR	WT	G	—	—	5/8/25	0935		2			X							X	X	X	N	
3	BAT-10-CCR	WT	G	—	—	5/8/25	1125		2			X							X	X	X	N	
4	BAT-02-CCR	WT	G	—	—	5/8/25	1335		2			X							X	X	X	N	
5																						N	
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	AECOM	5/8/25	1700		5/9/25	1130	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Hoppes & Olivia Helinski

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 05/08/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Updated COC received via Gmail on: 5-14-25

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: CO
Cert. Needed: ☐ Yes ☒ No

Workorder: 60474978 Workorder Name: 60754422 PRPA CCR

Owner Received Date: 5/12/2025 Results Requested By: 6/3/2025

Report To	Subcontract To
Heather Wilson Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 1(913)563-1407	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis: Total Radium-226, Total Sum Radium	Total Radium-228											LAB USE ONLY
1	BAT-01-CCR	PS	5/8/2025 09:30	60474978001	Water	2						X	X											001
2	ERB-01-CCR	PS	5/8/2025 09:35	60474978002	Water	2						X	X											002
3	BAT-10-CCR	PS	5/8/2025 11:25	60474978003	Water	2						X	X											003
4	BAT-02-CCR	PS	5/8/2025 13:35	60474978004	Water	2						X	X											004
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1			[signature]	5.10.25 1130
2				
3				

Comments: IR30- Radium QC Sheets Required

Cooler Temperature on Receipt ___ °C | Custody Seal (Y) or N | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO# : 30779277

30779277

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-GBUR-0088 v07_Sam Greensburg Effective Date: 01/04/2024	WO# : 30779277 PM: CMC Due Date: 05/22/25 CLIENT: PACE_60_LEKS

Client Name: Pace-KS/AECOM

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 4453 8930 3305

Initial / Date

Examined By: LB 5-14-25
Labeled By: LB 5-14-25
Temped By: —

Custody Seal on Cooler/Box Present: ☒ Yes ☐No **Seals Intact:** ☒ Yes ☐No

Thermometer Used: — **Type of Ice:** Wet Blue None

Cooler Temperature: Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot#	D.P.D. Residual Chlorine Lot #
10043241	

Comments:	Yes	No	NA	
Chain of Custody Present	X			1. Updated COC/IRWO received via email on 5-14-25
Chain of Custody Filled Out:	X			2.
-Were client corrections present on COC		X		
Chain of Custody Relinquished		X		3. Original CoC only
Sampler Name & Signature on COC:		X		4. Original CoC only
Sample Labels match COC:	X			5.
-Includes date/time/ID				
Matrix: WT				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used	X			
Containers Intact:	X			11.
Orthophosphate field filtered:			X	12.
Hex Cr Aqueous samples field filtered:			X	13.
Organic Samples checked for dichlorination			X	14:
Filtered volume received for dissolved tests:			X	15:
All containers checked for preservation:	X			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	X			Initial when completed LB / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			X	17.
624.1: Headspace in VOA Vials (0mm)			X	18.
Radon: Headspace in RAD Vials (0mm)			X	19.
Trip Blank Present:			X	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed BK / Date: 5.10.25 / Survey Meter SN: 25CUR80

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Page 1 of 1

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CHAIN-OF-CUSTODY / Analytical Request Doc

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed a

WO# : 30779277

PM: CMC **Due Date: 05/22/25**

CLIENT: PACE_60_LEKS

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	AECOM	Report To:	Vasanta Kalluri	Attention:	Accounts Payable
Address:	6200 South Quebec St	Copy To:	Jamie Herman	Company Name:	AECOM
	Greenwood Village, CO 80111			Address:	Same as Section A
Email To:	jamie.herman@aecom.com	Purchase Order No.:	NEED PO #	Pace Quote Reference:	42700
Phone:	(303) 740-2614 Fax:	Project Name:	~~60709371~~ PRPA CCR 60754427	Pace Project Manager:	Heather Wilson
Requested Due Date/TAT:	Standard	Project Number:	~~60709371~~ 60754427	Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☒ OTHER

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		
1	BAT-01-CCR	WT	G	—	—	5/8/25	0930		2			X							X	X	X	N	
2	ERB-01-CCR	WT	G	—	—	5/8/25	0935		2			X							X	X	X	N	
3	BAT-10-CCR	WT	G	—	—	5/8/25	1125		2			X							X	X	X	N	
4	BAT-02-CCR	WT	G	—	—	5/8/25	1335		2			X							X	X	X	N	
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	AECOM	5/8/25	1700		5/9/25	1130	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Hoppes & Olivia Helinski

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 05/08/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Quality Control Sample Performance Assessment

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Test:	Ra-226
Analyst:	LL1
Date:	5/22/2025
Batch ID:	85291
Matrix:	W

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3639832
MB concentration:	0.000
M/B 2 Sigma CSU:	0.275
MB MDC:	0.616
MB Numerical Performance Indicator:	0.00
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS85291	LCSD85291
Count Date:	5/28/2025	
Spike I.D.:	24-046	
Spike Concentration (pCi/mL):	31.830	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.652	
Target Conc. (pCi/L, g, F):	4.882	
Uncertainty (Calculated):	0.229	
Result (pCi/L, g, F):	4.945	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.288	
Numerical Performance Indicator:	0.09	
Percent Recovery:	101.29%	
Status vs Numerical Indicator:	Pass	
Status vs Recovery:	N/A	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	4/25/2025	
Sample I.D.	50399844001	
Sample MS I.D.	50399844002	
Sample MSD I.D.	50399844003	
Spike I.D.:	24-046	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	31.832	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.651	
MS Target Conc.(pCi/L, g, F):	9.779	
MSD Aliquot (L, g, F):	0.651	
MSD Target Conc. (pCi/L, g, F):	9.781	
MS Spike Uncertainty (calculated):	0.460	
MSD Spike Uncertainty (calculated):	0.460	
Sample Result:	-0.112	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.582	
Sample Matrix Spike Result:	9.245	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.028	
Sample Matrix Spike Duplicate Result:	10.285	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.002	
MS Numerical Performance Indicator:	-0.382	
MSD Numerical Performance Indicator:	0.565	
MS Percent Recovery:	95.69%	
MSD Percent Recovery:	106.30%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	N/A	
MSD Status vs Recovery:	N/A	
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	50399844001	
Sample MS I.D.	50399844002	
Sample MSD I.D.	50399844003	
Sample Matrix Spike Result:	9.245	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.028	
Sample Matrix Spike Duplicate Result:	10.285	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.002	
Duplicate Numerical Performance Indicator:	-0.715	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	10.50%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	N/A	
% RPD Limit:	32%	

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

Comments:

W 052825 TY 5-28-25

Quality Control Sample Performance Assessment

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Test:	Ra-228
Analyst:	JJS1
Date:	5/23/2025
Worklist:	85292
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3639834
MB concentration:	0.995
M/B 2 Sigma CSU:	0.443
MB MDC:	0.727
MB Numerical Performance Indicator:	4.40
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS85292	LCSD85292
Count Date:	5/29/2025	5/29/2025
Spike I.D.:	23-043	23-043
Decay Corrected Spike Concentration (pCi/mL):	32.425	32.425
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.817	0.819
Target Conc. (pCi/L, g, F):	3.968	3.958
Uncertainty (Calculated):	0.194	0.194
Result (pCi/L, g, F):	3.218	2.959
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.808	0.766
Numerical Performance Indicator:	-1.77	-2.48
Percent Recovery:	81.09%	74.76%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS85292	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD85292	
Sample Result (pCi/L, g, F):	3.218	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.808	
Sample Duplicate Result (pCi/L, g, F):	2.959	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.766	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.455	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	8.12%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

LAMS/30/25

ET
5-30-25

Pace Analytical Services, LLC
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Lenexa, KS 66219
(913)599-5665

July 09, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 60475328

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

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

Sincerely,

Heather M. Wilson

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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2025.07.09 13:56:04 -07'00'
Document is certified

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60475328001	**BAT-11-CCR**	Water	05/14/25 13:25	05/15/25 09:05

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60475328001	**BAT-11-CCR**	EPA 6010	ARMN	12	PASI-K
		EPA 6020	JGP	2	PASI-K
		EPA 7470	MNG	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 9056	MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

Sample: BAT-11-CCR **Lab ID: 60475328001** Collected: 05/14/25 13:25 Received: 05/15/25 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Arsenic	ND	ug/L	10.0	1	05/27/25 08:59	06/07/25 14:19	7440-38-2	
Barium	**29.4**	ug/L	5.0	1	05/27/25 08:59	06/07/25 14:19	7440-39-3	
Beryllium	ND	ug/L	1.0	1	05/27/25 08:59	06/07/25 14:19	7440-41-7	
Boron	**419**	ug/L	100	1	05/27/25 08:59	06/07/25 14:19	7440-42-8	
Cadmium	ND	ug/L	5.0	1	05/27/25 08:59	06/07/25 14:19	7440-43-9	
Calcium	**76400**	ug/L	200	1	05/27/25 08:59	06/07/25 14:19	7440-70-2	
Chromium	ND	ug/L	5.0	1	05/27/25 08:59	06/07/25 14:19	7440-47-3	
Cobalt	ND	ug/L	5.0	1	05/27/25 08:59	06/07/25 14:19	7440-48-4	
Lead	ND	ug/L	10.0	1	05/27/25 08:59	06/07/25 14:19	7439-92-1	
Lithium	**60.3**	ug/L	10.0	1	05/27/25 08:59	06/07/25 14:19	7439-93-2	
Molybdenum	ND	ug/L	20.0	1	05/27/25 08:59	06/07/25 14:19	7439-98-7	
Selenium	ND	ug/L	15.0	1	05/27/25 08:59	06/07/25 14:19	7782-49-2	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Antimony	ND	ug/L	1.0	1	05/23/25 13:30	06/16/25 15:55	7440-36-0	
Thallium	ND	ug/L	1.0	1	05/23/25 13:30	06/16/25 15:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Pace Analytical Services - Kansas City							
Mercury	ND	ug/L	0.20	1	05/30/25 14:53	06/02/25 11:02	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**751**	mg/L	13.3	1		05/21/25 17:40		
9056 IC Anions	Analytical Method: EPA 9056							
	Pace Analytical Services - Kansas City							
Chloride	**5.2**	mg/L	1.0	1		06/10/25 07:15	16887-00-6	
Fluoride	ND	mg/L	0.20	1		06/10/25 07:15	16984-48-8	
Sulfate	**177**	mg/L	50.0	50		06/10/25 07:27	14808-79-8	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

QC Batch: 936974
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60475328001

METHOD BLANK: 3714522 Matrix: Water
Associated Lab Samples: 60475328001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	06/02/25 10:08	

LABORATORY CONTROL SAMPLE: 3714523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3714524 3714525

Parameter	Units	60475975003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	3.6	3.6	72	71	75-125	2	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3714526 3714527

Parameter	Units	60475139001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.6	4.4	92	88	75-125	5	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

QC Batch: 936392
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60475328001

METHOD BLANK: 3712116 Matrix: Water
Associated Lab Samples: 60475328001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	06/07/25 14:53	
Barium	ug/L	ND	5.0	06/07/25 14:53	
Beryllium	ug/L	ND	1.0	06/07/25 14:53	
Boron	ug/L	ND	100	06/07/25 14:53	
Cadmium	ug/L	ND	5.0	06/07/25 14:53	
Calcium	ug/L	ND	200	06/07/25 14:53	
Chromium	ug/L	ND	5.0	06/07/25 14:53	
Cobalt	ug/L	ND	5.0	06/07/25 14:53	
Lead	ug/L	ND	10.0	06/07/25 14:53	
Lithium	ug/L	ND	10.0	06/07/25 14:53	
Molybdenum	ug/L	ND	20.0	06/07/25 14:53	
Selenium	ug/L	ND	15.0	06/07/25 14:53	

LABORATORY CONTROL SAMPLE: 3712117

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	896	90	80-120	
Barium	ug/L	1000	983	98	80-120	
Beryllium	ug/L	1000	977	98	80-120	
Boron	ug/L	1000	931	93	80-120	
Cadmium	ug/L	1000	975	98	80-120	
Calcium	ug/L	10000	9960	100	80-120	
Chromium	ug/L	1000	977	98	80-120	
Cobalt	ug/L	1000	999	100	80-120	
Lead	ug/L	1000	989	99	80-120	
Lithium	ug/L	1000	946	95	80-120	
Molybdenum	ug/L	1000	984	98	80-120	
Selenium	ug/L	1000	962	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3712118 3712119

Parameter	Units	60475548003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	1000	1000	1070	955	107	95	75-125	12	20	
Barium	ug/L	0.92 mg/L	1000	1000	2050	1860	113	94	75-125	10	20	
Beryllium	ug/L	ND	1000	1000	1140	1040	114	104	75-125	9	20	
Boron	ug/L	0.15 mg/L	1000	1000	1220	1090	107	94	75-125	11	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3712118 3712119

Parameter	Units	60475548003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	1080	963	108	96	75-125	11	20	
Calcium	ug/L	395 mg/L	10000	10000	456000	405000	616	106	75-125	12	20	M1
Chromium	ug/L	0.0093 mg/L	1000	1000	1100	1010	110	100	75-125	9	20	
Cobalt	ug/L	ND	1000	1000	1080	991	108	99	75-125	9	20	
Lead	ug/L	ND	1000	1000	1080	966	107	96	75-125	11	20	
Lithium	ug/L	0.075 mg/L	1000	1000	1130	1020	105	94	75-125	10	20	
Molybdenum	ug/L	ND	1000	1000	1120	1020	112	102	75-125	9	20	
Selenium	ug/L	ND	1000	1000	1110	994	110	99	75-125	11	20	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

QC Batch: 936177
QC Batch Method: EPA 3010
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60475328001

METHOD BLANK: 3711111 Matrix: Water
Associated Lab Samples: 60475328001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	06/16/25 15:04	
Thallium	ug/L	ND	1.0	06/16/25 15:04	

LABORATORY CONTROL SAMPLE: 3711112

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.0	102	80-120	
Thallium	ug/L	40	40.1	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3711113 3711114

Parameter	Units	60475139005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	38.5	38.3	96	96	75-125	0	20	
Thallium	ug/L	ND	40	40	34.8	34.5	87	86	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

QC Batch: 935858
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60475328001

METHOD BLANK: 3709507 Matrix: Water
Associated Lab Samples: 60475328001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	05/21/25 17:38	

LABORATORY CONTROL SAMPLE: 3709508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	975	98	80-120	

SAMPLE DUPLICATE: 3709509

Parameter	Units	60475254003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	427	431	1	10	

SAMPLE DUPLICATE: 3709510

Parameter	Units	60475511001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1080	1070	1	10	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

QC Batch: 937868
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60475328001

METHOD BLANK: 3718417 Matrix: Water
Associated Lab Samples: 60475328001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	06/09/25 23:59	
Fluoride	mg/L	ND	0.20	06/09/25 23:59	
Sulfate	mg/L	ND	1.0	06/09/25 23:59	

LABORATORY CONTROL SAMPLE: 3718418

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.2	103	80-120	
Fluoride	mg/L	2.5	2.5	99	80-120	
Sulfate	mg/L	5	5.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3718419 3718420

Parameter	Units	60475139001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	35.5	25	25	56.4	59.4	84	96	80-120	5	15	
Fluoride	mg/L	ND	2.5	2.5	2.0	2.0	78	80	80-120	3	15	M1
Sulfate	mg/L	3690	2000	2000	5430	5050	87	68	80-120	7	15	M1

SAMPLE DUPLICATE: 3718421

Parameter	Units	60475139001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	35.5	34.5	3	15	
Fluoride	mg/L	ND	ND		15	
Sulfate	mg/L	3690	3200	14	15	

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 60475328

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60475328001	**BAT-11-CCR**	EPA 3010	936392	EPA 6010	936467
60475328001	**BAT-11-CCR**	EPA 3010	936177	EPA 6020	936383
60475328001	**BAT-11-CCR**	EPA 7470	936974	EPA 7470	936998
60475328001	**BAT-11-CCR**	SM 2540C	935858		
60475328001	**BAT-11-CCR**	EPA 9056	937868		

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WO# : 60475328

60475328

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample	
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: AECOM

Courier: FedEx ☑ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐

Tracking #: 609107997270 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☑ Other ☐

Thermometer Used: T-301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 4.1 **Corr. Factor** +0.1 **Corrected** 4.2

Date and initials of person examining contents: KH 5/13

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 96888	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

BAT CCR KS

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A — **Required** Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B — **Required** Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA X OTHER EPA CCR

Site Location STATE: CO

Section D — **Required** Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	9056 Cl, F, SO4	6020 Total Metals*	6010 Total Metals**	7470 Total Mercury	2540C TDS	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BAT-11-CCR	WT	G	—	—	5/14/25	1325		3	2		1						X	X	X	X	X	N	60475328
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Sb, Tl	[signature] /AECOM	5/14/25	1200	Carmen Jure Pace	5/15	0905	4.2
**As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kara Holmes & Mackensie Swift

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 05/14/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Client: AECOM

Profile/EZ # 11033-3

Site: PRPA CCR 607544422

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1	1										
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass			
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass
		AG5U	100mL unpres amber glass

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

Misc.	
I	Wipe/Swab
SP5T	120mL Coliform Na Thiosulfate
ZPLC	Ziploc Bag
AF	Air Filter
C	Air Cassettes
R	Terracore Kit
U	Summa Can

Matrix	
WT	Water
SL	Solid
NAL	Non-aqueous Liquid
OL	OIL
WP	Wipe
DW	Drinking Water

Work Order Number **WO#: 60475328**

PM: HMW Due Date: 06/06/25

CLIENT: AECOM CO

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

September 03, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

Revised Report_rev.1 The Radium QC Appendix was added.

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

Sincerely,

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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2025.09.03 14:30:41 -07'00'
Document is certified

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CERTIFICATIONS

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60475540001	**BAT-11-CCR**	Water	05/14/25 13:25	05/19/25 09:00

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60475540001	**BAT-11-CCR**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

Sample: BAT-11-CCR **Lab ID: 60475540001** Collected: 05/14/25 13:25 Received: 05/19/25 09:00 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.195 ± 0.638 (1.18) C:NA T:93%**	pCi/L	06/16/25 15:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.939 ± 0.423 (0.688) C:76% T:89%**	pCi/L	06/13/25 14:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.13 ± 1.06 (1.87)**	pCi/L	06/16/25 17:10	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

QC Batch: 748063
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60475540001

METHOD BLANK: 3643708 Matrix: Water
Associated Lab Samples: 60475540001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.182 ± 0.358 (0.642) C:NA T:92%	pCi/L	06/16/25 15:08	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

QC Batch: 748064
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60475540001

METHOD BLANK: 3643709 Matrix: Water
Associated Lab Samples: 60475540001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.532 ± 0.320 (0.579) C:85% T:89%	pCi/L	06/13/25 14:12	

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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR-Revised Report
Pace Project No.: 60475540

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60475540001	**BAT-11-CCR**	EPA 903.1	748063		
60475540001	**BAT-11-CCR**	EPA 904.0	748064		
60475540001	**BAT-11-CCR**	Total Radium Calculation	752312		

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BAT-11-CCR PA

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A — Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	~~60709371~~ PRPA CCR 60754422
Project Number:	~~60709371~~ 60754422

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	42700
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D — Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BAT-11-CCR	WT	G	—	—	5/14/25	1325		2			X							X	X	X	N	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	MacKenzie Swift / AECOM	5/15/25	1700	[signature]	5/19/25	9:00	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MacKenzie Swift & Kara Hopkes

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/14/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

State Of Origin: CO
Cert. Needed: ☐ Yes ☒ No

Workorder: 60475540 Workorder Name: 60754422 PRPA CCR

Owner Received Date: 5/19/2025 Results Requested By: 6/10/2025

Report To	Subcontract To
Heather Wilson Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 1(913)563-1407	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

						Preserved Containers						Requested Analysis												
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3						Total Radium-226, Total Sum Radium	Total Radium-228											LAB USE ONLY
1	BAT-11-CCR	PS	5/14/2025 13:25	60475540001	Water	2						X	X											01
2																								
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1			[signature]	5/19/25 900
2				
3				

Comments: IR30- Radium QC Sheets Required

Cooler Temperature on Receipt ___°C | Custody Seal (Y) or N | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO# : 30780643

30780643

DC#_Title: ENV-FRM-GBUR-0088 v07_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO# : 30780643

PM: CMC Due Date: 06/18/25

CLIENT: PACE_60_LEKS

Client Name: AECOM

Proj

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 6091 0798 5461

Initial / Date

Examined By: PS 5/19/25

Labeled By: PS 5/20/25 PS 5/19/25 MS 5/20/25

Temped By: —

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No Seals Intact: ☑ Yes ☐ No

Thermometer Used: —

Type of Ice: Wet Blue (None)

Cooler Temperature: Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 10D43241

D.P.D. Residual Chlorine Lot # —

Comments:	Yes	No	NA
Chain of Custody Present	✓		
Chain of Custody Filled Out: -Were client corrections present on COC	✓		
Chain of Custody Relinquished		✓	
Sampler Name & Signature on COC:	✓		
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓		
Samples Arrived within Hold Time:	✓		
Short Hold Time Analysis (<72hr remaining):		✓	
Rush Turn Around Time Requested:		✓	
Sufficient Volume:	✓		
Correct Containers Used: -Pace Containers Used	✓		
Containers Intact:	✓		
Orthophosphate field filtered:			✓
Hex Cr Aqueous samples field filtered:			✓
Organic Samples checked for dichlorination			✓
Filtered volume received for dissolved tests:			✓
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	✓		
All containers meet method preservation requirements:	✓		
8260C/D: Headspace in VOA Vials (> 6mm)			✓
624.1: Headspace in VOA Vials (0mm)			✓
Radon: Headspace in RAD Vials (0mm)			✓
Trip Blank Present:			✓
Rad Samples Screened <.05 mrem/hr.	✓		

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14: 15: 16. PH<2

Initial when completed PS Date/Time of Preservation

Lot# of added Preservative

17. 18. 19.

Trip blank custody seal present? YES or NO

Initial when completed PS Date: 5/19/25 Survey Meter SN: 25014380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Page 1 of 1

Qualtrax ID: 55680

BAT CCR PA

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	AECOM	Report To:	Vasanta Kalluri	Attention:	Accounts Payable
Address:	6200 South Quebec St	Copy To:	Jamie Herman	Company Name:	AECOM
	Greenwood Village, CO 80111			Address:	Same as Section A
Email To:	jamie.herman@aecom.com	Purchase Order No.:	NEED PO #	Pace Quote Reference:	42700
Phone:	(303) 740-2614 Fax:	Project Name:	~~60709371~~ PRPA CCR 60754422	Pace Project Manager:	Heather Wilson
Requested Due Date/TAT:	Standard	Project Number:	~~60709371~~ 60754422	Pace Profile #:	11033, 3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER EPA CCR

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	N		
1	BAT-11-CCR	WT	G	—	—	5/14/25	1325		2			X							X	X	X	N	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	MackenzieSwift / AECOM	5/15/25	1700	[signature]	5/19/25	9:00	

WO# : 30780643

PM: CMC Due Date: 06/18/25

CLIENT: PACE_60_LEKS

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mackenzie Swift & Kara Hopkes

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/14/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

...rment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	CLM
Date:	6/4/2025
Batch ID:	85386
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3643708
MB concentration:	0.182
M/B 2 Sigma CSU:	0.358
MB MDC:	0.642
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS85386	LCSD85386
Count Date:	6/16/2025	
Spike I.D.:	24-046	
Spike Concentration (pCi/mL):	31.830	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.652	
Target Conc. (pCi/L, g, F):	4.885	
Uncertainty (Calculated):	0.230	
Result (pCi/L, g, F):	4.185	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.014	
Numerical Performance Indicator:	-1.32	
Percent Recovery:	85.67%	
Status vs Numerical Indicator:	Pass	
Status vs Recovery:	N/A	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/12/2025	
Sample I.D.	30780483001	
Sample MS I.D.	30780483003	
Sample MSD I.D.	30780483005	
Spike I.D.:	24-046	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	31.831	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.026	
MS Target Conc.(pCi/L, g, F):	244.949	
MSD Aliquot (L, g, F):	0.029	
MSD Target Conc. (pCi/L, g, F):	220.666	
MS Spike Uncertainty (calculated):	11.513	
MSD Spike Uncertainty (calculated):	10.371	
Sample Result:	28.662	
Sample Result 2 Sigma CSU (pCi/L, g, F):	13.906	
Sample Matrix Spike Result:	284.328	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	49.164	
Sample Matrix Spike Duplicate Result:	266.643	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	46.326	
MS Numerical Performance Indicator:	0.401	
MSD Numerical Performance Indicator:	0.686	
MS Percent Recovery:	104.38%	
MSD Percent Recovery:	107.85%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	N/A	
MSD Status vs Recovery:	N/A	
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	30780483001	
Sample MS I.D.	30780483003	
Sample MSD I.D.	30780483005	
Sample Matrix Spike Result:	284.328	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	49.164	
Sample Matrix Spike Duplicate Result:	266.643	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	46.326	
Duplicate Numerical Performance Indicator:	0.513	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	3.27%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	N/A	
% RPD Limit:	32%	

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

Comments:

TY 6-16-25

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	6/11/2025
Worklist:	85387
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3643709
MB concentration:	0.532
M/B 2 Sigma CSU:	0.320
MB MDC:	0.579
MB Numerical Performance Indicator:	3.26
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS85387	LCSD85387
Count Date:	6/13/2025	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	32.264	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.822	
Target Conc. (pCi/L, g, F):	3.924	
Uncertainty (Calculated):	0.192	
Result (pCi/L, g, F):	3.782	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.871	
Numerical Performance Indicator:	-0.31	
Percent Recovery:	96.39%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	5/12/2025	
Sample I.D.	30780483001	
Sample MS I.D.	30780483003	
Sample MSD I.D.	30780483005	
Spike I.D.:	23-043	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.609	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.054	
MS Target Conc.(pCi/L, g, F):	121.450	
MSD Aliquot (L, g, F):	0.052	
MSD Target Conc. (pCi/L, g, F):	125.614	
MS Spike Uncertainty (calculated):	5.951	
MSD Spike Uncertainty (calculated):	6.155	
Sample Result:	37.560	
Sample Result 2 Sigma CSU (pCi/L, g, F):	9.726	
Sample Matrix Spike Result:	170.518	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	33.567	
Sample Matrix Spike Duplicate Result:	171.694	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	33.756	
MS Numerical Performance Indicator:	0.636	
MSD Numerical Performance Indicator:	0.468	
MS Percent Recovery:	109.48%	
MSD Percent Recovery:	106.78%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	30780483001	
Sample MS I.D.	30780483003	
Sample MSD I.D.	30780483005	
Sample Matrix Spike Result:	170.518	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	33.567	
Sample Matrix Spike Duplicate Result:	171.694	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	33.756	
Duplicate Numerical Performance Indicator:	-0.048	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	2.49%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

Comments:

~~*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.~~ MB activity < MDC, PASS

6/16/25

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
AECOM Chemist: Priya Nagwanshi
AECOM Secondary Reviewer: Jamie Herman

Event: 1SA Groundwater 2025
Date: 8/12 /2025
Date: 9/3/2025

Introduction:

This validation report documents the data review process through the checklists below. Further identification and explanation of any anomalies are provided following each section of the checklist, as needed.

The field sample and laboratory identification associations are summarized in Table 1.

Qualified data are summarized and presented in Table 2.

Laboratory and Sample Delivery Groups (SDGs):

Pace Analytical Services in Lenexa, Kansas – 60474705, 60474710, 60474878, 60475328,

Pace Analytical Services in Greensburg, Pennsylvania – 60474660, 60474729, 60474978, 60475540

Analytical Methods Validated:

Anions (chloride, sulfate, fluoride) by EPA Method 9056, total metals (select list) by EPA Methods 6010 and 6020, total mercury by EPA Method 7070A, total dissolved solids (TDS) by SM2540C, radium-226 by EPA Method 903.1, radium-228 by EPA method 904.0, and total radium (calculation).

Validation:

Stage 2A Validation

Validation Guidance Documents:

The data review was conducted in accordance with *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA November 2020), and evaluation of laboratory criteria, as applicable.

Overall Assessment of Data:

As no data were missing or qualified as unusable during the validation process, the overall assessment of data was acceptable at 100%. Qualified data are summarized and presented in Table 2.

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
AECOM Chemist: Priya Nagwanshi
AECOM Secondary Reviewer: Jamie Herman

Event: 1SA Groundwater 2025
Date: 8/12 /2025
Date: 9/3/2025

1.0 Sample Documentation and Case Narrative

Sample Documentation Criteria	Yes	No	NA
Were all samples documented correctly on the chain-of-custody (COC) and container labels?	X		
Were sample analyses completed per the COC?	X		
Were samples extracted and analyzed within the method required holding times?	X		
Laboratory Case Narrative	**Yes**	**No**	**NA**
Were there additional narrative clarifications made by the laboratory, not addressed within this validation?	X[1]		

1. **Data Package 60475540:** The laboratory revised and reissued the data package to include missing batch QC associated with Methods 903.1 and 904.0 for radiochemistry.

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
AECOM Chemist: Priya Nagwanshi
AECOM Secondary Reviewer: Jamie Herman

Event: 1SA Groundwater 2025
Date: 8/12 /2025
Date: 9/3/2025

2.0 Quality Control and Performance Checks

Stage 2A Validation Criteria				
Method Blank Criteria		**Yes**	**No**	**NA**
Was a method blank analyzed for each batch, as applicable to the method?		X		
Were method blank concentrations reported as not detected or less than the MDC?		X		
Laboratory Control Sample Criteria		**Yes**	**No**	**NA**
Was an LCS reported with each preparation batch, as applicable to the method?		X		
Were LCS/LCSD recoveries and/or RPDs within acceptance criteria?		X		
Matrix Spike/Matrix Spike Duplicates Criteria		**Yes**	**No**	**NA**
Was an MS/MSD performed on a project specific sample? *		X		
Parent Sample	**Method**			
BAT-04R-CCR	6010, 6020, 7470, 9056, 903.1, 904.0			
BAT-09-CCR	6010			
BAT-01-CCR	6010			
For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within acceptance criteria?		X		
Spike recovery limits and RPDs are not applicable when the parent sample concentration is ≥ 4x the spike added. The data is reported without qualification.				
Laboratory Duplicate Criteria – As applicable to the analytical method		**Yes**	**No**	**NA**
Was a laboratory duplicate performed on a project specific sample?		X		
If both the parent sample and duplicate values were >5xRL, was laboratory duplicate RPD within laboratory acceptance criteria?		X		
If either the parent sample or duplicate value was <5xRL, was the absolute difference within acceptance criteria of <2xRL for waters, and <3.5xRL for solids?				X
For radiological parameters, was the DER agreement between parent sample results and laboratory duplicate sample results ≤2?		X		
Tracery/Carrier Recovery - Radiological		**Yes**	**No**	**NA**
The sample specific recoveries were within the laboratory limits (30-110%).				X

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
AECOM Chemist: Priya Nagwanshi
AECOM Secondary Reviewer: Jamie Herman

Event: 1SA Groundwater 2025
Date: 8/12 /2025
Date: 9/3/2025

3.0 Field Quality Control Samples

Field QC Blank Criteria		Yes	No	NA
Was a trip blank shipped with, and analyzed with the samples?				X
Were trip blank concentrations reported as non-detect for target analytes?				X
Were field and/or equipment blanks collected and analyzed with the samples?		X		
Were field QC blank concentrations reported as non-detect or less than the MDC for radiological parameters, for the target analytes?		X		
Field Duplicate Criteria		**Yes**	**No**	**NA**
Were field duplicate samples collected for this sampling event?		X		
Parent Sample	**Field Duplicate Sample**			
BAT-12-CCR	DUP-01-CCR			
If both the parent sample and/field duplicate sample results were >5xRL were the RPDs within the acceptance criteria of ≤30%?			X[1]	
If either the parent sample or duplicate value was <5xRL, was the absolute difference within the acceptance criteria of <2xRL?		X		
For radiological parameters, was the DER agreement between parent sample results and field duplicate sample results ≤2?		X		

1. The following field duplicate samples did not meet the QC acceptance criteria:

Sample Identification	Method	Analyte	Parent Result	Field Duplicate Result	Unit	Criteria Not Met
BAT-12-CCR/ DUP-01-CCR	6010	Barium	38.7	61.1	ug/L	RPD

Both the parent and field duplicate sample results were qualified as estimated (J fd) to demonstrate the imprecision between the associated results. The qualified data are presented in Table 2.

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
AECOM Chemist: Priya Nagwanshi
AECOM Secondary Reviewer: Jamie Herman

Event: 1SA Groundwater 2025
Date: 8/12 /2025
Date: 9/3/2025

4.0 Sensitivity, Additional Qualification, and Completeness

Sensitivity Criteria	**Yes**	**No**	**NA**
Did all analytes meet sensitivity requirements?		X[1]	
For radiological parameters, if the associated uncertainty was greater than the reported result, the 2 sigma (σ) uncertainty multiplied by 1.65 was less than or equal to the MDC?		X[2]	
Additional Qualification Criteria	**Yes**	**No**	**NA**
Was professional judgment used to qualify data?	X		
Were multiple results reported for a single analyte?	X		
Total vs Dissolved Analyses	**Yes**	**No**	**NA**
Was the dissolved concentration greater than the total concentration?			X
If either sample result was >5xRL, were the RPDs within ≤30%?			X
If either sample result was <5xRL, was the absolute difference within 2xRL?			X
Completeness Criteria	**Yes**	**No**	**NA**
Were the reported results usable if qualified?	X		
Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		

1. Several samples were reported as non-detect at elevated reporting limits. These non-detect results will need to be evaluated with respect to project objectives.

2. For radiological parameters, the following sample results did not meet the 2σ uncertainty evaluation.

Sample Identification	Method	Analyte	Result	2 Sigma (σ) Uncertainty	MDC	Units
Data Package 60474660						
BAT-12-CCR	903.1	Radium-226	0.670	0.730	1.19	pCi/L
Data Package 60474729						
BAT-03-CCR	903.1	Radium-226	0.0659	0.735	1.18	pCi/L
Data Package 60474978						
BAT-10-CCR	903.1	Radium-226	0.843	0.897	1.46	pCi/L
BAT-02-CCR	903.1	Radium-226	1.02	1.06	1.72	pCi/L

As the 2σ uncertainty multiplied by 1.65 was greater than the reported minimum detectable concentration (MDC), the associated results were qualified as estimated (J v). The qualified data are presented in Table 2.

Table 1 – Sample Summary and Laboratory Association

Sample Identification	Collection Date	Laboratory Identification	Sample Type
Data Package 60474660			
BAT-09-CCR	05/06/25	60474660001	Normal
BAT-06-CCR	05/06/25	60474660002	Normal
BAT-12-CCR	05/06/25	60474660003	Normal
DUP-01-CCR	05/06/25	60474660004	Field Duplicate
Data Package 60474705			
BAT-05-CCR	05/07/25	60474705001	Normal
BAT-03-CCR	05/07/25	60474705002	Normal
BAT-04R-CCR	05/07/25	60474705003	Normal
Data Package 60474710			
BAT-09-CCR	05/06/25	60474710001	Normal
BAT-06-CCR	05/06/25	60474710002	Normal
BAT-12-CCR	05/06/25	60474710003	Normal
DUP-01-CCR	05/06/25	60474710004	Field Duplicate
Data Package 60474729			
BAT-05-CCR	05/07/25	60474729001	Normal
BAT-03-CCR	05/07/25	60474729002	Normal
BAT-04R-CCR	05/07/25	60474729003	Matrix Spike
Data Package 60474878			
BAT-01-CCR	05/08/25	60474878001	Normal
ERB-01-CCR	05/08/25	60474878002	Equipment Blank
BAT-10-CCR	05/08/25	60474878003	Normal
BAT-02-CCR	05/08/25	60474878004	Normal
Data Package 60474978			
BAT-01-CCR	05/08/25	60474978001	Normal
ERB-01-CCR	05/08/25	60474978002	Equipment Blank
BAT-10-CCR	05/08/25	60474978003	Normal
BAT-02-CCR	05/08/25	60474978004	Normal
Data Package 60475328			
BAT-11-CCR	05/14/25	60475328001	Normal
Data Package 60475328			
BAT-11-CCR	05/14/25	60475540001	Normal

Table 2 – Summary of Qualified Sample Results

Sample Identification	Laboratory Identification	Analytical Method	Fraction	Analyte	Result	Unit	Qualifier	Reason
BAT-12-CCR	60474660003	903.1	NA	Radium-226	0.670	pCi/L	J	v
BAT-12-CCR	60474710003	6010	Total	Barium	38.7	ug/L	J	fd
DUP-01-CCR	60474710004	6010	Total	Barium	61.1	ug/L	J	fd
BAT-03-CCR	60474729002	903.1	NA	Radium-226	0.0659	pCi/L	J	v
BAT-10-CCR	60474978003	903.1	NA	Radium-226	0.843	pCi/L	J	v
BAT-02-CCR	60474978004	903.1	NA	Radium-226	1.02	pCi/L	J	v

ATTACHMENT A
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit, or the sample result was considered not-detected due to associated blank contamination.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

UJ The analyte was analyzed for, but was not detected. The reported sample quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control (QC) criteria. The analyte may or may not be present in the sample.

