2020 Annual Groundwater Monitoring and Corrective Action Report

for Compliance with the Coal Combustion Residuals (CCR) Rule

Comanche Station

Public Service Company of Colorado

January 29, 2021

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Certification

2020 Groundwater Monitoring Annual Report for Comanche Station

I hereby certify to the best of my knowledge that this groundwater monitoring annual report is designed to meet the performance standard in 40 CFR Part 257 of the Federal Coal Combustion Residuals (CCR) Rule.

I am duly licensed Professional Engineer under the laws of the State of Colorado.

Matthew Rohr, PE
Colorado PE License 0053467
License renewal date October 31, 2021



Table of Abbreviations and Acronyms

Abbreviation	Definition
BTV	background threshold value
CCR	Coal Combustion Residuals
COI	constituent of interest
EPA	Environmental Protection Agency
LCS	Laboratory Control Samples
MS/MSD	Matrix Spike/Duplicate
QC	quality control
RPD	Relative Percent Difference
SOP	Standard Operating Procedure
SSI	statistically significant increase
SSL	statistically significant level
TDS	Total Dissolved Solids
TSS	Total Suspended Solids

Summary of 40 CFR Section § 257.90(e)(6) Groundwater Monitoring System Requirements and Site-Specific Compliance at Comanche Station			
§ 257.90(e)(6) *A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:*		**Bottom Ash Impoundment**	**Landfill**
§257.90(e)(6)(i)	*At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.*	No Aquifer Determination / Background Monitoring Program	No Aquifer Determination / Background Monitoring Program
§257.90(e)(6)(ii)	*At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.*	Background Monitoring Program	Background Monitoring Program
§257.90(e)(6)(iii)	*If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):*	SSI evaluation planned for Q1 2021	SSI evaluation planned for Q1 2021
§257.90(e)(6)(iii)(A)	*Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase.*	N/A	N/A
§257.90(e)(6)(iii)(B)	*Provide the date when the assessment monitoring program was initiated for the CCR unit.*	N/A	N/A
§257.90(e)(6)(iv)	*If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:*	N/A	N/A
§257.90(e)(6)(iv) (A)	*Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase.*	N/A	N/A
§257.90(e)(6)(iv) (B)	*Provide the date when the assessment of corrective measures was initiated for the CCR unit.*	N/A	N/A
§257.90(e)(6)(iv)(C)	*Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.*	N/A	N/A
§257.90(e)(6)(iv)(D)	*Provide the date when the assessment of corrective measures was completed for the CCR unit.*	N/A	N/A
§257.90(e)(6)(v)	*Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection.*	N/A	N/A
§257.90(e)(6)(vi)	*(vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.*	N/A	N/A

1.0 Introduction

The U.S. Environmental Protection Agency's (EPA's) final Coal Combustion Residuals (CCR) Rule establishes comprehensive a set of requirements for the management and disposal of CCR (or coal ash) in landfills and surface impoundments by electric utilities. Comanche Station, located in Pueblo, Colorado (**Figure 1)** is owned and operated by Public Service Company of Colorado (PSCo), an Xcel Energy Company. Comanche Station has two active CCR units, an impoundment (Bottom Ash Pond) and an ash disposal facility (Landfill) (**Figure 2**) that is subject to certain requirements of the CCR Rule.

Per the CCR Rule, groundwater monitoring is required to monitor potential impacts to the uppermost aquifer. PSCo established a monitoring network as described in Comanche Groundwater Monitoring System Certification and completed eight rounds of background sampling between 2015 and 2017 (HDR, 2018). The certified monitoring network in 2015-2017 included a combination of existing and newly installed wells at both the bottom ash pond and at the landfill in 2017. Based on the perched water encountered in the colluvium in wells around the CCR units and the associated geotechnical and hydrogeologic boring logs that chiefly indicated drilling refusal at the Pierre Shale at the base of the colluvium, it was determined that the new wells added to the groundwater monitoring network should be screened in the colluvium at the waste boundary of the CCR units. After two years of monitoring, the background hydrologic condition associated with the colluvium was determined to be predominantly dry. These findings were consistent with multiple previous investigations that indicated a laterally continuous groundwater surface was not present, and therefore an upgradient location for a background well could not be established based on this information.

PSCo characterized hydrogeologic conditions at the site in multiple previous investigations and through CCR compliance monitoring. It was determined in 2018 that the uppermost aquifer at the site is in the Dakota Sandstone, which is approximately 1,500 feet below ground surface and lies below 1,400 feet of the regionally continuous, very low permeability Pierre Shale. The studies also demonstrated that there is no reasonable probability for the Bottom Ash Pond or Ash Disposal Facility to impact the Dakota Sandstone aquifer. The perched water in isolated pockets of the colluvium has a very low yield, high TDS concentrations, and is not laterally continuous. The properties of the isolated perched water present in the colluvium are not consistent with the definition of an "aquifer" in the CCR Rule (40 CFR 257.53), as discussed in the January 2018 *Comanche Station 2018 No Aquifer Determination Memorandum.*
In 2020, a phased drilling program was initiated to further evaluate site hydrogeologic conditions. Borings were completed using core drilling to investigate the upper portion of the Pierre Shale to determine if there is potential for groundwater flow in weathered shale below the colluvium and above the consolidated Pierre Shale. Eight new wells were installed in August 2020, primarily in the weathered shale, and eight rounds of background monitoring were completed. In December 2020 six new wells were installed to further characterize the groundwater system and provide site perimeter wells.

This Annual Groundwater Monitoring Report presents the sampling and analysis completed in 2020:

- The status of the groundwater monitoring program for the Bottom Ash Pond at the end of 2020 is in updated background monitoring.
- The status of the groundwater monitoring program for the landfill at the end of 2020 is in updated background monitoring.

In 2021 PSCo intends to continue the sampling and analysis program following the CCR Rule groundwater monitoring program requirements in 40 CFR 257.93-95.

2.0 Facility Description

Comanche Station is a coal-fired plant consisting of three units (Units 1, 2, 3) that burn Powder River Basin coal. Unit 1 was built in 1973, Unit 2 was built in 1975, and Unit 3 was built in 2010 (Tetra Tech, 2012). Comanche Station currently has two CCR units subject to the CCR Rule: a landfill and an impoundment (**Figure 2**). The sections that follow provide a brief description of the CCR units.

The CCR landfill, also known as the CCR Ash Disposal Facility (**Figure 2**), is an engineered ash monofill consisting of two disposal cells with a combined area of approximately 55 acres. Cell 1 was constructed in 1987 with a clay liner and Cell 2E was constructed with a composite liner system and leachate collection system compliant with the CCR Rule. Additional disposal cells have been permitted and will be constructed in phases as needed to dispose of ash and other approved waste from power generating activities. Fly ash from all three units is collected in silos for disposal in the landfill. Bottom ash is also permitted to be disposed in the on-site landfill. Water treatment sludge (lime from an on-site treatment system), process water pond sediment, coal impurities, and excavation soils are also permitted for disposal at the landfill (Tetra Tech, 2015).

Bottom ash generated from Units 1 and 2 is sluiced to the Bottom Ash Pond for dewatering and temporary storage. Bottom ash solids are routinely excavated from the impoundment and either beneficially used off-site or transported to the landfill for disposal. Bottom ash is removed from Unit 3 dry via a submerged flight conveyor (SFC) and does not go into the bottom ash pond; it is transported dry either to off-site beneficial use or to the landfill for disposal. According to historic documents, the impoundment was constructed in 1972 with a three-foot thick clay liner. The impoundment is partially incised and is 513 feet long by 138 feet wide and 26 feet deep with a surface area of 1.6 acres. The primary influent to the CCR impoundment is sluiced bottom ash, with lesser quantities of economizer ash, and pyrites and non-CCR wastewater. The CCR impoundment effluent discharges to the polishing pond immediately east of the Bottom Ash Pond (**Figure 2**) and the polishing pond discharges under Colorado Discharge Permit System (CDPS) Permit No. CO0000612.

Additional ponds at the facility include process water, settling, polishing, and raw water storage ponds. These ponds do not receive CCR, and therefore are not subject to the CCR Rule. The operation and monitoring of all the CCR units are described further in the Comanche Station Groundwater Monitoring System Certification (HDR, 2018).

2.1 Hydrogeology

Comanche Station is underlain by unconsolidated colluvium consisting of stiff clays and silts. Typical colluvium thickness is approximately 20 feet but ranges between 5 and 75 feet (Woodward-Clyde, 1987; URS, 2005). At the southern property boundary and west and south of the CCR landfill, alluvial sand and gravels are interbedded with the colluvium. The colluvium overlies the Pierre Shale bedrock at the Comanche Station. The Pierre Shale is a low-permeability shale deposit that is 1,450 feet thick in this area. The low-permeability shale deposits consist of primarily bentonitic shales, with some minor chalk and limestone deposits interbedded within the shale. Multiple hydrogeologic investigations have concluded that a water table does not exist regionally in the Pierre Shale (Tetra Tech, 2013). Underlying the shale deposits is the Dakota Sandstone Formation, which is recognized as a regional aquifer in this area.