QUALIFIER REASON CODE DEFINITIONS

be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bm	Missing Blank Information
c	Calibration issue
cl	Clean-up standard recovery
cp	Insufficient in growth (radiochemical data only)
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
dt	Dissolved result > total over limit
fd	Field duplicate imprecision
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate imprecision (matrix duplicate, MSD, LCSD)
lq	Level of quantitation/trace value
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
pe	Post Extraction Spike
pr	Professional Judgement
q	Quantitation issue
r	Dual column RPD
rp	Re-extraction precision issue [PAHs only]
rt	SIM ions not within + 2 seconds
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature Preservation Issue
u	High combined sample result uncertainty (radiochemical data Only)
v	compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

September/October 2025

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 27, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,

Tina Soltani
tina.soltani@pacelabs.com
(612) 607-6384
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification via A2LA #: R-036
North Dakota Certification via MN #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10752029001	**ASH-02-CCR**	Water	10/02/25 12:20	10/03/25 09:00
10752029002	**BAT-04R-CCR**	Water	10/02/25 13:45	10/03/25 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10752029001	**ASH-02-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	AMC2	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752029002	**BAT-04R-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	AMC2	1	PASI-M
		EPA 300.0	AR3	3	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752029001	**ASH-02-CCR**					
EPA 6020B	Barium	17.7	ug/L	0.60	10/15/25 18:25	
EPA 6020B	Boron	2000	ug/L	500	10/15/25 18:28	
EPA 6020B	Calcium	165000	ug/L	5000	10/15/25 18:28	
EPA 6020B	Lithium	255	ug/L	1.0	10/15/25 18:25	
EPA 6020B	Molybdenum	6.5	ug/L	1.0	10/15/25 18:25	
SM 2540C	Total Dissolved Solids	3370	mg/L	50.0	10/09/25 19:25	
EPA 300.0	Chloride	22.3	mg/L	1.2	10/15/25 01:21	
EPA 300.0	Fluoride	0.17	mg/L	0.050	10/15/25 01:21	
EPA 300.0	Sulfate	2200	mg/L	12.0	10/17/25 07:15	
10752029002	**BAT-04R-CCR**					
EPA 6020B	Barium	12.5	ug/L	0.60	10/15/25 18:37	
EPA 6020B	Boron	688	ug/L	20.0	10/15/25 18:37	
EPA 6020B	Calcium	489000	ug/L	5000	10/15/25 18:46	P6
EPA 6020B	Lithium	155	ug/L	1.0	10/15/25 18:37	
EPA 6020B	Selenium	19.2	ug/L	1.0	10/15/25 18:37	
SM 2540C	Total Dissolved Solids	3260	mg/L	50.0	10/09/25 19:25	
EPA 300.0	Chloride	32.9	mg/L	1.2	10/15/25 01:37	
EPA 300.0	Fluoride	0.16	mg/L	0.050	10/15/25 01:37	
EPA 300.0	Sulfate	2000	mg/L	12.0	10/17/25 07:31	

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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Sample: ASH-02-CCR **Lab ID: 10752029001** Collected: 10/02/25 12:20 Received: 10/03/25 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:25	7440-36-0	D3
Arsenic	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:25	7440-38-2	D3
Barium	**17.7**	ug/L	0.60	2	10/13/25 06:17	10/15/25 18:25	7440-39-3	
Beryllium	ND	ug/L	0.40	2	10/13/25 06:17	10/15/25 18:25	7440-41-7	D3
Boron	**2000**	ug/L	500	50	10/13/25 06:17	10/15/25 18:28	7440-42-8	
Cadmium	ND	ug/L	0.16	2	10/13/25 06:17	10/15/25 18:25	7440-43-9	D3
Calcium	**165000**	ug/L	5000	50	10/13/25 06:17	10/15/25 18:28	7440-70-2	
Chromium	ND	ug/L	4.0	2	10/13/25 06:17	10/15/25 18:25	7440-47-3	D3
Cobalt	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:25	7440-48-4	D3
Lead	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:25	7439-92-1	D3
Lithium	**255**	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:25	7439-93-2	
Molybdenum	**6.5**	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:25	7439-98-7	
Selenium	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:25	7782-49-2	D3
Thallium	ND	ug/L	0.20	2	10/13/25 06:17	10/15/25 18:25	7440-28-0	D3
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 11:53	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**3370**	mg/L	50.0	1		10/09/25 19:25		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**22.3**	mg/L	1.2	1		10/15/25 01:21	16887-00-6	
Fluoride	**0.17**	mg/L	0.050	1		10/15/25 01:21	16984-48-8	
Sulfate	**2200**	mg/L	12.0	10		10/17/25 07:15	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Sample: BAT-04R-CCR **Lab ID: 10752029002** Collected: 10/02/25 13:45 Received: 10/03/25 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:37	7440-36-0	D3
Arsenic	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:37	7440-38-2	D3
Barium	**12.5**	ug/L	0.60	2	10/13/25 06:17	10/15/25 18:37	7440-39-3	
Beryllium	ND	ug/L	0.40	2	10/13/25 06:17	10/15/25 18:37	7440-41-7	D3
Boron	**688**	ug/L	20.0	2	10/13/25 06:17	10/15/25 18:37	7440-42-8	
Cadmium	ND	ug/L	0.16	2	10/13/25 06:17	10/15/25 18:37	7440-43-9	D3
Calcium	**489000**	ug/L	5000	50	10/13/25 06:17	10/15/25 18:46	7440-70-2	P6
Chromium	ND	ug/L	4.0	2	10/13/25 06:17	10/15/25 18:37	7440-47-3	D3
Cobalt	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:37	7440-48-4	D3
Lead	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:37	7439-92-1	D3
Lithium	**155**	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:37	7439-93-2	
Molybdenum	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:37	7439-98-7	D3
Selenium	**19.2**	ug/L	1.0	2	10/13/25 06:17	10/15/25 18:37	7782-49-2	
Thallium	ND	ug/L	0.20	2	10/13/25 06:17	10/15/25 18:37	7440-28-0	D3
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 11:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**3260**	mg/L	50.0	1		10/09/25 19:25		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**32.9**	mg/L	1.2	1		10/15/25 01:37	16887-00-6	
Fluoride	**0.16**	mg/L	0.050	1		10/15/25 01:37	16984-48-8	
Sulfate	**2000**	mg/L	12.0	10		10/17/25 07:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

QC Batch: 1034763
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470A Mercury Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752029001, 10752029002

METHOD BLANK: 5389621 Matrix: Water
Associated Lab Samples: 10752029001, 10752029002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	10/13/25 11:50	

LABORATORY CONTROL SAMPLE: 5389622

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5389623 5389624

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	98	101	80-120	2	20	

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

QC Batch: 1034264
QC Batch Method: EPA 3020A
Analysis Method: EPA 6020B
Analysis Description: 6020B Water UPD5
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752029001, 10752029002

METHOD BLANK: 5386475 Matrix: Water
Associated Lab Samples: 10752029001, 10752029002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	0.50	10/15/25 14:59	
Arsenic	ug/L	ND	0.50	10/15/25 14:59	
Barium	ug/L	ND	0.30	10/15/25 14:59	
Beryllium	ug/L	ND	0.20	10/15/25 14:59	
Boron	ug/L	ND	10.0	10/15/25 14:59	
Cadmium	ug/L	ND	0.080	10/15/25 14:59	
Calcium	ug/L	ND	100	10/15/25 14:59	
Chromium	ug/L	ND	2.0	10/15/25 14:59	
Cobalt	ug/L	ND	0.50	10/15/25 14:59	
Lead	ug/L	ND	0.50	10/15/25 14:59	
Lithium	ug/L	ND	0.50	10/15/25 14:59	
Molybdenum	ug/L	ND	0.50	10/15/25 14:59	
Selenium	ug/L	ND	0.50	10/15/25 14:59	
Thallium	ug/L	ND	0.10	10/15/25 14:59	

LABORATORY CONTROL SAMPLE: 5386476

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	104	104	80-120	
Arsenic	ug/L	100	106	106	80-120	
Barium	ug/L	100	105	105	80-120	
Beryllium	ug/L	100	110	110	80-120	
Boron	ug/L	100	107	107	80-120	
Cadmium	ug/L	100	104	104	80-120	
Calcium	ug/L	2000	2240	112	80-120	
Chromium	ug/L	100	109	109	80-120	
Cobalt	ug/L	100	111	111	80-120	
Lead	ug/L	100	105	105	80-120	
Lithium	ug/L	100	108	108	80-120	
Molybdenum	ug/L	100	103	103	80-120	
Selenium	ug/L	100	107	107	80-120	
Thallium	ug/L	100	109	109	80-120	

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5386477 5386478

Parameter	Units	10752019003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	97.9	93.0	98	93	75-125	5	20	
Arsenic	ug/L	1.2	100	100	104	102	103	100	75-125	3	20	
Barium	ug/L	27.9	100	100	139	131	111	103	75-125	6	20	
Beryllium	ug/L	ND	100	100	101	95.6	101	96	75-125	5	20	
Boron	ug/L	669	100	100	777	770	108	101	75-125	1	20	
Cadmium	ug/L	ND	100	100	97.4	91.1	97	91	75-125	7	20	
Calcium	ug/L	492000	2000	2000	475000	483000	-891	-455	75-125	2	20	P6
Chromium	ug/L	ND	100	100	106	101	103	98	75-125	5	20	
Cobalt	ug/L	1.7	100	100	104	97.8	102	96	75-125	6	20	
Lead	ug/L	2.0	100	100	103	96.7	101	95	75-125	6	20	
Lithium	ug/L	245	100	100	353	346	107	101	75-125	2	20	
Molybdenum	ug/L	ND	100	100	98.9	95.3	98	94	75-125	4	20	
Selenium	ug/L	48.7	100	100	155	152	106	103	75-125	2	20	
Thallium	ug/L	ND	100	100	104	98.6	104	99	75-125	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5386479 5386480

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	100	101	100	101	75-125	1	20	
Arsenic	ug/L	ND	100	100	103	103	103	102	75-125	0	20	
Barium	ug/L	12.5	100	100	111	113	99	101	75-125	2	20	
Beryllium	ug/L	ND	100	100	97.8	96.2	98	96	75-125	2	20	
Boron	ug/L	688	100	100	798	776	110	88	75-125	3	20	
Cadmium	ug/L	ND	100	100	94.0	94.1	94	94	75-125	0	20	
Calcium	ug/L	489000	2000	2000	478000	476000	-566	-645	75-125	0	20	P6
Chromium	ug/L	ND	100	100	99.4	98.7	99	98	75-125	1	20	
Cobalt	ug/L	ND	100	100	99.5	100	99	100	75-125	1	20	
Lead	ug/L	ND	100	100	96.7	97.4	97	97	75-125	1	20	
Lithium	ug/L	155	100	100	256	252	100	97	75-125	2	20	
Molybdenum	ug/L	ND	100	100	96.5	97.2	96	96	75-125	1	20	
Selenium	ug/L	19.2	100	100	125	124	106	104	75-125	1	20	
Thallium	ug/L	ND	100	100	102	101	102	101	75-125	1	20	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

QC Batch: 1034183
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752029001, 10752029002

METHOD BLANK: 5386175 Matrix: Water
Associated Lab Samples: 10752029001, 10752029002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10/09/25 19:25	

LABORATORY CONTROL SAMPLE: 5386176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 5386177

Parameter	Units	10752019003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	4680	4810	3	10	PP

SAMPLE DUPLICATE: 5386178

Parameter	Units	10752029002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3260	3270	0	10	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

QC Batch: 1034900
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752029001, 10752029002

METHOD BLANK: 5389973 Matrix: Water
Associated Lab Samples: 10752029001, 10752029002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	10/15/25 00:48	
Fluoride	mg/L	ND	0.050	10/15/25 00:48	
Sulfate	mg/L	ND	1.2	10/15/25 00:48	

LABORATORY CONTROL SAMPLE: 5389974

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	200	193	97	90-110	
Fluoride	mg/L	5	5.0	99	90-110	
Sulfate	mg/L	200	194	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5389975 5389976

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	32.9	200	200	218	216	93	92	80-120	1	20	
Fluoride	mg/L	0.16	5	5	5.0	4.9	96	96	80-120	0	20	
Sulfate	mg/L	2000	2000	2000	3880	3880	94	94	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5389977 5389978

Parameter	Units	10752453001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.0	200	200	189	190	93	94	80-120	0	20	
Fluoride	mg/L	0.15	5	5	4.9	4.9	94	95	80-120	1	20	
Sulfate	mg/L	6.0	200	200	192	193	93	93	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PP	The mass of dried residue obtained did not meet the test method requirements based on volume used.

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 10752029

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10752029001	**ASH-02-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752029002	**BAT-04R-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752029001	**ASH-02-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752029002	**BAT-04R-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752029001	**ASH-02-CCR**	SM 2540C	1034183		
10752029002	**BAT-04R-CCR**	SM 2540C	1034183		
10752029001	**ASH-02-CCR**	EPA 300.0	1034900		
10752029002	**BAT-04R-CCR**	EPA 300.0	1034900		

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	60709371 PRPA CCR
Project Number:	60709371

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	
Pace Project Manager:	Tina Soltani
Pace Profile #:	36715

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	300.0 Cl, F, SO4	2540C TDS	6020B Total Metals*	7470A Total Mercury	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GSH-02-CCR	WT	G	—	—	10/2/25	1220		2	1	1							N	X	X	X	X	N	001
2	BAT-04R-CCR	↓	↓	↓	↓	↓	1345		6	3	3							N	X	X	X	X	↓	MS/MSD
3	~~BAT-12-CCR~~								2	1	1							N	X	X	X	X		002
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl					10/3/25	9:00	0.7	y	y	y

WO# : 10752029

10752029

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mackensie Swift

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/2/25

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

ENV-FRM-MIN4-0150 v21_Sample Condition Upon Receipt

Person Examining & Date: KRM 10/3/25 **PROJECT #:** WO#: 10752029

PM: TS1 Due Date: 10/17/25

CLIENT: AECOM

Client Name: AECOM

Custody Seal Present: ☒ YES ☐ NO **Seals Intact:** ☒ YES ☐ NO

Tracking Number: 4521 6245 2846 ☐ **See Exceptions form ENV-FRM-MIN4-0142.**

Courier: ☐ Client ☐ Commercial ☒ FedEx ☐ Pace Courier/Field ☐ SpeeDee ☐ UPS ☐ USPS

Packing Material: ☐ Bubble Bags ☐ Bubble Wrap ☒ None ☐ Other: _____ **Biological Tissue Frozen:** ☐ YES ☒ NO

Thermometer: ☐ T1 (0461) ☐ T2 (0431) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0187) ☐ T6 (0396) ☒ T7 (0377) ☐ T8 (0775) ☐ T9 (0428) ☐ 01339252 (0710)

Type of Ice: ☐ Blue ☐ Dry ☒ Wet ☐ Melted ☐ None

Temp Blank: ☐ YES ☒ NO

NOTE: *Temp should be ≤ 6°C, but above freezing.*

Read Temp w/Temp Blank: _____ °C

Correction Factor: +0.2

Corrected Temp w/Temp Blank: _____ °C

Did Samples Originate in West Virginia: ☐ YES ☒ NO **(list temps on exception)**

Were All Container Temps Taken: ☐ YES ☐ NO ☒ N/A

Average Corrected Temp (No Temp Blank Only): 0.7

☐ **See Exceptions form ENV-FRM-MIN4-0142.** ☐ 1 Container

USDA Regulated Soil: ☒ N/A - Water Sample/Other (describe): _____

Did Samples originate from one of the following states (check maps): ☐ YES ☐ NO

Circle State: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, VA

Are samples from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO

NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one): ☐ **DULUTH** ☒ **MINNEAPOLIS** ☐ **VIRGINIA**	**YES**	**NO**	**N/A**	**COMMENT(S)**
Chain of Custody Present and Filled Out? **(i.e., Analysis/ID/Date/Time)**	☒	☐		1.
Chain of Custody Relinquished?	☒	☐		2.
Sampler Name and/or Signature on COC?	☒	☐	☐	3.
Samples Arrived within Hold Time? **NOTE:** < 24 hrs if lab filter is requested for Dissolved LL-Mercury by 1631E.	☒	☐		4. If Fecal: ☐ < 8 hrs ☐ > 8 hr but < 24 hrs ☐ >24 hr
Short Hold Time Analysis (<72 hr)?	☐	☒		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Turbidity ☐ Other: _____
Rush Turn Around Time Requested?	☐	☒		6. ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 Day Due Date: _____
Sufficient Sample Volume? **(If NO, list approximate volume in section 7.)**	☒	☐		7.
Correct Containers Used? – Pace Containers Used?	☒ ☒	☐ ☐	☐	8.
Containers Intact?	☒	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☒	☐	☐	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
ID/Date/Time Match? **(If NO, fill out section 11.)** Matrix: ☐ Oil ☐ Soil ☐ Water ☐ Other	☒	☐	☐	11. ☐ **See Exceptions form ENV-FRM-MIN4-0142**
All containers needing acid/base preservation have been checked?	☒	☐	☐	12.
Sample #: ☒ HNO3 001 1/1, 002 3/3 ☐ H2SO4 _____ ☐ NaOH _____ ☐ Zinc Acetate _____ **pH Paper Lot #:** ☐ Residual Chlorine _____ ☒ 0-6 Roll 230624 ☐ 0-6 Strip _____ ☐ 0-14 Strip _____ **Positive for Residual Chlorine (NaOH containers only):** ☐ **YES** ☐ **NO**				
Preserved containers in compliance with EPA recommendations? (HNO3, H2SO4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) **EXCEPTIONS (water only):** VOA, Coliform, TOC/DOC, Oil & Grease, Phenols, DRO/8015, Dioxins, and PFAS	☒ ☐	☐ ☐	☐ ☒	☐ **See Exceptions form ENV-FRM-MIN4-0142**
Extra labels present on soil VOA or WIDRO containers? **(soil only)**	☐	☐	☒	13.
Headspace in Methyl Mercury Container?	☐	☐	☒	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☒	☐	☐ **See Exceptions form ENV-FRM-MIN4-0140**
Trip Blanks Present?	☐	☒	☐	15.
Trip Blank Custody Seals Present?	☐	☐	☒	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION / RESOLUTION: **Labeled By:** AR **Line:** 4

Person Contacted & Date/Time: _____ **PM Review & Date:** 10/7/25 Jina Soltani

NOTE: *When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office.*

ENV-FRM-MIN4-0142 v05_Sample Condition Upon Receipt - Exceptions

Workorder #: _____

Anything is OVER 6.0°C, MUST be documented in the sections below.

Tracking Number	Temperature (°C)

Out of Temp Sample ID	Container Type	# of Containers

PM Notified of Out of Temp Cooler? ☐ YES ☐ NO **Multiple Cooler Project?** ☐ YES ☐ NO

If **YES**, indicate who was contacted, date, and time: _____

If **NO**, indicate reason why: ☐ All Nitric ☐ Not on ice ☐ Sampled same day ☐ Other: _____

No Temp Blank

Temp Gun: T-7 **Correction Factor:** +0.2

Read Temp	Corrected Temp	Average Temp
1.1	1.3	0.7
0.3	0.5	
0.5	0.7	
0.1	0.3	

Other	

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative		pH Upon Receipt	Date / Time Adjusted	Amount Added (mL)	Lot # Added	ph After	In Compliance After?		Initials
	HNO_3	H_2SO_4						YES	NO	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	

COMMENT(S):

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 27, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,

Tina Soltani
tina.soltani@pacelabs.com
(612) 607-6384
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification via A2LA #: R-036
North Dakota Certification via MN #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10752259001	**BAT-02-CCR**	Water	10/06/25 14:30	10/07/25 08:50
10752259002	**BAT-05-CCR**	Water	10/06/25 13:45	10/07/25 08:50
10752259003	**ERB-02-CCR**	Water	10/06/25 14:40	10/07/25 08:50

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10752259001	**BAT-02-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	JKH	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752259002	**BAT-05-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	JKH	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752259003	**ERB-02-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	JKH	1	PASI-M
		EPA 300.0	AR3	3	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752259001	**BAT-02-CCR**					
EPA 6020B	Barium	12.4	ug/L	0.30	10/15/25 19:14	
EPA 6020B	Boron	1090	ug/L	200	10/16/25 09:56	
EPA 6020B	Calcium	346000	ug/L	2000	10/15/25 19:17	
EPA 6020B	Cobalt	1.1	ug/L	0.50	10/15/25 19:14	
EPA 6020B	Lithium	176	ug/L	0.50	10/15/25 19:14	
EPA 6020B	Molybdenum	1.3	ug/L	0.50	10/15/25 19:14	
SM 2540C	Total Dissolved Solids	2840	mg/L	25.0	10/10/25 19:16	PP
EPA 300.0	Chloride	184	mg/L	1.2	10/16/25 21:02	
EPA 300.0	Fluoride	0.17	mg/L	0.050	10/16/25 21:02	
EPA 300.0	Sulfate	1600	mg/L	6.0	10/16/25 23:23	
10752259002	**BAT-05-CCR**					
EPA 6020B	Arsenic	2.9	ug/L	1.0	10/15/25 19:20	
EPA 6020B	Barium	56.3	ug/L	0.60	10/15/25 19:20	
EPA 6020B	Boron	1120	ug/L	200	10/16/25 10:00	
EPA 6020B	Calcium	441000	ug/L	5000	10/15/25 19:23	
EPA 6020B	Chromium	10.8	ug/L	4.0	10/15/25 19:20	
EPA 6020B	Cobalt	7.2	ug/L	1.0	10/15/25 19:20	
EPA 6020B	Lead	6.4	ug/L	1.0	10/15/25 19:20	
EPA 6020B	Lithium	206	ug/L	1.0	10/15/25 19:20	
EPA 6020B	Molybdenum	2.1	ug/L	1.0	10/15/25 19:20	
SM 2540C	Total Dissolved Solids	4150	mg/L	25.0	10/10/25 19:17	PP
EPA 300.0	Chloride	60.8	mg/L	1.2	10/16/25 21:49	
EPA 300.0	Fluoride	0.12	mg/L	0.050	10/16/25 21:49	
EPA 300.0	Sulfate	2680	mg/L	12.0	10/16/25 23:39	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Sample: BAT-02-CCR **Lab ID: 10752259001** Collected: 10/06/25 14:30 Received: 10/07/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:14	7440-36-0	
Arsenic	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:14	7440-38-2	
Barium	**12.4**	ug/L	0.30	1	10/13/25 06:17	10/15/25 19:14	7440-39-3	
Beryllium	ND	ug/L	0.20	1	10/13/25 06:17	10/15/25 19:14	7440-41-7	
Boron	**1090**	ug/L	200	20	10/13/25 06:17	10/16/25 09:56	7440-42-8	
Cadmium	ND	ug/L	0.080	1	10/13/25 06:17	10/15/25 19:14	7440-43-9	
Calcium	**346000**	ug/L	2000	20	10/13/25 06:17	10/15/25 19:17	7440-70-2	
Chromium	ND	ug/L	2.0	1	10/13/25 06:17	10/15/25 19:14	7440-47-3	
Cobalt	**1.1**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:14	7440-48-4	
Lead	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:14	7439-92-1	
Lithium	**176**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:14	7439-93-2	
Molybdenum	**1.3**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:14	7439-98-7	
Selenium	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:14	7782-49-2	
Thallium	ND	ug/L	0.10	1	10/13/25 06:17	10/15/25 19:14	7440-28-0	
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 11:59	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**2840**	mg/L	25.0	1		10/10/25 19:16		PP
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**184**	mg/L	1.2	1		10/16/25 21:02	16887-00-6	
Fluoride	**0.17**	mg/L	0.050	1		10/16/25 21:02	16984-48-8	
Sulfate	**1600**	mg/L	6.0	5		10/16/25 23:23	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Sample: BAT-05-CCR **Lab ID: 10752259002** Collected: 10/06/25 13:45 Received: 10/07/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:20	7440-36-0	D3
Arsenic	**2.9**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:20	7440-38-2	
Barium	**56.3**	ug/L	0.60	2	10/13/25 06:17	10/15/25 19:20	7440-39-3	
Beryllium	ND	ug/L	0.40	2	10/13/25 06:17	10/15/25 19:20	7440-41-7	D3
Boron	**1120**	ug/L	200	20	10/13/25 06:17	10/16/25 10:00	7440-42-8	
Cadmium	ND	ug/L	0.16	2	10/13/25 06:17	10/15/25 19:20	7440-43-9	D3
Calcium	**441000**	ug/L	5000	50	10/13/25 06:17	10/15/25 19:23	7440-70-2	
Chromium	**10.8**	ug/L	4.0	2	10/13/25 06:17	10/15/25 19:20	7440-47-3	
Cobalt	**7.2**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:20	7440-48-4	
Lead	**6.4**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:20	7439-92-1	
Lithium	**206**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:20	7439-93-2	
Molybdenum	**2.1**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:20	7439-98-7	
Selenium	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:20	7782-49-2	D3
Thallium	ND	ug/L	0.20	2	10/13/25 06:17	10/15/25 19:20	7440-28-0	D3
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**4150**	mg/L	25.0	1		10/10/25 19:17		PP
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**60.8**	mg/L	1.2	1		10/16/25 21:49	16887-00-6	
Fluoride	**0.12**	mg/L	0.050	1		10/16/25 21:49	16984-48-8	
Sulfate	**2680**	mg/L	12.0	10		10/16/25 23:39	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Sample: ERB-02-CCR **Lab ID: 10752259003** Collected: 10/06/25 14:40 Received: 10/07/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:26	7440-36-0	
Arsenic	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:26	7440-38-2	
Barium	ND	ug/L	0.30	1	10/13/25 06:17	10/15/25 19:26	7440-39-3	
Beryllium	ND	ug/L	0.20	1	10/13/25 06:17	10/15/25 19:26	7440-41-7	
Boron	ND	ug/L	10.0	1	10/13/25 06:17	10/15/25 19:26	7440-42-8	
Cadmium	ND	ug/L	0.080	1	10/13/25 06:17	10/15/25 19:26	7440-43-9	
Calcium	ND	ug/L	100	1	10/13/25 06:17	10/15/25 19:26	7440-70-2	
Chromium	ND	ug/L	2.0	1	10/13/25 06:17	10/15/25 19:26	7440-47-3	
Cobalt	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:26	7440-48-4	
Lead	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:26	7439-92-1	
Lithium	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:26	7439-93-2	
Molybdenum	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:26	7439-98-7	
Selenium	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:26	7782-49-2	
Thallium	ND	ug/L	0.10	1	10/13/25 06:17	10/15/25 19:26	7440-28-0	
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	ND	mg/L	25.0	1		10/10/25 19:17		PL
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	ND	mg/L	1.2	1		10/17/25 13:41	16887-00-6	
Fluoride	ND	mg/L	0.050	1		10/17/25 13:41	16984-48-8	
Sulfate	ND	mg/L	1.2	1		10/17/25 13:41	14808-79-8	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

QC Batch: 1034763
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470A Mercury Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752259001, 10752259002, 10752259003

METHOD BLANK: 5389621 Matrix: Water
Associated Lab Samples: 10752259001, 10752259002, 10752259003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	10/13/25 11:50	

LABORATORY CONTROL SAMPLE: 5389622

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5389623 5389624

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	98	101	80-120	2	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

QC Batch: 1034264
QC Batch Method: EPA 3020A
Analysis Method: EPA 6020B
Analysis Description: 6020B Water UPD5
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752259001, 10752259002, 10752259003

METHOD BLANK: 5386475 Matrix: Water
Associated Lab Samples: 10752259001, 10752259002, 10752259003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	0.50	10/15/25 14:59	
Arsenic	ug/L	ND	0.50	10/15/25 14:59	
Barium	ug/L	ND	0.30	10/15/25 14:59	
Beryllium	ug/L	ND	0.20	10/15/25 14:59	
Boron	ug/L	ND	10.0	10/15/25 14:59	
Cadmium	ug/L	ND	0.080	10/15/25 14:59	
Calcium	ug/L	ND	100	10/15/25 14:59	
Chromium	ug/L	ND	2.0	10/15/25 14:59	
Cobalt	ug/L	ND	0.50	10/15/25 14:59	
Lead	ug/L	ND	0.50	10/15/25 14:59	
Lithium	ug/L	ND	0.50	10/15/25 14:59	
Molybdenum	ug/L	ND	0.50	10/15/25 14:59	
Selenium	ug/L	ND	0.50	10/15/25 14:59	
Thallium	ug/L	ND	0.10	10/15/25 14:59	

LABORATORY CONTROL SAMPLE: 5386476

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	104	104	80-120	
Arsenic	ug/L	100	106	106	80-120	
Barium	ug/L	100	105	105	80-120	
Beryllium	ug/L	100	110	110	80-120	
Boron	ug/L	100	107	107	80-120	
Cadmium	ug/L	100	104	104	80-120	
Calcium	ug/L	2000	2240	112	80-120	
Chromium	ug/L	100	109	109	80-120	
Cobalt	ug/L	100	111	111	80-120	
Lead	ug/L	100	105	105	80-120	
Lithium	ug/L	100	108	108	80-120	
Molybdenum	ug/L	100	103	103	80-120	
Selenium	ug/L	100	107	107	80-120	
Thallium	ug/L	100	109	109	80-120	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5386477 5386478

Parameter	Units	10752019003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	97.9	93.0	98	93	75-125	5	20	
Arsenic	ug/L	1.2	100	100	104	102	103	100	75-125	3	20	
Barium	ug/L	27.9	100	100	139	131	111	103	75-125	6	20	
Beryllium	ug/L	ND	100	100	101	95.6	101	96	75-125	5	20	
Boron	ug/L	669	100	100	777	770	108	101	75-125	1	20	
Cadmium	ug/L	ND	100	100	97.4	91.1	97	91	75-125	7	20	
Calcium	ug/L	492000	2000	2000	475000	483000	-891	-455	75-125	2	20	P6
Chromium	ug/L	ND	100	100	106	101	103	98	75-125	5	20	
Cobalt	ug/L	1.7	100	100	104	97.8	102	96	75-125	6	20	
Lead	ug/L	2.0	100	100	103	96.7	101	95	75-125	6	20	
Lithium	ug/L	245	100	100	353	346	107	101	75-125	2	20	
Molybdenum	ug/L	ND	100	100	98.9	95.3	98	94	75-125	4	20	
Selenium	ug/L	48.7	100	100	155	152	106	103	75-125	2	20	
Thallium	ug/L	ND	100	100	104	98.6	104	99	75-125	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5386479 5386480

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	100	101	100	101	75-125	1	20	
Arsenic	ug/L	ND	100	100	103	103	103	102	75-125	0	20	
Barium	ug/L	12.5	100	100	111	113	99	101	75-125	2	20	
Beryllium	ug/L	ND	100	100	97.8	96.2	98	96	75-125	2	20	
Boron	ug/L	688	100	100	798	776	110	88	75-125	3	20	
Cadmium	ug/L	ND	100	100	94.0	94.1	94	94	75-125	0	20	
Calcium	ug/L	489000	2000	2000	478000	476000	-566	-645	75-125	0	20	P6
Chromium	ug/L	ND	100	100	99.4	98.7	99	98	75-125	1	20	
Cobalt	ug/L	ND	100	100	99.5	100	99	100	75-125	1	20	
Lead	ug/L	ND	100	100	96.7	97.4	97	97	75-125	1	20	
Lithium	ug/L	155	100	100	256	252	100	97	75-125	2	20	
Molybdenum	ug/L	ND	100	100	96.5	97.2	96	96	75-125	1	20	
Selenium	ug/L	19.2	100	100	125	124	106	104	75-125	1	20	
Thallium	ug/L	ND	100	100	102	101	102	101	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

QC Batch: 1034557
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752259001, 10752259002, 10752259003

METHOD BLANK: 5388044 Matrix: Water
Associated Lab Samples: 10752259001, 10752259002, 10752259003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10/10/25 19:16	

LABORATORY CONTROL SAMPLE: 5388045

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 5388046

Parameter	Units	10752448001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	208	198	5	10	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

QC Batch: 1035224
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752259001, 10752259002

METHOD BLANK: 5391880 Matrix: Water
Associated Lab Samples: 10752259001, 10752259002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	10/16/25 13:32	
Fluoride	mg/L	ND	0.050	10/16/25 13:32	
Sulfate	mg/L	ND	1.2	10/16/25 13:32	

LABORATORY CONTROL SAMPLE: 5391881

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	200	205	102	90-110	
Fluoride	mg/L	5	5.2	105	90-110	
Sulfate	mg/L	200	205	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5391882 5391883

Parameter	Units	10752127005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.3	200	200	215	214	103	102	80-120	0	20	
Fluoride	mg/L	0.24	5	5	5.5	5.5	105	105	80-120	0	20	
Sulfate	mg/L	1290	2000	2000	3250	3240	98	98	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5391884 5391885

Parameter	Units	10752105006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	82.7	200	200	274	274	96	95	80-120	0	20	
Fluoride	mg/L	0.78	5	5	5.9	5.9	102	102	80-120	0	20	
Sulfate	mg/L	172	200	200	352	351	90	90	80-120	0	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

QC Batch: 1035228
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10752259003

METHOD BLANK: 5391890 Matrix: Water
Associated Lab Samples: 10752259003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	10/17/25 06:19	
Fluoride	mg/L	ND	0.050	10/17/25 06:19	
Sulfate	mg/L	ND	1.2	10/17/25 06:19	

LABORATORY CONTROL SAMPLE: 5391891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	200	205	102	90-110	
Fluoride	mg/L	5	5.3	105	90-110	
Sulfate	mg/L	200	205	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5391892 5391893

Parameter	Units	10752127006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.3	200	200	209	210	100	100	80-120	0	20	
Fluoride	mg/L	0.24	5	5	5.4	5.4	102	103	80-120	0	20	
Sulfate	mg/L	1260	1000	1000	2220	2220	97	96	80-120	0	20	E

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5391894 5391895

Parameter	Units	10752273001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	181	200	200	361	362	90	90	80-120	0	20	
Fluoride	mg/L	0.17	5	5	5.3	5.3	103	103	80-120	0	20	
Sulfate	mg/L	1480	2000	2000	3550	3490	104	101	80-120	2	20	

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.
PP	The mass of dried residue obtained did not meet the test method requirements based on volume used.

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 10752259

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10752259001	**BAT-02-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752259002	**BAT-05-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752259003	**ERB-02-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752259001	**BAT-02-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752259002	**BAT-05-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752259003	**ERB-02-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752259001	**BAT-02-CCR**	SM 2540C	1034557		
10752259002	**BAT-05-CCR**	SM 2540C	1034557		
10752259003	**ERB-02-CCR**	SM 2540C	1034557		
10752259001	**BAT-02-CCR**	EPA 300.0	1035224		
10752259002	**BAT-05-CCR**	EPA 300.0	1035224		
10752259003	**ERB-02-CCR**	EPA 300.0	1035228		

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WO#: 10752259

10752259

Pace An

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of

Section A
Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone:	(303) 740-2614
Fax:	
Requested Due Date/TAT:	

Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	60709371 PRPA CCR
Project Number:	60709371

Section C
Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	
Pace Project Manager:	Tina Soltani
Pace Profile #:	36715

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: CO

Section D
Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	300.0 Cl, F, SO4 (N)	2540C TDS (N)	6020B Total Metals* (Y)	7470A Total Mercury (Y)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Bat-02-CCR	WT	G	—	—	10/06/25	1430	—	2	1		1							X	X	X	X	N	001
2	Bat-05-CCR	↓	↓	↓	↓	↓	1345	↓	↓	↓		↓							↓	↓	↓	↓		002
3	ERB-02-CCR	↓	↓	↓	↓	↓	1440	↓	↓	↓		↓							↓	↓	↓	↓		003
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
*Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	[signature] / AECOM	10/06/25	1700	[signature] Pace	10725	850	1.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mackensie Swift

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 10/06/25

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

ENV-FRM-MIN4-0150 v21_Sample Condition Upon Receipt

Person Examining & Date: 10725 MS **PROJECT #:**

WO#: 10752259
PM: TS1 Due Date: 10/21/25
CLIENT: AECOM

Client Name: Aecom

Custody Seal Present: ☑ YES ☐ NO **Seals Intact:** ☑ YES ☐ NO

Tracking Number: 4521 6248 2710 ☐ See Exceptions form ENV-FRM-MIN4-0142.

Courier: ☐ Client ☐ Commercial ☑ FedEx ☐ Pace Courier/Field ☐ SpeeDee ☐ UPS ☐ USPS

Packing Material: ☑ Bubble Bags ☐ Bubble Wrap ☐ None ☐ Other: _____ **Biological Tissue Frozen:** ☐ YES ☑ NO

Thermometer: ☐ T1 (0461) ☐ T2 (0431) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0187) ☐ T6 (0396) ☑ T7 (0377) ☐ T8 (0775) ☐ T9 (0428) ☐ 01339252 (0710)

Type of Ice: ☐ Blue ☐ Dry ☑ Wet ☐ Melted ☐ None

Temp Blank: ☑ YES ☐ NO

***NOTE:** Temp should be ≤ 6°C, but above freezing.*

Read Temp w/Temp Blank: 1.8 °C
Correction Factor: +1.2
Corrected Temp w/Temp Blank: 1.0 °C

Did Samples Originate in West Virginia: ☐ YES ☑ NO **(list temps on exception)**
Were All Container Temps Taken: ☐ YES ☐ NO ☑ N/A
Average Corrected Temp (No Temp Blank Only): _____
☐ See Exceptions form ENV-FRM-MIN4-0142. ☐ 1 Container

USDA Regulated Soil: ☑ N/A - Water Sample/Other (describe): _____

Did Samples originate from one of the following states (check maps): ☐ YES ☐ NO
Circle State: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, VA

Are samples from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO

NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out? **(i.e., Analysis/ID/Date/Time)**	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☑	☐	☐	3.
Samples Arrived within Hold Time? **NOTE:** < 24 hrs if lab filter is requested for Dissolved LL-Mercury by 1631E.	☑	☐		4. If Fecal: ☐ < 8 hrs ☐ > 8 hr but < 24 hrs ☐ >24 hr
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Turbidity ☐ Other:
Rush Turn Around Time Requested?	☐	☑		6. ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 Day Due Date:
Sufficient Sample Volume? **(If NO, list approximate volume in section 7.)**	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☑	☐ ☐	☐	8. 1x BP2U, 1x BP3N
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
ID/Date/Time Match? **(If NO, fill out section 11.)** Matrix: ☐ Oil ☐ Soil ☑ Water ☐ Other	☑	☐	☐	11. ☐ See Exceptions form ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☑	☐	☐	12.