The Pierre Shale has a measured hydraulic conductivity of 3 x 10-10 to 3 x 10-7 cm/sec and Geotrans (2009) estimated shallow perched groundwater travel time through the shale deposits to take approximately 13,000 years to migrate through the Pierre Shale deposits before reaching the Dakota Sandstone Aquifer. Tetra Tech (2018) estimated it will take in excess of 14,500 years for shallow groundwater at the site to reach the Dakota Sandstone Aquifer. All studies previously completed at the Comanche site concluded that the shale deposit beneath the site is effectively impermeable.

The monitoring well network prior to the 2020 drilling was established to monitor the colluvium, with screened intervals in the colluvium and well bottoms at the colluvium/shale contact. The wells were placed around the CCR units to capture any groundwater flow around the units, and to determine if a groundwater flow direction could be monitored and observed. Consistent with prior studies, the shallow unconsolidated colluvium deposits beneath the site were observed by HDR between 2015 and 2020 to be predominantly dry, with some isolated areas of perched water (GeoTrans, Inc., 2009). Areas of perched water were thought to be controlled by the bedrock topography where water becomes trapped by topographic lows in the shale bedrock surface (GeoTrans, Inc., 2009).

In 2020 additional wells were drilled in the weathered shale to evaluate whether groundwater is present at this depth, if flow direction along fracture permeability could be established and whether monitoring wells for the CCR units should be constructed in the weathered bedrock. Monitoring in 2020 indicates that groundwater is present in the weathered shale and appears to have greater lateral continuity than that observed in the colluvium. Slug testing on the wells produced estimated hydraulic conductivity values resulting in a geomean hydraulic conductivity of 2.52E-04 cm/s in the weathered bedrock and geomean hydraulic conductivity of 4.07E-05 in the colluvium. Detailed results will be included in the well installation report and updated groundwater monitoring system certification in 2021.A series of potentiometric surface maps are provided in **Appendix A**. The groundwater flow direction is generally south, consistent with the ground surface topography that slopes to the south-southeast towards the St. Charles River.

2.2 Monitoring Well Network

2.2.1 Landfill/ Ash Disposal Facility

Six wells are described in the existing Groundwater Monitoring System Certification: MW-1 through MW-6 (**Figure 2**) (HDR, 2018). Because of the lack of a water table in the colluvium across the site in monitored wells in 2015-2019, a groundwater flow direction could not be determined at that time. In August 2020, three new wells, MW-1B, MW-2B, and MW-4B were installed surrounding the landfill (**Figure 2**). These wells are located adjacent to the existing colluvial wells MW-1, MW-2, and MW-4 wells that have historically been dry. The new "B" wells were drilled deeper in order to evaluate the presence of groundwater in the weathered shale. Water was present in all wells and sampled. Evaluation of groundwater elevations is in progress and upgradient and downgradient wells will be designated based upon the groundwater flow directions once confirmed. However, the landfill facility is surrounded by monitoring wells; therefore, all possible conditions will be represented in the collection of groundwater samples.

This phased approach to well network expansion is ongoing, and an updated Groundwater Monitoring System Certification will be developed upon completion of the phased approach.

2.2.2 Impoundment/ Bottom Ash Pond

Four wells are described in the existing Groundwater Monitoring System Certification: W-3 through W-6 (**Figure 2**) (HDR, 2018). Because of the lack of a water table in the colluvium across the site in monitored wells in 2015-2019, a groundwater flow direction could not be determined at that time. Wells W-1 and W-2 were existing wells and are being added to the monitoring network.

In August 2020 new wells W-2A, W-2B were installed east of the existing well W-2 that has historically been intermittently dry. Both were drilled deeper than W-2 in order to evaluate the presence of groundwater in weathered shale, with W-2A screened in the weathered shale and W-2B in the consolidated shale. Monitoring well W-2A is screened in the weathered shale, has groundwater on a consistent basis, is upgradient of both CCR units and has physical separation from both CCR units. Therefore, well W-2A is currently intended to serve as the background well for the site, providing background water quality for both the landfill and Bottom Ash Pond.

Also, in August 2020 wells W-7 and W-8A were installed along the southeastern property boundary in the weathered shale, and W-8B was installed in the consolidated shale. In December 2020 monitoring well W-5B was drilled adjacent to W-5 but deeper and screened in the weathered shale to evaluate any groundwater differences between colluvium and weathered shale at this location.

Wells W-10A and W-10B were drilled to evaluate depth to groundwater as a geotechnical design constraint for new facilities planned for construction in 2021. In December 2020 additional wells were installed south and east, W-9, W-11, W-12, and W-13, and will be used to monitor groundwater quality more distant from the CCR units and in the direction of the eastern property boundary. Test hole borings TH-184 and TH-185 were installed in 1987 for a geotechnical study and field located in 2020 and will be monitored for water levels (**Figure 2**). These wells are screened in the colluvium and are dry.

Wells installed under this phased drilling program are being evaluated for inclusion in the certified monitoring well network and an updated Groundwater Monitoring System Certification will be developed upon completion of the phased approach. The impoundment is surrounded by five monitoring wells; therefore, all possible conditions will be represented in the collection of shallow groundwater.

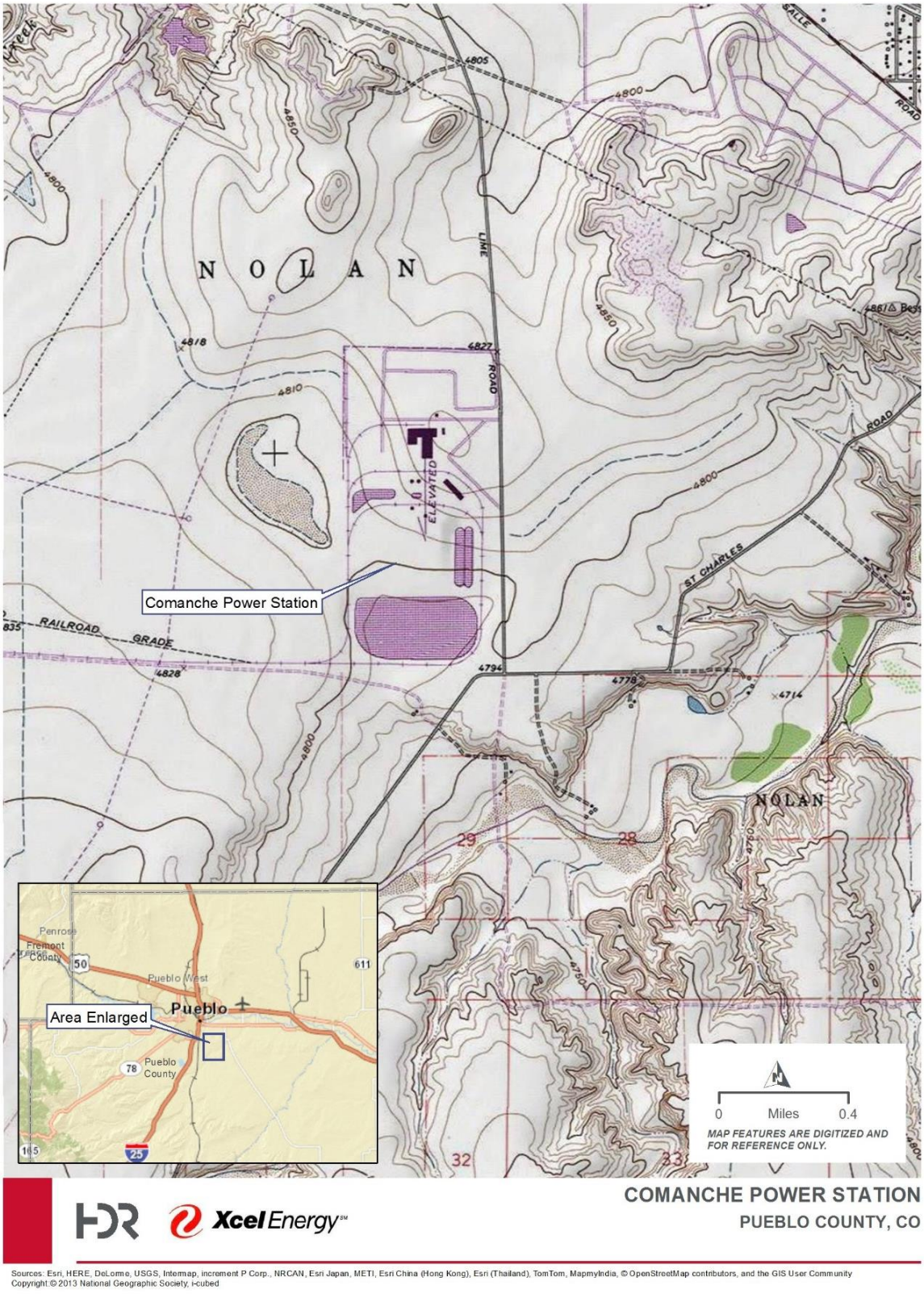


Figure 1. Vicinity Map for Comanche Station

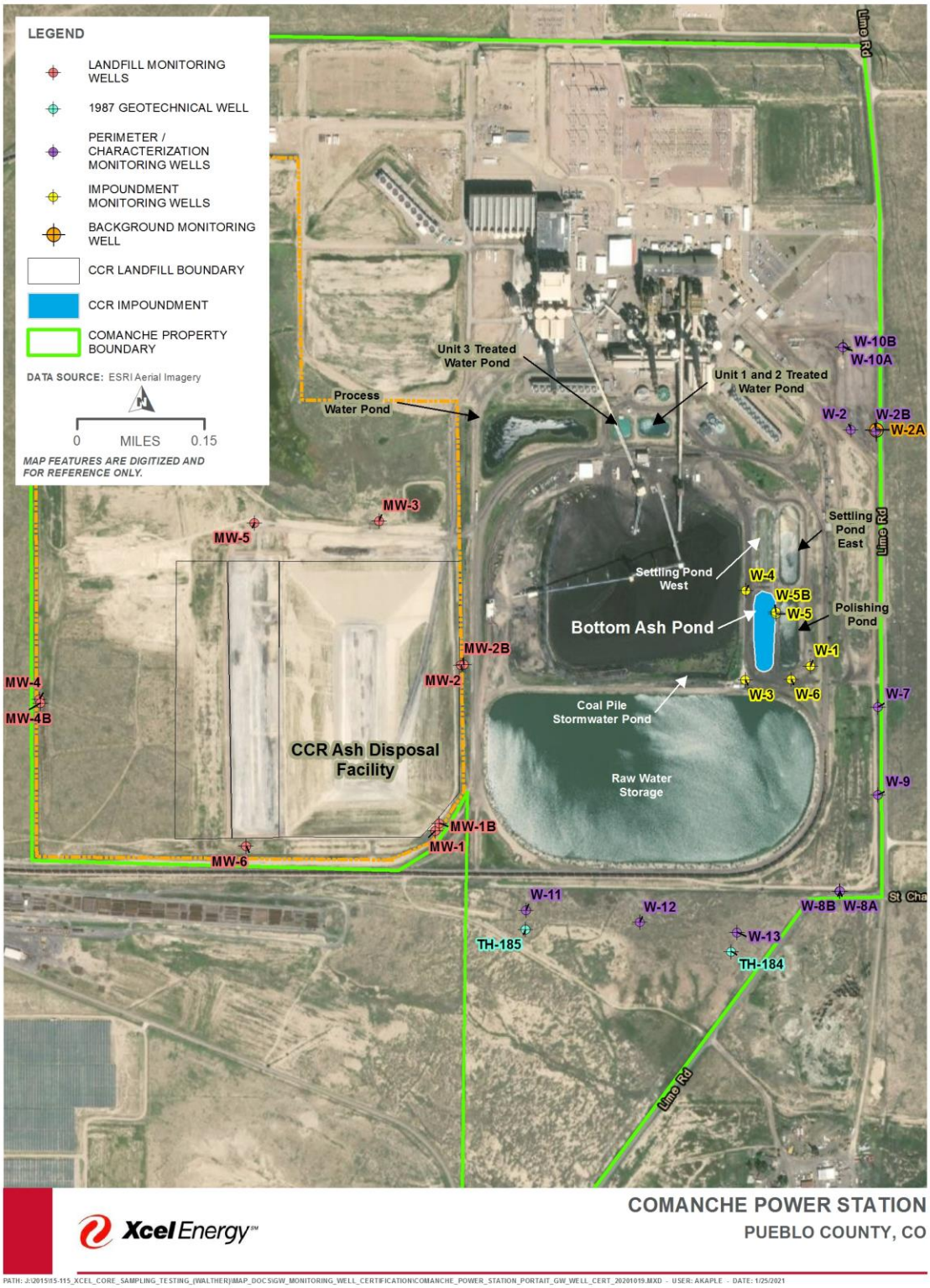


Figure 2. Comanche Station – CCR units and monitoring well location map.

3.0 Monitoring

3.1 Frequency

3.1.1 Landfill/ Ash Disposal Facility

Groundwater monitoring was conducted quarterly between fourth quarter 2015 and third quarter 2017 at wells MW-1 through MW-4. These samples were collected to represent background water quality sampling as required in the CCR Rule. However, at that time there was no water table in the colluvium under the site to determine upgradient versus downgradient wells and therefore no background water quality could be established for the site. Based upon the *No Aquifer Determination* in 2018, the groundwater monitoring program in 2018 and 2019 consisted of semi-annual water level monitoring to continue evaluating the groundwater.

Groundwater monitoring was resumed at the site in 2020. Background monitoring was conducted site-wide to establish background water quality. Eight rounds of background sampling were collected from all non-dry wells from August 2020 through December 2020 and analyzed for all Appendix III and IV constituents plus TSS (**Table 1**). Background threshold values (BTVs) will be developed in 2021 using the background water quality data for use in evaluating future monitoring data. **Table 2** provides the well identification, number of samples collected, dates samples were collected in 2020, and the CCR Rule monitoring purpose.

Table 1. Groundwater quality parameters

Appendix III Constituents	**Appendix IV Constituents**
Boron	Antimony
Calcium	Arsenic
Chloride	Barium
Fluoride	Beryllium
pH	Cadmium
Sulfate	Chromium
Total Dissolved Solids (TDS)	Cobalt
Additional Parameters	Fluoride
Total Suspended Solids (TSS)	Lead
	Lithium
	Mercury
	Molybdenum
	Selenium
	Thallium
	Radium 226 and 228 combined

Table 2. Number and dates of groundwater samples collected for each well and the required monitoring programs for the Comanche Landfill/ Ash Disposal Facility (257.90(e)(3))

Monitoring Well I.D.	Well Location[1]	Dates Monitored	CCR Rule Monitoring Purpose
MW-1	Landfill	August 27, 2020* September 9, 2020* September 24, 2020* October 8, 2020* October 20, 2020* November 4, 2020* November 19, 2020* December 3, 2020*	Background Monitoring
MW-1B	Landfill	August 27, 2020 September 9, 2020 September 24, 2020 October 8, 2020 October 20, 2020 November 4, 2020 November 19, 2020 December 3, 2020	Background Monitoring
MW-2	Landfill	August 28, 2020* September 10, 2020* September 25, 2020* October 8, 2020* October 20, 2020* November 4, 2020* November 19, 2020* December 2, 2020*	Background Monitoring
MW-2B	Landfill	August 28, 2020 September 10, 2020 September 25, 2020 October 8, 2020 October 20, 2020 November 4, 2020 November 19, 2020 December 2, 2020	Background Monitoring
MW-3	Landfill	March 4, 2020	Characterization Monitoring
		August 28, 2020 September 9, 2020 September 23, 2020 October 7, 2020 October 20, 2020 November 5, 2020 November 19, 2020 December 2, 2020	Background Monitoring
MW-4	Landfill	August 26, 2020* September 10, 2020* September 23, 2020* October 7, 2020* October 21, 2020* November 4, 2020* November 20, 2020* December 3, 2020*	Background Monitoring
MW-4B	Landfill	August 26, 2020 September 10, 2020 September 23, 2020 October 7, 2020 October 21, 2020 November 4, 2020 November 20, 2020 December 3, 2020	Background Monitoring
MW-5	Landfill	March 4, 2020	Characterization Monitoring

Table 2. Number and dates of groundwater samples collected for each well and the required monitoring programs for the Comanche Landfill/ Ash Disposal Facility (257.90(e)(3))

Monitoring Well I.D.	Well Location[1]	Dates Monitored	CCR Rule Monitoring Purpose
		August 26, 2020 September 9, 2020 September 23, 2020 October 7, 2020 October 20, 2020 November 5, 2020 November 20, 2020 December 3, 2020	Background Monitoring
MW-6	Landfill	March 5, 2020	Characterization Monitoring
		August 27, 2020 September 9, 2020 September 24, 2020 October 7, 2020 October 20, 2020 November 4, 2020 November 20, 2020 December 3, 2020	Background Monitoring

[1]Upgradient and downgradient wells cannot be designated based upon the lack of groundwater flow direction.
[2]MW-1B, MW-2B, and MW-4B were installed adjacent to MW-1, MW-2, and MW-4, respectively, in August 2020. The new wells were drilled deeper because the original wells were historically dry. The water levels of the original wells were measured if water was present, but they were not sampled.
*Well was monitored and found to be dry, no sample could be collected

3.1.2 Bottom Ash Impoundment

Groundwater monitoring was conducted quarterly between fourth quarter 2015 and third quarter 2017 at wells W-3 through W-6. These samples were collected to represent background water quality sampling as required in the CCR Rule. However, at that time there was no water table in the colluvium under the site to determine upgradient versus downgradient wells and therefore no background water quality could be established for the impoundment. Based upon the *No Aquifer Determination* in 2018, the groundwater monitoring program in 2018 and 2019 consisted of semi-annual water level monitoring to continue evaluating the groundwater.