Sample #: ☑ HNO3 1/1 x 4(3) ☐ H2SO4 _____ ☐ NaOH _____ ☐ Zinc Acetate _____

pH Paper Lot #: 10725MS ☐ Residual Chlorine _____ ☑ 0-6 Roll 230624 ☐ 0-6 Strip _____ ☐ 0-14 Strip _____

Positive for Residual Chlorine (NaOH containers only): ☐ YES ☐ NO

Preserved containers in compliance with EPA recommendations? (HNO3, H2SO4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) **EXCEPTIONS (water only):** VOA, Coliform, TOC/DOC, Oil & Grease, Phenols, DRO/8015, Dioxins, and PFAS	☑ ☐	☐ ☐	☐ ☑	☐ See Exceptions form ENV-FRM-MIN4-0142
Extra labels present on soil VOA or WIDRO containers? **(soil only)**	☐	☐	☑	13.
Headspace in Methyl Mercury Container?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present?	☐	☐	☑	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION / RESOLUTION: **Labeled By:** MLS **Line:** 2

Person Contacted & Date/Time: _____ **PM Review & Date:** 10/8/25

***NOTE:** When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office.*

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 27, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,

Tina Soltani
tina.soltani@pacelabs.com
(612) 607-6384
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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1700 Elm Street
Minneapolis, MN 55414
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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification via A2LA #: R-036
North Dakota Certification via MN #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10752265001	**BAT-06-CCR**	Water	10/06/25 09:35	10/07/25 08:50
10752265002	**BAT-01-CCR**	Water	10/06/25 10:00	10/07/25 08:50
10752265003	**BAT-09-CCR**	Water	10/06/25 11:25	10/07/25 08:50
10752265004	**BAT-03-CCR**	Water	10/06/25 12:40	10/07/25 08:50

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10752265001	**BAT-06-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	JKH	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752265002	**BAT-01-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	JKH	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752265003	**BAT-09-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	JKH	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752265004	**BAT-03-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	JKH	1	PASI-M
		EPA 300.0	AR3	3	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752265001	**BAT-06-CCR**					
EPA 6020B	Barium	14.2	ug/L	0.30	10/15/25 19:33	
EPA 6020B	Boron	1760	ug/L	200	10/16/25 10:03	
EPA 6020B	Calcium	115000	ug/L	2000	10/15/25 19:36	
EPA 6020B	Cobalt	0.61	ug/L	0.50	10/15/25 19:33	
EPA 6020B	Lithium	156	ug/L	0.50	10/15/25 19:33	
EPA 6020B	Molybdenum	6.8	ug/L	0.50	10/15/25 19:33	
SM 2540C	Total Dissolved Solids	2500	mg/L	25.0	10/10/25 19:17	PP
EPA 300.0	Chloride	11.9	mg/L	1.2	10/17/25 13:57	
EPA 300.0	Fluoride	0.24	mg/L	0.050	10/17/25 13:57	
EPA 300.0	Sulfate	1600	mg/L	6.0	10/17/25 20:21	
10752265002	**BAT-01-CCR**					
EPA 6020B	Barium	34.7	ug/L	0.30	10/15/25 19:39	
EPA 6020B	Boron	1510	ug/L	200	10/16/25 10:06	
EPA 6020B	Calcium	124000	ug/L	2000	10/15/25 19:42	
EPA 6020B	Cobalt	1.6	ug/L	0.50	10/15/25 19:39	
EPA 6020B	Lithium	163	ug/L	0.50	10/15/25 19:39	
EPA 6020B	Molybdenum	2.1	ug/L	0.50	10/15/25 19:39	
SM 2540C	Total Dissolved Solids	2070	mg/L	25.0	10/10/25 19:17	PP
EPA 300.0	Chloride	396	mg/L	12.0	10/18/25 02:57	
EPA 300.0	Fluoride	0.16	mg/L	0.050	10/18/25 02:12	
EPA 300.0	Sulfate	729	mg/L	12.0	10/18/25 02:57	
10752265003	**BAT-09-CCR**					
EPA 6020B	Barium	11.4	ug/L	0.60	10/15/25 19:51	
EPA 6020B	Boron	2140	ug/L	200	10/16/25 10:09	
EPA 6020B	Calcium	220000	ug/L	5000	10/15/25 19:54	
EPA 6020B	Lithium	208	ug/L	1.0	10/15/25 19:51	
EPA 6020B	Molybdenum	1.9	ug/L	1.0	10/15/25 19:51	
SM 2540C	Total Dissolved Solids	3280	mg/L	25.0	10/10/25 19:17	PP
EPA 300.0	Chloride	96.6	mg/L	1.2	10/18/25 03:41	
EPA 300.0	Fluoride	0.11	mg/L	0.050	10/18/25 03:41	
EPA 300.0	Sulfate	1830	mg/L	6.0	10/21/25 15:47	
10752265004	**BAT-03-CCR**					
EPA 6020B	Barium	72.8	ug/L	0.60	10/15/25 19:57	
EPA 6020B	Boron	1150	ug/L	200	10/16/25 10:12	
EPA 6020B	Calcium	427000	ug/L	5000	10/15/25 20:00	
EPA 6020B	Cobalt	2.3	ug/L	1.0	10/15/25 19:57	
EPA 6020B	Lithium	260	ug/L	1.0	10/15/25 19:57	
SM 2540C	Total Dissolved Solids	4000	mg/L	25.0	10/10/25 19:17	PP
EPA 300.0	Chloride	49.3	mg/L	1.2	10/18/25 03:56	
EPA 300.0	Fluoride	0.13	mg/L	0.050	10/18/25 03:56	
EPA 300.0	Sulfate	3070	mg/L	12.0	10/19/25 10:47	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Sample: BAT-06-CCR **Lab ID: 10752265001** Collected: 10/06/25 09:35 Received: 10/07/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:33	7440-36-0	
Arsenic	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:33	7440-38-2	
Barium	**14.2**	ug/L	0.30	1	10/13/25 06:17	10/15/25 19:33	7440-39-3	
Beryllium	ND	ug/L	0.20	1	10/13/25 06:17	10/15/25 19:33	7440-41-7	
Boron	**1760**	ug/L	200	20	10/13/25 06:17	10/16/25 10:03	7440-42-8	
Cadmium	ND	ug/L	0.080	1	10/13/25 06:17	10/15/25 19:33	7440-43-9	
Calcium	**115000**	ug/L	2000	20	10/13/25 06:17	10/15/25 19:36	7440-70-2	
Chromium	ND	ug/L	2.0	1	10/13/25 06:17	10/15/25 19:33	7440-47-3	
Cobalt	**0.61**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:33	7440-48-4	
Lead	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:33	7439-92-1	
Lithium	**156**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:33	7439-93-2	
Molybdenum	**6.8**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:33	7439-98-7	
Selenium	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:33	7782-49-2	
Thallium	ND	ug/L	0.10	1	10/13/25 06:17	10/15/25 19:33	7440-28-0	
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:06	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**2500**	mg/L	25.0	1		10/10/25 19:17		PP
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**11.9**	mg/L	1.2	1		10/17/25 13:57	16887-00-6	
Fluoride	**0.24**	mg/L	0.050	1		10/17/25 13:57	16984-48-8	
Sulfate	**1600**	mg/L	6.0	5		10/17/25 20:21	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Sample: BAT-01-CCR **Lab ID: 10752265002** Collected: 10/06/25 10:00 Received: 10/07/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:39	7440-36-0	
Arsenic	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:39	7440-38-2	
Barium	**34.7**	ug/L	0.30	1	10/13/25 06:17	10/15/25 19:39	7440-39-3	
Beryllium	ND	ug/L	0.20	1	10/13/25 06:17	10/15/25 19:39	7440-41-7	
Boron	**1510**	ug/L	200	20	10/13/25 06:17	10/16/25 10:06	7440-42-8	
Cadmium	ND	ug/L	0.080	1	10/13/25 06:17	10/15/25 19:39	7440-43-9	
Calcium	**124000**	ug/L	2000	20	10/13/25 06:17	10/15/25 19:42	7440-70-2	
Chromium	ND	ug/L	2.0	1	10/13/25 06:17	10/15/25 19:39	7440-47-3	
Cobalt	**1.6**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:39	7440-48-4	
Lead	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:39	7439-92-1	
Lithium	**163**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:39	7439-93-2	
Molybdenum	**2.1**	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:39	7439-98-7	
Selenium	ND	ug/L	0.50	1	10/13/25 06:17	10/15/25 19:39	7782-49-2	
Thallium	ND	ug/L	0.10	1	10/13/25 06:17	10/15/25 19:39	7440-28-0	
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:07	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**2070**	mg/L	25.0	1		10/10/25 19:17		PP
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**396**	mg/L	12.0	10		10/18/25 02:57	16887-00-6	
Fluoride	**0.16**	mg/L	0.050	1		10/18/25 02:12	16984-48-8	
Sulfate	**729**	mg/L	12.0	10		10/18/25 02:57	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Sample: BAT-09-CCR **Lab ID: 10752265003** Collected: 10/06/25 11:25 Received: 10/07/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:51	7440-36-0	D3
Arsenic	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:51	7440-38-2	D3
Barium	**11.4**	ug/L	0.60	2	10/13/25 06:17	10/15/25 19:51	7440-39-3	
Beryllium	ND	ug/L	0.40	2	10/13/25 06:17	10/15/25 19:51	7440-41-7	D3
Boron	**2140**	ug/L	200	20	10/13/25 06:17	10/16/25 10:09	7440-42-8	
Cadmium	ND	ug/L	0.16	2	10/13/25 06:17	10/15/25 19:51	7440-43-9	D3
Calcium	**220000**	ug/L	5000	50	10/13/25 06:17	10/15/25 19:54	7440-70-2	
Chromium	ND	ug/L	4.0	2	10/13/25 06:17	10/15/25 19:51	7440-47-3	D3
Cobalt	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:51	7440-48-4	D3
Lead	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:51	7439-92-1	D3
Lithium	**208**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:51	7439-93-2	
Molybdenum	**1.9**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:51	7439-98-7	
Selenium	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:51	7782-49-2	D3
Thallium	ND	ug/L	0.20	2	10/13/25 06:17	10/15/25 19:51	7440-28-0	D3
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**3280**	mg/L	25.0	1		10/10/25 19:17		PP
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**96.6**	mg/L	1.2	1		10/18/25 03:41	16887-00-6	
Fluoride	**0.11**	mg/L	0.050	1		10/18/25 03:41	16984-48-8	
Sulfate	**1830**	mg/L	6.0	5		10/21/25 15:47	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Sample: BAT-03-CCR **Lab ID: 10752265004** Collected: 10/06/25 12:40 Received: 10/07/25 08:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:57	7440-36-0	D3
Arsenic	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:57	7440-38-2	D3
Barium	**72.8**	ug/L	0.60	2	10/13/25 06:17	10/15/25 19:57	7440-39-3	
Beryllium	ND	ug/L	0.40	2	10/13/25 06:17	10/15/25 19:57	7440-41-7	D3
Boron	**1150**	ug/L	200	20	10/13/25 06:17	10/16/25 10:12	7440-42-8	
Cadmium	ND	ug/L	0.16	2	10/13/25 06:17	10/15/25 19:57	7440-43-9	D3
Calcium	**427000**	ug/L	5000	50	10/13/25 06:17	10/15/25 20:00	7440-70-2	
Chromium	ND	ug/L	4.0	2	10/13/25 06:17	10/15/25 19:57	7440-47-3	D3
Cobalt	**2.3**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:57	7440-48-4	
Lead	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:57	7439-92-1	D3
Lithium	**260**	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:57	7439-93-2	
Molybdenum	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:57	7439-98-7	D3
Selenium	ND	ug/L	1.0	2	10/13/25 06:17	10/15/25 19:57	7782-49-2	D3
Thallium	ND	ug/L	0.20	2	10/13/25 06:17	10/15/25 19:57	7440-28-0	D3
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**4000**	mg/L	25.0	1		10/10/25 19:17		PP
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**49.3**	mg/L	1.2	1		10/18/25 03:56	16887-00-6	
Fluoride	**0.13**	mg/L	0.050	1		10/18/25 03:56	16984-48-8	
Sulfate	**3070**	mg/L	12.0	10		10/19/25 10:47	14808-79-8	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

QC Batch: 1034763
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470A Mercury Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752265001, 10752265002, 10752265003, 10752265004

METHOD BLANK: 5389621 Matrix: Water
Associated Lab Samples: 10752265001, 10752265002, 10752265003, 10752265004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	10/13/25 11:50	

LABORATORY CONTROL SAMPLE: 5389622

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5389623 5389624

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	98	101	80-120	2	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

QC Batch: 1034264
QC Batch Method: EPA 3020A
Analysis Method: EPA 6020B
Analysis Description: 6020B Water UPD5
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752265001, 10752265002, 10752265003, 10752265004

METHOD BLANK: 5386475 Matrix: Water
Associated Lab Samples: 10752265001, 10752265002, 10752265003, 10752265004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	0.50	10/15/25 14:59	
Arsenic	ug/L	ND	0.50	10/15/25 14:59	
Barium	ug/L	ND	0.30	10/15/25 14:59	
Beryllium	ug/L	ND	0.20	10/15/25 14:59	
Boron	ug/L	ND	10.0	10/15/25 14:59	
Cadmium	ug/L	ND	0.080	10/15/25 14:59	
Calcium	ug/L	ND	100	10/15/25 14:59	
Chromium	ug/L	ND	2.0	10/15/25 14:59	
Cobalt	ug/L	ND	0.50	10/15/25 14:59	
Lead	ug/L	ND	0.50	10/15/25 14:59	
Lithium	ug/L	ND	0.50	10/15/25 14:59	
Molybdenum	ug/L	ND	0.50	10/15/25 14:59	
Selenium	ug/L	ND	0.50	10/15/25 14:59	
Thallium	ug/L	ND	0.10	10/15/25 14:59	

LABORATORY CONTROL SAMPLE: 5386476

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	104	104	80-120	
Arsenic	ug/L	100	106	106	80-120	
Barium	ug/L	100	105	105	80-120	
Beryllium	ug/L	100	110	110	80-120	
Boron	ug/L	100	107	107	80-120	
Cadmium	ug/L	100	104	104	80-120	
Calcium	ug/L	2000	2240	112	80-120	
Chromium	ug/L	100	109	109	80-120	
Cobalt	ug/L	100	111	111	80-120	
Lead	ug/L	100	105	105	80-120	
Lithium	ug/L	100	108	108	80-120	
Molybdenum	ug/L	100	103	103	80-120	
Selenium	ug/L	100	107	107	80-120	
Thallium	ug/L	100	109	109	80-120	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5386477 5386478

Parameter	Units	10752019003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	97.9	93.0	98	93	75-125	5	20	
Arsenic	ug/L	1.2	100	100	104	102	103	100	75-125	3	20	
Barium	ug/L	27.9	100	100	139	131	111	103	75-125	6	20	
Beryllium	ug/L	ND	100	100	101	95.6	101	96	75-125	5	20	
Boron	ug/L	669	100	100	777	770	108	101	75-125	1	20	
Cadmium	ug/L	ND	100	100	97.4	91.1	97	91	75-125	7	20	
Calcium	ug/L	492000	2000	2000	475000	483000	-891	-455	75-125	2	20	P6
Chromium	ug/L	ND	100	100	106	101	103	98	75-125	5	20	
Cobalt	ug/L	1.7	100	100	104	97.8	102	96	75-125	6	20	
Lead	ug/L	2.0	100	100	103	96.7	101	95	75-125	6	20	
Lithium	ug/L	245	100	100	353	346	107	101	75-125	2	20	
Molybdenum	ug/L	ND	100	100	98.9	95.3	98	94	75-125	4	20	
Selenium	ug/L	48.7	100	100	155	152	106	103	75-125	2	20	
Thallium	ug/L	ND	100	100	104	98.6	104	99	75-125	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5386479 5386480

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	100	101	100	101	75-125	1	20	
Arsenic	ug/L	ND	100	100	103	103	103	102	75-125	0	20	
Barium	ug/L	12.5	100	100	111	113	99	101	75-125	2	20	
Beryllium	ug/L	ND	100	100	97.8	96.2	98	96	75-125	2	20	
Boron	ug/L	688	100	100	798	776	110	88	75-125	3	20	
Cadmium	ug/L	ND	100	100	94.0	94.1	94	94	75-125	0	20	
Calcium	ug/L	489000	2000	2000	478000	476000	-566	-645	75-125	0	20	P6
Chromium	ug/L	ND	100	100	99.4	98.7	99	98	75-125	1	20	
Cobalt	ug/L	ND	100	100	99.5	100	99	100	75-125	1	20	
Lead	ug/L	ND	100	100	96.7	97.4	97	97	75-125	1	20	
Lithium	ug/L	155	100	100	256	252	100	97	75-125	2	20	
Molybdenum	ug/L	ND	100	100	96.5	97.2	96	96	75-125	1	20	
Selenium	ug/L	19.2	100	100	125	124	106	104	75-125	1	20	
Thallium	ug/L	ND	100	100	102	101	102	101	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

QC Batch: 1034557 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752265001, 10752265002, 10752265003, 10752265004

METHOD BLANK: 5388044 Matrix: Water
Associated Lab Samples: 10752265001, 10752265002, 10752265003, 10752265004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10/10/25 19:16	

LABORATORY CONTROL SAMPLE: 5388045

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 5388046

Parameter	Units	10752448001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	208	198	5	10	

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

QC Batch: 1035228
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10752265001

METHOD BLANK: 5391890 Matrix: Water
Associated Lab Samples: 10752265001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	10/17/25 06:19	
Fluoride	mg/L	ND	0.050	10/17/25 06:19	
Sulfate	mg/L	ND	1.2	10/17/25 06:19	

LABORATORY CONTROL SAMPLE: 5391891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	200	205	102	90-110	
Fluoride	mg/L	5	5.3	105	90-110	
Sulfate	mg/L	200	205	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5391892 5391893

Parameter	Units	10752127006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.3	200	200	209	210	100	100	80-120	0	20	
Fluoride	mg/L	0.24	5	5	5.4	5.4	102	103	80-120	0	20	
Sulfate	mg/L	1260	1000	1000	2220	2220	97	96	80-120	0	20	E

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5391894 5391895

Parameter	Units	10752273001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	181	200	200	361	362	90	90	80-120	0	20	
Fluoride	mg/L	0.17	5	5	5.3	5.3	103	103	80-120	0	20	
Sulfate	mg/L	1480	2000	2000	3550	3490	104	101	80-120	2	20	

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Minneapolis, MN 55414
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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

QC Batch: 1035958
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752265002, 10752265003, 10752265004

METHOD BLANK: 5395525 Matrix: Water
Associated Lab Samples: 10752265002, 10752265003, 10752265004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	10/18/25 01:57	
Fluoride	mg/L	ND	0.050	10/18/25 01:57	
Sulfate	mg/L	ND	1.2	10/18/25 01:57	

LABORATORY CONTROL SAMPLE: 5395526

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	200	202	101	90-110	
Fluoride	mg/L	5	5.2	104	90-110	
Sulfate	mg/L	200	202	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5395527 5395528

Parameter	Units	10752265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	396	2000	2000	2400	2400	100	100	80-120	0	20	
Fluoride	mg/L	0.16	5	5	5.3	5.4	103	104	80-120	1	20	
Sulfate	mg/L	729	2000	2000	2740	2750	101	101	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5395529 5395530

Parameter	Units	10752462001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	332	200	200	493	493	80	80	80-120	0	20	E
Fluoride	mg/L	0.52	5	5	5.7	5.7	103	104	80-120	0	20	
Sulfate	mg/L	2900	2000	2000	4820	4730	96	91	80-120	2	20	E

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

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PP	The mass of dried residue obtained did not meet the test method requirements based on volume used.

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 10752265

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10752265001	**BAT-06-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752265002	**BAT-01-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752265003	**BAT-09-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752265004	**BAT-03-CCR**	EPA 3020A	1034264	EPA 6020B	1034934
10752265001	**BAT-06-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752265002	**BAT-01-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752265003	**BAT-09-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752265004	**BAT-03-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752265001	**BAT-06-CCR**	SM 2540C	1034557		
10752265002	**BAT-01-CCR**	SM 2540C	1034557		
10752265003	**BAT-09-CCR**	SM 2540C	1034557		
10752265004	**BAT-03-CCR**	SM 2540C	1034557		
10752265001	**BAT-06-CCR**	EPA 300.0	1035228		
10752265002	**BAT-01-CCR**	EPA 300.0	1035958		
10752265003	**BAT-09-CCR**	EPA 300.0	1035958		
10752265004	**BAT-03-CCR**	EPA 300.0	1035958		

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CCR

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	AECOM	Report To:	Vasanta Kalluri	Attention:	Accounts Payable
Address:	6200 South Quebec St	Copy To:	Jamie Herman	Company Name:	AECOM
	Greenwood Village, CO 80111			Address:	Same as Section A
Email To:	jamie.herman@aecom.com	Purchase Order No.:	NEED PO #	Pace Quote Reference:	
Phone:	(303) 740-2614 Fax:	Project Name:	60709371 PRPA CCR	Pace Project Manager:	Tina Soltani
Requested Due Date/TAT:	standard	Project Number:	60709371	Pace Profile #:	36715

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	300.0 Cl, F, SO4	2540C TDS	6020B Total Metals*	7470A Total Mercury	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	Y	Y		
1	Bat-06-CCR	WT	G	—	—	10/06/25	0935	—	2	1		1							X	X	X	X	N	001
2	Bat-01-CCR	↓	↓	↓	↓	↓	1000	↓	↓	↓		↓							↓	↓	↓	↓		002
3	BAT-09-CCR						1125																	003
4	BAT-03-CCR						1240																	004
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	[signature] / AECOM	10/06/25	1700	[signature] Pace	10/7/25	850	Y	Y	Y	Y

WO#: 10752265
10752265

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mackenzie Swift / Kara Hoppes

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/06/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

ENV-FRM-MIN4-0150 v21_Sample Condition Upon Receipt

Person Examining & Date: 10725 MS **PROJECT #:**

WO#: 10752265
PM: TS1 Due Date: 10/21/25
CLIENT: AECOM

Client Name: Aecom

Custody Seal Present: ☑ YES ☐ NO **Seals Intact:** ☑ YES ☐ NO

Tracking Number: 4521 6248 2765 ☐ See Exceptions form ENV-FRM-MIN4-0142.

Courier: ☐ Client ☐ Commercial ☑ FedEx ☐ Pace Courier/Field ☐ SpeeDee ☐ UPS ☐ USPS

Packing Material: ☑ Bubble Bags ☐ Bubble Wrap ☑ None ☐ Other: _____ **Biological Tissue Frozen:** ☐ YES ☑ NO

Thermometer: ☐ T1 (0461) ☐ T2 (0431) ☐ T3 (0459) ☐ T4 (0402) **Type of Ice:** ☐ Blue ☐ Dry ☑ Wet ☐ Melted ☐ None
☐ T5 (0187) ☐ T6 (0396) ☑ T7 (0377) ☐ T8 (0775)
☐ T9 (0428) ☐ 01339252 (0710) **Temp Blank:** ☐ YES ☑ NO

***NOTE:** Temp should be ≤ 6°C, but above freezing.*
Read Temp w/Temp Blank: _____ °C
Correction Factor: +.2
Corrected Temp w/Temp Blank: _____ °C

Did Samples Originate in West Virginia: ☐ YES ☑ NO **(list temps on exception)**
Were All Container Temps Taken: ☐ YES ☐ NO ☑ N/A
Average Corrected Temp (No Temp Blank Only): 14
☐ See Exceptions form ENV-FRM-MIN4-0142. ☐ 1 Container

USDA Regulated Soil: ☑ N/A - Water Sample/Other (describe): _____
Did Samples originate from one of the following states (check maps): ☐ YES ☐ NO
Circle State: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, VA
Are samples from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO

NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out? **(i.e., Analysis/ID/Date/Time)**	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☑	☐	☐	3.
Samples Arrived within Hold Time? **NOTE:** < 24 hrs if lab filter is requested for Dissolved LL-Mercury by 1631E.	☑	☐		4. If Fecal: ☐ < 8 hrs ☐ > 8 hr but < 24 hrs ☐ >24 hr
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Turbidity ☐ Other: _____
Rush Turn Around Time Requested?	☐	☑		6. ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 Day Due Date: _____
Sufficient Sample Volume? **(If NO, list approximate volume in section 7.)**	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☑	☐ ☐	☐	8. 1x BP2U, 1x BP3N
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
ID/Date/Time Match? **(If NO, fill out section 11.)** Matrix: ☐ Oil ☐ Soil ☑ Water ☐ Other	☑	☐	☐	11. ☐ See Exceptions form ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☑	☐	☐	12.

Sample #: 1/1 x4
☑ HNO3 ☐ H2SO4 _____ ☐ NaOH _____ ☐ Zinc Acetate _____
pH Paper Lot #:
☐ Residual Chlorine _____ ☑ 0-6 Roll 230624 ☐ 0-6 Strip _____ ☐ 0-14 Strip _____
Positive for Residual Chlorine (NaOH containers only): ☐ YES ☐ NO

Preserved containers in compliance with EPA recommendations? (HNO3, H2SO4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide)	☑	☐	☐	☐ See Exceptions form ENV-FRM-MIN4-0142
EXCEPTIONS (water only): VOA, Coliform, TOC/DOC, Oil & Grease, Phenols, DRO/8015, Dioxins, and PFAS	☐	☐	☑	
Extra labels present on soil VOA or WIDRO containers? **(soil only)**	☐	☐	☑	13.
Headspace in Methyl Mercury Container?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present?	☐	☐	☑	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION / RESOLUTION: **Labeled By:** MLS **Line:** 2

Person Contacted & Date/Time: _____ **PM Review & Date:** 10/8/25 Jina Soltani

***NOTE:** When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office.*

ENV-FRM-MIN4-0142 v05_Sample Condition Upon Receipt - Exceptions

Workorder #: _____

Anything is OVER 6.0°C, MUST be documented in the sections below.

Tracking Number	Temperature (°C)

Out of Temp Sample ID	Container Type	# of Containers

PM Notified of Out of Temp Cooler? ☐ YES ☐ NO **Multiple Cooler Project?** ☐ YES ☐ NO

If **YES**, indicate who was contacted, date, and time: _____

If **NO**, indicate reason why: ☐ All Nitric ☐ Not on ice ☐ Sampled same day ☐ Other: _____

No Temp Blank

Temp Gun: T7 **Correction Factor:** +1.2

Read Temp	Corrected Temp	Average Temp
.2	.4	.4
.1	~~.5~~ .3	10725 MS
.3	.5	
0.0	.2	

Other	

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative		pH Upon Receipt	Date / Time Adjusted	Amount Added (mL)	Lot # Added	ph After	In Compliance After?		Initials
	HNO_3	H_2SO_4						YES	NO	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	
	☐	☐						☐	☐	

COMMENT(S):

_____

_____

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 27, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on October 08, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,

Tina Soltani
tina.soltani@pacelabs.com
(612) 607-6384
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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Minneapolis, MN 55414
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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification via A2LA #: R-036
North Dakota Certification via MN #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10752464001	**FD-02-CCR**	Water	10/07/25 00:00	10/08/25 09:00
10752464002	**BAT-12-CCR**	Water	10/07/25 11:00	10/08/25 09:00
10752464003	**BAT-11-CCR**	Water	10/07/25 14:10	10/08/25 09:00
10752464004	**BAT-10-CCR**	Water	10/07/25 14:25	10/08/25 09:00

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10752464001	**FD-02-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	AMC2	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752464002	**BAT-12-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	AMC2	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752464003	**BAT-11-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	AMC2	1	PASI-M
		EPA 300.0	AR3	3	PASI-M
10752464004	**BAT-10-CCR**	EPA 6020B	IMB	14	PASI-M
		EPA 7470A	LMW	1	PASI-M
		SM 2540C	AMC2	1	PASI-M
		EPA 300.0	AR3	3	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752464001	**FD-02-CCR**					
EPA 6020B	Arsenic	0.76	ug/L	0.50	10/16/25 17:02	
EPA 6020B	Barium	36.7	ug/L	0.30	10/16/25 17:02	
EPA 6020B	Boron	210	ug/L	10.0	10/16/25 17:02	
EPA 6020B	Calcium	99300	ug/L	2000	10/16/25 17:06	
EPA 6020B	Lithium	84.1	ug/L	0.50	10/16/25 17:02	
EPA 6020B	Molybdenum	6.2	ug/L	0.50	10/16/25 17:02	
EPA 6020B	Selenium	3.2	ug/L	0.50	10/16/25 17:02	
SM 2540C	Total Dissolved Solids	970	mg/L	25.0	10/14/25 15:06	
EPA 300.0	Chloride	165	mg/L	1.2	10/18/25 08:55	
EPA 300.0	Fluoride	0.61	mg/L	0.050	10/18/25 08:55	
EPA 300.0	Sulfate	398	mg/L	1.2	10/18/25 08:55	
10752464002	**BAT-12-CCR**					
EPA 6020B	Arsenic	0.74	ug/L	0.50	10/16/25 17:09	
EPA 6020B	Barium	37.1	ug/L	0.30	10/16/25 17:09	
EPA 6020B	Boron	215	ug/L	10.0	10/16/25 17:09	
EPA 6020B	Calcium	97300	ug/L	2000	10/16/25 17:12	
EPA 6020B	Lithium	85.6	ug/L	0.50	10/16/25 17:09	
EPA 6020B	Molybdenum	6.2	ug/L	0.50	10/16/25 17:09	
EPA 6020B	Selenium	3.2	ug/L	0.50	10/16/25 17:09	
SM 2540C	Total Dissolved Solids	973	mg/L	25.0	10/14/25 15:06	
EPA 300.0	Chloride	164	mg/L	1.2	10/18/25 09:10	
EPA 300.0	Fluoride	0.61	mg/L	0.050	10/18/25 09:10	
EPA 300.0	Sulfate	396	mg/L	1.2	10/18/25 09:10	
10752464003	**BAT-11-CCR**					
EPA 6020B	Barium	31.7	ug/L	0.30	10/16/25 17:15	
EPA 6020B	Boron	678	ug/L	200	10/16/25 17:18	
EPA 6020B	Calcium	81600	ug/L	2000	10/16/25 17:18	
EPA 6020B	Cobalt	0.85	ug/L	0.50	10/16/25 17:15	
EPA 6020B	Lithium	76.9	ug/L	0.50	10/16/25 17:15	
EPA 6020B	Molybdenum	4.8	ug/L	0.50	10/16/25 17:15	
EPA 6020B	Selenium	2.2	ug/L	0.50	10/16/25 17:15	
SM 2540C	Total Dissolved Solids	769	mg/L	25.0	10/14/25 15:06	
EPA 300.0	Chloride	13.4	mg/L	1.2	10/18/25 09:24	
EPA 300.0	Fluoride	0.14	mg/L	0.050	10/18/25 09:24	
EPA 300.0	Sulfate	255	mg/L	1.2	10/18/25 09:24	
10752464004	**BAT-10-CCR**					
EPA 6020B	Barium	16.2	ug/L	0.60	10/16/25 17:21	
EPA 6020B	Boron	1020	ug/L	500	10/16/25 17:24	
EPA 6020B	Calcium	411000	ug/L	5000	10/16/25 17:24	
EPA 6020B	Lithium	172	ug/L	1.0	10/16/25 17:21	
EPA 6020B	Molybdenum	4.1	ug/L	1.0	10/16/25 17:21	
EPA 6020B	Selenium	229	ug/L	1.0	10/16/25 17:21	
SM 2540C	Total Dissolved Solids	3930	mg/L	25.0	10/14/25 15:07	PP
EPA 300.0	Chloride	25.0	mg/L	1.2	10/18/25 09:39	
EPA 300.0	Fluoride	0.47	mg/L	0.050	10/18/25 09:39	
EPA 300.0	Sulfate	3120	mg/L	12.0	10/19/25 11:47	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Sample: FD-02-CCR **Lab ID: 10752464001** Collected: 10/07/25 00:00 Received: 10/08/25 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:02	7440-36-0	
Arsenic	**0.76**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:02	7440-38-2	
Barium	**36.7**	ug/L	0.30	1	10/13/25 06:17	10/16/25 17:02	7440-39-3	
Beryllium	ND	ug/L	0.20	1	10/13/25 06:17	10/16/25 17:02	7440-41-7	
Boron	**210**	ug/L	10.0	1	10/13/25 06:17	10/16/25 17:02	7440-42-8	
Cadmium	ND	ug/L	0.080	1	10/13/25 06:17	10/16/25 17:02	7440-43-9	
Calcium	**99300**	ug/L	2000	20	10/13/25 06:17	10/16/25 17:06	7440-70-2	
Chromium	ND	ug/L	2.0	1	10/13/25 06:17	10/16/25 17:02	7440-47-3	
Cobalt	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:02	7440-48-4	
Lead	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:02	7439-92-1	
Lithium	**84.1**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:02	7439-93-2	
Molybdenum	**6.2**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:02	7439-98-7	
Selenium	**3.2**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:02	7782-49-2	
Thallium	ND	ug/L	0.10	1	10/13/25 06:17	10/16/25 17:02	7440-28-0	
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:12	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**970**	mg/L	25.0	1		10/14/25 15:06		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**165**	mg/L	1.2	1		10/18/25 08:55	16887-00-6	
Fluoride	**0.61**	mg/L	0.050	1		10/18/25 08:55	16984-48-8	
Sulfate	**398**	mg/L	1.2	1		10/18/25 08:55	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Sample: BAT-12-CCR **Lab ID: 10752464002** Collected: 10/07/25 11:00 Received: 10/08/25 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:09	7440-36-0	
Arsenic	**0.74**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:09	7440-38-2	
Barium	**37.1**	ug/L	0.30	1	10/13/25 06:17	10/16/25 17:09	7440-39-3	
Beryllium	ND	ug/L	0.20	1	10/13/25 06:17	10/16/25 17:09	7440-41-7	
Boron	**215**	ug/L	10.0	1	10/13/25 06:17	10/16/25 17:09	7440-42-8	
Cadmium	ND	ug/L	0.080	1	10/13/25 06:17	10/16/25 17:09	7440-43-9	
Calcium	**97300**	ug/L	2000	20	10/13/25 06:17	10/16/25 17:12	7440-70-2	
Chromium	ND	ug/L	2.0	1	10/13/25 06:17	10/16/25 17:09	7440-47-3	
Cobalt	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:09	7440-48-4	
Lead	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:09	7439-92-1	
Lithium	**85.6**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:09	7439-93-2	
Molybdenum	**6.2**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:09	7439-98-7	
Selenium	**3.2**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:09	7782-49-2	
Thallium	ND	ug/L	0.10	1	10/13/25 06:17	10/16/25 17:09	7440-28-0	
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:13	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**973**	mg/L	25.0	1		10/14/25 15:06		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**164**	mg/L	1.2	1		10/18/25 09:10	16887-00-6	
Fluoride	**0.61**	mg/L	0.050	1		10/18/25 09:10	16984-48-8	
Sulfate	**396**	mg/L	1.2	1		10/18/25 09:10	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Sample: BAT-11-CCR **Lab ID: 10752464003** Collected: 10/07/25 14:10 Received: 10/08/25 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:15	7440-36-0	
Arsenic	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:15	7440-38-2	
Barium	**31.7**	ug/L	0.30	1	10/13/25 06:17	10/16/25 17:15	7440-39-3	
Beryllium	ND	ug/L	0.20	1	10/13/25 06:17	10/16/25 17:15	7440-41-7	
Boron	**678**	ug/L	200	20	10/13/25 06:17	10/16/25 17:18	7440-42-8	
Cadmium	ND	ug/L	0.080	1	10/13/25 06:17	10/16/25 17:15	7440-43-9	
Calcium	**81600**	ug/L	2000	20	10/13/25 06:17	10/16/25 17:18	7440-70-2	
Chromium	ND	ug/L	2.0	1	10/13/25 06:17	10/16/25 17:15	7440-47-3	
Cobalt	**0.85**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:15	7440-48-4	
Lead	ND	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:15	7439-92-1	
Lithium	**76.9**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:15	7439-93-2	
Molybdenum	**4.8**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:15	7439-98-7	
Selenium	**2.2**	ug/L	0.50	1	10/13/25 06:17	10/16/25 17:15	7782-49-2	
Thallium	ND	ug/L	0.10	1	10/13/25 06:17	10/16/25 17:15	7440-28-0	
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:15	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**769**	mg/L	25.0	1		10/14/25 15:06		
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**13.4**	mg/L	1.2	1		10/18/25 09:24	16887-00-6	
Fluoride	**0.14**	mg/L	0.050	1		10/18/25 09:24	16984-48-8	
Sulfate	**255**	mg/L	1.2	1		10/18/25 09:24	14808-79-8	

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ANALYTICAL RESULTS

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Sample: BAT-10-CCR **Lab ID: 10752464004** Collected: 10/07/25 14:25 Received: 10/08/25 09:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3020A Pace Analytical Services - Minneapolis							
Antimony	ND	ug/L	1.0	2	10/13/25 06:17	10/16/25 17:21	7440-36-0	D3
Arsenic	ND	ug/L	1.0	2	10/13/25 06:17	10/16/25 17:21	7440-38-2	D3
Barium	**16.2**	ug/L	0.60	2	10/13/25 06:17	10/16/25 17:21	7440-39-3	
Beryllium	ND	ug/L	0.40	2	10/13/25 06:17	10/16/25 17:21	7440-41-7	D3
Boron	**1020**	ug/L	500	50	10/13/25 06:17	10/16/25 17:24	7440-42-8	
Cadmium	ND	ug/L	0.16	2	10/13/25 06:17	10/16/25 17:21	7440-43-9	D3
Calcium	**411000**	ug/L	5000	50	10/13/25 06:17	10/16/25 17:24	7440-70-2	
Chromium	ND	ug/L	4.0	2	10/13/25 06:17	10/16/25 17:21	7440-47-3	D3
Cobalt	ND	ug/L	1.0	2	10/13/25 06:17	10/16/25 17:21	7440-48-4	D3
Lead	ND	ug/L	1.0	2	10/13/25 06:17	10/16/25 17:21	7439-92-1	D3
Lithium	**172**	ug/L	1.0	2	10/13/25 06:17	10/16/25 17:21	7439-93-2	
Molybdenum	**4.1**	ug/L	1.0	2	10/13/25 06:17	10/16/25 17:21	7439-98-7	
Selenium	**229**	ug/L	1.0	2	10/13/25 06:17	10/16/25 17:21	7782-49-2	
Thallium	ND	ug/L	0.20	2	10/13/25 06:17	10/16/25 17:21	7440-28-0	D3
7470A Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Minneapolis							
Mercury	ND	ug/L	0.20	1	10/13/25 06:36	10/13/25 12:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Minneapolis							
Total Dissolved Solids	**3930**	mg/L	25.0	1		10/14/25 15:07		PP
300.0 IC Anions	Analytical Method: EPA 300.0 Pace Analytical Services - Minneapolis							
Chloride	**25.0**	mg/L	1.2	1		10/18/25 09:39	16887-00-6	
Fluoride	**0.47**	mg/L	0.050	1		10/18/25 09:39	16984-48-8	
Sulfate	**3120**	mg/L	12.0	10		10/19/25 11:47	14808-79-8	

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

QC Batch: 1034763
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470A Mercury Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

METHOD BLANK: 5389621 Matrix: Water
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	10/13/25 11:50	

LABORATORY CONTROL SAMPLE: 5389622

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5389623 5389624

Parameter	Units	10752029002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	98	101	80-120	2	20	

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

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

QC Batch: 1034748
QC Batch Method: EPA 3020A
Analysis Method: EPA 6020B
Analysis Description: 6020B Water UPD5
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

METHOD BLANK: 5389554 Matrix: Water
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	0.50	10/15/25 15:02	
Arsenic	ug/L	ND	0.50	10/15/25 15:02	
Barium	ug/L	ND	0.30	10/15/25 15:02	
Beryllium	ug/L	ND	0.20	10/15/25 15:02	
Boron	ug/L	ND	10.0	10/15/25 15:02	
Cadmium	ug/L	ND	0.080	10/15/25 15:02	
Calcium	ug/L	ND	100	10/15/25 15:02	
Chromium	ug/L	ND	2.0	10/15/25 15:02	
Cobalt	ug/L	ND	0.50	10/15/25 15:02	
Lead	ug/L	ND	0.50	10/15/25 15:02	
Lithium	ug/L	ND	0.50	10/15/25 15:02	
Molybdenum	ug/L	ND	0.50	10/15/25 15:02	
Selenium	ug/L	ND	0.50	10/15/25 15:02	
Thallium	ug/L	ND	0.10	10/15/25 15:02	