Groundwater monitoring was resumed at the site in 2020. Background monitoring was initiated site-wide to establish background water quality. Eight rounds of background sampling were collected from all non-dry wells from August 2020 through December 2020 and analyzed for all Appendix III and IV constituents plus TSS (**Table 1**). Background threshold values (BTVs) will be developed in 2021 using the background water quality data for use in evaluating future monitoring data. provides the well identification, number of samples collected, dates samples were collected in 2020, and the CCR Rule monitoring purpose.

Table 3. Number and dates of groundwater samples collected for each well and the required monitoring programs for the Comanche Bottom Ash Impoundment (257.90(e)(3))

Monitoring Well I.D.	Well Location	Dates Monitored	CCR Rule Monitoring Purpose
W-1	Bottom Ash Pond	March 5, 2020	Characterization Monitoring
		September 4, 2020 September 10, 2020 October 15, 2020 October 29, 2020 November 11, 2020 November 25, 2020 December 11, 2020	Background Monitoring
W-2[1]	Upgradient / Background	March 24-April 13, 2020	Characterization Monitoring
		August 26, 2020* September 9, 2020* September 24, 2020* October 8, 2020* October 20, 2020* November 4, 2020* November 11, 2020 November 25, 2020	Background Monitoring
W-2A	Upgradient / Background	August 26, 2020 September 9, 2020 September 24, 2020 October 8, 2020 October 20, 2020 November 4, 2020 November 20, 2020 December 2, 2020	Background Monitoring
W-2B	Site-wide Characterization	September 10, 2020 October 15, 2020 October 29, 2020 November 4, 2020 November 20, 2020 December 11, 2020	Characterization Monitoring
W-3	Bottom Ash Pond	March 4, 2020	Characterization Monitoring
		August 27, 2020 September 9, 2020 September 25, 2020 October 7, 2020 October 20, 2020 November 4, 2020 November 20, 2020 December 5, 2020	Background Monitoring
W-4	Bottom Ash Pond	March 5, 2020	Characterization Monitoring
		August 27, 2020* September 9, 2020* September 23, 2020* October 15, 2020 October 29, 2020 November 11, 2020 November 25, 2020 December 11, 2020	Background Monitoring
W-5	Bottom Ash Pond	March 5, 2020	Characterization Monitoring

Table 3. Number and dates of groundwater samples collected for each well and the required monitoring programs for the Comanche Bottom Ash Impoundment (257.90(e)(3))

Monitoring Well I.D.	Well Location	Dates Monitored	CCR Rule Monitoring Purpose
		August 27, 2020 September 9, 2020 September 23, 2020 October 7, 2020 October 20, 2020 November 3, 2020 November 20, 2020 December 4, 2020	Background Monitoring
W-6	Bottom Ash Pond	March 4, 2020	Characterization Monitoring
		August 27, 2020 September 9, 2020 September 23, 2020 October 7, 2020 October 19, 2020 November 3, 2020 November 20, 2020 December 11, 2020	Background Monitoring
W-7	Perimeter Well	August 27, 2020 September 9, 2020 September 25, 2020 October 7, 2020 October 20, 2020 November 4, 2020 November 20, 2020 December 4, 2020	Background Monitoring
W-8A	Perimeter Well	August 27, 2020* September 9, 2020* September 25, 2020* October 7, 2020* October 20, 2020* November 4, 2020* November 20, 2020* December 4, 2020*	Background Monitoring
W-8B	Perimeter Well	August 27, 2020^ September 9, 2020^ September 25, 2020^ October 7, 2020^ October 20, 2020^ November 4, 2020^ November 20, 2020^ December 4, 2020^	Characterization Monitoring

[1]W-2A and W-2B were installed adjacent to W-2 in August 2020. The new wells were drilled deeper because the original well was historically dry. Water levels and samples were taken from W-2 when enough water was present, although multiple trips were required to obtain one sample round.

*Well was monitored and found to be dry, no sample could be collected

^Water level was monitored and continued rising/stabilizing for most events. Maximum water in well was one to two feet of water in the well. The well is considered functionally dry.

3.2 Water Levels and Sample Collection

Water levels were collected in each well prior to sample collection. Groundwater sample collection protocols follow the Groundwater Sample Collection Standard Operating Procedure (SOP) (HDR, 2015). The water samples were collected using a bladder pump or bailer, and the equipment was decontaminated between wells following protocols outlined in the Sampling SOP. Each well was purged until field parameters stabilized in accordance with the sampling SOP. In accordance with the CCR Rule, groundwater samples were not field filtered. The field parameters of turbidity, pH, and temperature were measured using a YSI Professional Plus (or

an equivalent) portable water quality instrument that was calibrated prior to use each day of sampling. The results of field measurements were recorded on a field data form, which is maintained as part of the field sampling records. For quality control, one field duplicate sample and one field equipment blank sample was collected during each sample event. Water samples were delivered under Chain of Custody to Test America in Denver, Colorado.

3.3 Analytical Testing

Groundwater samples for each type of monitoring were analyzed for the constituents of interest (COIs) shown in . Background monitoring analyses include all the parameters in Appendices III and IV of CCR Rule Part 257, plus TSS. The laboratory analyzed matrix spike/matrix spike duplicates at a rate of 5 percent, per laboratory quality control procedures.

3.4 Data Validation and Data Management

Data validation and data management tasks were performed per the Data Management and Statistical Procedures Plan for Compliance with the Coal Combustion Residuals Rule (HDR, 2019a). Data validation was conducted to eliminate data that did not meet validation criteria and designate a data qualifier for any data quality limitation discovered.

All samples and quality control (QC) were reviewed and evaluated, and no samples were rejected. Most QC analyses were within reportable limits; however, when QC was outside control limits, samples were reported as estimated. Data analyses required minimal qualifications, and all data were usable, even when qualified.

Relative percent difference (RPD) results for field duplicate analyses were generally within the control limit criterion of 20%. Outliers were identified for metals (four instances), TDS (three instances), TSS (two instances), anions (two instances), and radiochemical (two instances).

RPD results for lab duplicate analyses were generally within the control limit criterion of 20%. Outliers were identified for TSS (four instances) and fluoride (one instance). Laboratory Control Sample (LCS)/LCS duplicate recoveries were generally within control limits. Outliers were identified for Ra-228 (two instances, where recoveries were within the lab's broader control limits but below the project control limits). Matrix Spike/Duplicate (MS/MSD) recoveries were generally within control limits. Outliers were identified for anions (five instances) and metals (four instances). LCS/LCSD RPDs were all within control limits. MS/MSD RPDs were generally within control limits. Outliers were identified for calcium (one instance) and anions (one instance).

4.0 Monitoring Results

4.1 Water Levels and Groundwater Flow Direction

The water levels at monitoring wells were recorded during monitoring events and are shown in **Table 4**. Potentiometric contour maps were created for water level measurements collected from the wells in the existing monitoring network in March, August, October, and December 2020 (**Appendix A**). The groundwater flow direction in the weathered shale is generally south,

though under the landfill there is variability and flow appears to be coming from east and west and heading south. There may be some perched groundwater mounding in the colluvium under the Bottom Ash Pond in the vicinity of W-5. Water level information from the December 2020 installed wells is still being evaluated and when complete an updated potentiometric contour map will be prepared.

Table 4. Groundwater elevations measured in 2020

Well ID	TOC Elevation (ft amsl)	CCR Unit	Groundwater Elevation (ft amsl) 1/9/2020	Groundwater Elevation (ft amsl) Week of 3/3/2020	Groundwater Elevation (ft amsl) Week of 8/24/2020	Groundwater Elevation (ft amsl) Week of 9/8/2020	Groundwater Elevation (ft amsl) Week of 9/22/2020
MW-1	4806.73	Landfill	Dry	Dry	Dry	Dry	Dry
MW-1B	4807.72	Landfill	--	--	4776.55	4776.34	4776.50
MW-2	4800.45	Landfill	4788.20	4788.15	Dry	Dry	Dry
MW-2B	4801.72	Landfill	--	--	4783.27	4783.14	4783.32
MW-3	4798.45	Landfill	4789.61	4789.25	4789.80	4789.80	4789.70
MW-4	4826.47	Landfill	Dry	Dry	Dry	Dry	Dry
MW-4B	4826.41	Landfill	--	--	4787.56	4787.85	4788.10
MW-5	4806.97	Landfill	4779.77	4779.80	4779.62	4779.57	4779.62
MW-6	4823.08	Landfill	4792.35	4792.17	4791.78	4791.53	4791.65
W-3	4807.41	Bottom Ash Pond	4794.39	4795.05	4793.65	4793.66	4792.72
W-4	4812.47	Bottom Ash Pond	4798.90	4798.77	4790.54	NM	4812.47
W-5	4811.89	Bottom Ash Pond	4802.44	4802.32	4805.83	4806.61	4803.99
W-6	4807.46	Bottom Ash Pond	4797.58	4797.66	4797.64	4797.95	4797.91
W-1	4801.37	Bottom Ash Pond	4782.97	4791.08	4791.65	Not static	4790.86
W-2	4829.09	Bottom Ash Pond	4814.11	4814.41	Dry	Dry	Dry
W-2A	4827.86	Bottom Ash Pond	--	--	4800.84	4800.68	4800.88
W-2B	4827.80	Bottom Ash Pond	--	--	4771.11	Not static	4827.80
W-7	4797.54	Bottom Ash Pond	--	--	4790.35	4790.11	4790.38
W-8A	4804.26	Bottom Ash Pond	--	--	Dry	Not measured	Dry
W-8B	4804.46	Bottom Ash Pond	--	--	4747.55	Not measured	4804.46

[1]Wells MW-1B, MW-2B, MW-4B, W-2A, W-2B, W-7, W-8A, and W-8B were t installed in August 2020.
Additional wells were drilled in December 2020 and are not included herein because water levels were still stabilizing, and wells were being developed at the end of 2020.

Table 4. Groundwater elevations measured in 2020 (cont.)

Well ID	TOC Elevation (ft amsl)	CCR Unit	Groundwater Elevation (ft amsl) Week of 10/6/2020	Groundwater Elevation (ft amsl) Week of 10/19/2020	Groundwater Elevation (ft amsl) Week of 11/3/2020	Groundwater Elevation (ft amsl) Week of 11/19/2020	Groundwater Elevation (ft amsl) Week of 12/2/2020
MW-1	4806.73	Landfill	Dry	Dry	Dry	Dry	Dry
MW-1B	4807.72	Landfill	4776.45	4776.57	4776.59	4776.65	4776.40
MW-2	4800.45	Landfill	Dry	Dry	4788.13	Not measured	4788.13
MW-2B	4801.72	Landfill	4783.32	4783.50	4783.45	4783.53	4783.27
MW-3	4798.45	Landfill	4789.57	4789.67	4789.52	4789.43	4788.95
MW-4	4826.47	Landfill	Dry	Dry	Dry	Dry	Dry
MW-4B	4826.41	Landfill	4788.02	4788.67	4788.18	4788.30	4787.89
MW-5	4806.97	Landfill	4779.60	4779.72	4779.72	4779.82	4779.64
MW-6	4823.08	Landfill	4791.60	4791.66	4791.63	4791.67	4791.45
W-3	4807.41	Bottom Ash Pond	4792.29	4793.07	4793.11	4792.66	4793.88
W-4	4812.47	Bottom Ash Pond	Not static	4785.20	4785.26	4785.66	4785.28
W-5	4811.89	Bottom Ash Pond	4803.99	4805.45	4804.88	4803.51	4802.14
W-6	4807.46	Bottom Ash Pond	4797.81	4797.77	4798.00	4797.89	4797.68
W-1	4801.37	Bottom Ash Pond	4789.82	4790.83	4790.64	4791.17	4790.97
W-2	4829.09	Bottom Ash Pond	Dry	Dry	4814.14	4814.27	4813.99
W-2A	4827.86	Bottom Ash Pond	4800.84	4801.16	4800.97	4800.64	4800.78
W-2B	4827.80	Bottom Ash Pond	4786.40	4777.00	4763.14	4771.25	4771.55
W-7	4797.54	Bottom Ash Pond	4790.33	4790.59	4790.40	4790.49	4789.99
W-8A	4804.26	Bottom Ash Pond	Dry	Dry	Dry	Dry	Dry
W-8B	4804.46	Bottom Ash Pond	4747.83	4748.21	4748.33	4748.55	4749.05

4.2 Water Quality

4.2.1 Landfill/ Ash Disposal Facility

As stipulated in the CCR Rule, eight rounds of background groundwater sampling were completed between August and December 2020. Samples were analyzed for Appendix III and IV parameters, plus TSS. Laboratory reports are provided in **Appendix B**. The laboratory data from the December 2020 sample event will not be received until January 2021. Once all laboratory data from all eight events is received and validated, the data will be compiled and statistically analyzed to develop background threshold values (BTVs) for each COI.

4.2.2 Impoundment

As stipulated in the CCR Rule, eight rounds of background groundwater sampling were completed between August and December 2020. Samples were analyzed for Appendix III and IV parameters, plus TSS. Laboratory reports are provided in **Appendix B**. The laboratory data from the December 2020 sample event will not be received until January 2021. Once all laboratory data from all eight events in received and validated, the data will be compiled and statistically analyzed to develop background threshold values (BTVs) for each COI.

5.0 Summary

The following observations are based on CCR Rule compliance monitoring data collected during 2020:

Landfill/ Ash Disposal Facility

- A total of six monitoring wells are in the certified landfill monitoring network for CCR compliance: MW-1 through MW-6.
- A round of sampling was collected from all non-dry landfill wells in March 2020 for characterization and analyzed for all Appendix III and IV constituents plus TSS.
- Three wells, MW-1B, MW-2B, and MW-4B were installed in August 2020 surrounding the landfill. These wells are located adjacent to colluvial wells MW-1, MW-2, and MW-4 wells that have historically been dry and were drilled deeper in order to evaluate the presence of groundwater in the weathered bedrock. Water was present in all wells and sampled. Evaluation of groundwater elevations is in progress and upgradient and downgradient wells will be designated based upon the groundwater flow directions once confirmed.
- Eight rounds of background sampling were collected from all non-dry wells from August 2020 through December 2020 and analyzed for all Appendix III and IV constituents plus TSS. In 2021 after all laboratory reports have been received, the BTVs will be developed.
- In 2021, PSCo will continue landfill monitoring following the CCR Rule groundwater monitoring program requirements in 40 CFR 257.93-95, including detection monitoring sampling and comparison of results to BTVs.
- In 2021 the Groundwater Monitoring Network Certification will be updated to reflect the new “B” wells drilled in 2020 being added into the certified monitoring network.

Bottom Ash Ponds/Impoundment

- Four wells are in the certified monitoring network for CCR compliance of the bottom ash impoundment: W-3 through W-6.
- Existing well W-1 and W-2 are also monitored in 2020.
- A round of sampling was collected from all non-dry impoundment wells in March 2020 for characterization and analyzed for all Appendix III and IV constituents plus TSS.
- New wells W-2A, W-2B, W-7, W-8A, and W-8B were installed in August 2020.
- New wells W-5B, W-9, W-10A, W-10B, W-11, W-12, W-13 were installed in December 2020. In addition, existing wells TH-184 and TH-185 from a 1987 geotechnical study were field located south of the Raw Water Pond and were found to be dry but will continue to be monitored for water.
- Eight rounds of background sampling were collected from all non-dry wells from August 2020 through December 2020 and analyzed for all Appendix III and IV constituents plus TSS. In 2021 after all laboratory reports have been received, the BTVs will be developed.
- In 2021, PSCo will continue monitoring the wells surrounding the Bottom Ash Pond following the CCR Rule groundwater monitoring program requirements in 40 CFR 257.93-95, including detection monitoring sampling and comparison of results to BTVs.
- In 2021 the Groundwater Monitoring Network Certification will be updated to reflect the new wells drilled in 2020 that are being added into the certified monitoring network.

6.0 References

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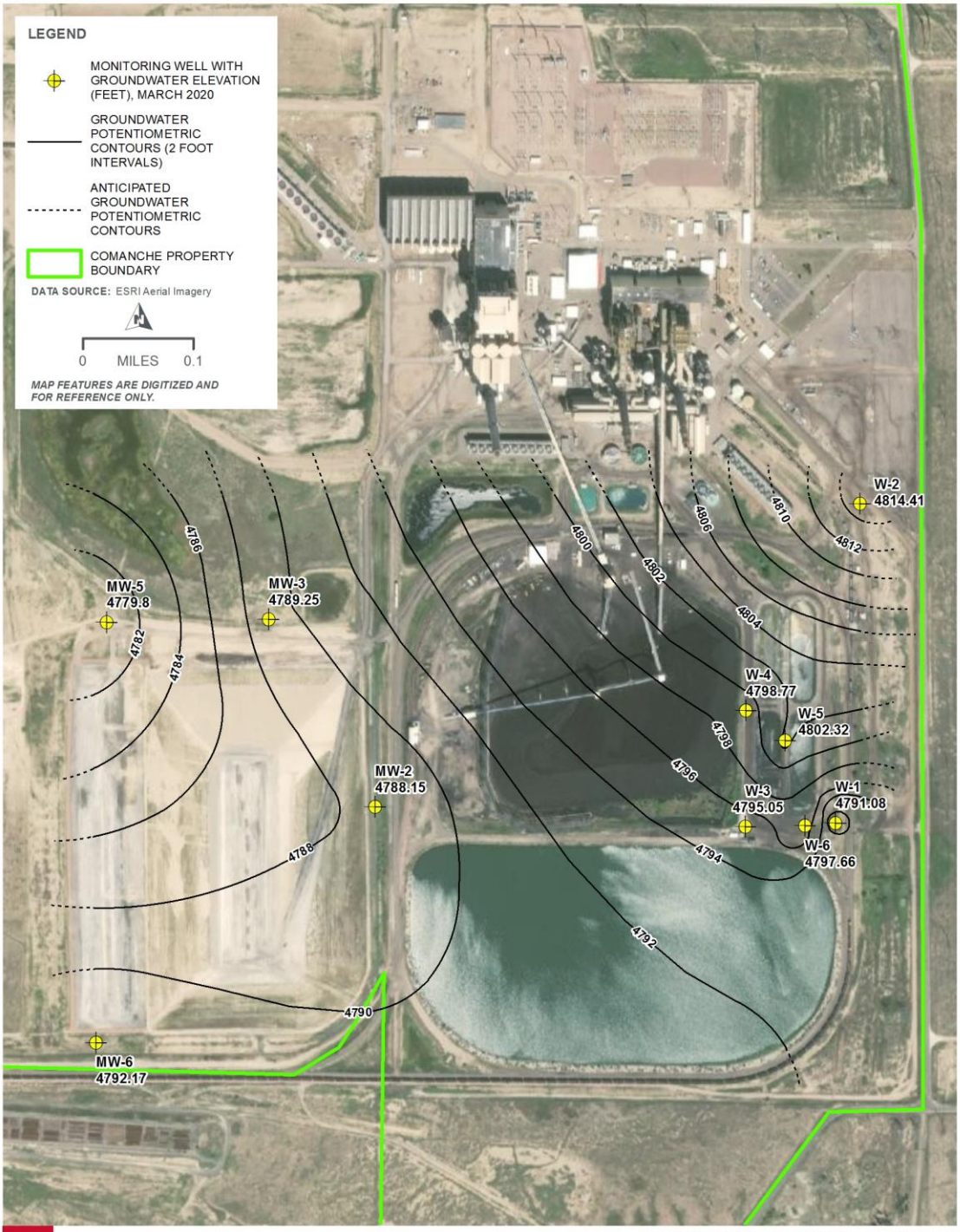
URS, 2005. Geotechnical Investigation, Unit 3, Comanche Station, Pueblo, Colorado. March 2, 2005.