LABORATORY CONTROL SAMPLE: 5389555

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	100	105	105	80-120	
Arsenic	ug/L	100	108	108	80-120	
Barium	ug/L	100	107	107	80-120	
Beryllium	ug/L	100	109	109	80-120	
Boron	ug/L	100	106	106	80-120	
Cadmium	ug/L	100	104	104	80-120	
Calcium	ug/L	2000	2200	110	80-120	
Chromium	ug/L	100	110	110	80-120	
Cobalt	ug/L	100	111	111	80-120	
Lead	ug/L	100	105	105	80-120	
Lithium	ug/L	100	108	108	80-120	
Molybdenum	ug/L	100	104	104	80-120	
Selenium	ug/L	100	108	108	80-120	
Thallium	ug/L	100	107	107	80-120	

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

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QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5389556 5389557

Parameter	Units	10751998001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	100	100	97.8	103	98	103	75-125	5	20	
Arsenic	ug/L	ND	100	100	106	110	106	110	75-125	4	20	
Barium	ug/L	10.4	100	100	110	116	99	106	75-125	6	20	
Beryllium	ug/L	ND	100	100	100	104	100	104	75-125	4	20	
Boron	ug/L	662	100	100	785	832	123	170	75-125	6	20	P6
Cadmium	ug/L	ND	100	100	95.9	102	96	102	75-125	6	20	
Calcium	ug/L	439000	2000	2000	422000	451000	-854	582	75-125	7	20	P6
Chromium	ug/L	ND	100	100	107	111	107	110	75-125	3	20	
Cobalt	ug/L	ND	100	100	106	111	105	110	75-125	5	20	
Lead	ug/L	ND	100	100	97.4	101	97	101	75-125	4	20	
Lithium	ug/L	417	100	100	535	566	118	148	75-125	6	20	M1
Molybdenum	ug/L	1.1	100	100	105	110	104	109	75-125	5	20	
Selenium	ug/L	62.0	100	100	167	176	105	114	75-125	5	20	
Thallium	ug/L	ND	100	100	104	106	104	106	75-125	2	20	

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

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

QC Batch: 1035118 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

METHOD BLANK: 5391290 Matrix: Water
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10/14/25 15:06	

LABORATORY CONTROL SAMPLE: 5391291

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 5391292

Parameter	Units	10752446001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	985	975	1	10	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

QC Batch: 1035958
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

METHOD BLANK: 5395525 Matrix: Water
Associated Lab Samples: 10752464001, 10752464002, 10752464003, 10752464004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.2	10/18/25 01:57	
Fluoride	mg/L	ND	0.050	10/18/25 01:57	
Sulfate	mg/L	ND	1.2	10/18/25 01:57	

LABORATORY CONTROL SAMPLE: 5395526

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	200	202	101	90-110	
Fluoride	mg/L	5	5.2	104	90-110	
Sulfate	mg/L	200	202	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5395527 5395528

Parameter	Units	10752265002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	396	2000	2000	2400	2400	100	100	80-120	0	20	
Fluoride	mg/L	0.16	5	5	5.3	5.4	103	104	80-120	1	20	
Sulfate	mg/L	729	2000	2000	2740	2750	101	101	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5395529 5395530

Parameter	Units	10752462001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	332	200	200	493	493	80	80	80-120	0	20	E
Fluoride	mg/L	0.52	5	5	5.7	5.7	103	104	80-120	0	20	
Sulfate	mg/L	2900	2000	2000	4820	4730	96	91	80-120	2	20	E

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PP	The mass of dried residue obtained did not meet the test method requirements based on volume used.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 10752464

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10752464001	**FD-02-CCR**	EPA 3020A	1034748	EPA 6020B	1034936
10752464002	**BAT-12-CCR**	EPA 3020A	1034748	EPA 6020B	1034936
10752464003	**BAT-11-CCR**	EPA 3020A	1034748	EPA 6020B	1034936
10752464004	**BAT-10-CCR**	EPA 3020A	1034748	EPA 6020B	1034936
10752464001	**FD-02-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752464002	**BAT-12-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752464003	**BAT-11-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752464004	**BAT-10-CCR**	EPA 7470A	1034763	EPA 7470A	1034892
10752464001	**FD-02-CCR**	SM 2540C	1035118		
10752464002	**BAT-12-CCR**	SM 2540C	1035118		
10752464003	**BAT-11-CCR**	SM 2540C	1035118		
10752464004	**BAT-10-CCR**	SM 2540C	1035118		
10752464001	**FD-02-CCR**	EPA 300.0	1035958		
10752464002	**BAT-12-CCR**	EPA 300.0	1035958		
10752464003	**BAT-11-CCR**	EPA 300.0	1035958		
10752464004	**BAT-10-CCR**	EPA 300.0	1035958		

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CCR

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	AECOM	Report To:	Vasanta Kalluri	Attention:	Accounts Payable
Address:	6200 South Quebec St	Copy To:	Jamie Herman	Company Name:	AECOM
	Greenwood Village, CO 80111			Address:	Same as Section A
Email To:	jamie.herman@aecom.com	Purchase Order No.:	NEED PO #	Pace Quote Reference:	
Phone:	(303) 740-2614 Fax:	Project Name:	60709371 PRPA CCR	Pace Project Manager:	Tina Soltani
Requested Due Date/TAT:	Standard	Project Number:	60709371	Pace Profile #:	36715

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ Y/N	300.0 Cl, F, SO4	2540C TDS	6020B Total Metals*	7470A Total Mercury	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Requested Analysis Filtered (Y/N)	N	N	Y	Y		
1	ED-02-CCR	WT	G	—	—	10/07/25	—	—	2	1		1							X	X	X	X	N	001
2	Bat-12-CCR	↓	↓	↓	↓	↓	1100		↓	↓		↓							↓	↓	↓	↓		002
3	Bat-11-CCR						1416																	003
4	Bat-10-CCR						1425																	004
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, Tl	Mackenzie Swift/AECOM	10/07/25	1700	Courier	10/8/25	9:00	4.2 1.5	Y	Y	Y

WO# : 10752464

10752464

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mackenzie Swift

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/07/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

ENV-FRM-MIN4-0150 v21_Sample Condition Upon Receipt

Person Examining & Date: CRL 10/8/25 **PROJECT #:** **WO#: 10752464**

PM: TS1 **Due Date: 10/22/25**

CLIENT: AECOM

Client Name: AECOM

Custody Seal Present: ☑ YES ☐ NO **Seals Intact:** ☑ YES ☐ NO

Tracking Number: 4519 4999 6524, 4519 4999 6535 ☐ See Exceptions form ENV-FRM-MIN4-0142.

Courier: ☐ Client ☐ Commercial ☑ FedEx ☐ Pace Courier/Field ☐ SpeeDee ☐ UPS ☐ USPS

Packing Material: ☑ Bubble Bags ☐ Bubble Wrap ☐ None ☐ Other: _____ **Biological Tissue Frozen:** ☐ YES ☑ NO

Thermometer: ☐ T1 (0461) ☐ T2 (0431) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0187) ☐ T6 (0396) ☑ T7 (0377) ☐ T8 (0775) ☐ T9 (0428) ☐ 01339252 (0710)

Type of Ice: ☐ Blue ☐ Dry ☑ Wet ☐ Melted ☐ None

Temp Blank: ☑ YES ☐ NO

NOTE: Temp should be ≤ 6°C, but above freezing.

Read Temp w/Temp Blank: 4.6, 1.3 °C

Correction Factor: +0.2

Corrected Temp w/Temp Blank: 4.8, 1.5 °C

Did Samples Originate in West Virginia: ☐ YES ☑ NO (list temps on exception)

Were All Container Temps Taken: ☐ YES ☐ NO ☑ N/A

Average Corrected Temp (No Temp Blank Only): _____

☐ See Exceptions form ENV-FRM-MIN4-0142. ☐ 1 Container

USDA Regulated Soil: ☑ N/A – Water Sample/Other (describe): _____

Did Samples originate from one of the following states (check maps): ☐ YES ☐ NO

Circle State: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, VA

Are samples from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO

NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out? **(i.e., Analysis/ID/Date/Time)**	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☑	☐	☐	3.
Samples Arrived within Hold Time? **NOTE:** < 24 hrs if lab filter is requested for Dissolved LL-Mercury by 1631E.	☑	☐		4. If Fecal: ☐ < 8 hrs ☐ > 8 hr but < 24 hrs ☐ >24 hr
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Turbidity ☐ Other:
Rush Turn Around Time Requested?	☐	☑		6. ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 5 Day Due Date:
Sufficient Sample Volume? **(If NO, list approximate volume in section 7.)**	☑	☐		7.
Correct Containers Used? -- Pace Containers Used?	☑ ☑	☐ ☐	☐	8.
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☑	☐	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
ID/Date/Time Match? **(If NO, fill out section 11.)** Matrix: ☐ Oil ☐ Soil ☑ Water ☐ Other	☑	☐	☐	11. ☐ See Exceptions form ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☑	☐	☐	12.
Preserved containers in compliance with EPA recommendations? (HNO3, H2SO4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide)	☑	☐	☐	☐ See Exceptions form ENV-FRM-MIN4-0142
EXCEPTIONS (water only): VOA, Coliform, TOC/DOC, Oil & Grease, Phenols, DRO/8015, Dioxins, and PFAS	☐	☐	☑	
Extra labels present on soil VOA or WIDRO containers? **(soil only)**	☐	☐	☑	13.
Headspace in Methyl Mercury Container?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present?	☐	☐	☑	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased):

Sample #: ☐ HNO3 901-004 1/1 ☐ H2SO4 _____ ☐ NaOH _____ ☐ Zinc Acetate _____

pH Paper Lot #: ☐ Residual Chlorine _____ ☑ 0-6 Roll 234624 ☐ 0-6 Strip _____ ☐ 0-14 Strip _____

Positive for Residual Chlorine (NaOH containers only): ☐ YES ☐ NO

CLIENT NOTIFICATION / RESOLUTION: **Labeled By:** CRL **Line:** 2

Person Contacted & Date/Time: _____ **PM Review & Date:** 10/9/25 Jina Soltani

***NOTE:** When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office.*

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

November 03, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

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

Sincerely,

Tina Soltani
tina.soltani@pacelabs.com
(612) 607-6384
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10752477001	**ERB-01-CCR**	Water	10/02/25 10:50	10/03/25 10:30
10752477002	**ASH-02-CCR**	Water	10/02/25 12:20	10/03/25 10:30
10752477003	**BAT-04R-CCR**	Water	10/02/25 13:45	10/03/25 10:30
10752477004	**BAT-04R-CCR MS**	Water	10/02/25 13:45	10/03/25 10:30
10752477005	**BAT-04R-CCR MSD**	Water	10/02/25 13:45	10/03/25 10:30

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(612)607-1700

SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10752477001	**ERB-01-CCR**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752477002	**ASH-02-CCR**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752477003	**BAT-04R-CCR**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752477004	**BAT-04R-CCR MS**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
10752477005	**BAT-04R-CCR MSD**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752477001	**ERB-01-CCR**					
EPA 903.1	Radium-226	-0.0474 ± 0.383 (0.790) C:NA T:99%	pCi/L		10/30/25 15:19	
EPA 904.0	Radium-228	1.08 ± 0.572 (1.04) C:78% T:73%	pCi/L		10/28/25 11:30	
Total Radium Calculation	Total Radium	1.08 ± 0.955 (1.83)	pCi/L		10/31/25 13:11	
10752477002	**ASH-02-CCR**					
EPA 903.1	Radium-226	0.383 ± 0.493 (0.821) C:NA T:98%	pCi/L		10/30/25 15:19	
EPA 904.0	Radium-228	0.481 ± 0.435 (0.889) C:84% T:79%	pCi/L		10/28/25 11:30	
Total Radium Calculation	Total Radium	0.864 ± 0.928 (1.71)	pCi/L		10/31/25 13:11	
10752477003	**BAT-04R-CCR**					
EPA 903.1	Radium-226	0.319 ± 0.297 (0.392) C:NA T:94%	pCi/L		10/30/25 15:19	
EPA 904.0	Radium-228	0.665 ± 0.387 (0.708) C:88% T:85%	pCi/L		10/28/25 11:30	
Total Radium Calculation	Total Radium	0.984 ± 0.684 (1.10)	pCi/L		10/31/25 13:11	
10752477004	**BAT-04R-CCR MS**					
EPA 903.1	Radium-226	91.61 %REC ± NA (NA) C:NA T:NA	pCi/L		10/30/25 15:19	
EPA 904.0	Radium-228	116.87 %REC ± NA (NA) C:NA T:NA	pCi/L		10/28/25 11:30	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752477005	**BAT-04R-CCR MSD**					
EPA 903.1	Radium-226	107.93 %REC 16.35RPD ± NA (NA) C:NA T:NA	pCi/L		10/30/25 15:19	
EPA 904.0	Radium-228	101.50 %REC 14.08RPD ± NA (NA) C:NA T:NA	pCi/L		10/28/25 11:30	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Sample: ERB-01-CCR **Lab ID: 10752477001** Collected: 10/02/25 10:50 Received: 10/03/25 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0474 ± 0.383 (0.790) C:NA T:99%**	pCi/L	10/30/25 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.08 ± 0.572 (1.04) C:78% T:73%**	pCi/L	10/28/25 11:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.08 ± 0.955 (1.83)**	pCi/L	10/31/25 13:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Sample: ASH-02-CCR **Lab ID: 10752477002** Collected: 10/02/25 12:20 Received: 10/03/25 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.383 ± 0.493 (0.821) C:NA T:98%**	pCi/L	10/30/25 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.481 ± 0.435 (0.889) C:84% T:79%**	pCi/L	10/28/25 11:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.864 ± 0.928 (1.71)**	pCi/L	10/31/25 13:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Sample: BAT-04R-CCR **Lab ID: 10752477003** Collected: 10/02/25 13:45 Received: 10/03/25 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.319 ± 0.297 (0.392) C:NA T:94%**	pCi/L	10/30/25 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.665 ± 0.387 (0.708) C:88% T:85%**	pCi/L	10/28/25 11:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.984 ± 0.684 (1.10)**	pCi/L	10/31/25 13:11	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Sample: BAT-04R-CCR MS **Lab ID: 10752477004** Collected: 10/02/25 13:45 Received: 10/03/25 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**91.61 %REC ± NA (NA) C:NA T:NA**	pCi/L	10/30/25 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**116.87 %REC ± NA (NA) C:NA T:NA**	pCi/L	10/28/25 11:30	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Sample: BAT-04R-CCR MSD **Lab ID: 10752477005** Collected: 10/02/25 13:45 Received: 10/03/25 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**107.93 %REC 16.35RPD ± NA (NA) C:NA T:NA**	pCi/L	10/30/25 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**101.50 %REC 14.08RPD ± NA (NA) C:NA T:NA**	pCi/L	10/28/25 11:30	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

QC Batch: 777314
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 10752477001, 10752477002, 10752477003, 10752477004, 10752477005

METHOD BLANK: 3790674 Matrix: Water
Associated Lab Samples: 10752477001, 10752477002, 10752477003, 10752477004, 10752477005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0393 ± 0.204 (0.423) C:NA T:96%	pCi/L	10/30/25 15:19	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

QC Batch: 777315
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 10752477001, 10752477002, 10752477003, 10752477004, 10752477005

METHOD BLANK: 3790676 Matrix: Water
Associated Lab Samples: 10752477001, 10752477002, 10752477003, 10752477004, 10752477005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.620 ± 0.375 (0.685) C:78% T:88%	pCi/L	10/28/25 11:30	

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

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 10752477

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10752477001	**ERB-01-CCR**	EPA 903.1	777314		
10752477002	**ASH-02-CCR**	EPA 903.1	777314		
10752477003	**BAT-04R-CCR**	EPA 903.1	777314		
10752477004	**BAT-04R-CCR MS**	EPA 903.1	777314		
10752477005	**BAT-04R-CCR MSD**	EPA 903.1	777314		
10752477001	**ERB-01-CCR**	EPA 904.0	777315		
10752477002	**ASH-02-CCR**	EPA 904.0	777315		
10752477003	**BAT-04R-CCR**	EPA 904.0	777315		
10752477004	**BAT-04R-CCR MS**	EPA 904.0	777315		
10752477005	**BAT-04R-CCR MSD**	EPA 904.0	777315		
10752477001	**ERB-01-CCR**	Total Radium Calculation	781063		
10752477002	**ASH-02-CCR**	Total Radium Calculation	781063		
10752477003	**BAT-04R-CCR**	Total Radium Calculation	781063		

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CCR RA

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	15 Day TAT

Section B Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	1717889
Project Name:	~~60754422~~ PRPA ~~CDPHE~~ CCR 60709371
Project Number:	~~60754422~~ 60709371

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	73141
Pace Project Manager:	Heather Wilson
Pace Profile #:	11033, 8

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER CCR

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: Total Radium-226	Total Radium-228	Sum Radium-226 & 228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	ERB-01-CCR	WT	G	—	—	10/2/25	1050		2			X						N	X	X	X	N	~~001~~
2	ASH-02-CCR	WT	G	—	—	10/2/25	1220		2			X						N	X	X	X	N	002
3	BAT-04R-CCR	WT	G	—	—	10/2/25	1345		6			X						N	X	X	X	N	MS/MSD ~~003~~
4																							ES 10-7-25
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
RUN MS/MSD ON BAT-04R-CCR	[signature] / AECOM	10/2/25	1700	Mackenzie Swift	10/3/25	10:30	—	N	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Olivia Helinski, Mackensie Swift, ~~Kara Hoppes~~

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/02/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

new COC/ updated received 10-13-25 by email ES

Internal Transfer Chain of Custody

Rush Multiplier____X

Samples Pre-Logged into eCOC

State Of Origin: CO

Cert. Needed: Yes No

Owner Received Date: 10/3/2025 Results Requested By: 10/24/2025

Workorder: 10752477 Workorder Name: 60709371 PRPA CCR

Report To	Subcontract To
Tina Soltani Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612) 607-6384	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3 & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis: Radium 226+228 (Pace PIttsburg)	Radium-226 (Pace PIttsburg)	Radium-228 (Pace PIttsburg)										LAB USE ONLY
1	ERB-01-CCR	PS	10/2/2025 10:50	10752477001	Water	2						X	X	X										001
2	ASH-02-CCR	PS	10/2/2025 12:20	10752477002	Water	2						X	X	X										002
3	BAT-04R-CCR	RQS	10/2/2025 13:45	10752477003	Water	2						X	X	X										003
4	BAT-04R-CCR MS	PS	10/2/2025 13:45	10752477004	Water	2							X	X										004
5	BAT-04R-CCR MSD	PS	10/2/2025 13:45	10752477005	Water	2							X	X										005

Transfers	Released By	Date/Time	Received By	Date/Time
1				
2				
3				

Comments

Cooler Temperature on Receipt ___ °C | Custody Seal Y or (N) | Received on Ice Y or (N) | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO# : 30817865

30817865

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-GBUR-0088 v09_Sample Con
Greensburg

Effective Date: 06/24/2025

WO# : 30817865

PM: ARG Due Date: 10/27/25
CLIENT: PACE_10_MIMN

Client Name: AECOM **Project #:**

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 8846 1028 5350

Initial / Date

Examined By: ES 10-7-25
Labeled By: ES 10-13-25
Temped By: —

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☑ No
Therm. Used: — **Type of Ice:** Wet Blue (None)
Cooler Temp: Observed Temp — °C Correction Factor: — °C Final Temp: — °C
Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 10D43241 / D.P.D. Residual Chlorine Lot # —
Chain of Custody Present	/			1.
Chain of Custody Filled Out:	/			2.
-Were client corrections present on COC	/	X ES 10-7-25		
Chain of Custody Relinquished	/			3.
Sampler Name & Signature on COC:	/			4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	/			5.
Samples Arrived within Hold Time:	/			6.
Short Hold Time Analysis (<72hr remaining):		/		7.
Rush Turn Around Time Requested:		/		8.
Sufficient Volume:	/			9.
Correct Containers Used:	/			10.
-Pace Containers Used	/			
Containers Intact:	/			11.
Orthophosphate field filtered:			/	12.
Hex Cr Aqueous samples field filtered:			/	13.
Organic Samples checked for dechlorination			/	14:
Filtered volume received for dissolved tests: **Cr6+, Orthophosphate, DOC, Metals**			/	15:
All containers checked for preservation:	/			16.
exceptions: VOA, coliform, TOC, O&G, TOX, LL Hg, Radon, non-aqueous matrix				pH < 2
All containers meet method preservation requirements:	/			Initial when completed ES / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			/	17.
624.1: Headspace in VOA Vials (0mm)			/	18.
Radon: Headspace in RAD Vials (0mm)			/	19.
Trip Blank Present:			/	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed MS / Date: 10/3/25 / Survey Meter SN: 2501438 0

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	DSO
Date:	10/20/2025
Batch ID:	87582
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3790674
MB concentration:	0.039
M/B 2 Sigma CSU:	0.204
MB MDC:	0.423
MB Numerical Performance Indicator:	0.38
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS87582	LCSD87582
Count Date:	10/30/2025	
Spike I.D.:	25-038	
Spike Concentration (pCi/mL):	31.875	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.657	
Target Conc. (pCi/L, g, F):	4.851	
Uncertainty (Calculated):	0.228	
Result (pCi/L, g, F):	4.872	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.134	
Numerical Performance Indicator:	0.03	
Percent Recovery:	100.42%	
Status vs Numerical Indicator:	Pass	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/2/2025	
Sample I.D.	10752477003	
Sample MS I.D.	10752477004	
Sample MSD I.D.	10752477005	
Spike I.D.:	25-036	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	31.876	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.503	
MS Target Conc.(pCi/L, g, F):	12.665	
MSD Aliquot (L, g, F):	0.513	
MSD Target Conc. (pCi/L, g, F):	12.419	
MS Spike Uncertainty (calculated):	0.595	
MSD Spike Uncertainty (calculated):	0.584	
Sample Result:	0.319	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.297	
Sample Matrix Spike Result:	11.922	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.123	
Sample Matrix Spike Duplicate Result:	13.723	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.341	
MS Numerical Performance Indicator:	-0.936	
MSD Numerical Performance Indicator:	0.794	
MS Percent Recovery:	91.61%	
MSD Percent Recovery:	107.93%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	10752477003	
Sample MS I.D.	10752477004	
Sample MSD I.D.	10752477005	
Sample Matrix Spike Result:	11.922	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	2.123	
Sample Matrix Spike Duplicate Result:	13.723	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.341	
Duplicate Numerical Performance Indicator:	-1.117	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	16.35%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	32%	

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

Comments:

TH 10.30.25

Quality Control Sample Performance Assessment

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Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	JJS1
Date:	10/21/2025
Worklist:	87583
Matrix:	WT

Method Blank Assessment	
MB Sample ID	3790676
MB concentration:	0.620
M/B 2 Sigma CSU:	0.375
MB MDC:	0.685
MB Numerical Performance Indicator:	3.24
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS87583	LCSD87583
Count Date:	10/28/2025	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	30.838	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.827	
Target Conc. (pCi/L, g, F):	3.728	
Uncertainty (Calculated):	0.183	
Result (pCi/L, g, F):	2.844	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.788	
Numerical Performance Indicator:	-2.14	
Percent Recovery:	76.29%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

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

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/2/2025	
Sample I.D.	10752477003	
Sample MS I.D.	10752477004	
Sample MSD I.D.	10752477005	
Spike I.D.:	23-043	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	31.104	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.805	
MS Target Conc.(pCi/L, g, F):	7.723	
MSD Aliquot (L, g, F):	0.817	
MSD Target Conc. (pCi/L, g, F):	7.612	
MS Spike Uncertainty (calculated):	0.378	
MSD Spike Uncertainty (calculated):	0.373	
Sample Result:	0.665	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.387	
Sample Matrix Spike Result:	9.691	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.952	
Sample Matrix Spike Duplicate Result:	8.391	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.729	
MS Numerical Performance Indicator:	1.261	
MSD Numerical Performance Indicator:	0.124	
MS Percent Recovery:	116.87%	
MSD Percent Recovery:	101.50%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	10752477003	
Sample MS I.D.	10752477004	
Sample MSD I.D.	10752477005	
Sample Matrix Spike Result:	9.691	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.952	
Sample Matrix Spike Duplicate Result:	8.391	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.729	
Duplicate Numerical Performance Indicator:	0.977	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	14.08%	
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

Comments:

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

MB < MDC
pass

VAL
10/29/25

MM 10/29/25

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 28, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

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

Sincerely,

Tina Soltani
tina.soltani@pacelabs.com
(612) 607-6384
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10752478001	**BAT-06-CCR**	Water	10/06/25 09:35	10/07/25 09:40
10752478002	**BAT-01-CCR**	Water	10/06/25 10:00	10/07/25 09:40
10752478003	**BAT-09-CCR**	Water	10/06/25 11:25	10/07/25 09:40
10752478004	**BAT-03-CCR**	Water	10/06/25 12:40	10/07/25 09:40
10752478005	**BAT-05-CCR**	Water	10/06/25 13:45	10/07/25 09:40
10752478006	**BAT-02-CCR**	Water	10/06/25 14:30	10/07/25 09:40
10752478007	**ERB-02-CCR**	Water	10/06/25 14:40	10/07/25 09:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10752478001	**BAT-06-CCR**	EPA 903.1	JML1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752478002	**BAT-01-CCR**	EPA 903.1	JML1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752478003	**BAT-09-CCR**	EPA 903.1	JML1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752478004	**BAT-03-CCR**	EPA 903.1	JML1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752478005	**BAT-05-CCR**	EPA 903.1	JML1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752478006	**BAT-02-CCR**	EPA 903.1	JML1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752478007	**ERB-02-CCR**	EPA 903.1	JML1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752478001	**BAT-06-CCR**					
EPA 903.1	Radium-226	0.553 ± 0.349 (0.150) C:NA T:87%	pCi/L		10/24/25 15:37	
EPA 904.0	Radium-228	0.469 ± 0.465 (0.963) C:82% T:72%	pCi/L		10/22/25 14:42	
Total Radium Calculation	Total Radium	1.02 ± 0.814 (1.11)	pCi/L		10/24/25 17:25	
10752478002	**BAT-01-CCR**					
EPA 903.1	Radium-226	0.166 ± 0.522 (0.966) C:NA T:86%	pCi/L		10/24/25 15:37	
EPA 904.0	Radium-228	0.614 ± 0.517 (1.05) C:81% T:72%	pCi/L		10/22/25 14:42	
Total Radium Calculation	Total Radium	0.780 ± 1.04 (2.02)	pCi/L		10/24/25 17:25	
10752478003	**BAT-09-CCR**					
EPA 903.1	Radium-226	0.360 ± 0.472 (0.786) C:NA T:83%	pCi/L		10/24/25 15:37	
EPA 904.0	Radium-228	1.58 ± 0.820 (1.48) C:80% T:53%	pCi/L		10/22/25 14:42	
Total Radium Calculation	Total Radium	1.94 ± 1.29 (2.27)	pCi/L		10/24/25 17:25	
10752478004	**BAT-03-CCR**					
EPA 903.1	Radium-226	0.269 ± 0.281 (0.396) C:NA T:88%	pCi/L		10/24/25 15:37	
EPA 904.0	Radium-228	0.515 ± 0.436 (0.881) C:81% T:84%	pCi/L		10/22/25 14:42	
Total Radium Calculation	Total Radium	0.784 ± 0.717 (1.28)	pCi/L		10/24/25 17:25	

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SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752478005	**BAT-05-CCR**					
EPA 903.1	Radium-226	0.133 ± 0.523 (1.00) C:NA T:88%	pCi/L		10/24/25 15:37	
EPA 904.0	Radium-228	1.57 ± 0.554 (0.789) C:80% T:86%	pCi/L		10/22/25 14:42	
Total Radium Calculation	Total Radium	1.70 ± 1.08 (1.79)	pCi/L		10/24/25 17:25	
10752478006	**BAT-02-CCR**					
EPA 903.1	Radium-226	0.437 ± 0.327 (0.169) C:NA T:83%	pCi/L		10/24/25 15:37	
EPA 904.0	Radium-228	1.03 ± 0.575 (1.05) C:78% T:77%	pCi/L		10/22/25 14:42	
Total Radium Calculation	Total Radium	1.47 ± 0.902 (1.22)	pCi/L		10/24/25 17:25	
10752478007	**ERB-02-CCR**					
EPA 903.1	Radium-226	0.000 ± 0.328 (0.710) C:NA T:81%	pCi/L		10/24/25 15:37	
EPA 904.0	Radium-228	1.04 ± 0.522 (0.928) C:83% T:80%	pCi/L		10/22/25 14:42	
Total Radium Calculation	Total Radium	1.04 ± 0.850 (1.64)	pCi/L		10/24/25 17:25	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Sample: BAT-06-CCR **Lab ID: 10752478001** Collected: 10/06/25 09:35 Received: 10/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.553 ± 0.349 (0.150) C:NA T:87%**	pCi/L	10/24/25 15:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.469 ± 0.465 (0.963) C:82% T:72%**	pCi/L	10/22/25 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.02 ± 0.814 (1.11)**	pCi/L	10/24/25 17:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Sample: BAT-01-CCR **Lab ID: 10752478002** Collected: 10/06/25 10:00 Received: 10/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.166 ± 0.522 (0.966) C:NA T:86%**	pCi/L	10/24/25 15:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.614 ± 0.517 (1.05) C:81% T:72%**	pCi/L	10/22/25 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.780 ± 1.04 (2.02)**	pCi/L	10/24/25 17:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Sample: BAT-09-CCR **Lab ID: 10752478003** Collected: 10/06/25 11:25 Received: 10/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.360 ± 0.472 (0.786) C:NA T:83%**	pCi/L	10/24/25 15:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.58 ± 0.820 (1.48) C:80% T:53%**	pCi/L	10/22/25 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.94 ± 1.29 (2.27)**	pCi/L	10/24/25 17:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Sample: BAT-03-CCR **Lab ID: 10752478004** Collected: 10/06/25 12:40 Received: 10/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.269 ± 0.281 (0.396) C:NA T:88%**	pCi/L	10/24/25 15:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.515 ± 0.436 (0.881) C:81% T:84%**	pCi/L	10/22/25 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.784 ± 0.717 (1.28)**	pCi/L	10/24/25 17:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Sample: BAT-05-CCR **Lab ID: 10752478005** Collected: 10/06/25 13:45 Received: 10/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.133 ± 0.523 (1.00) C:NA T:88%**	pCi/L	10/24/25 15:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.57 ± 0.554 (0.789) C:80% T:86%**	pCi/L	10/22/25 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.70 ± 1.08 (1.79)**	pCi/L	10/24/25 17:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Sample: BAT-02-CCR **Lab ID: 10752478006** Collected: 10/06/25 14:30 Received: 10/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.437 ± 0.327 (0.169) C:NA T:83%**	pCi/L	10/24/25 15:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.03 ± 0.575 (1.05) C:78% T:77%**	pCi/L	10/22/25 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.47 ± 0.902 (1.22)**	pCi/L	10/24/25 17:25	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Sample: ERB-02-CCR **Lab ID: 10752478007** Collected: 10/06/25 14:40 Received: 10/07/25 09:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.328 (0.710) C:NA T:81%**	pCi/L	10/24/25 15:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.04 ± 0.522 (0.928) C:83% T:80%**	pCi/L	10/22/25 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.04 ± 0.850 (1.64)**	pCi/L	10/24/25 17:25	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

QC Batch: 777307
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 10752478001, 10752478002, 10752478003, 10752478004, 10752478005, 10752478006, 10752478007

METHOD BLANK: 3790658
Matrix: Water
Associated Lab Samples: 10752478001, 10752478002, 10752478003, 10752478004, 10752478005, 10752478006, 10752478007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.389 ± 0.370 (0.756) C:81% T:79%	pCi/L	10/22/25 14:41	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

QC Batch: 777306
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 10752478001, 10752478002, 10752478003, 10752478004, 10752478005, 10752478006, 10752478007

METHOD BLANK: 3790657 Matrix: Water
Associated Lab Samples: 10752478001, 10752478002, 10752478003, 10752478004, 10752478005, 10752478006, 10752478007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.204 (0.458) C:NA T:88%	pCi/L	10/24/25 15:37	

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 10752478

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10752478001	**BAT-06-CCR**	EPA 903.1	777306		
10752478002	**BAT-01-CCR**	EPA 903.1	777306		
10752478003	**BAT-09-CCR**	EPA 903.1	777306		
10752478004	**BAT-03-CCR**	EPA 903.1	777306		
10752478005	**BAT-05-CCR**	EPA 903.1	777306		
10752478006	**BAT-02-CCR**	EPA 903.1	777306		
10752478007	**ERB-02-CCR**	EPA 903.1	777306		
10752478001	**BAT-06-CCR**	EPA 904.0	777307		
10752478002	**BAT-01-CCR**	EPA 904.0	777307		
10752478003	**BAT-09-CCR**	EPA 904.0	777307		
10752478004	**BAT-03-CCR**	EPA 904.0	777307		
10752478005	**BAT-05-CCR**	EPA 904.0	777307		
10752478006	**BAT-02-CCR**	EPA 904.0	777307		
10752478007	**ERB-02-CCR**	EPA 904.0	777307		
10752478001	**BAT-06-CCR**	Total Radium Calculation	779669		
10752478002	**BAT-01-CCR**	Total Radium Calculation	779669		
10752478003	**BAT-09-CCR**	Total Radium Calculation	779669		
10752478004	**BAT-03-CCR**	Total Radium Calculation	779669		
10752478005	**BAT-05-CCR**	Total Radium Calculation	779669		
10752478006	**BAT-02-CCR**	Total Radium Calculation	779669		
10752478007	**ERB-02-CCR**	Total Radium Calculation	779669		

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COOLER 1 of 1 CCR RA PA

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	AECOM	Report To:	Vasanta Kalluri	Attention:	Accounts Payable
Address:	6200 South Quebec St	Copy To:	Jamie Herman	Company Name:	AECOM
	Greenwood Village, CO 80111			Address:	Same as Section A
Email To:	jamie.herman@aecom.com	Purchase Order No.:	NEED PO #	Pace Quote Reference:	
Phone:	(303) 740-2614 Fax:	Project Name:	60709371 PRPA CCR	Pace Project Manager:	Tina Soltani
Requested Due Date/TAT:	15 Day TAT	Project Number:	60709371	Pace Profile #:	36715

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER CCR

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	Section D Required Client Information (SAMPLE ID)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): Radium-226	Radium-228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N		
1	BAT-06-CCR	WT	G	—	—	10/06/25	0935	—	2			2							X	X	X	N	
2	BAT-01-CCR	WT	G	—	—	10/6/25	1000	—	2			2							X	X	X	N	
3	BAT-09-CCR	WT	G	—	—	10/6/25	1125	—	2			2							X	X	X	N	
4	BAT-03-CCR	WT	G	—	—	10/6/25	1240	—	2			2							X	X	X	N	
5	BAT-05-CCR	WT	G	—	—	10/6/25	1345	—	2			2							X	X	X	N	
6	BAT-02-CCR	WT	G	—	—	10/6/25	1430	—	2			2							X	X	X	N	
7	ERB-02-CCR	WT	G	—	—	10/6/25	1440	—	2			2							X	X	X	N	
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	/AECOM	10/6/25	1700		10/7/25	940	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kavaltoppa & Mackenzie Swift

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 10/06/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

updated IRW/COC received 10/9/25 via email -PS

Internal Transfer Chain of Custody

Pace

☐ Rush Multiplier_____X
☐ Samples Pre-Logged into eCOC

State Of Origin: CO
Cert. Needed: ☐ Yes ☐ No

Workorder: 10752478 Workorder Name: 60709371 PRPA CCR

Owner Received Date: 10/7/2025 Results Requested By: 10/28/2025

Report To	Subcontract To
Tina Soltani Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612) 607-6384	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3 & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Radium 226+228 (Pace PIttsburg)	Radium-226 (Pace PIttsburg)	Radium-228 (Pace PIttsburg)	LAB USE ONLY
1	BAT-06-CCR	PS	10/6/2025 09:35	10752478001	Water	2	X	X	X	001
2	BAT-01-CCR	PS	10/6/2025 10:00	10752478002	Water	2	X	X	X	002
3	BAT-09-CCR	PS	10/6/2025 11:25	10752478003	Water	2	X	X	X	003
4	BAT-03-CCR	PS	10/6/2025 12:40	10752478004	Water	2	X	X	X	004
5	BAT-05-CCR	PS	10/6/2025 13:45	10752478005	Water	2	X	X	X	005
6	BAT-02-CCR	PS	10/6/2025 14:30	10752478006	Water	2	X	X	X	006
7	ERB-02-CCR	PS	10/6/2025 14:40	10752478007	Water	2	X	X	X	007

Transfers	Released By	Date/Time	Received By	Date/Time
1			[signature]	10/7/25 4:40
2				
3				

Comments

Cooler Temperature on Receipt ____°C | Custody Seal (Y) or N | Received on Ice Y or (N) | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO# : 30817744
30817744

DC#_Title: ENV-FRM-GBUR-0088 v09_Sample C

Greensburg

Effective Date: 06/24/2025

WO# : 30817744

PM: ARG Due Date: 10/21/25

CLIENT: PACE_10_MIMN

Client Name: AECOM **Project**

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 8846 1036 5843

Initial / Date

Examined By: PS 10/11/25

Labeled By: PS 10/13/25

Temped By: ——

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No **Seals Intact:** ☐ Yes ☐ No

Therm. Used: —— **Type of Ice:** Wet Blue (None)

Cooler Temp: Observed Temp ——°C Correction Factor: ——°C Final Temp: ——°C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA
Chain of Custody Present	✓		
Chain of Custody Filled Out:	✓		
-Were client corrections present on COC		✓	
Chain of Custody Relinquished	✓		
Sampler Name & Signature on COC:	✓		
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓		
Samples Arrived within Hold Time:	✓		
Short Hold Time Analysis (<72hr remaining):		✓	
Rush Turn Around Time Requested:		✓	
Sufficient Volume:	✓		
Correct Containers Used:	✓		
-Pace Containers Used	✓		
Containers Intact:	✓		
Orthophosphate field filtered:			✓
Hex Cr Aqueous samples field filtered:			✓
Organic Samples checked for dechlorination			✓
Filtered volume received for dissolved tests: **Cr6+, Orthophosphate, DOC, Metals**			✓
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, TOX, LL Hg , Radon, non-aqueous matrix	✓		
All containers meet method preservation requirements:	✓		
8260C/D: Headspace in VOA Vials (> 6mm)			✓
624.1: Headspace in VOA Vials (0mm)			✓
Radon: Headspace in RAD Vials (0mm)			✓
Trip Blank Present:			✓
Rad Samples Screened <.05 mrem/hr.	✓		

pH paper Lot# 10043241 **D.P.D. Residual Chlorine Lot #** ——

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14: 15: 16.

pH<2

Initial when completed PS Date/Time of Preservation

Lot# of added Preservative

17. 18. 19.