Woodward-Clyde Consultants, 1987. Feasibility Investigation, Two Ash Disposal Areas for Comanche Power Station, Pueblo, Colorado. March 1987.

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Appendix A

Potentiometric Surface Maps

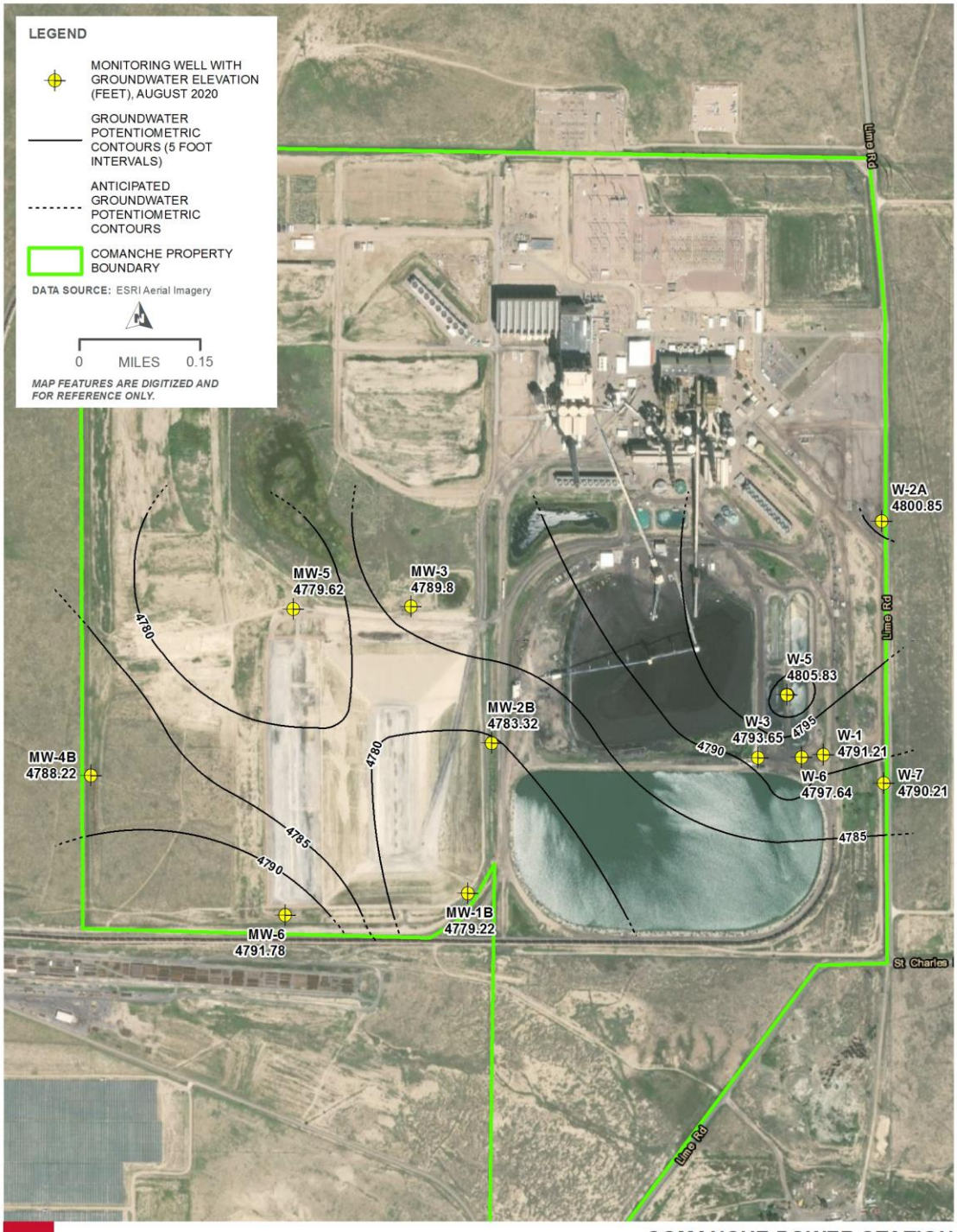


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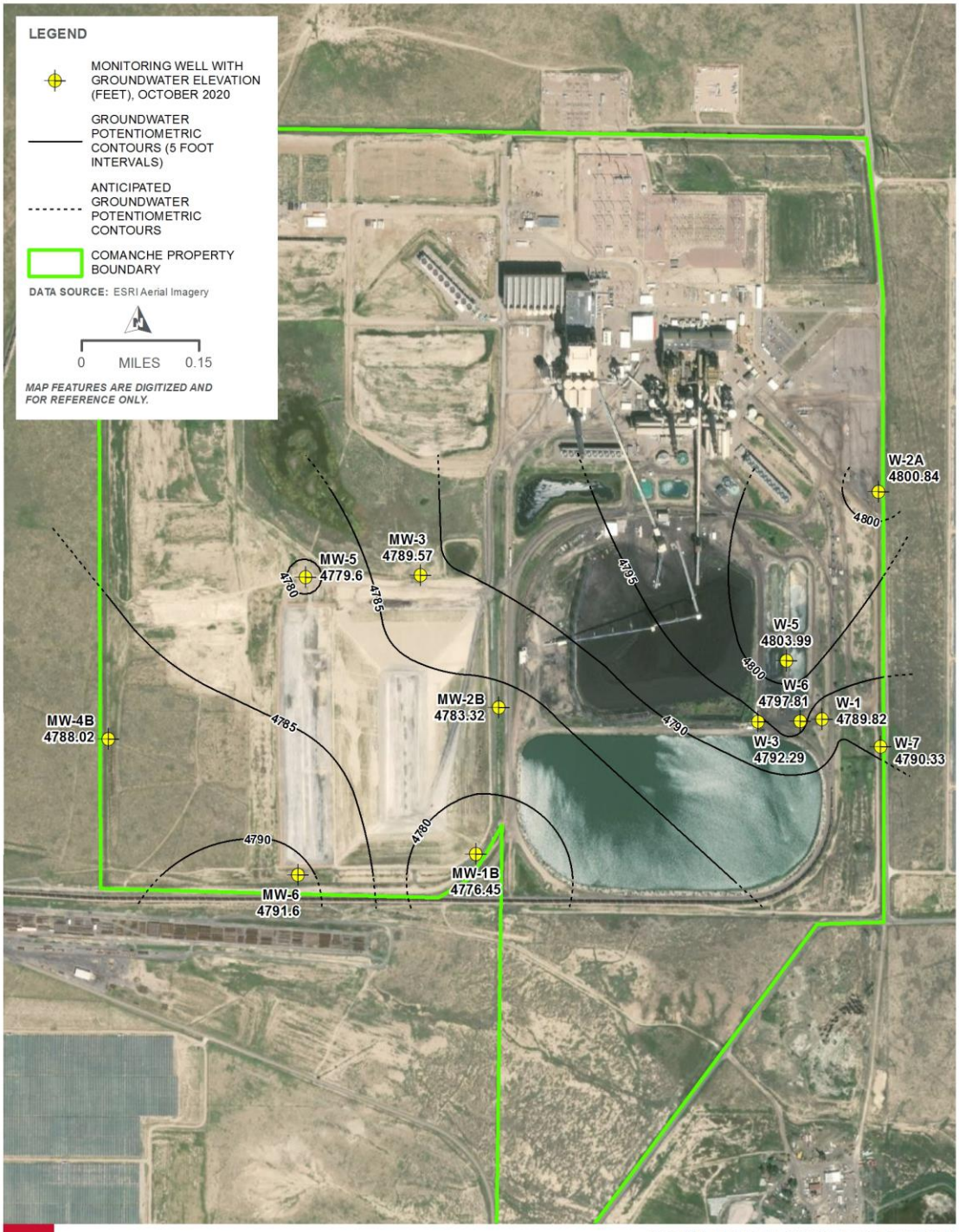