Trip blank custody seal present? YES or NO

Initial when completed PS Date: 10/7/25 Survey Meter SN: 25014380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-226
Analyst:	JML1
Date:	10/15/2025
Batch ID:	87577
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3790657
MB concentration:	0.000
M/B 2 Sigma CSU:	0.204
MB MDC:	0.458
MB Numerical Performance Indicator:	0.00
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	N/A

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS87577	**LCSD87577**
Count Date:	10/24/2025	10/24/2025
Spike I.D.:	25-038	25-038
Spike Concentration (pCi/mL):	31.875	31.875
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.654	0.652
Target Conc. (pCi/L, g, F):	4.877	4.890
Uncertainty (Calculated):	0.229	0.230
Result (pCi/L, g, F):	4.062	6.699
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.050	1.514
Numerical Performance Indicator:	-1.49	2.31
Percent Recovery:	83.28%	136.99%
Status vs Numerical Indicator:	Pass	Warning
Status vs Recovery:	N/A	N/A
Upper % Recovery Limits:	133%	133%
Lower % Recovery Limits:	73%	73%

Duplicate Sample Assessment		
Sample I.D.:	LCS87577	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD87577	
Sample Result (pCi/L, g, F):	4.062	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.050	
Sample Duplicate Result (pCi/L, g, F):	6.699	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.514	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-2.806	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	48.76%	
Duplicate Status vs Numerical Indicator:	Warning	
Duplicate Status vs RPD:	N/A	
% RPD Limit:	32%	

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

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

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

Comments:

JML 10.24.25

TY 10.24.25

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	ZPC
Date:	10/16/2025
Worklist:	87578
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3790658
MB concentration:	0.389
M/B 2 Sigma CSU:	0.370
MB MDC:	0.756
MB Numerical Performance Indicator:	2.06
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS87578	LCSD87578
Count Date:	10/22/2025	10/22/2025
Spike I.D.:	23-043	23-043
Decay Corrected Spike Concentration (pCi/mL):	30.900	30.900
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.816	0.825
Target Conc. (pCi/L, g, F):	3.788	3.747
Uncertainty (Calculated):	0.186	0.184
Result (pCi/L, g, F):	4.255	4.610
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.005	1.045
Numerical Performance Indicator:	0.89	1.59
Percent Recovery:	112.31%	123.03%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS87578	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD87578	
Sample Result (pCi/L, g, F):	4.255	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.005	
Sample Duplicate Result (pCi/L, g, F):	4.610	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.045	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.480	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	9.11%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

SLC 10/23/25

VAL
10/23/25

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 29, 2025

Vasanta Kalluri
AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

RE: Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Dear Vasanta Kalluri:

Enclosed are the analytical results for sample(s) received by the laboratory on October 08, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

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

Sincerely,

Tina Soltani
tina.soltani@pacelabs.com
(612) 607-6384
Project Manager

Enclosures

cc: Jamie Herman, AECOM
Kara Hoppes, AECOM
Sawyer Hunt, AECOM
Jeremy Hurshman, AECOM

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10752482001	**FD-02-CCR**	Water	10/07/25 00:00	10/08/25 09:50
10752482002	**BAT-12-CCR**	Water	10/07/25 11:00	10/08/25 09:50
10752482003	**BAT-11-CCR**	Water	10/07/25 14:10	10/08/25 09:50
10752482004	**BAT-10-CCR**	Water	10/07/25 14:25	10/08/25 09:50

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10752482001	**FD-02-CCR**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752482002	**BAT-12-CCR**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752482003	**BAT-11-CCR**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
10752482004	**BAT-10-CCR**	EPA 903.1	DSO	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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Minneapolis, MN 55414
(612)607-1700

SUMMARY OF DETECTION

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10752482001	**FD-02-CCR**					
EPA 903.1	Radium-226	0.409 ± 0.330 (0.185) C:NA T:94%	pCi/L		10/22/25 13:39	
EPA 904.0	Radium-228	0.358 ± 0.347 (0.713) C:80% T:91%	pCi/L		10/20/25 15:14	
Total Radium Calculation	Total Radium	0.767 ± 0.677 (0.898)	pCi/L		10/23/25 08:52	
10752482002	**BAT-12-CCR**					
EPA 903.1	Radium-226	0.134 ± 0.305 (0.181) C:NA T:98%	pCi/L		10/22/25 13:58	
EPA 904.0	Radium-228	0.606 ± 0.368 (0.678) C:82% T:86%	pCi/L		10/20/25 15:17	
Total Radium Calculation	Total Radium	0.740 ± 0.673 (0.859)	pCi/L		10/23/25 08:52	
10752482003	**BAT-11-CCR**					
EPA 903.1	Radium-226	0.0724 ± 0.330 (0.533) C:NA T:96%	pCi/L		10/22/25 14:08	
EPA 904.0	Radium-228	0.293 ± 0.325 (0.677) C:75% T:97%	pCi/L		10/20/25 15:15	
Total Radium Calculation	Total Radium	0.365 ± 0.655 (1.21)	pCi/L		10/23/25 08:52	
10752482004	**BAT-10-CCR**					
EPA 903.1	Radium-226	0.359 ± 0.468 (0.772) C:NA T:97%	pCi/L		10/22/25 13:58	
EPA 904.0	Radium-228	0.536 ± 0.411 (0.804) C:69% T:85%	pCi/L		10/20/25 15:17	
Total Radium Calculation	Total Radium	0.895 ± 0.879 (1.58)	pCi/L		10/23/25 08:52	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Sample: FD-02-CCR **Lab ID: 10752482001** Collected: 10/07/25 00:00 Received: 10/08/25 09:50 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • No time listed on COC or containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.409 ± 0.330 (0.185) C:NA T:94%**	pCi/L	10/22/25 13:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.358 ± 0.347 (0.713) C:80% T:91%**	pCi/L	10/20/25 15:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.767 ± 0.677 (0.898)**	pCi/L	10/23/25 08:52	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Sample: BAT-12-CCR **Lab ID: 10752482002** Collected: 10/07/25 11:00 Received: 10/08/25 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.134 ± 0.305 (0.181) C:NA T:98%**	pCi/L	10/22/25 13:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.606 ± 0.368 (0.678) C:82% T:86%**	pCi/L	10/20/25 15:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.740 ± 0.673 (0.859)**	pCi/L	10/23/25 08:52	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Sample: BAT-11-CCR **Lab ID: 10752482003** Collected: 10/07/25 14:10 Received: 10/08/25 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0724 ± 0.330 (0.533) C:NA T:96%**	pCi/L	10/22/25 14:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.293 ± 0.325 (0.677) C:75% T:97%**	pCi/L	10/20/25 15:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.365 ± 0.655 (1.21)**	pCi/L	10/23/25 08:52	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Sample: BAT-10-CCR **Lab ID: 10752482004** Collected: 10/07/25 14:25 Received: 10/08/25 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.359 ± 0.468 (0.772) C:NA T:97%**	pCi/L	10/22/25 13:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.536 ± 0.411 (0.804) C:69% T:85%**	pCi/L	10/20/25 15:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.895 ± 0.879 (1.58)**	pCi/L	10/23/25 08:52	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

QC Batch: 777769
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 10752482001, 10752482002, 10752482003, 10752482004

METHOD BLANK: 3793144 Matrix: Water
Associated Lab Samples: 10752482001, 10752482002, 10752482003, 10752482004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.217 ± 0.302 (0.504) C:NA T:100%	pCi/L	10/22/25 13:28	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

QC Batch: 777770
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 10752482001, 10752482002, 10752482003, 10752482004

METHOD BLANK: 3793145 Matrix: Water
Associated Lab Samples: 10752482001, 10752482002, 10752482003, 10752482004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.00824 ± 0.262 (0.615) C:83% T:90%	pCi/L	10/20/25 12:08	

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

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QUALIFIERS

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60754415 PRPA CCR
Pace Project No.: 10752482

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10752482001	**FD-02-CCR**	EPA 903.1	777769		
10752482002	**BAT-12-CCR**	EPA 903.1	777769		
10752482003	**BAT-11-CCR**	EPA 903.1	777769		
10752482004	**BAT-10-CCR**	EPA 903.1	777769		
10752482001	**FD-02-CCR**	EPA 904.0	777770		
10752482002	**BAT-12-CCR**	EPA 904.0	777770		
10752482003	**BAT-11-CCR**	EPA 904.0	777770		
10752482004	**BAT-10-CCR**	EPA 904.0	777770		
10752482001	**FD-02-CCR**	Total Radium Calculation	779190		
10752482002	**BAT-12-CCR**	Total Radium Calculation	779190		
10752482003	**BAT-11-CCR**	Total Radium Calculation	779190		
10752482004	**BAT-10-CCR**	Total Radium Calculation	779190		

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CCR RA PA

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company:	AECOM
Address:	6200 South Quebec St
	Greenwood Village, CO 80111
Email To:	jamie.herman@aecom.com
Phone: (303) 740-2614	Fax:
Requested Due Date/TAT:	15 Day TAT

Section B Required Project Information:

Report To:	Vasanta Kalluri
Copy To:	Jamie Herman
Purchase Order No.:	NEED PO #
Project Name:	60709371 PRPA CCR
Project Number:	60709371

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	AECOM
Address:	Same as Section A
Pace Quote Reference:	
Pace Project Manager:	Tina Soltani
Pace Profile #:	36715

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: CO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: Radium-226	Analysis Test: Radium-228	Analysis Test: Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N		
1	FD-02-CCR	WT	G	—	—	10/07/25	—		2			2							X	X	X	N	
2	Bat-12-CCR	↓	↓	↓	↓	↓	1100		↓			↓							↓	↓	↓	N	
3	Bat-11-CCR						1410															N	
4	BAT-10-CCR						1425															N	
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Mackenzie Swift/ AECOM	10/07/25	1700		10/8/25	950	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mackenzie Swift

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/07/25

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

updated IRWO / COC received via email 10/9/25 -PS

Internal Transfer Chain of Custody

Pace

☐ Rush Multiplier_____X
☐ Samples Pre-Logged into eCOC

State Of Origin: CO
Cert. Needed: ☐ Yes ☐ No

Workorder: 10752482 Workorder Name: 60709371 PRPA CCR

Owner Received Date: 10/8/2025 Results Requested By: 10/29/2025

Report To	Subcontract To
Tina Soltani Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612) 607-6384	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3 & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: Radium 226+228 (Pace Pittsburg)	Radium-226 (Pace Pittsburg)	Radium-228 (Pace Pittsburg)										LAB USE ONLY
1	FD-02-CCR	PS	10/7/2025 00:00	10752482001	Water	2						X	X	X										001
2	BAT-12-CCR	PS	10/7/2025 11:00	10752482002	Water	2						X	X	X										002
3	BAT-11-CCR	PS	10/7/2025 14:10	10752482003	Water	2						X	X	X										003
4	BAT-10-CCR	PS	10/7/2025 14:25	10752482004	Water	2						X	X	X										004
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1			[signature] 10	18/25 9:50
2				
3				

Comments

Cooler Temperature on Receipt ___ °C | Custody Seal (Y) or N | Received on Ice Y or (N) | Samples Intact (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

WO# : 30817741

30817741

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-GBUR-0088 v09_Sample Co Greensburg Effective Date: 06/24/2025

WO#: 30817741
PM: ARG Due Date: 10/22/25
CLIENT: PACE_10_MIMN

Client Name: AECOM **Project #:**

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 884610446943

Initial / Date

Examined By: PS 10/11/25
Labeled By: PS 10/13/25
Temped By: ——

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No **Seals Intact:** ☐ Yes ☐ No

Therm. Used: —— **Type of Ice:** Wet Blue ~~None~~

Cooler Temp: Observed Temp —— °C Correction Factor: —— °C Final Temp: —— °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 10043241 / D.P.D. Residual Chlorine Lot # ——
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC	✓			
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:	✓			4.
Sample Labels match COC:		✓		5. - No time on Sample 001 COC / bottles
-Includes date/time/ID Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dechlorination			✓	14:
Filtered volume received for dissolved tests: **Cr6+, Orthophosphate, DOC, Metals**			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, TOX, LL Hg, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	✓			Initial when completed PS / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed PS / Date: 10/8/25 / Survey Meter SN: 25014380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	DSO
Date:	10/16/2025
Batch ID:	87622
Matrix:	WT

Method Blank Assessment	
MB Sample ID	3793144
MB concentration:	0.217
M/B 2 Sigma CSU:	0.302
MB MDC:	0.504
MB Numerical Performance Indicator:	1.41
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS87622	LCSD87622
Count Date:	10/22/2025	10/22/2025
Spike I.D.:	25-038	25-038
Spike Concentration (pCi/mL):	31.875	31.875
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.654	0.654
Target Conc. (pCi/L, g, F):	4.873	4.877
Uncertainty (Calculated):	0.229	0.229
Result (pCi/L, g, F):	4.687	4.892
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.280	1.185
Numerical Performance Indicator:	-0.26	0.02
Percent Recovery:	96.18%	100.31%
Status vs Numerical Indicator:	Pass	Pass
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	133%	133%
Lower % Recovery Limits:	73%	73%

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

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS87622	
Duplicate Sample I.D.	LCSD87622	
Sample Result (pCi/L, g, F):	4.687	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.280	
Sample Duplicate Result (pCi/L, g, F):	4.892	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.185	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.231	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	4.20%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	32%	

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

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

Comments:

TY 10-22-25 RD 10/22/25

Quality Control Sample Performance Assessment

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www.pacelabs.com

Test:	Ra-228
Analyst:	JJS1
Date:	10/17/2025
Worklist:	87623
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3793145
MB concentration:	-0.008
M/B 2 Sigma CSU:	0.262
MB MDC:	0.615
MB Numerical Performance Indicator:	-0.06
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS87623	LCSD87623
Count Date:	10/20/2025	10/20/2025
Spike I.D.:	23-043	23-043
Decay Corrected Spike Concentration (pCi/mL):	30.920	30.920
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.817	0.818
Target Conc. (pCi/L, g, F):	3.784	3.780
Uncertainty (Calculated):	0.185	0.185
Result (pCi/L, g, F):	2.990	3.373
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.728	0.809
Numerical Performance Indicator:	-2.07	-0.96
Percent Recovery:	79.01%	89.23%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS87623	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD87623	
Sample Result (pCi/L, g, F):	2.990	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.728	
Sample Duplicate Result (pCi/L, g, F):	3.373	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.809	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.690	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.15%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

VAL
10/21/25

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
Validating Chemist: Manasa M B
Secondary Review Chemist: Jamie Herman

Event: 2SA Groundwater 2025
Date: 12/10/2025
Date: 12/17/2025

Introduction:

This validation report documents the data review through the checklists below. Further identification and explanation of the anomalies identified through the validation process are provided following each section of the checklist, as needed.

The field sample and laboratory identification associations are summarized in Table 1. Qualified data are summarized and presented in Table 2. Data were qualified per the qualifiers and reason codes presented in Attachment A.

In instances where multiple validation qualifiers were applied with an associated bias (J+ or J-), the final validation qualifier reflects the overall bias considering all qualifications. For example, if a sample was qualified with both a high (J+) and low bias (J-), the overall qualification was J with no affiliated bias.

Laboratory and Sample Delivery Groups (SDGs):

Pace Analytical Services in Minneapolis MN – 10752259, 10752265, 10752464, 10752029

Pace Analytical Services in Greensburg, Pennsylvania – 10752478, 10752482, 10752477

Analytical Methods Validated:

Anions (chloride, sulfate, fluoride) by EPA Method 300.0, total metals (select list) by EPA Method 6020B, total mercury by EPA Method 7470A, total dissolved solids (TDS) by SM2540C, radium-226 by EPA Method 903.1, radium-228 by EPA method 904.0, and total radium calculation (TRC).

Validation:

Stage 2A Validation

Validation Guidance Documents:

The data review was conducted in accordance with *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA November 2020), and evaluation of laboratory criteria, as applicable.

Overall Assessment of Data:

As no data were missing or qualified as unusable during the validation process, the overall assessment of data was acceptable at 100%. Qualified data are summarized and presented in Table 2.

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
Validating Chemist: Manasa M B
Secondary Review Chemist: Jamie Herman
Event: 2SA Groundwater 2025
Date: 12/10/2025
Date: 12/17/2025

1.0 Sample Documentation and Case Narrative

Sample Documentation Criteria	Yes	No	NA
Were all samples documented correctly on the chain-of-custody (COC) and container labels?	X		
Were sample analyses completed per the COC?	X[1]		
Were samples extracted and analyzed within the method required holding times?	X		
Laboratory Case Narrative	**Yes**	**No**	**NA**
Were there additional narrative clarifications made by the laboratory, not addressed within this validation?	X[1]		

1. **Data Packages 10752029 and 10752477:** Both ASH and BAT wells were included on the same COC and reported by the laboratory. Only the BAT well is evaluated within this validation report; the ASH well is evaluated under a separate cover.

   Data Packages 10752259, 10752265, and 10752464: The dry residue obtained for TDS analysis did not meet Method SM2540C requirements for samples BAT-02-CCR, BAT-05-CCR, ERB-02-CCR, BAT-06-CCR, BAT-01-CCR, BAT-09-CCR, BAT-03-CCR, and BAT-10-CCR. The associated results were qualified as estimated (J/UJ pr).

   Data Packages 10752464 and 10752482: The laboratory noted that there was no time listed on COC or containers for the sample FD-02-CCR. This is a blind field duplicate and no further action was necessary.

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
Validating Chemist: Manasa M B
Secondary Review Chemist: Jamie Herman
Event: 2SA Groundwater 2025
Date: 12/10/2025
Date: 12/17/2025

2.0 Quality Control and Performance Checks

Stage 2A Validation Criteria			
Method Blank Criteria	**Yes**	**No**	**NA**
Was a method blank analyzed for each batch, as applicable to the method?	X		
Were method blank concentrations reported as not detected or less than the MDC?	X		
Laboratory Control Sample Criteria	**Yes**	**No**	**NA**
Was an LCS reported with each preparation batch, as applicable to the method?	X		
Were LCS/LCSD recoveries and/or RPDs within acceptance criteria?		X[1]	
Matrix Spike/Matrix Spike Duplicates Criteria	**Yes**	**No**	**NA**
Was an MS/MSD performed on a project specific sample?	X		

Parent Sample	**Method**
BAT-04R-CCR	7470A, 6020B, SM2540C, 300.0, 903.1, 904.0, TRC
BAT-01-CCR	300.0

For concentrations <4x the spike concentration, were MS/MSD recoveries and RPDs within acceptance criteria?	X		
Spike recovery limits and RPDs are not applicable when the parent sample concentration is ≥ 4x the spike added. The data is reported without qualification.			
Laboratory Duplicate Criteria – As applicable to the analytical method	**Yes**	**No**	**NA**
Was a laboratory duplicate performed on a project specific sample?	X		
If both the parent sample and duplicate values were >5xRL, was laboratory duplicate RPD within laboratory acceptance criteria?	X		
If either the parent sample or duplicate value was <5xRL, was the absolute difference within acceptance criteria of <2xRL for waters, and <3.5xRL for solids?	X		
For radiological parameters, was the DER agreement between parent sample results and laboratory duplicate sample results ≤2?	X		
Tracery/Carrier Recovery - Radiological	**Yes**	**No**	**NA**
The sample specific recoveries were within the laboratory limits (30-110%).	X		

1. The following laboratory control samples were outside the QC acceptance criteria:

LCS Identification	**Method**	**Analyte**	**Recovery**	**Recovery Limit**	**RPD/ RER**	**RPD/ RER Limit**
Data Package 10752478						
LCS 87577 LCSD 87577	903.1	Radium 226	83/**137**	73-133	-1.4	2

In instances where the LCS recovery was greater than the upper acceptance limit, the associated detected results were qualified as estimated (J+ l) to demonstrate the potential high bias.

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
Validating Chemist: Manasa M B
Secondary Review Chemist: Jamie Herman

Event: 2SA Groundwater 2025
Date: 12/10/2025
Date: 12/17/2025

3.0 Field Quality Control Samples

Field QC Blank Criteria	Yes	No	NA
Was a trip blank shipped with, and analyzed with the samples?			X
Were trip blank concentrations reported as non-detect for target analytes?			X
Were field and/or equipment blanks collected and analyzed with the samples?	X		
Were field QC blank concentrations reported as non-detect or less than the MDC for radiological parameters, for the target analytes?		X[1]	
Field Duplicate Criteria	**Yes**	**No**	**NA**
Were field duplicate samples collected for this sampling event?	X		
Parent Sample / **Field Duplicate Sample**			
BAT-12-CCR / FD-02-CCR			
If both the parent sample and/field duplicate sample results were >5xRL were the RPDs within the acceptance criteria of ≤30%?	X		
If either the parent sample or duplicate value was <5xRL, was the absolute difference within the acceptance criteria of <2xRL?	X		
For radiological parameters, was the DER agreement between parent sample results and field duplicate sample results ≤2?	X		

1. The following analytes were reported as detected in the equipment blank:

Blank Identification	Method	Analyte	Blank result	Associated samples	Sample result	Unit
Data Package 10752478						
ERB-02-CCR	904.0	Radium-228	1.04	BAT-06-CCR	0.469	pCi/L
				BAT-01-CCR	0.614	pCi/L
				BAT-09-CCR	1.58	pCi/L
				BAT-03-CCR	0.515	pCi/L
				BAT-05-CCR	1.57	pCi/L
				BAT-02-CCR	1.03	pCi/L

The associated sample results were qualified as estimated (J be) due to equipment blank contamination.

Data Validation Report

Project/Site: Platte River Power Authority/CCR BAT Wells
Validating Chemist: Manasa M B
Secondary Review Chemist: Jamie Herman
Event: 2SA Groundwater 2025
Date: 12/10/2025
Date: 12/17/2025

4.0 Sensitivity, Additional Qualification, and Completeness

Sensitivity Criteria	Yes	No	NA
Did all analytes meet sensitivity requirements?		X[1]	
For radiological parameters, if the associated uncertainty was greater than the reported result, the 2 sigma (σ) uncertainty multiplied by 1.65 was less than or equal to the MDC?		X[1]	
Additional Qualification Criteria	**Yes**	**No**	**NA**
Was professional judgment used to qualify data?		X	
Were multiple results reported for a single analyte?		X	
Total vs Dissolved Analyses	**Yes**	**No**	**NA**
Was the dissolved concentration greater than the total concentration?			X
If either sample result was >5xRL, were the RPDs within ≤30%?			X
If either sample result was <5xRL, was the absolute difference within 2xRL?			X
Completeness Criteria	**Yes**	**No**	**NA**
Were the reported results usable if qualified?	X		
Were the analyses requested performed, the correct analyte lists used, and correct sample preparation and analyses methods and units utilized?	X		

1. Several samples were reported as non-detect at elevated reporting limits. These non-detect results will need to be evaluated with respect to project objectives.

   For radiological parameters, the following sample results did not meet the 2σ uncertainty evaluation.

Sample Identification	Method	Analyte	Result	2 Sigma (σ) Uncertainty	MDC	Units
Data Package 10752478						
BAT-03-CCR	903.1	Radium-226	0.269	± 0.281	0.396	pCi/L
BAT-05-CCR	904.0	Radium-228	1.57	± 0.554	0.789	pCi/L
BAT-02-CCR	903.1	Radium-226	0.437	± 0.327	0.169	pCi/L
Data Package 10752482						
BAT-12-CCR	903.1	Radium-226	0.134	± 0.305	0.181	pCi/L
BAT-11-CCR	903.1	Radium-226	0.0724	± 0.330	0.533	pCi/L

   As the 2σ uncertainty multiplied by 1.65 was greater than the reported minimum detectable concentration (MDC), the associated results were qualified as estimated (J v).

Table 1 – Sample Summary and Laboratory Association

Sample Identification	Collection Date	Laboratory Identification	Sample Type
Data Package 10752259			
BAT-02-CCR	10/06/2025	10752259001	Normal
BAT-05-CCR	10/06/2025	10752259002	Normal
ERB-02-CCR	10/06/2025	10752259003	Equipment Blank
Data Package 10752029			
BAT-04R-CCR	10/02/2025	10752029002	Matrix Spike
Data Package 10752265			
BAT-06-CCR	10/06/2025	10752265001	Normal
BAT-01-CCR	10/06/2025	10752265002	Normal
BAT-09-CCR	10/06/2025	10752265003	Normal
BAT-03-CCR	10/06/2025	10752265004	Normal
Data Package 10752464			
FD-02-CCR	10/07/2025	10752464001	Field Duplicate
BAT-12-CCR	10/07/2025	10752464002	Normal
BAT-11-CCR	10/07/2025	10752464003	Normal
BAT-10-CCR	10/07/2025	10752464004	Normal
Data Package 10752478			
BAT-06-CCR	10/06/2025	10752478001	Normal
BAT-01-CCR	10/06/2025	10752478002	Normal
BAT-09-CCR	10/06/2025	10752478003	Normal
BAT-03-CCR	10/06/2025	10752478004	Normal
BAT-05-CCR	10/06/2025	10752478005	Normal
BAT-02-CCR	10/06/2025	10752478006	Normal
ERB-02-CCR	10/06/2025	10752478007	Equipment Blank
Data Package 10752482			
FD-02-CCR	10/07/2025	10752482001	Field Duplicate
BAT-12-CCR	10/07/2025	10752482002	Normal
BAT-11-CCR	10/07/2025	10752482003	Normal
BAT-10-CCR	10/07/2025	10752482004	Normal
Data Package 10752477			
BAT-04R-CCR	10/02/2025	10752477003	Matrix Spike

Table 2 – Summary of Qualified Sample Results

Sample Identification	Laboratory Identification	Analytical Method	Analyte	Result	Unit	Qualifier	Reason
BAT-02-CCR	10752259001	SM2540C	Total Dissolved Solids	2840	mg/L	J	pr
BAT-05-CCR	10752259002	SM2540C	Total Dissolved Solids	4150	mg/L	J	pr
ERB-02-CCR	10752259003	SM2540C	Total Dissolved Solids	ND	mg/L	UJ	pr
BAT-06-CCR	10752265001	SM2540C	Total Dissolved Solids	2500	mg/L	J	pr
BAT-01-CCR	10752265002	SM2540C	Total Dissolved Solids	2070	mg/L	J	pr
BAT-09-CCR	10752265003	SM2540C	Total Dissolved Solids	3280	mg/L	J	pr
BAT-03-CCR	10752265004	SM2540C	Total Dissolved Solids	4000	mg/L	J	pr
BAT-10-CCR	10752464004	SM2540C	Total Dissolved Solids	3930	mg/L	J	pr
BAT-06-CCR	10752478001	E903.1	Radium-226	0.553	pCi/L	J+	l
BAT-06-CCR	10752478001	E904.0	Radium-228	0.469	pCi/L	J	be
BAT-01-CCR	10752478002	E903.1	Radium-226	0.166	pCi/L	J+	l
BAT-01-CCR	10752478002	E904.0	Radium-228	0.614	pCi/L	J	be
BAT-09-CCR	10752478003	E903.1	Radium-226	0.360	pCi/L	J+	l
BAT-09-CCR	10752478003	E904.0	Radium-228	1.58	pCi/L	J	be
BAT-03-CCR	10752478004	E903.1	Radium-226	0.269	pCi/L	J+	l,v
BAT-03-CCR	10752478004	E904.0	Radium-228	0.515	pCi/L	J	be
BAT-05-CCR	10752478005	E903.1	Radium-226	0.133	pCi/L	J+	l
BAT-05-CCR	10752478005	E904.0	Radium-228	1.57	pCi/L	J	v,be
BAT-02-CCR	10752478006	E903.1	Radium-226	0.437	pCi/L	J+	l,v
BAT-02-CCR	10752478006	E904.0	Radium-228	1.03	pCi/L	J	be
ERB-02-CCR	10752478007	E903.1	Radium-226	0.000	pCi/L	J+	l
BAT-12-CCR	10752482002	E903.1	Radium-226	0.134	pCi/L	J	v
BAT-11-CCR	10752482003	E903.1	Radium-226	0.0724	pCi/L	J	v

ATTACHMENT A

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for but was not detected above the reported sample quantitation limit, or the sample result was considered not-detected due to associated blank contamination.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

UJ The analyte was analyzed for but was not detected. The reported sample quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control (QC) criteria. The analyte may or may not be present in the sample.

QUALIFIER REASON CODE DEFINITIONS

be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bm	Missing Blank Information
c	Calibration issue
cl	Clean-up standard recovery
cp	Insufficient growth (radiochemical data only)
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
dt	Dissolved result > total over limit
fd	Field duplicate imprecision
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate imprecision (matrix duplicate, MSD, LCSD)
lq	Level of quantitation/trace value
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
pe	Post Extraction Spike
pr	Professional Judgement
q	Quantitation issue
r	Dual column RPD
rp	Re-extraction precision issue [PAHs only]
rt	SIM ions not within + 2 seconds
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature Preservation Issue
u	High combined sample result uncertainty (radiochemical data Only)
v	compound identification issue
x	Low % solids
y	Serial dilution results
z	ICS results

Appendix D

Groundwater Velocity Calculation Sheet

Hydraulic Gradient Calculations
Former BAT Impoundments
Platte River Power Authority, Rawhide Station

Darcy
$V = Ki/n_e$

V = Velocity
K = Average Hydraulic Conductivity in ft/day
i = delta (height) / delta (length) (change in GW elevation / length of line drawn)
n_e = Effective Porosity (15% for fractured Pierre shale)

Average Hydraulic Conductivity

April BAT		September BAT	
K =	0.029	K =	0.029
dH	17.02	dH	17.23
dL	1120	dL	1120
n_e	0.15	n_e	0.15
GW Velocity =	2.938E-03	GW Velocity =	2.974E-03

Average:	2.956E-03

Notes:
BAT wells gradient between BAT-10 and BAT-05 for dH and dL

Gradient	BAT-10 to BAT-05
April 2025	0.015196429
September 2025	0.015383929
Average	0.015290179

Low Hydraulic Conductivity

April BAT		September BAT	
K =	0.0002	K =	0.0002
dH	17.02	dH	17.23
dL	1120	dL	1120
n_e	0.15	n_e	0.15
GW Velocity =	2.026E-05	GW Velocity =	2.051E-05
Average:	2.039E-05		

Max Hydraulic Conductivity

April BAT		September BAT	
K =	0.33	K =	0.33
dH	17.02	dH	17.23
dL	1120	dL	1120
n_e	0.15	n_e	0.15
GW Velocity =	3.343E-02	GW Velocity =	3.384E-02
Average:	3.364E-02		

Notes:
low = 0.0002 ft/day
high = 0.33 ft/day
average = 0.029

Appendix E

Statistical Analysis Results and Input/Output Files

Location_ID	Date	Boron	D_Boron	Calcium	D_Calcium	Chloride	D_Chloride	Fluoride	D_Fluoride	pH	D_pH	Sulfate	D_Sulfate	TDS	D_TDS
BAT-09	9/14/2016	2200	1	220000	1	150	1	0.34	1					3100	1
BAT-09	11/30/2016	1900	1	170000	1	140	1	0.32	1					2800	1
BAT-09	12/19/2016	2000	1	160000	1	110	1	0.97	1					2500	1
BAT-09	4/6/2017	2100	1	140000	1	86	1	0.24	1			1600	1	2600	1
BAT-09	5/11/2017	2300	1	160000	1	92	1	0.2	1	7.49	1	1500	1	2700	1
BAT-09	6/14/2017	2400	1	160000	1	100	1	0.22	1	7.26	1	1500	1	2800	1
BAT-09	7/12/2017									7.3	1				
BAT-09	2/8/2018	2200	1	140000	1	87	1	0.37	1			1500	1	2600	1
BAT-09	3/27/2018							0.2	0	7.35	1				
BAT-09	6/22/2018	2390	1	135000	1	90.5	1	0.24	1	7.56	1	1540	1	1600	1
BAT-09	10/10/2018	2060	1	139000	1	98.1	1	0.2	0	7.16	1	1770	1	1550	1
BAT-09	5/1/2019	2110	1	199000	1	29.1	1	0.2	0	7	1	29.5	1	3030	1
BAT-09	7/12/2019									7	1				
BAT-09	10/15/2019	2220	1	179000	1	147	1	0.2	0			1650	1	3530	1
BAT-09	4/17/2020	2240	1	174000	1	131	1	0.2	0	7.78	1	1610	1	2790	1
BAT-09	10/7/2020	2220	1	190000	1	174	1	0.25	1	7.33	1	1610	1	3470	1
BAT-09	4/14/2021	2170	1	161000	1	168	1	0.2	0	7.38	1	1	0	2650	1
BAT-09	10/15/2021	2150	1	221000	1	188	1	0.2	0	7.34	1	4.3	1	3250	1
BAT-09	5/4/2022	2210	1	187000	1	170	1	0.2	0	7.29	1	1590	1	2990	1
BAT-09	10/26/2022	2190	1	215000	1	185	1	0.2	0	7.24	1	2700	1	3250	1
BAT-09	5/2/2023	2220	1	185000	1	226	1	0.2	0	7.21	1	1690	1	2820	1
BAT-09	10/17/2023	2050	1	193000	1	160	1	0.2	0	7.21	1	1900	1	3150	1
BAT-09	5/7/2024	2110	1	186000	1	103	1	0.2	0	6.89	1	1760	1	2610	1
BAT-09	10/10/2024	2230	1	228000	1	94.9	1	2.3	1	7.25	1	1830	1	3140	1
BAT-10	1/24/2019	813	1	363000	1	22.2	1	0.53	1	7.7	1	2760	1	3820	1
BAT-10	5/3/2019	875	1	360000	1	45.4	1	0.31	1	7	1	2360	1	3620	1
BAT-10	7/22/2019	859	1	392000	1	23.8	1	0.21	1	8	1	2490	1	4130	1
BAT-10	10/11/2019	750	1	364000	1	22.8	1	0.2	0			2490	1	3830	1
BAT-10	1/14/2020	818	1	343000	1	22.1	1	0.23	1	6.7	1	2940	1	4250	1
BAT-10	4/22/2020	889	1	413000	1	22.5	1	0.4	1	7.76	1	2630	1	3930	1
BAT-10	7/20/2020	659	1	471000	1	24.1	1	0.34	1	7.33	1	2550	1	3520	1
BAT-10	10/8/2020	881	1	378000	1	22.7	1	0.2	0	7.36	1	2460	1	4020	1
BAT-10	1/7/2021	788	1	397000	1	22.2	1	0.5	1	7.5	1	2490	1	4270	1
BAT-10	4/21/2021	798	1	396000	1	22.8	1	0.2	0	7.35	1	14.8	1	3810	1
BAT-10	10/18/2021	689	1	431000	1	24.5	1	0.2	0	7.33	1	2330	1	3950	1
BAT-10	5/4/2022	837	1	405000	1	22.5	1	0.2	0	7.4	1	2360	1	3990	1
BAT-10	10/28/2022	799	1	430000	1	22.2	1	0.2	0	7.43	1	2030	1	4010	1
BAT-10	5/2/2023	789	1	404000	1	22.5	1	0.2	0	7.27	1	2640	1	3270	1
BAT-10	10/19/2023	864	1	416000	1	22.9	1	0.2	0	7.44	1	2660	1	4160	1
BAT-10	5/9/2024	815	1	425000	1	29.3	1	0.2	0	6.94	1	3100	1	1860	1
BAT-10	10/15/2024	819	1	404000	1	23.4	1	0.62	1	7.31	1	2180	1	4060	1

Location_ID	Date	Antimony	D_Antimony	Arsenic	D_Arsenic	Barium	D_Barium	Beryllium	D_Beryllium	Cadmium	D_Cadmium	Chromium	D_Chromium	Cobalt	D_Cobalt	Fluoride	D_Fluoride	Lead	D_Lead	Lithium	D_Lithium
BAT-09	9/14/2016	2	1	5	1	46	1	1	0	0.1	1	2	1	3	1	0.34	1	1	1	194	1
BAT-09	11/30/2016	2	1	3	1	28	1	1	0	0.1	0	1	0	2	1	0.32	1	1	0	192	1
BAT-09	12/19/2016	1	1	4	1	27	1	1	0	0.1	0	1	0	1	1	0.97	1	1	0	330	1
BAT-09	4/6/2017	1	1	3	1	20	1	1	0	0.1	0	1	0	1	1	0.24	1	1	1	173	1
BAT-09	5/11/2017	1	0	2	1	17	1	1	0	0.1	0	1	0	1	1	0.2	1	1	0	187	1
BAT-09	6/14/2017	2	1	3	1	21	1	1	0	0.1	0	1	0	2	1	0.22	1	1	0	247	1
BAT-09	2/8/2018	1	1	4	1	19	1	1	0	0.1	0	1	0	1	1	0.37	1	1	0	230	1
BAT-09	3/27/2018	1	0	1.6	1	16.3	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	192	1
BAT-09	6/22/2018	3	0	3	0	18.1	1	1.5	0	1.5	0	3	0	3	0	0.24	1	3	0	200	1
BAT-09	10/10/2018	0.5	0	2.5	1	23.7	1	1	0	0.08	0	2.9	1	1.8	1	0.2	0	1.5	1	182	1
BAT-09	5/1/2019	1	0	1	0	19.3	1	0.5	0	0.5	0	1.6	1	1.4	1	0.2	0	1	0	209	1
BAT-09	10/15/2019	1	0	1.1	1	12.6	1	0.5	0	0.5	0	1	0	1.8	1	0.2	0	1	0	200	1
BAT-09	4/17/2020	1	0	1	0	11.9	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	212	1
BAT-09	10/7/2020	1	0	1	0	10.9	1	0.5	0	0.5	0	1	0	1	0	0.25	1	1	0	210	1
BAT-09	4/14/2021	1	0	1	0	13.4	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	197	1
BAT-09	10/15/2021	1	0	1	0	13.8	1	0.5	0	0.5	0	1.7	1	1	0	0.2	0	1	0	264	1
BAT-09	5/4/2022	1	0	1.1	1	11.6	1	0.5	0	0.5	0	1.7	1	1	0	0.2	0	1	0	221	1
BAT-09	10/26/2022	5	0	5	0	12	1	2.5	0	2.5	0	5	0	5	0	0.2	0	5	0	249	1
BAT-09	5/2/2023	1	0	1	0	12.3	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	220	1
BAT-09	10/17/2023	2	0	2	0	11.5	1	1	0	1	0	2	0	2	0	0.2	0	2	0	215	1
BAT-09	5/7/2024	1	0	1	0	10.2	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	231	1
BAT-09	10/10/2024	1	0	10	0	13.8	1	1	0	5	0	5	0	5	0	2.3	1	10	0	252	1
BAT-10	1/24/2019	1.2	1	2.6	1	34.1	1	0.5	0	0.5	0	1	0	1.1	1	0.53	1	1	0	221	1
BAT-10	5/3/2019	2	0	2	0	30.9	1	1	0	1	0	2.2	1	2	0	0.31	1	2	0	227	1
BAT-10	7/22/2019	1	0	1	0	21.5	1	0.5	0	0.5	0	1	0	1.2	1	0.21	1	1	0	223	1
BAT-10	10/11/2019	3	0	3	0	25.3	1	1.5	0	1.5	0	3	0	3	0	0.2	0	3	0	196	1
BAT-10	1/14/2020	1	0	1.2	1	59.2	1	0.5	0	0.5	0	1.5	1	1.5	1	0.23	1	1	0	193	1
BAT-10	4/22/2020	1	0	1	0	38.3	1	0.5	0	0.5	0	1.3	0	1	1	0.4	1	1	0	236	1
BAT-10	7/20/2020	1	0	1	0	24.9	1	0.5	0	0.5	0	1	0	1	0	0.34	1	1	0	383	1
BAT-10	10/8/2020	3	0	3	0	25.8	1	0.5	0	0.5	0	3	0	1	0	0.2	0	1	0	232	1
BAT-10	1/7/2021	1	0	1	0	17.8	1	0.5	0	0.5	0	1	0	1	0	0.5	1	1	0	195	1
BAT-10	4/21/2021	1	0	1	0	18.8	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	212	1
BAT-10	10/18/2021	1	0	1	0	24.6	1	0.5	0	0.5	0	1.1	1	1	0	0.2	0	1	0	197	1
BAT-10	5/4/2022	1	0	1	0	14.6	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	225	1
BAT-10	10/28/2022	10	0	10	0	24.1	1	5	0	5	0	10	0	10	0	0.2	0	10	0	220	1
BAT-10	5/2/2023	1	0	1	0	16.3	1	0.5	0	0.5	0	1	0	1	0	0.2	0	1	0	225	1
BAT-10	10/19/2023	2	0	2	0	16.2	1	1	0	1	0	2	0	2	0	0.2	0	2	0	236	1
BAT-10	5/9/2024	3	0	3	0	14.4	1	1.5	0	1.5	0	3	0	3	0	0.2	0	3	0	230	1
BAT-10	10/15/2024	1	0	10	0	15.1	1	1	0	5	0	5	0	5	0	0.62	1	10	0	213	1

Location_ID	Date	Mercury	D_Mercury	Molybdenum	D_Molybdenum	Radium	D_Radium	Selenium	D_Selenium	Thallium	D_Thallium
BAT-09	9/14/2016	0.1	0	23	1	3.2	1	12	1	1	0
BAT-09	11/30/2016	0.1	0	40	1	1.6	1	5	1	1	0
BAT-09	12/19/2016	0.1	0	32	1	1.6	1	3	1	1	0
BAT-09	4/6/2017	0.1	0	26	1	0.55	1	4	1	1	0
BAT-09	5/11/2017	0.1	0	25	1	1.7	1	3	1	1	0
BAT-09	6/14/2017	0.1	0	18	1	0.31	1	5	1	1	0
BAT-09	2/8/2018	0.1	0	33	1	1.4	1	3	1	1	0
BAT-09	3/27/2018	0.2	0	18.3	1	0.947	1	1	0	1	0
BAT-09	6/22/2018	0.2	0	17.7	1	0.85	1	3	0	3	0
BAT-09	10/10/2018	0.2	0	12.7	1	0.834	1	2.5	0	0.1	0
BAT-09	5/1/2019	0.2	0	9.6	1	1.09	1	1.5	1	1	0
BAT-09	10/15/2019	0.2	0	8.2	1	0.497	1	1	0	1	0
BAT-09	4/17/2020	0.2	0	4.9	1	0.451	1	1	0	1	0
BAT-09	10/7/2020	0.2	0	4.9	1	0.913	1	1	0	1	0
BAT-09	4/14/2021	0.2	0	5.4	1	0.884	1	1	0	1	0
BAT-09	10/15/2021	0.2	0	3.8	1	2.81	1	1	0	1	0
BAT-09	5/4/2022	0.2	0	2.7	1	0.785	1	1	0	1	0
BAT-09	10/26/2022	0.2	0	5	0	0.242	1	5	0	5	0
BAT-09	5/2/2023	0.2	0	3.1	1	0.537	1	1	0	1	0
BAT-09	10/17/2023	0.2	0	2.3	1	0.647	1	2	0	2	0
BAT-09	5/7/2024	0.2	0	2.3	1	0.274	1	1	0	1	0
BAT-09	10/10/2024	0.2	0	20	0	1.87	1	15	0	1	0
BAT-10	1/24/2019	0.2	0	36.8	1			131	1	1	0
BAT-10	5/3/2019	0.2	0	32.5	1	1.03	1	100	1	2	0
BAT-10	7/22/2019	0.2	0	20.4	1	1.64	1	109	1	1	0
BAT-10	10/11/2019	0.2	0	19.3	1	0.915	1	115	1	3	0
BAT-10	1/14/2020	0.2	0	17.4	1	0.681	1	79	1	1	0
BAT-10	4/22/2020	0.2	0	13.3	1	0.382	1	76.5	1	1	0
BAT-10	7/20/2020	0.2	0	12	1	0.487	1	90.3	1	1	0
BAT-10	10/8/2020	0.2	0	10.4	1	1.16	1	115	1	1	0
BAT-10	1/7/2021	0.2	0	6.2	1	1.2	1	228	1	1	0
BAT-10	4/21/2021	0.2	0	8.2	1	1.93	1	150	1	1	0
BAT-10	10/18/2021	0.2	0	6.4	1	0.666	1	213	1	1	0
BAT-10	5/4/2022	0.2	0	4.6	1	0.485	1	143	1	1	0
BAT-10	10/28/2022	0.2	0	10	0	0.723	1	187	1	10	0
BAT-10	5/2/2023	0.2	0	5.3	1	0.91	1	167	1	1	0
BAT-10	10/19/2023	0.2	0	4.3	1	0.729	1	161	1	2	0
BAT-10	5/9/2024	0.2	0	5	1	1.57	1	136	1	3	0
BAT-10	10/15/2024	0.2	0	20	0	0	1	175	1	1	0

1				Background Statistics for Data Sets with Non-Detects								
2		User Selected Options										
3		Date/Time of Computation		ProUCL 5.2 1/23/2025 1:01:55 PM								
4		From File		ProUCL Input PRPA CCR BAT Appendix III Total 2016-2024.xls								
5		Full Precision		OFF								
6		Confidence Coefficient		95%								
7		Coverage		95%								
8		Different or Future K Observations		1								
9		Number of Bootstrap Operations		2000								
10												
11	TDS											
12												
13	General Statistics											
14				Total Number of Observations	38				Number of Distinct Observations	35		
15									Number of Missing Observations	3		
16				Minimum	1550				First Quartile	2793		
17				Second Largest	4250				Median	3250		
18				Maximum	4270				Third Quartile	3905		
19				Mean	3248				SD	721.6		
20				Coefficient of Variation	0.222				Skewness	-0.558		
21				Mean of logged Data	8.058				SD of logged Data	0.252		
22												
23				Critical Values for Background Threshold Values (BTVs)								
24				Tolerance Factor K (For UTL)	2.132				d2max (for USL)	2.846		
25												
26				Normal GOF Test								
27				Shapiro Wilk Test Statistic	0.934				Shapiro Wilk GOF Test			
28				1% Shapiro Wilk Critical Value	0.916				Data appear Normal at 1% Significance Level			
29				Lilliefors Test Statistic	0.124				Lilliefors GOF Test			
30				1% Lilliefors Critical Value	0.165				Data appear Normal at 1% Significance Level			
31				Data appear Normal at 1% Significance Level								
32												
33				Background Statistics Assuming Normal Distribution								
34				95% UTL with 95% Coverage	4787				90% Percentile (z)	4173		
35				95% UPL (t)	4482				95% Percentile (z)	4435		
36				95% USL	5302				99% Percentile (z)	4927		
37												
38				Gamma GOF Test								
39				A-D Test Statistic	0.887				Anderson-Darling Gamma GOF Test			
40				5% A-D Critical Value	0.747				Data Not Gamma Distributed at 5% Significance Level			
41				K-S Test Statistic	0.122				Kolmogorov-Smirnov Gamma GOF Test			
42				5% K-S Critical Value	0.143				Detected data appear Gamma Distributed at 5% Significance Level			
43				Detected data follow Appr. Gamma Distribution at 5% Significance Level								
44												
45				Gamma Statistics								
46				k hat (MLE)	17.89				k star (bias corrected MLE)	16.49		
47				Theta hat (MLE)	181.6				Theta star (bias corrected MLE)	197		
48				nu hat (MLE)	1359				nu star (bias corrected)	1253		
49				MLE Mean (bias corrected)	3248				MLE Sd (bias corrected)	799.9		
50												
51				Background Statistics Assuming Gamma Distribution								
52				95% Wilson Hilferty (WH) Approx. Gamma UPL	4691				90% Percentile	4306		
53				95% Hawkins Wixley (HW) Approx. Gamma UPL	4728				95% Percentile	4666		
54				95% WH Approx. Gamma UTL with 95% Coverage	5125				99% Percentile	5392		
55				95% HW Approx. Gamma UTL with 95% Coverage	5185							
56				95% WH USL	5915				95% HW USL	6031		
57												
58				Lognormal GOF Test								
59				Shapiro Wilk Test Statistic	0.881				Shapiro Wilk Lognormal GOF Test			
60				10% Shapiro Wilk Critical Value	0.947				Data Not Lognormal at 10% Significance Level			
61				Lilliefors Test Statistic	0.116				Lilliefors Lognormal GOF Test			
62				10% Lilliefors Critical Value	0.13				Data appear Lognormal at 10% Significance Level			
63				Data appear Approximate Lognormal at 10% Significance Level								
64												
65				Background Statistics assuming Lognormal Distribution								
66				95% UTL with 95% Coverage	5407				90% Percentile (z)	4363		
67				95% UPL (t)	4860				95% Percentile (z)	4782		
68				95% USL	6475				99% Percentile (z)	5679		
69												
70				Nonparametric Distribution Free Background Statistics								
71				Data appear Normal at 1% Significance Level								
72												
73				Nonparametric Upper Limits for Background Threshold Values								
74				Order of Statistic, order	38				95% UTL with 95% Coverage	4270		
75				Approx, f used to compute achieved CC	2				Approximate Actual Confidence Coefficient achieved by UTL	0.858		
76									Approximate Sample Size needed to achieve specified CC	59		
77				95% Percentile Bootstrap UTL with 95% Coverage	4270				95% BCA Bootstrap UTL with 95% Coverage	4270		
78				95% UPL	4251				90% Percentile	4081		
79				90% Chebyshev UPL	5441				95% Percentile	4174		

80				95% Chebyshev UPL	6435					99% Percentile	4263	
81				95% USL	4270							
82												
83	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
84	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
85	and consists of observations collected from clean unimpacted locations.											
86	The use of USL tends to provide a balance between false positives and false negatives provided the data											
87	represents a background data set and when many onsite observations need to be compared with the BTV.											
88												
89	**Boron**											
90												
91	**General Statistics**											
92				Total Number of Observations	38					Number of Distinct Observations	34	
93										Number of Missing Observations	3	
94				Minimum	659					First Quartile	818.3	
95				Second Largest	2390					Median	2025	
96				Maximum	2400					Third Quartile	2200	
97				Mean	1563					SD	695.2	
98				Coefficient of Variation	0.445					Skewness	-0.184	
99				Mean of logged Data	7.24					SD of logged Data	0.504	
100												
101					**Critical Values for Background Threshold Values (BTVs)**							
102				Tolerance Factor K (For UTL)	2.132					d2max (for USL)	2.846	
103												
104					**Normal GOF Test**							
105				Shapiro Wilk Test Statistic	0.738				**Shapiro Wilk GOF Test**			
106				1% Shapiro Wilk Critical Value	0.916				Data Not Normal at 1% Significance Level			
107				Lilliefors Test Statistic	0.281				**Lilliefors GOF Test**			
108				1% Lilliefors Critical Value	0.165				Data Not Normal at 1% Significance Level			
109					Data Not Normal at 1% Significance Level							
110												
111					**Background Statistics Assuming Normal Distribution**							
112				95% UTL with 95% Coverage	3046					90% Percentile (z)	2454	
113				95% UPL (t)	2752					95% Percentile (z)	2707	
114				95% USL	3542					99% Percentile (z)	3181	
115												
116					**Gamma GOF Test**							
117				A-D Test Statistic	4.704				**Anderson-Darling Gamma GOF Test**			
118				5% A-D Critical Value	0.752				Data Not Gamma Distributed at 5% Significance Level			
119				K-S Test Statistic	0.284				**Kolmogorov-Smirnov Gamma GOF Test**			
120				5% K-S Critical Value	0.144				Data Not Gamma Distributed at 5% Significance Level			
121					Data Not Gamma Distributed at 5% Significance Level							
122												
123					**Gamma Statistics**							
124				k hat (MLE)	4.512					k star (bias corrected MLE)	4.173	
125				Theta hat (MLE)	346.5					Theta star (bias corrected MLE)	374.6	
126				nu hat (MLE)	342.9					nu star (bias corrected)	317.2	
127				MLE Mean (bias corrected)	1563					MLE Sd (bias corrected)	765.3	
128												
129					**Background Statistics Assuming Gamma Distribution**							
130				95% Wilson Hilferty (WH) Approx. Gamma UPL	3040					90% Percentile	2589	
131				95% Hawkins Wixley (HW) Approx. Gamma UPL	3094					95% Percentile	2997	
132				95% WH Approx. Gamma UTL with 95% Coverage	3560					99% Percentile	3866	
133				95% HW Approx. Gamma UTL with 95% Coverage	3664							
134				95% WH USL	4567					95% HW USL	4800	
135												
136					**Lognormal GOF Test**							
137				Shapiro Wilk Test Statistic	0.736				**Shapiro Wilk Lognormal GOF Test**			
138				10% Shapiro Wilk Critical Value	0.947				Data Not Lognormal at 10% Significance Level			
139				Lilliefors Test Statistic	0.289				**Lilliefors Lognormal GOF Test**			
140				10% Lilliefors Critical Value	0.13				Data Not Lognormal at 10% Significance Level			
141					Data Not Lognormal at 10% Significance Level							
142												
143					**Background Statistics assuming Lognormal Distribution**							
144				95% UTL with 95% Coverage	4082					90% Percentile (z)	2659	
145				95% UPL (t)	3298					95% Percentile (z)	3193	
146				95% USL	5851					99% Percentile (z)	4502	
147												
148					**Nonparametric Distribution Free Background Statistics**							
149					Data do not follow a Discernible Distribution							
150												
151					**Nonparametric Upper Limits for Background Threshold Values**							
152				Order of Statistic, order	38					95% UTL with 95% Coverage	2400	
153				Approx, f used to compute achieved CC	2					Approximate Actual Confidence Coefficient achieved by UTL	0.858	
154										Approximate Sample Size needed to achieve specified CC	59	
155				95% Percentile Bootstrap UTL with 95% Coverage	2400					95% BCA Bootstrap UTL with 95% Coverage	2400	
156				95% UPL	2391					90% Percentile	2233	
157				90% Chebyshev UPL	3676					95% Percentile	2314	
158				95% Chebyshev UPL	4633					99% Percentile	2396	

159					95% USL	2400						
160												
161	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
162	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
163	and consists of observations collected from clean unimpacted locations.											
164	The use of USL tends to provide a balance between false positives and false negatives provided the data											
165	represents a background data set and when many onsite observations need to be compared with the BTV.											
166												
167	**Calcium**											
168												
169	**General Statistics**											
170				Total Number of Observations		38				Number of Distinct Observations		34
171										Number of Missing Observations		3
172					Minimum	135000				First Quartile		175250
173					Second Largest	431000				Median		220500
174					Maximum	471000				Third Quartile		396750
175					Mean	277211				SD		115365
176					Coefficient of Variation	0.416				Skewness		0.223
177					Mean of logged Data	12.44				SD of logged Data		0.431
178												
179					**Critical Values for Background Threshold Values (BTVs)**							
180				Tolerance Factor K (For UTL)		2.132				d2max (for USL)		2.846
181												
182					**Normal GOF Test**							
183				Shapiro Wilk Test Statistic		0.828				**Shapiro Wilk GOF Test**		
184				1% Shapiro Wilk Critical Value		0.916				Data Not Normal at 1% Significance Level		
185				Lilliefors Test Statistic		0.218				**Lilliefors GOF Test**		
186				1% Lilliefors Critical Value		0.165				Data Not Normal at 1% Significance Level		
187						Data Not Normal at 1% Significance Level						
188												
189					**Background Statistics Assuming Normal Distribution**							
190				95% UTL with	95% Coverage	523179				90% Percentile (z)		425056
191					95% UPL (t)	474386				95% Percentile (z)		466969
192					95% USL	605577				99% Percentile (z)		545589
193												
194					**Gamma GOF Test**							
195				A-D Test Statistic		2.489				**Anderson-Darling Gamma GOF Test**		
196				5% A-D Critical Value		0.75				Data Not Gamma Distributed at 5% Significance Level		
197				K-S Test Statistic		0.207				**Kolmogorov-Smirnov Gamma GOF Test**		
198				5% K-S Critical Value		0.143				Data Not Gamma Distributed at 5% Significance Level		
199						Data Not Gamma Distributed at 5% Significance Level						
200												
201					**Gamma Statistics**							
202					k hat (MLE)	5.795				k star (bias corrected MLE)		5.355
203					Theta hat (MLE)	47837				Theta star (bias corrected MLE)		51767
204					nu hat (MLE)	440.4				nu star (bias corrected)		407
205					MLE Mean (bias corrected)	277211				MLE Sd (bias corrected)		119793
206												
207					**Background Statistics Assuming Gamma Distribution**							
208				95% Wilson Hilferty (WH) Approx. Gamma UPL		504639				90% Percentile		437507
209				95% Hawkins Wixley (HW) Approx. Gamma UPL		510104				95% Percentile		499038
210				95% WH Approx. Gamma UTL with	95% Coverage	582040				99% Percentile		628655
211				95% HW Approx. Gamma UTL with	95% Coverage	593259						
212					95% WH USL	730040				95% HW USL		756261
213												
214					**Lognormal GOF Test**							
215				Shapiro Wilk Test Statistic		0.846				**Shapiro Wilk Lognormal GOF Test**		
216				10% Shapiro Wilk Critical Value		0.947				Data Not Lognormal at 10% Significance Level		
217				Lilliefors Test Statistic		0.213				**Lilliefors Lognormal GOF Test**		
218				10% Lilliefors Critical Value		0.13				Data Not Lognormal at 10% Significance Level		
219						Data Not Lognormal at 10% Significance Level						
220												
221					**Background Statistics assuming Lognormal Distribution**							
222				95% UTL with	95% Coverage	636181				90% Percentile (z)		440843
223					95% UPL (t)	530113				95% Percentile (z)		515616
224					95% USL	865666				99% Percentile (z)		691772
225												
226					**Nonparametric Distribution Free Background Statistics**							
227						Data do not follow a Discernible Distribution						
228												
229					**Nonparametric Upper Limits for Background Threshold Values**							
230					Order of Statistic, order	38				95% UTL with	95% Coverage	471000
231				Approx, f used to compute achieved CC		2				Approximate Actual Confidence Coefficient achieved by UTL		0.858
232										Approximate Sample Size needed to achieve specified CC		59
233				95% Percentile Bootstrap UTL with	95% Coverage	471000				95% BCA Bootstrap UTL with	95% Coverage	471000
234					95% UPL	433000					90% Percentile	418700
235					90% Chebyshev UPL	627829					95% Percentile	430150
236					95% Chebyshev UPL	786648					99% Percentile	456200
237					95% USL	471000						

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

Chloride

General Statistics

Total Number of Observations	38	Number of Distinct Observations	33
		Number of Missing Observations	3
Minimum	22.1	First Quartile	22.83
Second Largest	188	Median	86.5
Maximum	226	Third Quartile	137.8
Mean	82.83	SD	63.33
Coefficient of Variation	0.765	Skewness	0.559
Mean of logged Data	4.072	SD of logged Data	0.879

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.132	d2max (for USL)	2.846

Normal GOF Test

Shapiro Wilk Test Statistic	0.838	**Shapiro Wilk GOF Test**
1% Shapiro Wilk Critical Value	0.916	Data Not Normal at 1% Significance Level
Lilliefors Test Statistic	0.248	**Lilliefors GOF Test**
1% Lilliefors Critical Value	0.165	Data Not Normal at 1% Significance Level

Data Not Normal at 1% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	217.9	90% Percentile (z)	164
95% UPL (t)	191.1	95% Percentile (z)	187
95% USL	263.1	99% Percentile (z)	230.2

Gamma GOF Test

A-D Test Statistic	2.656	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.765	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.246	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.595	k star (bias corrected MLE)	1.487
Theta hat (MLE)	51.92	Theta star (bias corrected MLE)	55.7
nu hat (MLE)	121.3	nu star (bias corrected)	113
MLE Mean (bias corrected)	82.83	MLE Sd (bias corrected)	67.92

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	221.1	90% Percentile	173
95% Hawkins Wixley (HW) Approx. Gamma UPL	228.7	95% Percentile	216.4
95% WH Approx. Gamma UTL with 95% Coverage	279.8	99% Percentile	314.5
95% HW Approx. Gamma UTL with 95% Coverage	296.6		
95% WH USL	401.2	95% HW USL	444.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.803	**Shapiro Wilk Lognormal GOF Test**
10% Shapiro Wilk Critical Value	0.947	Data Not Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.234	**Lilliefors Lognormal GOF Test**
10% Lilliefors Critical Value	0.13	Data Not Lognormal at 10% Significance Level

Data Not Lognormal at 10% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with 95% Coverage	382.3	90% Percentile (z)	181
95% UPL (t)	263.6	95% Percentile (z)	249.1
95% USL	716.3	99% Percentile (z)	453.5

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, order	38	95% UTL with 95% Coverage	226
Approx, f used to compute achieved CC	2	Approximate Actual Confidence Coefficient achieved by UTL	0.858
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	226	95% BCA Bootstrap UTL with 95% Coverage	226
95% UPL	189.9	90% Percentile	171.2
90% Chebyshev UPL	275.3	95% Percentile	185.5
95% Chebyshev UPL	362.5	99% Percentile	211.9
95% USL	226		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

Fluoride

General Statistics

Total Number of Observations	39	Number of Missing Observations	2
Number of Distinct Observations	16		
Number of Detects	18	Number of Non-Detects	21
Number of Distinct Detects	16	Number of Distinct Non-Detects	1
Minimum Detect	0.2	Minimum Non-Detect	0.2
Maximum Detect	2.3	Maximum Non-Detect	0.2
Variance Detected	0.243	Percent Non-Detects	53.85%
Mean Detected	0.477	SD Detected	0.493
Mean of Detected Logged Data	-0.988	SD of Detected Logged Data	0.621

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.124	d2max (for USL)	2.857

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.55	**Shapiro Wilk GOF Test**	
1% Shapiro Wilk Critical Value	0.858	Data Not Normal at 1% Significance Level	
Lilliefors Test Statistic	0.291	**Lilliefors GOF Test**	
1% Lilliefors Critical Value	0.235	Data Not Normal at 1% Significance Level	

Data Not Normal at 1% Significance Level

Kaplan Meier (KM) Background Statistics Assuming Normal Distribution

KM Mean	0.328	KM SD	0.354
95% UTL95% Coverage	1.08	95% KM UPL (t)	0.932
90% KM Percentile (z)	0.781	95% KM Percentile (z)	0.91
99% KM Percentile (z)	1.151	95% KM USL	1.339

DL/2 Substitution Background Statistics Assuming Normal Distribution

Mean	0.274	SD	0.381
95% UTL95% Coverage	1.084	95% UPL (t)	0.925
90% Percentile (z)	0.762	95% Percentile (z)	0.901
99% Percentile (z)	1.16	95% USL	1.363

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.537	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.231	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.17	k star (bias corrected MLE)	1.845
Theta hat (MLE)	0.22	Theta star (bias corrected MLE)	0.259
nu hat (MLE)	78.1	nu star (bias corrected)	66.42
MLE Mean (bias corrected)	0.477		
MLE Sd (bias corrected)	0.351	95% Percentile of Chisquare (2kstar)	8.981

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.226
Maximum	2.3	Median	0.01
SD	0.406	CV	1.798
k hat (MLE)	0.447	k star (bias corrected MLE)	0.43
Theta hat (MLE)	0.505	Theta star (bias corrected MLE)	0.525
nu hat (MLE)	34.86	nu star (bias corrected)	33.51
MLE Mean (bias corrected)	0.226	MLE Sd (bias corrected)	0.344
95% Percentile of Chisquare (2kstar)	3.482	90% Percentile	0.629
95% Percentile	0.915	99% Percentile	1.627

The following statistics are computed using Gamma ROS Statistics on Imputed Data

Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	1.224	1.368	95% Approx. Gamma UPL	0.855	0.901
95% Gamma USL	2.105	2.6			

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.328	SD (KM)	0.354

396					Variance (KM)	0.125				SE of Mean (KM)		0.0583
397					k hat (KM)	0.859				k star (KM)		0.81
398					nu hat (KM)	67.02				nu star (KM)		63.2
399					theta hat (KM)	0.382				theta star (KM)		0.405
400					80% gamma percentile (KM)	0.536				90% gamma percentile (KM)		0.795
401					95% gamma percentile (KM)	1.059				99% gamma percentile (KM)		1.682
402												
403					**The following statistics are computed using gamma distribution and KM estimates**							
404					**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
405						WH	HW				WH	HW
406				95% Approx. Gamma UTL with 95% Coverage		0.866	0.846			95% Approx. Gamma UPL	0.716	0.695
407					95% KM Gamma Percentile	0.695	0.674			95% Gamma USL	1.179	1.168
408												
409					**Lognormal GOF Test on Detected Observations Only**							
410					Shapiro Wilk Test Statistic	0.837	**Shapiro Wilk GOF Test**					
411					10% Shapiro Wilk Critical Value	0.914	Data Not Lognormal at 10% Significance Level					
412					Lilliefors Test Statistic	0.176	**Lilliefors GOF Test**					
413					10% Lilliefors Critical Value	0.185	Detected Data appear Lognormal at 10% Significance Level					
414					Detected Data appear Approximate Lognormal at 10% Significance Level							
415												
416					**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**							
417					Mean in Original Scale	0.261				Mean in Log Scale		-1.944
418					SD in Original Scale	0.389				SD in Log Scale		1.093
419					95% UTL95% Coverage	1.46				95% BCA UTL95% Coverage		2.3
420					95% Bootstrap (%) UTL95% Coverage	2.3				95% UPL (t)		0.925
421					90% Percentile (z)	0.581				95% Percentile (z)		0.864
422					99% Percentile (z)	1.82				95% USL		3.251
423												
424					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
425					KM Mean of Logged Data	-1.322				95% KM UTL (Lognormal)95% Coverage		0.794
426					KM SD of Logged Data	0.514				95% KM UPL (Lognormal)		0.641
427					95% KM Percentile Lognormal (z)	0.62				95% KM USL (Lognormal)		1.157
428												
429					**Background DL/2 Statistics Assuming Lognormal Distribution**							
430					Mean in Original Scale	0.274				Mean in Log Scale		-1.696
431					SD in Original Scale	0.381				SD in Log Scale		0.783
432					95% UTL95% Coverage	0.969				95% UPL (t)		0.699
433					90% Percentile (z)	0.501				95% Percentile (z)		0.665
434					99% Percentile (z)	1.135				95% USL		1.719
435					DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.							
436												
437					**Nonparametric Distribution Free Background Statistics**							
438					Data appear to follow a Discernible Distribution							
439												
440					**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
441					Order of Statistic, r	39				95% UTL with95% Coverage		2.3
442					Approx, f used to compute achieved CC	2.053				Approximate Actual Confidence Coefficient achieved by UTL		0.865
443				Approximate Sample Size needed to achieve specified CC		59				95% UPL		0.97
444					95% USL	2.3				95% KM Chebyshev UPL		1.89
445												
446					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
447					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
448					and consists of observations collected from clean unimpacted locations.							
449					The use of USL tends to provide a balance between false positives and false negatives provided the data							
450					represents a background data set and when many onsite observations need to be compared with the BTV.							
451												
452	**pH**											
453												
454	**General Statistics**											
455					Total Number of Observations	34				Number of Distinct Observations		28
456										Number of Missing Observations		7
457					Minimum	6.7				First Quartile		7.218
458					Second Largest	7.78				Median		7.33
459					Maximum	8				Third Quartile		7.423
460					Mean	7.319				SD		0.262
461					Coefficient of Variation	0.0358				Skewness		0.189
462					Mean of logged Data	1.99				SD of logged Data		0.0357
463												
464					**Critical Values for Background Threshold Values (BTVs)**							
465					Tolerance Factor K (For UTL)	2.166				d2max (for USL)		2.799
466												
467					**Normal GOF Test**							
468					Shapiro Wilk Test Statistic	0.962	**Shapiro Wilk GOF Test**					
469					1% Shapiro Wilk Critical Value	0.908	Data appear Normal at 1% Significance Level					
470					Lilliefors Test Statistic	0.132	**Lilliefors GOF Test**					
471					1% Lilliefors Critical Value	0.175	Data appear Normal at 1% Significance Level					
472					Data appear Normal at 1% Significance Level							
473												
474					**Background Statistics Assuming Normal Distribution**							

475				95% UTL with	95% Coverage	7.886				90% Percentile (z)		7.655
476					95% UPL (t)	7.769				95% Percentile (z)		7.75
477					95% USL	8.052				99% Percentile (z)		7.928
478												
479						**Gamma GOF Test**							
480					A-D Test Statistic	0.712	**Anderson-Darling Gamma GOF Test**					
481					5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level					
482					K-S Test Statistic	0.133	**Kolmogorov-Smirnov Gamma GOF Test**					
483					5% K-S Critical Value	0.15	Detected data appear Gamma Distributed at 5% Significance Level					
484					Detected data appear Gamma Distributed at 5% Significance Level							
485												
486						**Gamma Statistics**						
487					k hat (MLE)	807.4				k star (bias corrected MLE)		736.2
488					Theta hat (MLE)	0.00907				Theta star (bias corrected MLE)		0.00994
489					nu hat (MLE)	54901				nu star (bias corrected)		50058
490					MLE Mean (bias corrected)	7.319				MLE Sd (bias corrected)		0.27
491												
492						**Background Statistics Assuming Gamma Distribution**							
493			95% Wilson Hilferty (WH) Approx. Gamma UPL			7.774				90% Percentile		7.667
494			95% Hawkins Wixley (HW) Approx. Gamma UPL			7.775				95% Percentile		7.769
495			95% WH Approx. Gamma UTL with	95% Coverage		7.897				99% Percentile		7.962
496			95% HW Approx. Gamma UTL with	95% Coverage		7.899						
497					95% WH USL	8.073				95% HW USL		8.076
498												
499						**Lognormal GOF Test**							
500					Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**					
501					10% Shapiro Wilk Critical Value	0.943	Data appear Lognormal at 10% Significance Level					
502					Lilliefors Test Statistic	0.137	**Lilliefors Lognormal GOF Test**					
503					10% Lilliefors Critical Value	0.137	Data appear Lognormal at 10% Significance Level					
504					Data appear Lognormal at 10% Significance Level							
505												
506						**Background Statistics assuming Lognormal Distribution**							
507				95% UTL with	95% Coverage	7.903				90% Percentile (z)		7.657
508					95% UPL (t)	7.778				95% Percentile (z)		7.757
509					95% USL	8.084				99% Percentile (z)		7.949
510												
511						**Nonparametric Distribution Free Background Statistics**							
512					Data appear Normal at 1% Significance Level							
513												
514						**Nonparametric Upper Limits for Background Threshold Values**							
515					Order of Statistic, order	34				95% UTL with	95% Coverage	8
516					Approx, f used to compute achieved CC	1.789				Approximate Actual Confidence Coefficient achieved by UTL		0.825
517										Approximate Sample Size needed to achieve specified CC		59
518			95% Percentile Bootstrap UTL with	95% Coverage		8				95% BCA Bootstrap UTL with	95% Coverage	8
519					95% UPL	7.835				90% Percentile		7.658
520					90% Chebyshev UPL	8.116				95% Percentile		7.767
521					95% Chebyshev UPL	8.477				99% Percentile		7.927
522					95% USL	8						
523												
524					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
525					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
526					and consists of observations collected from clean unimpacted locations.							
527					The use of USL tends to provide a balance between false positives and false negatives provided the data							
528					represents a background data set and when many onsite observations need to be compared with the BTV.							
529												
530	**Sulfate**											
531												
532						**General Statistics**							
533					Total Number of Observations	35				Number of Missing Observations		6
534					Number of Distinct Observations	29						
535					Number of Detects	34				Number of Non-Detects		1
536					Number of Distinct Detects	28				Number of Distinct Non-Detects		1
537					Minimum Detect	4.3				Minimum Non-Detect		1
538					Maximum Detect	3100				Maximum Non-Detect		1
539					Variance Detected	597562				Percent Non-Detects		2.857%
540					Mean Detected	1949				SD Detected		773
541					Mean of Detected Logged Data	7.188				SD of Detected Logged Data		1.512
542												
543						**Critical Values for Background Threshold Values (BTVs)**							
544					Tolerance Factor K (For UTL)	2.157				d2max (for USL)		2.812
545												
546						**Normal GOF Test on Detects Only**							
547					Shapiro Wilk Test Statistic	0.868	**Shapiro Wilk GOF Test**					
548					1% Shapiro Wilk Critical Value	0.908	Data Not Normal at 1% Significance Level					
549					Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**					
550					1% Lilliefors Critical Value	0.175	Data Not Normal at 1% Significance Level					
551					Data Not Normal at 1% Significance Level							
552												
553						**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**							

554					KM Mean	1893					KM SD	817.8
555					95% UTL95% Coverage	3657					95% KM UPL (t)	3296
556					90% KM Percentile (z)	2941					95% KM Percentile (z)	3239
557					99% KM Percentile (z)	3796					95% KM USL	4193
558												
559					**DL/2 Substitution Background Statistics Assuming Normal Distribution**							
560					Mean	1893					SD	829.7
561					95% UTL95% Coverage	3683					95% UPL (t)	3316
562					90% Percentile (z)	2957					95% Percentile (z)	3258
563					99% Percentile (z)	3824					95% USL	4226
564					DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons							
565												
566					**Gamma GOF Tests on Detected Observations Only**							
567					A-D Test Statistic	5.908	**Anderson-Darling GOF Test**					
568					5% A-D Critical Value	0.767	Data Not Gamma Distributed at 5% Significance Level					
569					K-S Test Statistic	0.406	**Kolmogorov-Smirnov GOF**					
570					5% K-S Critical Value	0.154	Data Not Gamma Distributed at 5% Significance Level					
571					Data Not Gamma Distributed at 5% Significance Level							
572												
573					**Gamma Statistics on Detected Data Only**							
574					k hat (MLE)	1.434					k star (bias corrected MLE)	1.327
575					Theta hat (MLE)	1359					Theta star (bias corrected MLE)	1469
576					nu hat (MLE)	97.52					nu star (bias corrected)	90.25
577					MLE Mean (bias corrected)	1949						
578					MLE Sd (bias corrected)	1692					95% Percentile of Chisquare (2kstar)	7.206
579												
580					**Gamma ROS Statistics using Imputed Non-Detects**							
581					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
582					GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)							
583					For such situations, GROS method may yield incorrect values of UCLs and BTVs							
584					This is especially true when the sample size is small.							
585					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
586					Minimum	4.3					Mean	1926
587					Maximum	3100					Median	1900
588					SD	774.2					CV	0.402
589					k hat (MLE)	1.46					k star (bias corrected MLE)	1.354
590					Theta hat (MLE)	1319					Theta star (bias corrected MLE)	1422
591					nu hat (MLE)	102.2					nu star (bias corrected)	94.78
592					MLE Mean (bias corrected)	1926					MLE Sd (bias corrected)	1655
593					95% Percentile of Chisquare (2kstar)	7.302					90% Percentile	4114
594					95% Percentile	5192					99% Percentile	7642
595					**The following statistics are computed using Gamma ROS Statistics on Imputed Data**							
596					**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
597						WH	HW				WH	HW
598					95% Approx. Gamma UTL with 95% Coverage	6397	7853			95% Approx. Gamma UPL	5075	5941
599					95% Gamma USL	8745	11485					
600												
601					**Estimates of Gamma Parameters using KM Estimates**							
602					Mean (KM)	1893					SD (KM)	817.8
603					Variance (KM)	668746					SE of Mean (KM)	140.3
604					k hat (KM)	5.361					k star (KM)	4.92
605					nu hat (KM)	375.3					nu star (KM)	344.4
606					theta hat (KM)	353.2					theta star (KM)	384.8
607					80% gamma percentile (KM)	2550					90% gamma percentile (KM)	3036
608					95% gamma percentile (KM)	3480					99% gamma percentile (KM)	4419
609												
610					**The following statistics are computed using gamma distribution and KM estimates**							
611					**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
612						WH	HW				WH	HW
613					95% Approx. Gamma UTL with 95% Coverage	7131	9148			95% Approx. Gamma UPL	5521	6686
614					95% KM Gamma Percentile	5291	6348			95% Gamma USL	10045	13968
615												
616					**Lognormal GOF Test on Detected Observations Only**							
617					Shapiro Wilk Test Statistic	0.477	**Shapiro Wilk GOF Test**					
618					10% Shapiro Wilk Critical Value	0.943	Data Not Lognormal at 10% Significance Level					
619					Lilliefors Test Statistic	0.445	**Lilliefors GOF Test**					
620					10% Lilliefors Critical Value	0.137	Data Not Lognormal at 10% Significance Level					
621					Data Not Lognormal at 10% Significance Level							
622												
623					**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**							
624					Mean in Original Scale	1897					Mean in Log Scale	7.116
625					SD in Original Scale	822.6					SD in Log Scale	1.548
626					95% UTL95% Coverage	34770					95% BCA UTL95% Coverage	3100
627					95% Bootstrap (%) UTL95% Coverage	3100					95% UPL (t)	17532
628					90% Percentile (z)	8962					95% Percentile (z)	15730
629					99% Percentile (z)	45184					95% USL	95812
630												
631					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
632					KM Mean of Logged Data	6.982					95% KM UTL (Lognormal)95% Coverage	64207