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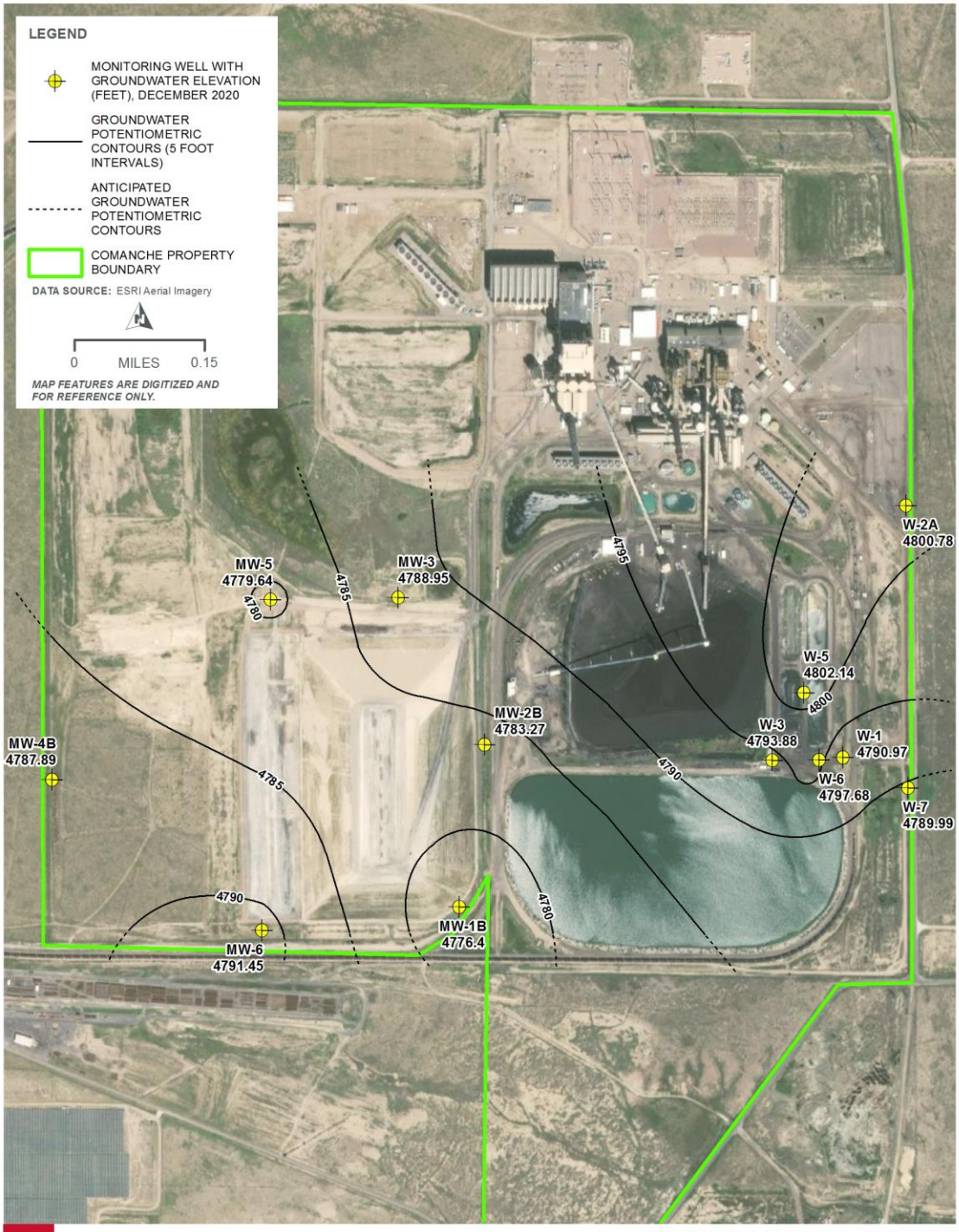


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Appendix B

Laboratory Reports

eurofins | Environment Testing TestAmerica



ANALYTICAL REPORT

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

Laboratory Job ID: 280-134343-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Darlene Bandy

Authorized for release by:
4/13/2020 12:32:39 AM

Darlene Bandy, Project Manager I
(303)736-0188
darlene.bandy@testamericainc.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
F7	MS/MSD RPD exceeds control limits. Sample size differs by <10%
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

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

Glossary

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

Job ID: 280-134343-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-134343-1

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

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

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

Revision 1 - 4/10/2020
This revision was created in order to add pH 9040B analysis for the samples requested on the chain of custody.

RECEIPT
The samples were received on 3/6/2020 8:37 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.6º C, 1.3º C and 1.3º C.

Receipt Exceptions

The requested analytes Calcium, Magnesium, Sodium, and Potassium were added to the metals lists for the following samples, per the chain of custody (COC): COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10).

The following samples were logged for Calcium, Magnesium, Sodium, and Potassium by method 6020A, per the chain of custody (COC): MW-3 (280-134343-1), MW-5 (280-134343-2), MW-6 (280-134343-3), W-3 (280-134343-4) and W-6 (280-134343-5).

The volume and analyses for samples W-1, W-4, and W-5 were listed on another COC received on 03/06/20 and were logged under SDG 280-134350-1.

TOTAL RECOVERABLE METALS
Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/13/2020 and analyzed on 03/16/2020.

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

TOTAL RECOVERABLE METALS (ICPMS)
Samples MW-3 (280-134343-1), MW-5 (280-134343-2), MW-6 (280-134343-3), W-3 (280-134343-4), W-6 (280-134343-5), COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 03/13/2020 and analyzed on 03/16/2020.

Job ID: 280-134343-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples MW-3 (280-134343-1)[100X] and MW-5 (280-134343-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Barium failed the recovery criteria low for the MSD of sample COM-SPEMSD (280-134343-7) in batch 240-426906. Barium exceeded the RPD limit. In addition, The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control.

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

TOTAL MERCURY
Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/13/2020 and analyzed on 03/16/2020.

The hot block temperature was 96 degrees C at the time samples completed digestion. The SOP specifies a range of 90-95 degrees C. The analysis of the QC in this batch shows acceptable recoveries and therefore validates the results of the associated samples. The following samples were impacted: COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9), COM-RAW (280-134343-10), (280-134343-G-6 MS) and (280-134343-G-6 MSD).

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

ALKALINITY
Samples MW-3 (280-134343-1), MW-5 (280-134343-2), MW-6 (280-134343-3), W-3 (280-134343-4), W-6 (280-134343-5), COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 03/13/2020 and 03/16/2020.

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

TOTAL DISSOLVED SOLIDS
Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 03/11/2020.

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

TOTAL SUSPENDED SOLIDS
Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 03/12/2020.

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

CORROSIVITY (PH)
Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for corrosivity (pH) in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 04/08/2020.

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

ANIONS (28 DAYS)
Samples MW-3 (280-134343-1), MW-5 (280-134343-2), MW-6 (280-134343-3), W-3 (280-134343-4), W-6 (280-134343-5), COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 03/23/2020, 03/24/2020, 03/25/2020 and 03/30/2020.

Samples MW-3 (280-134343-1)[5X], MW-3 (280-134343-1)[500X], MW-5 (280-134343-2)[10X], MW-5 (280-134343-2)[500X], MW-6

Job ID: 280-134343-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

(280-134343-3)[5X], MW-6 (280-134343-3)[50X], W-3 (280-134343-4)[20X], W-3 (280-134343-4)[5X], W-6 (280-134343-5)[5X], W-6 (280-134343-5)[500X], COM-SPW (280-134343-6)[5X], COM-SPE (280-134343-7)[5X], COM-PLP (280-134343-8)[20X] and COM-BAP (280-134343-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Chloride failed the recovery criteria high for the MSD of sample W-6 (280-134343-5) in batch 280-489538. Refer to the QC report for details. The acceptable LCS data indicate that the analytical system was operating within control. Sulfate was not reported for the MS/MSD, as the Sulfate for this sample had to be reanalyzed at a different dilution, and a sample from a different job was used as the batch MS/MSD for Sulfate.

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

RADIUM-226 (GFPC)

Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for Radium-226 (GFPC) in accordance with SW 846 9315. The samples were prepared on 03/12/2020 and analyzed on 04/03/2020.