	A	B	C	D	E	F	G	H	I	J	K	L
633					KM SD of Logged Data	1.895				95% KM UPL (Lognormal)		27774
634					95% KM Percentile Lognormal (z)	24321				95% KM USL (Lognormal)		221982
635												
636					**Background DL/2 Statistics Assuming Lognormal Distribution**							
637					Mean in Original Scale	1893				Mean in Log Scale		6.962
638					SD in Original Scale	829.7				SD in Log Scale		1.999
639					95% UTL95% Coverage	78740				95% UPL (t)		32533
640					90% Percentile (z)	13682				95% Percentile (z)		28282
641					99% Percentile (z)	110424				95% USL		291360
642					DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.							
643												
644					**Nonparametric Distribution Free Background Statistics**							
645					Data do not follow a Discernible Distribution							
646												
647					**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
648					Order of Statistic, r	35				95% UTL with95% Coverage		3100
649					Approx, f used to compute achieved CC	1.842				Approximate Actual Confidence Coefficient achieved by UTL		0.834
650					Approximate Sample Size needed to achieve specified CC	59				95% UPL		2972
651					95% USL	3100				95% KM Chebyshev UPL		5509
652												
653					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
654					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
655					and consists of observations collected from clean unimpacted locations.							
656					The use of USL tends to provide a balance between false positives and false negatives provided the data							
657					represents a background data set and when many onsite observations need to be compared with the BTV.							
658												

1				**Background Statistics for Data Sets with Non-Detects**								
2		**User Selected Options**										
3		Date/Time of Computation		ProUCL 5.2 1/23/2025 1:34:11 PM								
4		From File		ProUCL Input PRPA CCR BAT Appendix IV Total 2016-2024.xls								
5		Full Precision		OFF								
6		Confidence Coefficient		95%								
7		Coverage		95%								
8		Different or Future K Observations		1								
9		Number of Bootstrap Operations		2000								
10												
11	**Antimony**											
12												
13						**General Statistics**							
14				Total Number of Observations	39			Number of Missing Observations	0			
15				Number of Distinct Observations	7							
16				Number of Detects	7			Number of Non-Detects	32			
17				Number of Distinct Detects	3			Number of Distinct Non-Detects	6			
18				Minimum Detect	1			Minimum Non-Detect	0.5			
19				Maximum Detect	2			Maximum Non-Detect	10			
20				Variance Detected	0.263			Percent Non-Detects	82.05%			
21				Mean Detected	1.457			SD Detected	0.513			
22				Mean of Detected Logged Data	0.323			SD of Detected Logged Data	0.352			
23												
24						**Critical Values for Background Threshold Values (BTVs)**							
25				Tolerance Factor K (For UTL)	2.124			d2max (for USL)	2.857			
26												
27						**Normal GOF Test on Detects Only**							
28				Shapiro Wilk Test Statistic	0.721			**Shapiro Wilk GOF Test**				
29				1% Shapiro Wilk Critical Value	0.73			Data Not Normal at 1% Significance Level				
30				Lilliefors Test Statistic	0.284			**Lilliefors GOF Test**				
31				1% Lilliefors Critical Value	0.35			Detected Data appear Normal at 1% Significance Level				
32						**Detected Data appear Approximate Normal at 1% Significance Level**						
33												
34						**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**						
35				KM Mean	0.71			KM SD	0.449			
36				95% UTL95% Coverage	1.665			95% KM UPL (t)	1.478			
37				90% KM Percentile (z)	1.286			95% KM Percentile (z)	1.45			
38				99% KM Percentile (z)	1.756			95% KM USL	1.995			
39												
40						**DL/2 Substitution Background Statistics Assuming Normal Distribution**						
41				Mean	0.973			SD	0.863			
42				95% UTL95% Coverage	2.807			95% UPL (t)	2.447			
43				90% Percentile (z)	2.08			95% Percentile (z)	2.393			
44				99% Percentile (z)	2.982			95% USL	3.44			
45						**DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons**						
46												
47						**Gamma GOF Tests on Detected Observations Only**						
48				A-D Test Statistic	0.988			**Anderson-Darling GOF Test**				
49				5% A-D Critical Value	0.709			Data Not Gamma Distributed at 5% Significance Level				
50				K-S Test Statistic	0.301			**Kolmogorov-Smirnov GOF**				
51				5% K-S Critical Value	0.312			Detected data appear Gamma Distributed at 5% Significance Level				
52						**Detected data follow Appr. Gamma Distribution at 5% Significance Level**						
53												
54						**Gamma Statistics on Detected Data Only**						
55				k hat (MLE)	9.532			k star (bias corrected MLE)	5.542			
56				Theta hat (MLE)	0.153			Theta star (bias corrected MLE)	0.263			
57				nu hat (MLE)	133.5			nu star (bias corrected)	77.59			
58				MLE Mean (bias corrected)	1.457							
59				MLE Sd (bias corrected)	0.619			95% Percentile of Chisquare (2kstar)	19.79			
60												
61						**Gamma ROS Statistics using Imputed Non-Detects**						
62						GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs						
63						GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)						
64						For such situations, GROS method may yield incorrect values of UCLs and BTVs						
65						This is especially true when the sample size is small.						
66						For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates						
67				Minimum	0.01			Mean	0.425			
68				Maximum	2			Median	0.177			
69				SD	0.581			CV	1.369			
70				k hat (MLE)	0.439			k star (bias corrected MLE)	0.422			
71				Theta hat (MLE)	0.968			Theta star (bias corrected MLE)	1.006			
72				nu hat (MLE)	34.23			nu star (bias corrected)	32.93			
73				MLE Mean (bias corrected)	0.425			MLE Sd (bias corrected)	0.654			
74				95% Percentile of Chisquare (2kstar)	3.443			90% Percentile	1.188			
75				95% Percentile	1.732			99% Percentile	3.092			
76						**The following statistics are computed using Gamma ROS Statistics on Imputed Data**						
77						**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**						
78					WH	HW			WH	HW		
79				95% Approx. Gamma UTL with 95% Coverage	2.396	2.796		95% Approx. Gamma UPL	1.675	1.833		

80			95% Gamma USL	4.114	5.347							
81												
82					**Estimates of Gamma Parameters using KM Estimates**							
83				Mean (KM)	0.71					SD (KM)	0.449	
84				Variance (KM)	0.202					SE of Mean (KM)	0.0853	
85				k hat (KM)	2.498					k star (KM)	2.323	
86				nu hat (KM)	194.9					nu star (KM)	181.2	
87				theta hat (KM)	0.284					theta star (KM)	0.306	
88			80% gamma percentile (KM)		1.045				90% gamma percentile (KM)		1.334	
89			95% gamma percentile (KM)		1.608				99% gamma percentile (KM)		2.21	
90												
91					**The following statistics are computed using gamma distribution and KM estimates**							
92					**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
93				WH	HW					WH	HW	
94	95% Approx. Gamma UTL with 95% Coverage			1.626	1.622				95% Approx. Gamma UPL	1.386	1.375	
95			95% KM Gamma Percentile	1.352	1.34				95% Gamma USL	2.11	2.135	
96												
97					**Lognormal GOF Test on Detected Observations Only**							
98				Shapiro Wilk Test Statistic	0.735				**Shapiro Wilk GOF Test**			
99				10% Shapiro Wilk Critical Value	0.838				Data Not Lognormal at 10% Significance Level			
100				Lilliefors Test Statistic	0.282				**Lilliefors GOF Test**			
101				10% Lilliefors Critical Value	0.28				Data Not Lognormal at 10% Significance Level			
102					Data Not Lognormal at 10% Significance Level							
103												
104					**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**							
105				Mean in Original Scale	0.634					Mean in Log Scale	-0.678	
106				SD in Original Scale	0.477					SD in Log Scale	0.666	
107				95% UTL95% Coverage	2.089					95% BCA UTL95% Coverage	2	
108				95% Bootstrap (%) UTL95% Coverage	2					95% UPL (t)	1.582	
109				90% Percentile (z)	1.192					95% Percentile (z)	1.518	
110				99% Percentile (z)	2.39					95% USL	3.403	
111												
112					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
113				KM Mean of Logged Data	-0.468					95% KM UTL (Lognormal)95% Coverage	1.613	
114				KM SD of Logged Data	0.445					95% KM UPL (Lognormal)	1.34	
115				95% KM Percentile Lognormal (z)	1.303					95% KM USL (Lognormal)	2.235	
116												
117					**Background DL/2 Statistics Assuming Lognormal Distribution**							
118				Mean in Original Scale	0.973					Mean in Log Scale	-0.262	
119				SD in Original Scale	0.863					SD in Log Scale	0.636	
120				95% UTL95% Coverage	2.971					95% UPL (t)	2.279	
121				90% Percentile (z)	1.738					95% Percentile (z)	2.19	
122				99% Percentile (z)	3.378					95% USL	4.735	
123					DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.							
124												
125					**Nonparametric Distribution Free Background Statistics**							
126					Data appear to follow a Discernible Distribution							
127												
128					**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
129				Order of Statistic, r	39					95% UTL with95% Coverage	10	
130				Approx, f used to compute achieved CC	2.053					Approximate Actual Confidence Coefficient achieved by UTL	0.865	
131				Approximate Sample Size needed to achieve specified CC	59					95% UPL	5	
132				95% USL	10					95% KM Chebyshev UPL	2.695	
133												
134					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
135					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
136					and consists of observations collected from clean unimpacted locations.							
137					The use of USL tends to provide a balance between false positives and false negatives provided the data							
138					represents a background data set and when many onsite observations need to be compared with the BTV.							
139												
140	**Arsenic**											
141												
142					**General Statistics**							
143				Total Number of Observations	39					Number of Missing Observations	0	
144				Number of Distinct Observations	11							
145				Number of Detects	13					Number of Non-Detects	26	
146				Number of Distinct Detects	9					Number of Distinct Non-Detects	5	
147				Minimum Detect	1.1					Minimum Non-Detect	1	
148				Maximum Detect	5					Maximum Non-Detect	10	
149				Variance Detected	1.499					Percent Non-Detects	66.67%	
150				Mean Detected	2.623					SD Detected	1.224	
151				Mean of Detected Logged Data	0.853					SD of Detected Logged Data	0.509	
152												
153					**Critical Values for Background Threshold Values (BTVs)**							
154				Tolerance Factor K (For UTL)	2.124					d2max (for USL)	2.857	
155												
156					**Normal GOF Test on Detects Only**							
157				Shapiro Wilk Test Statistic	0.937				**Shapiro Wilk GOF Test**			
158				1% Shapiro Wilk Critical Value	0.814				Detected Data appear Normal at 1% Significance Level			

159				Lilliefors Test Statistic	0.148	**Lilliefors GOF Test**						
160				1% Lilliefors Critical Value	0.271	Detected Data appear Normal at 1% Significance Level						
161				Detected Data appear Normal at 1% Significance Level								
162												
163				**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**								
164				KM Mean	1.629	KM SD	1.056					
165				95% UTL95% Coverage	3.873	95% KM UPL (t)	3.432					
166				90% KM Percentile (z)	2.982	95% KM Percentile (z)	3.366					
167				99% KM Percentile (z)	4.086	95% KM USL	4.647					
168												
169				**DL/2 Substitution Background Statistics Assuming Normal Distribution**								
170				Mean	1.746	SD	1.5					
171				95% UTL95% Coverage	4.933	95% UPL (t)	4.308					
172				90% Percentile (z)	3.669	95% Percentile (z)	4.214					
173				99% Percentile (z)	5.236	95% USL	6.032					
174				DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons								
175												
176				**Gamma GOF Tests on Detected Observations Only**								
177				A-D Test Statistic	0.366	**Anderson-Darling GOF Test**						
178				5% A-D Critical Value	0.736	Detected data appear Gamma Distributed at 5% Significance Level						
179				K-S Test Statistic	0.139	**Kolmogorov-Smirnov GOF**						
180				5% K-S Critical Value	0.238	Detected data appear Gamma Distributed at 5% Significance Level						
181				Detected data appear Gamma Distributed at 5% Significance Level								
182												
183				**Gamma Statistics on Detected Data Only**								
184				k hat (MLE)	4.641	k star (bias corrected MLE)	3.621					
185				Theta hat (MLE)	0.565	Theta star (bias corrected MLE)	0.724					
186				nu hat (MLE)	120.7	nu star (bias corrected)	94.14					
187				MLE Mean (bias corrected)	2.623							
188				MLE Sd (bias corrected)	1.378	95% Percentile of Chisquare (2kstar)	14.42					
189												
190				**Gamma ROS Statistics using Imputed Non-Detects**								
191				GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs								
192				GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)								
193				For such situations, GROS method may yield incorrect values of UCLs and BTVs								
194				This is especially true when the sample size is small.								
195				For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates								
196				Minimum	0.01	Mean	1.178					
197				Maximum	5	Median	0.829					
198				SD	1.314	CV	1.116					
199				k hat (MLE)	0.491	k star (bias corrected MLE)	0.47					
200				Theta hat (MLE)	2.399	Theta star (bias corrected MLE)	2.505					
201				nu hat (MLE)	38.29	nu star (bias corrected)	36.68					
202				MLE Mean (bias corrected)	1.178	MLE Sd (bias corrected)	1.718					
203				95% Percentile of Chisquare (2kstar)	3.692	90% Percentile	3.227					
204				95% Percentile	4.624	99% Percentile	8.081					
205				**The following statistics are computed using Gamma ROS Statistics on Imputed Data**								
206				**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**								
207					WH	HW				WH	HW	
208				95% Approx. Gamma UTL with 95% Coverage	6.442	7.923	95% Approx. Gamma UPL	4.6	5.295			
209				95% Gamma USL	10.76	14.76						
210												
211				**Estimates of Gamma Parameters using KM Estimates**								
212				Mean (KM)	1.629	SD (KM)	1.056					
213				Variance (KM)	1.116	SE of Mean (KM)	0.188					
214				k hat (KM)	2.377	k star (KM)	2.211					
215				nu hat (KM)	185.4	nu star (KM)	172.5					
216				theta hat (KM)	0.685	theta star (KM)	0.737					
217				80% gamma percentile (KM)	2.409	90% gamma percentile (KM)	3.094					
218				95% gamma percentile (KM)	3.744	99% gamma percentile (KM)	5.175					
219												
220				**The following statistics are computed using gamma distribution and KM estimates**								
221				**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**								
222					WH	HW				WH	HW	
223				95% Approx. Gamma UTL with 95% Coverage	3.976	4.003	95% Approx. Gamma UPL	3.349	3.342			
224				95% KM Gamma Percentile	3.261	3.251	95% Gamma USL	5.259	5.394			
225												
226				**Lognormal GOF Test on Detected Observations Only**								
227				Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**						
228				10% Shapiro Wilk Critical Value	0.889	Detected Data appear Lognormal at 10% Significance Level						
229				Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**						
230				10% Lilliefors Critical Value	0.215	Detected Data appear Lognormal at 10% Significance Level						
231				Detected Data appear Lognormal at 10% Significance Level								
232												
233				**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**								
234				Mean in Original Scale	1.393	Mean in Log Scale	0.0434					
235				SD in Original Scale	1.157	SD in Log Scale	0.761					
236				95% UTL95% Coverage	5.254	95% BCA UTL95% Coverage	4.1					
237				95% Bootstrap (%) UTL95% Coverage	5	95% UPL (t)	3.826					

238				90% Percentile (z)	2.768				95% Percentile (z)		3.648
239				99% Percentile (z)	6.126				95% USL		9.172
240											
241				Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution							
242				KM Mean of Logged Data	0.336				95% KM UTL (Lognormal)95% Coverage		4.109
243				KM SD of Logged Data	0.507				95% KM UPL (Lognormal)		3.326
244				95% KM Percentile Lognormal (z)	3.222				95% KM USL (Lognormal)		5.958
245											
246				Background DL/2 Statistics Assuming Lognormal Distribution							
247				Mean in Original Scale	1.746				Mean in Log Scale		0.207
248				SD in Original Scale	1.5				SD in Log Scale		0.849
249				95% UTL95% Coverage	7.46				95% UPL (t)		5.236
250				90% Percentile (z)	3.648				95% Percentile (z)		4.966
251				99% Percentile (z)	8.854				95% USL		13.89
252				DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.							
253											
254				Nonparametric Distribution Free Background Statistics							
255				Data appear to follow a Discernible Distribution							
256											
257				Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)							
258				Order of Statistic, r	39				95% UTL with95% Coverage		10
259				Approx, f used to compute achieved CC	2.053				Approximate Actual Confidence Coefficient achieved by UTL		0.865
260				Approximate Sample Size needed to achieve specified CC	59				95% UPL		10
261				95% USL	10				95% KM Chebyshev UPL		6.292
262											
263				Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
264				Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
265				and consists of observations collected from clean unimpacted locations.							
266				The use of USL tends to provide a balance between false positives and false negatives provided the data							
267				represents a background data set and when many onsite observations need to be compared with the BTV.							
268											
269	Barium										
270											
271	General Statistics										
272				Total Number of Observations	39				Number of Distinct Observations		37
273				Minimum	10.2				First Quartile		13.8
274				Second Largest	46				Median		18.1
275				Maximum	59.2				Third Quartile		24.75
276				Mean	20.8				SD		10.16
277				Coefficient of Variation	0.489				Skewness		1.951
278				Mean of logged Data	2.944				SD of logged Data		0.412
279											
280				Critical Values for Background Threshold Values (BTVs)							
281				Tolerance Factor K (For UTL)	2.124				d2max (for USL)		2.857
282											
283				Normal GOF Test							
284				Shapiro Wilk Test Statistic	0.821				Shapiro Wilk GOF Test		
285				1% Shapiro Wilk Critical Value	0.917				Data Not Normal at 1% Significance Level		
286				Lilliefors Test Statistic	0.149				Lilliefors GOF Test		
287				1% Lilliefors Critical Value	0.163				Data appear Normal at 1% Significance Level		
288				Data appear Approximate Normal at 1% Significance Level							
289											
290				Background Statistics Assuming Normal Distribution							
291				95% UTL with 95% Coverage	42.4				90% Percentile (z)		33.83
292				95% UPL (t)	38.16				95% Percentile (z)		37.52
293				95% USL	49.84				99% Percentile (z)		44.45
294											
295				Gamma GOF Test							
296				A-D Test Statistic	0.761				Anderson-Darling Gamma GOF Test		
297				5% A-D Critical Value	0.751				Data Not Gamma Distributed at 5% Significance Level		
298				K-S Test Statistic	0.104				Kolmogorov-Smirnov Gamma GOF Test		
299				5% K-S Critical Value	0.142				Detected data appear Gamma Distributed at 5% Significance Level		
300				Detected data follow Appr. Gamma Distribution at 5% Significance Level							
301											
302				Gamma Statistics							
303				k hat (MLE)	5.671				k star (bias corrected MLE)		5.252
304				Theta hat (MLE)	3.668				Theta star (bias corrected MLE)		3.961
305				nu hat (MLE)	442.3				nu star (bias corrected)		409.7
306				MLE Mean (bias corrected)	20.8				MLE Sd (bias corrected)		9.077
307											
308				Background Statistics Assuming Gamma Distribution							
309				95% Wilson Hilferty (WH) Approx. Gamma UPL	37.9				90% Percentile		32.95
310				95% Hawkins Wixley (HW) Approx. Gamma UPL	37.98				95% Percentile		37.63
311				95% WH Approx. Gamma UTL with 95% Coverage	43.67				99% Percentile		47.48
312				95% HW Approx. Gamma UTL with 95% Coverage	44.04						
313				95% WH USL	55.17				95% HW USL		56.43
314											
315				Lognormal GOF Test							
316				Shapiro Wilk Test Statistic	0.952				Shapiro Wilk Lognormal GOF Test		

317				10% Shapiro Wilk Critical Value		0.948		Data appear Lognormal at 10% Significance Level				
318				Lilliefors Test Statistic		0.0807		**Lilliefors Lognormal GOF Test**				
319				10% Lilliefors Critical Value		0.129		Data appear Lognormal at 10% Significance Level				
320						Data appear Lognormal at 10% Significance Level						
321												
322						**Background Statistics assuming Lognormal Distribution**						
323				95% UTL with	95% Coverage	45.62		90% Percentile (z)			32.23	
324					95% UPL (t)	38.42		95% Percentile (z)			37.44	
325					95% USL	61.72		99% Percentile (z)			49.58	
326												
327						**Nonparametric Distribution Free Background Statistics**						
328						Data appear Approximate Normal at 1% Significance Level						
329												
330						**Nonparametric Upper Limits for Background Threshold Values**						
331				Order of Statistic, order		39		95% UTL with	95% Coverage		59.2	
332				Approx, f used to compute achieved CC		2.053		Approximate Actual Confidence Coefficient achieved by UTL			0.865	
333								Approximate Sample Size needed to achieve specified CC			59	
334				95% Percentile Bootstrap UTL with	95% Coverage	59.2		95% BCA Bootstrap UTL with	95% Coverage		59.2	
335					95% UPL	46			90% Percentile		31.54	
336					90% Chebyshev UPL	51.69			95% Percentile		39.07	
337					95% Chebyshev UPL	65.67			99% Percentile		54.18	
338					95% USL	59.2						
339												
340						Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.						
341						Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers						
342						and consists of observations collected from clean unimpacted locations.						
343						The use of USL tends to provide a balance between false positives and false negatives provided the data						
344						represents a background data set and when many onsite observations need to be compared with the BTV.						
345												
346	**Beryllium**											
347												
348						**General Statistics**						
349				Total Number of Observations		39		Number of Missing Observations			0	
350				Number of Distinct Observations		5						
351				Number of Detects		0		Number of Non-Detects			39	
352				Number of Distinct Detects		0		Number of Distinct Non-Detects			5	
353				Minimum Detect		N/A		Minimum Non-Detect			0.5	
354				Maximum Detect		N/A		Maximum Non-Detect			5	
355				Variance Detected		N/A		Percent Non-Detects			100%	
356				Mean Detected		N/A		SD Detected			N/A	
357				Mean of Detected Logged Data		N/A		SD of Detected Logged Data			N/A	
358												
359						Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!						
360						Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!						
361						The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).						
362												
363						The data set for variable Beryllium was not processed!						
364												
365												
366	**Cadmium**											
367												
368						**General Statistics**						
369				Total Number of Observations		39		Number of Missing Observations			0	
370				Number of Distinct Observations		7						
371				Number of Detects		1		Number of Non-Detects			38	
372				Number of Distinct Detects		1		Number of Distinct Non-Detects			7	
373				Minimum Detect		0.1		Minimum Non-Detect			0.08	
374				Maximum Detect		0.1		Maximum Non-Detect			5	
375				Variance Detected		N/A		Percent Non-Detects			97.44%	
376				Mean Detected		0.1		SD Detected			N/A	
377				Mean of Detected Logged Data		-2.303		SD of Detected Logged Data			N/A	
378												
379						Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!						
380						It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).						
381												
382						The data set for variable Cadmium was not processed!						
383												
384												
385	**Chromium**											
386												
387						**General Statistics**						
388				Total Number of Observations		39		Number of Missing Observations			0	
389				Number of Distinct Observations		12						
390				Number of Detects		8		Number of Non-Detects			31	
391				Number of Distinct Detects		7		Number of Distinct Non-Detects			6	
392				Minimum Detect		1.1		Minimum Non-Detect			1	
393				Maximum Detect		2.9		Maximum Non-Detect			10	
394				Variance Detected		0.291		Percent Non-Detects			79.49%	
395				Mean Detected		1.838		SD Detected			0.54	

396				Mean of Detected Logged Data		0.572				SD of Detected Logged Data		0.286
397												
398						**Critical Values for Background Threshold Values (BTVs)**							
399				Tolerance Factor K (For UTL)		2.124				d2max (for USL)		2.857
400												
401						**Normal GOF Test on Detects Only**							
402				Shapiro Wilk Test Statistic		0.935		**Shapiro Wilk GOF Test**				
403				1% Shapiro Wilk Critical Value		0.749		Detected Data appear Normal at 1% Significance Level				
404				Lilliefors Test Statistic		0.226		**Lilliefors GOF Test**				
405				1% Lilliefors Critical Value		0.333		Detected Data appear Normal at 1% Significance Level				
406						Detected Data appear Normal at 1% Significance Level						
407												
408						**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**							
409				KM Mean		1.223				KM SD		0.448
410				95% UTL95% Coverage		2.176				95% KM UPL (t)		1.989
411				90% KM Percentile (z)		1.798				95% KM Percentile (z)		1.96
412				99% KM Percentile (z)		2.266				95% KM USL		2.504
413												
414						**DL/2 Substitution Background Statistics Assuming Normal Distribution**							
415				Mean		1.176				SD		0.964
416				95% UTL95% Coverage		3.224				95% UPL (t)		2.822
417				90% Percentile (z)		2.411				95% Percentile (z)		2.761
418				99% Percentile (z)		3.418				95% USL		3.93
419						DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons						
420												
421						**Gamma GOF Tests on Detected Observations Only**							
422				A-D Test Statistic		0.255		**Anderson-Darling GOF Test**				
423				5% A-D Critical Value		0.715		Detected data appear Gamma Distributed at 5% Significance Level				
424				K-S Test Statistic		0.203		**Kolmogorov-Smirnov GOF**				
425				5% K-S Critical Value		0.294		Detected data appear Gamma Distributed at 5% Significance Level				
426						Detected data appear Gamma Distributed at 5% Significance Level						
427												
428						**Gamma Statistics on Detected Data Only**							
429				k hat (MLE)		14.01				k star (bias corrected MLE)		8.84
430				Theta hat (MLE)		0.131				Theta star (bias corrected MLE)		0.208
431				nu hat (MLE)		224.2				nu star (bias corrected)		141.4
432				MLE Mean (bias corrected)		1.838						
433				MLE Sd (bias corrected)		0.618				95% Percentile of Chisquare (2kstar)		28.46
434												
435						**Gamma ROS Statistics using Imputed Non-Detects**							
436						GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
437						GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)							
438						For such situations, GROS method may yield incorrect values of UCLs and BTVs							
439						This is especially true when the sample size is small.							
440						For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
441				Minimum		0.01				Mean		0.719
442				Maximum		2.9				Median		0.571
443				SD		0.721				CV		1.002
444				k hat (MLE)		0.592				k star (bias corrected MLE)		0.564
445				Theta hat (MLE)		1.214				Theta star (bias corrected MLE)		1.276
446				nu hat (MLE)		46.19				nu star (bias corrected)		43.97
447				MLE Mean (bias corrected)		0.719				MLE Sd (bias corrected)		0.958
448				95% Percentile of Chisquare (2kstar)		4.149				90% Percentile		1.896
449				95% Percentile		2.646				99% Percentile		4.471
450						**The following statistics are computed using Gamma ROS Statistics on Imputed Data**							
451						**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
452					WH	HW					WH	HW
453				95% Approx. Gamma UTL with 95% Coverage	3.673	4.447				95% Approx. Gamma UPL	2.672	3.048
454				95% Gamma USL	5.987	8.005						
455												
456						**Estimates of Gamma Parameters using KM Estimates**							
457				Mean (KM)		1.223				SD (KM)		0.448
458				Variance (KM)		0.201				SE of Mean (KM)		0.0869
459				k hat (KM)		7.433				k star (KM)		6.878
460				nu hat (KM)		579.8				nu star (KM)		536.5
461				theta hat (KM)		0.165				theta star (KM)		0.178
462				80% gamma percentile (KM)		1.588				90% gamma percentile (KM)		1.845
463				95% gamma percentile (KM)		2.077				99% gamma percentile (KM)		2.559
464												
465						**The following statistics are computed using gamma distribution and KM estimates**							
466						**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
467					WH	HW					WH	HW
468				95% Approx. Gamma UTL with 95% Coverage	2.148	2.146				95% Approx. Gamma UPL	1.928	1.921
469				95% KM Gamma Percentile	1.896	1.889				95% Gamma USL	2.575	2.589
470												
471						**Lognormal GOF Test on Detected Observations Only**							
472				Shapiro Wilk Test Statistic		0.973		**Shapiro Wilk GOF Test**				
473				10% Shapiro Wilk Critical Value		0.851		Detected Data appear Lognormal at 10% Significance Level				
474				Lilliefors Test Statistic		0.183		**Lilliefors GOF Test**				

475				10% Lilliefors Critical Value		0.265		Detected Data appear Lognormal at 10% Significance Level				
476				Detected Data appear Lognormal at 10% Significance Level								
477												
478				Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects								
479				Mean in Original Scale		0.98		Mean in Log Scale				-0.156
480				SD in Original Scale		0.555		SD in Log Scale				0.522
481				95% UTL95% Coverage		2.593		95% BCA UTL95% Coverage				2.9
482				95% Bootstrap (%) UTL95% Coverage		2.9		95% UPL (t)				2.086
483				90% Percentile (z)		1.67		95% Percentile (z)				2.019
484				99% Percentile (z)		2.882		95% USL				3.802
485												
486				Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution								
487				KM Mean of Logged Data		0.153		95% KM UTL (Lognormal)95% Coverage				2.141
488				KM SD of Logged Data		0.286		95% KM UPL (Lognormal)				1.9
489				95% KM Percentile Lognormal (z)		1.866		95% KM USL (Lognormal)				2.641
490												
491				Background DL/2 Statistics Assuming Lognormal Distribution								
492				Mean in Original Scale		1.176		Mean in Log Scale				-0.0958
493				SD in Original Scale		0.964		SD in Log Scale				0.696
494				95% UTL95% Coverage		3.985		95% UPL (t)				2.981
495				90% Percentile (z)		2.216		95% Percentile (z)				2.854
496				99% Percentile (z)		4.585		95% USL				6.634
497				DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.								
498												
499				Nonparametric Distribution Free Background Statistics								
500				Data appear to follow a Discernible Distribution								
501												
502				Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)								
503				Order of Statistic, r		39		95% UTL with95% Coverage				10
504				Approx, f used to compute achieved CC		2.053		Approximate Actual Confidence Coefficient achieved by UTL				0.865
505				Approximate Sample Size needed to achieve specified CC		59		95% UPL				5
506				95% USL		10		95% KM Chebyshev UPL				3.203
507												
508				Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.								
509				Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers								
510				and consists of observations collected from clean unimpacted locations.								
511				The use of USL tends to provide a balance between false positives and false negatives provided the data								
512				represents a background data set and when many onsite observations need to be compared with the BTV.								
513												
514	**Cobalt**											
515												
516				General Statistics								
517				Total Number of Observations		39		Number of Missing Observations				0
518				Number of Distinct Observations		10						
519				Number of Detects		14		Number of Non-Detects				25
520				Number of Distinct Detects		8		Number of Distinct Non-Detects				5
521				Minimum Detect		1		Minimum Non-Detect				1
522				Maximum Detect		3		Maximum Non-Detect				10
523				Variance Detected		0.341		Percent Non-Detects				64.1%
524				Mean Detected		1.486		SD Detected				0.584
525				Mean of Detected Logged Data		0.334		SD of Detected Logged Data				0.352
526												
527				Critical Values for Background Threshold Values (BTVs)								
528				Tolerance Factor K (For UTL)		2.124		d2max (for USL)				2.857
529												
530				Normal GOF Test on Detects Only								
531				Shapiro Wilk Test Statistic		0.818		**Shapiro Wilk GOF Test**				
532				1% Shapiro Wilk Critical Value		0.825		Data Not Normal at 1% Significance Level				
533				Lilliefors Test Statistic		0.203		**Lilliefors GOF Test**				
534				1% Lilliefors Critical Value		0.263		Detected Data appear Normal at 1% Significance Level				
535				Detected Data appear Approximate Normal at 1% Significance Level								
536												
537				Kaplan Meier (KM) Background Statistics Assuming Normal Distribution								
538				KM Mean		1.218		KM SD				0.436
539				95% UTL95% Coverage		2.145		95% KM UPL (t)				1.963
540				90% KM Percentile (z)		1.777		95% KM Percentile (z)				1.935
541				99% KM Percentile (z)		2.233		95% KM USL				2.464
542												
543				DL/2 Substitution Background Statistics Assuming Normal Distribution								
544				Mean		1.238		SD				0.929
545				95% UTL95% Coverage		3.211		95% UPL (t)				2.824
546				90% Percentile (z)		2.429		95% Percentile (z)				2.766
547				99% Percentile (z)		3.399		95% USL				3.892
548				DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons								
549												
550				Gamma GOF Tests on Detected Observations Only								
551				A-D Test Statistic		0.778		**Anderson-Darling GOF Test**				
552				5% A-D Critical Value		0.736		Data Not Gamma Distributed at 5% Significance Level				
553				K-S Test Statistic		0.188		**Kolmogorov-Smirnov GOF**				

554				5% K-S Critical Value	0.229	Detected data appear Gamma Distributed at 5% Significance Level						
555				Detected data follow Appr. Gamma Distribution at 5% Significance Level								
556												
557				Gamma Statistics on Detected Data Only								
558				k hat (MLE)	8.279	k star (bias corrected MLE)	6.553					
559				Theta hat (MLE)	0.179	Theta star (bias corrected MLE)	0.227					
560				nu hat (MLE)	231.8	nu star (bias corrected)	183.5					
561				MLE Mean (bias corrected)	1.486							
562				MLE Sd (bias corrected)	0.58	95% Percentile of Chisquare (2kstar)	22.5					
563												
564				Gamma ROS Statistics using Imputed Non-Detects								
565				GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs								
566				GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)								
567				For such situations, GROS method may yield incorrect values of UCLs and BTVs								
568				This is especially true when the sample size is small.								
569				For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates								
570				Minimum	0.01	Mean	0.84					
571				Maximum	3	Median	0.73					
572				SD	0.667	CV	0.795					
573				k hat (MLE)	0.981	k star (bias corrected MLE)	0.922					
574				Theta hat (MLE)	0.857	Theta star (bias corrected MLE)	0.911					
575				nu hat (MLE)	76.5	nu star (bias corrected)	71.95					
576				MLE Mean (bias corrected)	0.84	MLE Sd (bias corrected)	0.875					
577				95% Percentile of Chisquare (2kstar)	5.687	90% Percentile	1.973					
578				95% Percentile	2.59	99% Percentile	4.03					
579				The following statistics are computed using Gamma ROS Statistics on Imputed Data								
580				Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods								
581					WH	HW				WH	HW	
582				95% Approx. Gamma UTL with 95% Coverage	3.412	3.995	95% Approx. Gamma UPL			2.614	2.927	
583				95% Gamma USL	5.181	6.545						
584												
585				Estimates of Gamma Parameters using KM Estimates								
586				Mean (KM)	1.218	SD (KM)	0.436					
587				Variance (KM)	0.19	SE of Mean (KM)	0.0796					
588				k hat (KM)	7.788	k star (KM)	7.206					
589				nu hat (KM)	607.5	nu star (KM)	562.1					
590				theta hat (KM)	0.156	theta star (KM)	0.169					
591				80% gamma percentile (KM)	1.574	90% gamma percentile (KM)	1.823					
592				95% gamma percentile (KM)	2.047	99% gamma percentile (KM)	2.512					
593												
594				The following statistics are computed using gamma distribution and KM estimates								
595				Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods								
596					WH	HW				WH	HW	
597				95% Approx. Gamma UTL with 95% Coverage	2.109	2.106	95% Approx. Gamma UPL			1.898	1.89	
598				95% KM Gamma Percentile	1.867	1.859	95% Gamma USL			2.517	2.528	
599												
600				Lognormal GOF Test on Detected Observations Only								
601				Shapiro Wilk Test Statistic	0.866	Shapiro Wilk GOF Test						
602				10% Shapiro Wilk Critical Value	0.895	Data Not Lognormal at 10% Significance Level						
603				Lilliefors Test Statistic	0.186	Lilliefors GOF Test						
604				10% Lilliefors Critical Value	0.208	Detected Data appear Lognormal at 10% Significance Level						
605				Detected Data appear Approximate Lognormal at 10% Significance Level								
606												
607				Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects								
608				Mean in Original Scale	0.98	Mean in Log Scale	-0.15					
609				SD in Original Scale	0.55	SD in Log Scale	0.509					
610				95% UTL95% Coverage	2.538	95% BCA UTL95% Coverage	2.1					
611				95% Bootstrap (%) UTL95% Coverage	3	95% UPL (t)	2.053					
612				90% Percentile (z)	1.652	95% Percentile (z)	1.988					
613				99% Percentile (z)	2.813	95% USL	3.686					
614												
615				Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution								
616				KM Mean of Logged Data	0.152	95% KM UTL (Lognormal)95% Coverage	2.098					
617				KM SD of Logged Data	0.277	95% KM UPL (Lognormal)	1.869					
618				95% KM Percentile Lognormal (z)	1.837	95% KM USL (Lognormal)	2.571					
619												
620				Background DL/2 Statistics Assuming Lognormal Distribution								
621				Mean in Original Scale	1.238	Mean in Log Scale	-0.00365					
622				SD in Original Scale	0.929	SD in Log Scale	0.649					
623				95% UTL95% Coverage	3.953	95% UPL (t)	3.016					
624				90% Percentile (z)	2.288	95% Percentile (z)	2.896					
625				99% Percentile (z)	4.505	95% USL	6.357					
626				DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.								
627												
628				Nonparametric Distribution Free Background Statistics								
629				Data appear to follow a Discernible Distribution								
630												
631				Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)								
632				Order of Statistic, r	39	95% UTL with95% Coverage	10					

633	Approx, f used to compute achieved CC				2.053	Approximate Actual Confidence Coefficient achieved by UTL						0.865
634	Approximate Sample Size needed to achieve specified CC				59	95% UPL						5
635	95% USL				10	95% KM Chebyshev UPL						3.144
636												
637	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
638	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
639	and consists of observations collected from clean unimpacted locations.											
640	The use of USL tends to provide a balance between false positives and false negatives provided the data											
641	represents a background data set and when many onsite observations need to be compared with the BTV.											
642												
643	**Fluoride**											
644												
645	**General Statistics**											
646	Total Number of Observations				39	Number of Missing Observations						0
647	Number of Distinct Observations				16							
648	Number of Detects				18	Number of Non-Detects						21
649	Number of Distinct Detects				16	Number of Distinct Non-Detects						1
650	Minimum Detect				0.2	Minimum Non-Detect						0.2
651	Maximum Detect				2.3	Maximum Non-Detect						0.2
652	Variance Detected				0.243	Percent Non-Detects						53.85%
653	Mean Detected				0.477	SD Detected						0.493
654	Mean of Detected Logged Data				-0.988	SD of Detected Logged Data						0.621
655												
656	**Critical Values for Background Threshold Values (BTVs)**											
657	Tolerance Factor K (For UTL)				2.124	d2max (for USL)						2.857
658												
659	**Normal GOF Test on Detects Only**											
660	Shapiro Wilk Test Statistic				0.55	**Shapiro Wilk GOF Test**						
661	1% Shapiro Wilk Critical Value				0.858	Data Not Normal at 1% Significance Level						
662	Lilliefors Test Statistic				0.291	**Lilliefors GOF Test**						
663	1% Lilliefors Critical Value				0.235	Data Not Normal at 1% Significance Level						
664	Data Not Normal at 1% Significance Level											
665												
666	**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**											
667	KM Mean				0.328	KM SD						0.354
668	95% UTL95% Coverage				1.08	95% KM UPL (t)						0.932
669	90% KM Percentile (z)				0.781	95% KM Percentile (z)						0.91
670	99% KM Percentile (z)				1.151	95% KM USL						1.339
671												
672	**DL/2 Substitution Background Statistics Assuming Normal Distribution**											
673	Mean				0.274	SD						0.381
674	95% UTL95% Coverage				1.084	95% UPL (t)						0.925
675	90% Percentile (z)				0.762	95% Percentile (z)						0.901
676	99% Percentile (z)				1.16	95% USL						1.363
677	DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons											
678												
679	**Gamma GOF Tests on Detected Observations Only**											
680	A-D Test Statistic				1.537	**Anderson-Darling GOF Test**						
681	5% A-D Critical Value				0.751	Data Not Gamma Distributed at 5% Significance Level						
682	K-S Test Statistic				0.231	**Kolmogorov-Smirnov GOF**						
683	5% K-S Critical Value				0.206	Data Not Gamma Distributed at 5% Significance Level						
684	Data Not Gamma Distributed at 5% Significance Level											
685												
686	**Gamma Statistics on Detected Data Only**											
687	k hat (MLE)				2.17	k star (bias corrected MLE)						1.845
688	Theta hat (MLE)				0.22	Theta star (bias corrected MLE)						0.259
689	nu hat (MLE)				78.1	nu star (bias corrected)						66.42
690	MLE Mean (bias corrected)				0.477							
691	MLE Sd (bias corrected)				0.351	95% Percentile of Chisquare (2kstar)						8.981
692												
693	**Gamma ROS Statistics using Imputed Non-Detects**											
694	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
695	GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)											
696	For such situations, GROS method may yield incorrect values of UCLs and BTVs											
697	This is especially true when the sample size is small.											
698	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
699	Minimum				0.01	Mean						0.226
700	Maximum				2.3	Median						0.01
701	SD				0.406	CV						1.798
702	k hat (MLE)				0.447	k star (bias corrected MLE)						0.43
703	Theta hat (MLE)				0.505	Theta star (bias corrected MLE)						0.525
704	nu hat (MLE)				34.86	nu star (bias corrected)						33.51
705	MLE Mean (bias corrected)				0.226	MLE Sd (bias corrected)						0.344
706	95% Percentile of Chisquare (2kstar)				3.482	90% Percentile						0.629
707	95% Percentile				0.915	99% Percentile						1.627
708	**The following statistics are computed using Gamma ROS Statistics on Imputed Data**											
709	**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**											
710				WH	HW					WH	HW	
711	95% Approx. Gamma UTL with 95% Coverage			1.224	1.368	95% Approx. Gamma UPL				0.855	0.901	

712			95% Gamma USL	2.105	2.6							
713												
714					**Estimates of Gamma Parameters using KM Estimates**							
715				Mean (KM)	0.328					SD (KM)	0.354	
716				Variance (KM)	0.125					SE of Mean (KM)	0.0583	
717				k hat (KM)	0.859					k star (KM)	0.81	
718				nu hat (KM)	67.02					nu star (KM)	63.2	
719				theta hat (KM)	0.382					theta star (KM)	0.405	
720			80% gamma percentile (KM)		0.536				90% gamma percentile (KM)		0.795	
721			95% gamma percentile (KM)		1.059				99% gamma percentile (KM)		1.682	
722												
723					**The following statistics are computed using gamma distribution and KM estimates**							
724					**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
725					WH	HW				WH	HW	
726			95% Approx. Gamma UTL with 95% Coverage		0.866	0.846			95% Approx. Gamma UPL	0.716	0.695	
727			95% KM Gamma Percentile		0.695	0.674			95% Gamma USL	1.179	1.168	
728												
729					**Lognormal GOF Test on Detected Observations Only**							
730				Shapiro Wilk Test Statistic	0.837				**Shapiro Wilk GOF Test**			
731				10% Shapiro Wilk Critical Value	0.914				Data Not Lognormal at 10% Significance Level			
732				Lilliefors Test Statistic	0.176				**Lilliefors GOF Test**			
733				10% Lilliefors Critical Value	0.185				Detected Data appear Lognormal at 10% Significance Level			
734					Detected Data appear Approximate Lognormal at 10% Significance Level							
735												
736					**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**							
737				Mean in Original Scale	0.261					Mean in Log Scale	-1.944	
738				SD in Original Scale	0.389					SD in Log Scale	1.093	
739				95% UTL95% Coverage	1.46					95% BCA UTL95% Coverage	2.3	
740				95% Bootstrap (%) UTL95% Coverage	2.3					95% UPL (t)	0.925	
741				90% Percentile (z)	0.581					95% Percentile (z)	0.864	
742				99% Percentile (z)	1.82					95% USL	3.251	
743												
744					**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
745				KM Mean of Logged Data	-1.322					95% KM UTL (Lognormal)95% Coverage	0.794	
746				KM SD of Logged Data	0.514					95% KM UPL (Lognormal)	0.641	
747				95% KM Percentile Lognormal (z)	0.62					95% KM USL (Lognormal)	1.157	
748												
749					**Background DL/2 Statistics Assuming Lognormal Distribution**							
750				Mean in Original Scale	0.274					Mean in Log Scale	-1.696	
751				SD in Original Scale	0.381					SD in Log Scale	0.783	
752				95% UTL95% Coverage	0.969					95% UPL (t)	0.699	
753				90% Percentile (z)	0.501					95% Percentile (z)	0.665	
754				99% Percentile (z)	1.135					95% USL	1.719	
755					DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.							
756												
757					**Nonparametric Distribution Free Background Statistics**							
758					Data appear to follow a Discernible Distribution							
759												
760					**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
761				Order of Statistic, r	39					95% UTL with95% Coverage	2.3	
762				Approx, f used to compute achieved CC	2.053					Approximate Actual Confidence Coefficient achieved by UTL	0.865	
763				Approximate Sample Size needed to achieve specified CC	59					95% UPL	0.97	
764				95% USL	2.3					95% KM Chebyshev UPL	1.89	
765												
766					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
767					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
768					and consists of observations collected from clean unimpacted locations.							
769					The use of USL tends to provide a balance between false positives and false negatives provided the data							
770					represents a background data set and when many onsite observations need to be compared with the BTV.							
771												
772	**Lead**											
773												
774					**General Statistics**							
775				Total Number of Observations	39					Number of Missing Observations	0	
776				Number of Distinct Observations	6							
777				Number of Detects	3					Number of Non-Detects	36	
778				Number of Distinct Detects	2					Number of Distinct Non-Detects	5	
779				Minimum Detect	1					Minimum Non-Detect	1	
780				Maximum Detect	1.5					Maximum Non-Detect	10	
781				Variance Detected	0.0833					Percent Non-Detects	92.31%	
782				Mean Detected	1.167					SD Detected	0.289	
783				Mean of Detected Logged Data	0.135					SD of Detected Logged Data	0.234	
784												
785					Warning: Data set has only 3 Detected Values.							
786					This is not enough to compute meaningful or reliable statistics and estimates.							
787												
788												
789					**Critical Values for Background Threshold Values (BTVs)**							
790				Tolerance Factor K (For UTL)	2.124					d2max (for USL)	2.857	

791											
792						**Normal GOF Test on Detects Only**						
793					Shapiro Wilk Test Statistic	0.75	**Shapiro Wilk GOF Test**				
794					1% Shapiro Wilk Critical Value	0.753	Data Not Normal at 1% Significance Level				
795					Lilliefors Test Statistic	0.385	**Lilliefors GOF Test**				
796					1% Lilliefors Critical Value	0.429	Detected Data appear Normal at 1% Significance Level				
797						Detected Data appear Approximate Normal at 1% Significance Level						
798											
799						**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**						
800					KM Mean	1.017	KM SD	0.0912			
801					95% UTL95% Coverage	1.211	95% KM UPL (t)	1.173			
802					90% KM Percentile (z)	1.134	95% KM Percentile (z)	1.167			
803					99% KM Percentile (z)	1.229	95% KM USL	1.278			
804											
805						**DL/2 Substitution Background Statistics Assuming Normal Distribution**						
806					Mean	1.064	SD	1.231			
807					95% UTL95% Coverage	3.679	95% UPL (t)	3.166			
808					90% Percentile (z)	2.642	95% Percentile (z)	3.089			
809					99% Percentile (z)	3.928	95% USL	4.581			
810						DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons						
811											
812						**Gamma GOF Tests on Detected Observations Only**						
813					A-D Test Statistic	0.619	**Anderson-Darling GOF Test**				
814					5% A-D Critical Value	0.635	Detected data appear Gamma Distributed at 5% Significance Level				
815					K-S Test Statistic	0.427	**Kolmogorov-Smirnov GOF**				
816					5% K-S Critical Value	0.431	Detected data appear Gamma Distributed at 5% Significance Level				
817						Data Not Gamma Distributed at 5% Significance Level						
818											
819						**Gamma Statistics on Detected Data Only**						
820					k hat (MLE)	26.49	k star (bias corrected MLE)	N/A			
821					Theta hat (MLE)	0.044	Theta star (bias corrected MLE)	N/A			
822					nu hat (MLE)	158.9	nu star (bias corrected)	N/A			
823					MLE Mean (bias corrected)	N/A					
824					MLE Sd (bias corrected)	N/A	95% Percentile of Chisquare (2kstar)	N/A			
825											
826						**Gamma ROS Statistics using Imputed Non-Detects**						
827						GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs						
828						GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)						
829						For such situations, GROS method may yield incorrect values of UCLs and BTVs						
830						This is especially true when the sample size is small.						
831						For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates						
832					Minimum	0.01	Mean	0.164			
833					Maximum	1.5	Median	0.01			
834					SD	0.332	CV	2.022			
835					k hat (MLE)	0.391	k star (bias corrected MLE)	0.378			
836					Theta hat (MLE)	0.42	Theta star (bias corrected MLE)	0.434			
837					nu hat (MLE)	30.52	nu star (bias corrected)	29.5			
838					MLE Mean (bias corrected)	0.164	MLE Sd (bias corrected)	0.267			
839					95% Percentile of Chisquare (2kstar)	3.204	90% Percentile	0.468			
840					95% Percentile	0.695	99% Percentile	1.27			
841						**The following statistics are computed using Gamma ROS Statistics on Imputed Data**						
842						**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**						
843						WH	HW			WH	HW
844					95% Approx. Gamma UTL with 95% Coverage	0.879	0.919	95% Approx. Gamma UPL		0.602	0.594
845					95% Gamma USL	1.552	1.79				
846											
847						**Estimates of Gamma Parameters using KM Estimates**						
848					Mean (KM)	1.017	SD (KM)	0.0912			
849					Variance (KM)	0.00832	SE of Mean (KM)	0.0207			
850					k hat (KM)	124.3	k star (KM)	114.8			
851					nu hat (KM)	9697	nu star (KM)	8952			
852					theta hat (KM)	0.00818	theta star (KM)	0.00886			
853					80% gamma percentile (KM)	1.096	90% gamma percentile (KM)	1.141			
854					95% gamma percentile (KM)	1.178	99% gamma percentile (KM)	1.251			
855											
856						**The following statistics are computed using gamma distribution and KM estimates**						
857						**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**						
858						WH	HW			WH	HW
859					95% Approx. Gamma UTL with 95% Coverage	1.195	1.193	95% Approx. Gamma UPL		1.158	1.156
860					95% KM Gamma Percentile	1.152	1.151	95% Gamma USL		1.261	1.259
861											
862						**Lognormal GOF Test on Detected Observations Only**						
863					Shapiro Wilk Test Statistic	0.75	**Shapiro Wilk GOF Test**				
864					10% Shapiro Wilk Critical Value	0.789	Data Not Lognormal at 10% Significance Level				
865					Lilliefors Test Statistic	0.385	**Lilliefors GOF Test**				
866					10% Lilliefors Critical Value	0.389	Detected Data appear Lognormal at 10% Significance Level				
867						Detected Data appear Approximate Lognormal at 10% Significance Level						
868											
869						**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**						

870				Mean in Original Scale	0.374				Mean in Log Scale		-1.219
871				SD in Original Scale	0.289				SD in Log Scale		0.692
872				95% UTL95% Coverage	1.286				95% BCA UTL95% Coverage		1.05
873				95% Bootstrap (%) UTL95% Coverage	1.5				95% UPL (t)		0.964
874				90% Percentile (z)	0.718				95% Percentile (z)		0.923
875				99% Percentile (z)	1.479				95% USL		2.136
876											
877				**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
878				KM Mean of Logged Data	0.014				95% KM UTL (Lognormal)95% Coverage		1.187
879				KM SD of Logged Data	0.074				95% KM UPL (Lognormal)		1.151
880				95% KM Percentile Lognormal (z)	1.145				95% KM USL (Lognormal)		1.253
881											
882				**Background DL/2 Statistics Assuming Lognormal Distribution**							
883				Mean in Original Scale	1.064				Mean in Log Scale		-0.273
884				SD in Original Scale	1.231				SD in Log Scale		0.704
885				95% UTL95% Coverage	3.397				95% UPL (t)		2.533
886				90% Percentile (z)	1.876				95% Percentile (z)		2.424
887				99% Percentile (z)	3.916				95% USL		5.692
888				DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.							
889											
890				**Nonparametric Distribution Free Background Statistics**							
891				Data appear to follow a Discernible Distribution							
892											
893				**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
894				Order of Statistic, r	39				95% UTL with95% Coverage		10
895				Approx, f used to compute achieved CC	2.053				Approximate Actual Confidence Coefficient achieved by UTL		0.865
896				Approximate Sample Size needed to achieve specified CC	59				95% UPL		10
897				95% USL	10				95% KM Chebyshev UPL		1.42
898											
899				Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
900				Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
901				and consists of observations collected from clean unimpacted locations.							
902				The use of USL tends to provide a balance between false positives and false negatives provided the data							
903				represents a background data set and when many onsite observations need to be compared with the BTV.							
904											
905	**Lithium**										
906											
907	**General Statistics**										
908				Total Number of Observations	39				Number of Distinct Observations		30
909				Minimum	173				First Quartile		197
910				Second Largest	330				Median		220
911				Maximum	383				Third Quartile		230.5
912				Mean	222.3				SD		38.14
913				Coefficient of Variation	0.172				Skewness		2.551
914				Mean of logged Data	5.392				SD of logged Data		0.149
915											
916				**Critical Values for Background Threshold Values (BTVs)**							
917				Tolerance Factor K (For UTL)	2.124				d2max (for USL)		2.857
918											
919				**Normal GOF Test**							
920				Shapiro Wilk Test Statistic	0.767				**Shapiro Wilk GOF Test**		
921				1% Shapiro Wilk Critical Value	0.917				Data Not Normal at 1% Significance Level		
922				Lilliefors Test Statistic	0.206				**Lilliefors GOF Test**		
923				1% Lilliefors Critical Value	0.163				Data Not Normal at 1% Significance Level		
924				Data Not Normal at 1% Significance Level							
925											
926				**Background Statistics Assuming Normal Distribution**							
927				95% UTL with 95% Coverage	303.4				90% Percentile (z)		271.2
928				95% UPL (t)	287.5				95% Percentile (z)		285.1
929				95% USL	331.3				99% Percentile (z)		311.1
930											
931				**Gamma GOF Test**							
932				A-D Test Statistic	1.601				**Anderson-Darling Gamma GOF Test**		
933				5% A-D Critical Value	0.746				Data Not Gamma Distributed at 5% Significance Level		
934				K-S Test Statistic	0.175				**Kolmogorov-Smirnov Gamma GOF Test**		
935				5% K-S Critical Value	0.141				Data Not Gamma Distributed at 5% Significance Level		
936				Data Not Gamma Distributed at 5% Significance Level							
937											
938				**Gamma Statistics**							
939				k hat (MLE)	42.55				k star (bias corrected MLE)		39.3
940				Theta hat (MLE)	5.225				Theta star (bias corrected MLE)		5.658
941				nu hat (MLE)	3319				nu star (bias corrected)		3065
942				MLE Mean (bias corrected)	222.3				MLE Sd (bias corrected)		35.47
943											
944				**Background Statistics Assuming Gamma Distribution**							
945				95% Wilson Hilferty (WH) Approx. Gamma UPL	284.5				90% Percentile		268.8
946				95% Hawkins Wixley (HW) Approx. Gamma UPL	284.2				95% Percentile		283.7
947				95% WH Approx. Gamma UTL with 95% Coverage	301.8				99% Percentile		313.1
948				95% HW Approx. Gamma UTL with 95% Coverage	301.7						

949				95% WH USL	333.8					95% HW USL	334.3	
950												
951					Lognormal GOF Test							
952				Shapiro Wilk Test Statistic	0.864			Shapiro Wilk Lognormal GOF Test				
953				10% Shapiro Wilk Critical Value	0.948			Data Not Lognormal at 10% Significance Level				
954				Lilliefors Test Statistic	0.162			Lilliefors Lognormal GOF Test				
955				10% Lilliefors Critical Value	0.129			Data Not Lognormal at 10% Significance Level				
956					Data Not Lognormal at 10% Significance Level							
957												
958					Background Statistics assuming Lognormal Distribution							
959				95% UTL with 95% Coverage	301.5					90% Percentile (z)	265.9	
960				95% UPL (t)	283.4					95% Percentile (z)	280.7	
961				95% USL	336.3					99% Percentile (z)	310.7	
962												
963					Nonparametric Distribution Free Background Statistics							
964					Data do not follow a Discernible Distribution							
965												
966					Nonparametric Upper Limits for Background Threshold Values							
967				Order of Statistic, order	39					95% UTL with 95% Coverage	383	
968				Approx, f used to compute achieved CC	2.053					Approximate Actual Confidence Coefficient achieved by UTL	0.865	
969										Approximate Sample Size needed to achieve specified CC	59	
970			95% Percentile Bootstrap UTL with 95% Coverage		383					95% BCA Bootstrap UTL with 95% Coverage	383	
971				95% UPL	330					90% Percentile	249.6	
972				90% Chebyshev UPL	338.2					95% Percentile	270.6	
973				95% Chebyshev UPL	390.7					99% Percentile	362.9	
974				95% USL	383							
975												
976					Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.							
977					Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers							
978					and consists of observations collected from clean unimpacted locations.							
979					The use of USL tends to provide a balance between false positives and false negatives provided the data							
980					represents a background data set and when many onsite observations need to be compared with the BTV.							
981												
982	**Mercury**											
983												
984					General Statistics							
985				Total Number of Observations	39					Number of Missing Observations	0	
986				Number of Distinct Observations	2							
987				Number of Detects	0					Number of Non-Detects	39	
988				Number of Distinct Detects	0					Number of Distinct Non-Detects	2	
989				Minimum Detect	N/A					Minimum Non-Detect	0.1	
990				Maximum Detect	N/A					Maximum Non-Detect	0.2	
991				Variance Detected	N/A					Percent Non-Detects	100%	
992				Mean Detected	N/A					SD Detected	N/A	
993				Mean of Detected Logged Data	N/A					SD of Detected Logged Data	N/A	
994												
995					Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!							
996					Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!							
997					The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).							
998												
999					The data set for variable Mercury was not processed!							
1000												
1001												
1002	**Molybdenum**											
1003												
1004					General Statistics							
1005				Total Number of Observations	39					Number of Missing Observations	0	
1006				Number of Distinct Observations	34							
1007				Number of Detects	35					Number of Non-Detects	4	
1008				Number of Distinct Detects	32					Number of Distinct Non-Detects	3	
1009				Minimum Detect	2.3					Minimum Non-Detect	5	
1010				Maximum Detect	40					Maximum Non-Detect	20	
1011				Variance Detected	121.3					Percent Non-Detects	10.26%	
1012				Mean Detected	14.14					SD Detected	11.01	
1013				Mean of Detected Logged Data	2.32					SD of Detected Logged Data	0.86	
1014												
1015					Critical Values for Background Threshold Values (BTVs)							
1016				Tolerance Factor K (For UTL)	2.124					d2max (for USL)	2.857	
1017												
1018					Normal GOF Test on Detects Only							
1019				Shapiro Wilk Test Statistic	0.874			Shapiro Wilk GOF Test				
1020				1% Shapiro Wilk Critical Value	0.91			Data Not Normal at 1% Significance Level				
1021				Lilliefors Test Statistic	0.162			Lilliefors GOF Test				
1022				1% Lilliefors Critical Value	0.172			Detected Data appear Normal at 1% Significance Level				
1023					Detected Data appear Approximate Normal at 1% Significance Level							
1024												
1025					Kaplan Meier (KM) Background Statistics Assuming Normal Distribution							
1026				KM Mean	13.35					KM SD	10.65	
1027				95% UTL95% Coverage	35.97					95% KM UPL (t)	31.53	

1028				90% KM Percentile (z)	26.99				95% KM Percentile (z)		30.86
1029				99% KM Percentile (z)	38.12				95% KM USL		43.77
1030											
1031				**DL/2 Substitution Background Statistics Assuming Normal Distribution**							
1032				Mean	13.4				SD		10.71
1033				95% UTL95% Coverage	36.14				95% UPL (t)		31.68
1034				90% Percentile (z)	27.12				95% Percentile (z)		31.01
1035				99% Percentile (z)	38.31				95% USL		43.99
1036				DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons							
1037											
1038				**Gamma GOF Tests on Detected Observations Only**							
1039				A-D Test Statistic	0.64			**Anderson-Darling GOF Test**			
1040				5% A-D Critical Value	0.764			Detected data appear Gamma Distributed at 5% Significance Level			
1041				K-S Test Statistic	0.136			**Kolmogorov-Smirnov GOF**			
1042				5% K-S Critical Value	0.151			Detected data appear Gamma Distributed at 5% Significance Level			
1043				Detected data appear Gamma Distributed at 5% Significance Level							
1044											
1045				**Gamma Statistics on Detected Data Only**							
1046				k hat (MLE)	1.668				k star (bias corrected MLE)		1.544
1047				Theta hat (MLE)	8.481				Theta star (bias corrected MLE)		9.161
1048				nu hat (MLE)	116.7				nu star (bias corrected)		108.1
1049				MLE Mean (bias corrected)	14.14						
1050				MLE Sd (bias corrected)	11.38				95% Percentile of Chisquare (2kstar)		7.966
1051											
1052				**Gamma ROS Statistics using Imputed Non-Detects**							
1053				GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
1054				GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)							
1055				For such situations, GROS method may yield incorrect values of UCLs and BTVs							
1056				This is especially true when the sample size is small.							
1057				For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
1058				Minimum	2.3				Mean		13.33
1059				Maximum	40				Median		9.6
1060				SD	10.75				CV		0.806
1061				k hat (MLE)	1.653				k star (bias corrected MLE)		1.543
1062				Theta hat (MLE)	8.062				Theta star (bias corrected MLE)		8.637
1063				nu hat (MLE)	128.9				nu star (bias corrected)		120.4
1064				MLE Mean (bias corrected)	13.33				MLE Sd (bias corrected)		10.73
1065				95% Percentile of Chisquare (2kstar)	7.963				90% Percentile		27.58
1066				95% Percentile	34.39				99% Percentile		49.73
1067				**The following statistics are computed using Gamma ROS Statistics on Imputed Data**							
1068				**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
1069					WH	HW				WH	HW
1070				95% Approx. Gamma UTL with 95% Coverage	43.94	46.19			95% Approx. Gamma UPL	34.94	35.91
1071				95% Gamma USL	63.28	69.38					
1072											
1073				**Estimates of Gamma Parameters using KM Estimates**							
1074				Mean (KM)	13.35				SD (KM)		10.65
1075				Variance (KM)	113.4				SE of Mean (KM)		1.744
1076				k hat (KM)	1.571				k star (KM)		1.467
1077				nu hat (KM)	122.5				nu star (KM)		114.4
1078				theta hat (KM)	8.498				theta star (KM)		9.098
1079				80% gamma percentile (KM)	20.7				90% gamma percentile (KM)		27.96
1080				95% gamma percentile (KM)	35.03				99% gamma percentile (KM)		51
1081											
1082				**The following statistics are computed using gamma distribution and KM estimates**							
1083				**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**							
1084					WH	HW				WH	HW
1085				95% Approx. Gamma UTL with 95% Coverage	43.74	45.98			95% Approx. Gamma UPL	34.79	35.76
1086				95% KM Gamma Percentile	33.56	34.39			95% Gamma USL	62.95	69.05
1087											
1088				**Lognormal GOF Test on Detected Observations Only**							
1089				Shapiro Wilk Test Statistic	0.941			**Shapiro Wilk GOF Test**			
1090				10% Shapiro Wilk Critical Value	0.944			Data Not Lognormal at 10% Significance Level			
1091				Lilliefors Test Statistic	0.134			**Lilliefors GOF Test**			
1092				10% Lilliefors Critical Value	0.136			Detected Data appear Lognormal at 10% Significance Level			
1093				Detected Data appear Approximate Lognormal at 10% Significance Level							
1094											
1095				**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**							
1096				Mean in Original Scale	13.31				Mean in Log Scale		2.26
1097				SD in Original Scale	10.74				SD in Log Scale		0.84
1098				95% UTL95% Coverage	57.16				95% BCA UTL95% Coverage		40
1099				95% Bootstrap (%) UTL95% Coverage	40				95% UPL (t)		40.26
1100				90% Percentile (z)	28.15				95% Percentile (z)		38.2
1101				99% Percentile (z)	67.73				95% USL		105.8
1102											
1103				**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**							
1104				KM Mean of Logged Data	2.252				95% KM UTL (Lognormal)95% Coverage		57.8
1105				KM SD of Logged Data	0.85				95% KM UPL (Lognormal)		40.56
1106				95% KM Percentile Lognormal (z)	38.46				95% KM USL (Lognormal)		107.7

1107												
1108						**Background DL/2 Statistics Assuming Lognormal Distribution**							
1109						Mean in Original Scale	13.4				Mean in Log Scale	2.265
1110						SD in Original Scale	10.71				SD in Log Scale	0.85
1111						95% UTL95% Coverage	58.67				95% UPL (t)	41.15
1112						90% Percentile (z)	28.65				95% Percentile (z)	39.02
1113						99% Percentile (z)	69.66				95% USL	109.4
1114						DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.						
1115												
1116						**Nonparametric Distribution Free Background Statistics**							
1117						Data appear to follow a Discernible Distribution							
1118												
1119						**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**							
1120						Order of Statistic, r	39				95% UTL with95% Coverage	40
1121						Approx, f used to compute achieved CC	2.053				Approximate Actual Confidence Coefficient achieved by UTL	0.865
1122						Approximate Sample Size needed to achieve specified CC	59				95% UPL	36.8
1123						95% USL	40				95% KM Chebyshev UPL	60.36
1124												
1125						Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.						
1126						Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers						
1127						and consists of observations collected from clean unimpacted locations.						
1128						The use of USL tends to provide a balance between false positives and false negatives provided the data						
1129						represents a background data set and when many onsite observations need to be compared with the BTV.						
1130												
1131	**Radium**											
1132												
1133	**General Statistics**											
1134						Total Number of Observations	38				Number of Distinct Observations	37
1135											Number of Missing Observations	1
1136						Minimum	0				First Quartile	0.54
1137						Second Largest	2.81				Median	0.867
1138						Maximum	3.2				Third Quartile	1.35
1139						Mean	1.013				SD	0.678
1140						Coefficient of Variation	0.669				Skewness	1.408
1141												
1142						**Critical Values for Background Threshold Values (BTVs)**							
1143						Tolerance Factor K (For UTL)	2.132				d2max (for USL)	2.846
1144												
1145						**Normal GOF Test**						
1146						Shapiro Wilk Test Statistic	0.89				**Shapiro Wilk GOF Test**	
1147						1% Shapiro Wilk Critical Value	0.916				Data Not Normal at 1% Significance Level	
1148						Lilliefors Test Statistic	0.17				**Lilliefors GOF Test**	
1149						1% Lilliefors Critical Value	0.165				Data Not Normal at 1% Significance Level	
1150						Data Not Normal at 1% Significance Level						
1151												
1152						**Background Statistics Assuming Normal Distribution**							
1153						95% UTL with 95% Coverage	2.458				90% Percentile (z)	1.882
1154						95% UPL (t)	2.171				95% Percentile (z)	2.128
1155						95% USL	2.942				99% Percentile (z)	2.59
1156												
1157						**Gamma Statistics**							
1158						Gamma Statistics Not Available						
1159												
1160						Cannot Compute Gamma Statistics!						
1161												
1162						Cannot Compute Log Statistics						
1163												
1164						**Nonparametric Distribution Free Background Statistics**							
1165						Data do not follow a Discernible Distribution						
1166												
1167						**Nonparametric Upper Limits for Background Threshold Values**							
1168						Order of Statistic, order	38				95% UTL with 95% Coverage	3.2
1169						Approx, f used to compute achieved CC	2				Approximate Actual Confidence Coefficient achieved by UTL	0.858
1170											Approximate Sample Size needed to achieve specified CC	59
1171						95% Percentile Bootstrap UTL with 95% Coverage	3.2				95% BCA Bootstrap UTL with 95% Coverage	3.2
1172						95% UPL	2.83				90% Percentile	1.751
1173						90% Chebyshev UPL	3.073				95% Percentile	2.062
1174						95% Chebyshev UPL	4.006				99% Percentile	3.056
1175						95% USL	3.2					
1176												
1177						Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.						
1178						Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers						
1179						and consists of observations collected from clean unimpacted locations.						
1180						The use of USL tends to provide a balance between false positives and false negatives provided the data						
1181						represents a background data set and when many onsite observations need to be compared with the BTV.						
1182												
1183	**Selenium**											
1184												
1185						**General Statistics**							

1186				Total Number of Observations	39				Number of Missing Observations		0	
1187				Number of Distinct Observations	25							
1188				Number of Detects	25				Number of Non-Detects		14	
1189				Number of Distinct Detects	21				Number of Distinct Non-Detects		6	
1190				Minimum Detect	1.5				Minimum Non-Detect		1	
1191				Maximum Detect	228				Maximum Non-Detect		15	
1192				Variance Detected	5476				Percent Non-Detects		35.9%	
1193				Mean Detected	96.49				SD Detected		74	
1194				Mean of Detected Logged Data	3.757				SD of Detected Logged Data		1.737	
1195												
1196				**Critical Values for Background Threshold Values (BTVs)**								
1197				Tolerance Factor K (For UTL)	2.124				d2max (for USL)		2.857	
1198												
1199				**Normal GOF Test on Detects Only**								
1200				Shapiro Wilk Test Statistic	0.902				**Shapiro Wilk GOF Test**			
1201				1% Shapiro Wilk Critical Value	0.886				Detected Data appear Normal at 1% Significance Level			
1202				Lilliefors Test Statistic	0.193				**Lilliefors GOF Test**			
1203				1% Lilliefors Critical Value	0.201				Detected Data appear Normal at 1% Significance Level			
1204				Detected Data appear Normal at 1% Significance Level								
1205												
1206				**Kaplan Meier (KM) Background Statistics Assuming Normal Distribution**								
1207				KM Mean	62.27				KM SD		73.9	
1208				95% UTL95% Coverage	219.3				95% KM UPL (t)		188.4	
1209				90% KM Percentile (z)	157				95% KM Percentile (z)		183.8	
1210				99% KM Percentile (z)	234.2				95% KM USL		273.4	
1211												
1212				**DL/2 Substitution Background Statistics Assuming Normal Distribution**								
1213				Mean	62.32				SD		74.83	
1214				95% UTL95% Coverage	221.3				95% UPL (t)		190.1	
1215				90% Percentile (z)	158.2				95% Percentile (z)		185.4	
1216				99% Percentile (z)	236.4				95% USL		276.1	
1217				DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons								
1218												
1219				**Gamma GOF Tests on Detected Observations Only**								
1220				A-D Test Statistic	2.166				**Anderson-Darling GOF Test**			
1221				5% A-D Critical Value	0.785				Data Not Gamma Distributed at 5% Significance Level			
1222				K-S Test Statistic	0.262				**Kolmogorov-Smirnov GOF**			
1223				5% K-S Critical Value	0.181				Data Not Gamma Distributed at 5% Significance Level			
1224				Data Not Gamma Distributed at 5% Significance Level								
1225												
1226				**Gamma Statistics on Detected Data Only**								
1227				k hat (MLE)	0.739				k star (bias corrected MLE)		0.677	
1228				Theta hat (MLE)	130.6				Theta star (bias corrected MLE)		142.6	
1229				nu hat (MLE)	36.93				nu star (bias corrected)		33.84	
1230				MLE Mean (bias corrected)	96.49							
1231				MLE Sd (bias corrected)	117.3				95% Percentile of Chisquare (2kstar)		4.663	
1232												
1233				**Gamma ROS Statistics using Imputed Non-Detects**								
1234				GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs								
1235				GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)								
1236				For such situations, GROS method may yield incorrect values of UCLs and BTVs								
1237				This is especially true when the sample size is small.								
1238				For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates								
1239				Minimum	1.5				Mean		65.84	
1240				Maximum	228				Median		16.68	
1241				SD	72.04				CV		1.094	
1242				k hat (MLE)	0.637				k star (bias corrected MLE)		0.605	
1243				Theta hat (MLE)	103.3				Theta star (bias corrected MLE)		108.8	
1244				nu hat (MLE)	49.69				nu star (bias corrected)		47.21	
1245				MLE Mean (bias corrected)	65.84				MLE Sd (bias corrected)		84.63	
1246				95% Percentile of Chisquare (2kstar)	4.342				90% Percentile		170.9	
1247				95% Percentile	236.2				99% Percentile		393.9	
1248				**The following statistics are computed using Gamma ROS Statistics on Imputed Data**								
1249				**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**								
1250						WH	HW			WH	HW	
1251				95% Approx. Gamma UTL with 95% Coverage		326.9	369.5		95% Approx. Gamma UPL	237.5	255.4	
1252				95% Gamma USL		533.7	657.2					
1253												
1254				**Estimates of Gamma Parameters using KM Estimates**								
1255				Mean (KM)	62.27				SD (KM)		73.9	
1256				Variance (KM)	5462				SE of Mean (KM)		12.08	
1257				k hat (KM)	0.71				k star (KM)		0.672	
1258				nu hat (KM)	55.37				nu star (KM)		52.45	
1259				theta hat (KM)	87.71				theta star (KM)		92.6	
1260				80% gamma percentile (KM)	102.5				90% gamma percentile (KM)		157.8	
1261				95% gamma percentile (KM)	215				99% gamma percentile (KM)		352.2	
1262												
1263				**The following statistics are computed using gamma distribution and KM estimates**								
1264				**Upper Limits using Wilson Hilferty (WH) and Hawkins Wixley (HW) Methods**								

1265					WH	HW					WH	HW
1266	95% Approx. Gamma UTL with 95% Coverage				365	434	95% Approx. Gamma UPL				252.4	279.5
1267	95% KM Gamma Percentile				237.8	260.5	95% Gamma USL				635.9	850.1
1268												
1269	**Lognormal GOF Test on Detected Observations Only**											
1270	Shapiro Wilk Test Statistic				0.77		**Shapiro Wilk GOF Test**					
1271	10% Shapiro Wilk Critical Value				0.931		Data Not Lognormal at 10% Significance Level					
1272	Lilliefors Test Statistic				0.311		**Lilliefors GOF Test**					
1273	10% Lilliefors Critical Value				0.159		Data Not Lognormal at 10% Significance Level					
1274	Data Not Lognormal at 10% Significance Level											
1275												
1276	**Background Lognormal ROS Statistics Assuming Lognormal Distribution Using Imputed Non-Detects**											
1277	Mean in Original Scale				62.45		Mean in Log Scale				2.501	
1278	SD in Original Scale				74.71		SD in Log Scale				2.248	
1279	95% UTL95% Coverage				1445		95% BCA UTL95% Coverage				228	
1280	95% Bootstrap (%) UTL95% Coverage				228		95% UPL (t)				565.9	
1281	90% Percentile (z)				217.3		95% Percentile (z)				491.7	
1282	99% Percentile (z)				2275		95% USL				7500	
1283												
1284	**Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution**											
1285	KM Mean of Logged Data				2.433		95% KM UTL (Lognormal)95% Coverage				1329	
1286	KM SD of Logged Data				2.24		95% KM UPL (Lognormal)				522.3	
1287	95% KM Percentile Lognormal (z)				453.9		95% KM USL (Lognormal)				6861	
1288												
1289	**Background DL/2 Statistics Assuming Lognormal Distribution**											
1290	Mean in Original Scale				62.32		Mean in Log Scale				2.34	
1291	SD in Original Scale				74.83		SD in Log Scale				2.413	
1292	95% UTL95% Coverage				1749		95% UPL (t)				639.3	
1293	90% Percentile (z)				228.8		95% Percentile (z)				549.7	
1294	99% Percentile (z)				2847		95% USL				10249	
1295	DL/2 is not a Recommended Method. DL/2 provided for comparisons and historical reasons.											
1296												
1297	**Nonparametric Distribution Free Background Statistics**											
1298	Data appear to follow a Discernible Distribution											
1299												
1300	**Nonparametric Upper Limits for BTVs(no distinction made between detects and nondetects)**											
1301	Order of Statistic, r				39		95% UTL with95% Coverage				228	
1302	Approx, f used to compute achieved CC				2.053		Approximate Actual Confidence Coefficient achieved by UTL				0.865	
1303	Approximate Sample Size needed to achieve specified CC				59		95% UPL				213	
1304	95% USL				228		95% KM Chebyshev UPL				388.5	
1305												
1306	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
1307	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
1308	and consists of observations collected from clean unimpacted locations.											
1309	The use of USL tends to provide a balance between false positives and false negatives provided the data											
1310	represents a background data set and when many onsite observations need to be compared with the BTV.											
1311												
1312	**Thallium**											
1313												
1314	**General Statistics**											
1315	Total Number of Observations				39		Number of Missing Observations				0	
1316	Number of Distinct Observations				6							
1317	Number of Detects				0		Number of Non-Detects				39	
1318	Number of Distinct Detects				0		Number of Distinct Non-Detects				6	
1319	Minimum Detect				N/A		Minimum Non-Detect				0.1	
1320	Maximum Detect				N/A		Maximum Non-Detect				10	
1321	Variance Detected				N/A		Percent Non-Detects				100%	
1322	Mean Detected				N/A		SD Detected				N/A	
1323	Mean of Detected Logged Data				N/A		SD of Detected Logged Data				N/A	
1324												
1325	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
1326	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
1327	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
1328												
1329	The data set for variable Thallium was not processed!											
1330												
1331												