The following sample was prepared at a reduced aliquot due to yellow discoloration: COM-SPE (280-134343-7).

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9), COM-RAW (280-134343-10), (LCS 160-464134/1-A), (MB 160-464134/19-A), (160-37526-A-5-C), (160-37526-A-5-D MS) and (160-37526-B-5-B MSD)

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

RADIUM-228

Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for Radium-228 in accordance with 9320. The samples were prepared on 03/12/2020 and analyzed on 04/01/2020.

The following sample was prepared at a reduced aliquot due to yellow discoloration: COM-SPE (280-134343-7).

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9), COM-RAW (280-134343-10), (LCS 160-464134/1-A), (MB 160-464134/19-A), (160-37526-A-5-C), (160-37526-A-5-D MS) and (160-37526-B-5-B MSD)

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

RADIUM-226/RADIUM-228 (GFPC)

Samples COM-SPW (280-134343-6), COM-SPE (280-134343-7), COM-PLP (280-134343-8), COM-BAP (280-134343-9) and COM-RAW (280-134343-10) were analyzed for Radium-226/Radium-228 (GFPC) in accordance with 9315/9320. The samples were analyzed on 04/06/2020.

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

Detection Summary

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-3 — Lab Sample ID: 280-134343-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	110		1.0	0.58	mg/L	1		6020A	Total Recoverable
Sodium	5900		100	33	mg/L	100		6020A	Total Recoverable
Potassium	52		1.0	0.22	mg/L	1		6020A	Total Recoverable
Magnesium	5300		100	20	mg/L	100		6020A	Total Recoverable
Chloride	330		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	37000		2500	520	mg/L	500		9056A	Total/NA
Alkalinity	880		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	880		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-134343-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	110		1.0	0.58	mg/L	1		6020A	Total Recoverable
Sodium	4500		10	3.3	mg/L	10		6020A	Total Recoverable
Potassium	38		1.0	0.22	mg/L	1		6020A	Total Recoverable
Magnesium	1900		1.0	0.20	mg/L	1		6020A	Total Recoverable
Chloride	1700		30	10	mg/L	10		9056A	Total/NA
Sulfate	18000		2500	520	mg/L	500		9056A	Total/NA
Alkalinity	1400		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	1400		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-134343-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	64		1.0	0.58	mg/L	1		6020A	Total Recoverable
Sodium	810		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	8.8		1.0	0.22	mg/L	1		6020A	Total Recoverable
Magnesium	330		1.0	0.20	mg/L	1		6020A	Total Recoverable
Chloride	210		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	3800		250	52	mg/L	50		9056A	Total/NA
Alkalinity	150		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	150		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-3 — Lab Sample ID: 280-134343-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Sodium	260		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	18		1.0	0.22	mg/L	1		6020A	Total Recoverable
Magnesium	250		1.0	0.20	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-3 (Continued) — Lab Sample ID: 280-134343-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	85		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	2800		100	21	mg/L	20		9056A	Total/NA
Alkalinity	250		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	250		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-134343-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	140		1.0	0.58	mg/L	1		6020A	Total Recoverable
Sodium	1800		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	10		1.0	0.22	mg/L	1		6020A	Total Recoverable
Magnesium	1000		1.0	0.20	mg/L	1		6020A	Total Recoverable
Chloride	440	F1	15	5.1	mg/L	5		9056A	Total/NA
Sulfate	18000		2500	520	mg/L	500		9056A	Total/NA
Alkalinity	730		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	730		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: COM-SPW — Lab Sample ID: 280-134343-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.19		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0022		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0021	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.15		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	110		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00025	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0019	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.014		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00042	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.041		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Sodium	62		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	5.7		1.0	0.22	mg/L	1		6020A	Total Recoverable
Manganese	0.016		0.0050	0.0021	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	24		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.72		0.50	0.17	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: COM-SPW (Continued)
Lab Sample ID: 280-134343-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	470		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	60		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	60		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	800		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	13		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SPE
Lab Sample ID: 280-134343-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.43		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0014	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0042	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.16	F1 F2	0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	160		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00020	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.030		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0021	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.066		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Sodium	140		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	11		1.0	0.22	mg/L	1		6020A	Total Recoverable
Manganese	0.016		0.0050	0.0021	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	68		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	990		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	48		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	48		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	1500		20	9.4	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	27		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-PLP
Lab Sample ID: 280-134343-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.22		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0025		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0020	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.22		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.00031	J	0.0010	0.00031	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: COM-PLP (Continued)
Lab Sample ID: 280-134343-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	100		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00046	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0039		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.014		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00069	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00042	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.036		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Sodium	56		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	5.5		1.0	0.22	mg/L	1		6020A	Total Recoverable
Manganese	0.017		0.0050	0.0021	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	8.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	24		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.79		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	370		100	21	mg/L	20		9056A	Total/NA
Alkalinity	77		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	77		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	750		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	21		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-BAP
Lab Sample ID: 280-134343-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.24		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0021		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0028	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.28		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	92		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00050	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0054		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.015		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00086	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.0094		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.031		0.0080	0.0017	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: COM-BAP (Continued) — Lab Sample ID: 280-134343-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	48		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	5.4		1.0	0.22	mg/L	1		6020A	Total Recoverable
Manganese	0.0088		0.0050	0.0021	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	19		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.78		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	320		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	94		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	94		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	610		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	21		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-RAW — Lab Sample ID: 280-134343-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.053		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	43		1.0	0.58	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0041	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0035	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.012		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Sodium	17		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	2.1		1.0	0.22	mg/L	1		6020A	Total Recoverable
Manganese	0.0052		0.0050	0.0021	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	5.6		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.38	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	88		5.0	1.0	mg/L	1		9056A	Total/NA
Alkalinity	110		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	110		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	250		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	4.8		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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

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

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

Laboratory References:

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

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-134343-1	MW-3	Water	03/04/20 15:20	03/06/20 08:37	
280-134343-2	MW-5	Water	03/04/20 14:40	03/06/20 08:37	
280-134343-3	MW-6	Water	03/05/20 11:20	03/06/20 08:37	
280-134343-4	W-3	Water	03/04/20 12:25	03/06/20 08:37	
280-134343-5	W-6	Water	03/04/20 13:45	03/06/20 08:37	
280-134343-6	COM-SPW	Water	03/05/20 15:15	03/06/20 08:37	
280-134343-7	COM-SPE	Water	03/05/20 16:00	03/06/20 08:37	
280-134343-8	COM-PLP	Water	03/05/20 16:30	03/06/20 08:37	
280-134343-9	COM-BAP	Water	03/05/20 16:50	03/06/20 08:37	
280-134343-10	COM-RAW	Water	03/05/20 17:20	03/06/20 08:37	

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

Client Sample ID: COM-SPW
Date Collected: 03/05/20 15:15
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.19		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 11:09	1

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.43		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 11:31	1

Client Sample ID: COM-PLP
Date Collected: 03/05/20 16:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.22		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 11:49	1

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.24		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 11:53	1

Client Sample ID: COM-RAW
Date Collected: 03/05/20 17:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 11:57	1

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

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:13	1
Sodium	5900		100	33	mg/L		03/13/20 14:00	03/16/20 14:52	100
Potassium	52		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 14:13	1
Magnesium	5300		100	20	mg/L		03/13/20 14:00	03/16/20 14:52	100

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:26	1
Sodium	4500		10	3.3	mg/L		03/13/20 14:00	03/16/20 14:55	10
Potassium	38		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 14:26	1
Magnesium	1900		1.0	0.20	mg/L		03/13/20 14:00	03/16/20 14:26	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	64		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:29	1

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

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	810		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 14:29	1
Potassium	8.8		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 14:29	1
Magnesium	330		1.0	0.20	mg/L		03/13/20 14:00	03/16/20 14:29	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	400		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:31	1
Sodium	260		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 14:31	1
Potassium	18		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 14:31	1
Magnesium	250		1.0	0.20	mg/L		03/13/20 14:00	03/16/20 14:31	1

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	140		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:34	1
Sodium	1800		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 14:34	1
Potassium	10		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 14:34	1
Magnesium	1000		1.0	0.20	mg/L		03/13/20 14:00	03/16/20 14:34	1

Client Sample ID: COM-SPW
Date Collected: 03/05/20 15:15
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0022		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:26	1
Arsenic	0.0021	J	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:26	1
Barium	0.15		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:26	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:26	1
Calcium	110		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:26	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:26	1
Cobalt	0.00025	J	0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:26	1
Chromium	0.0019	J	0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:26	1
Molybdenum	0.014		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:26	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:26	1
Selenium	0.011		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:26	1
Thallium	0.00042	J	0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:26	1
Lithium	0.041		0.0080	0.0017	mg/L		03/13/20 14:00	03/16/20 13:26	1
Sodium	62		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 13:26	1
Potassium	5.7		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 13:26	1
Manganese	0.016		0.0050	0.0021	mg/L		03/13/20 14:00	03/16/20 13:26	1

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0014	J	0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:28	1
Arsenic	0.0042	J	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:28	1
Barium	0.16	F1 F2	0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:28	1

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

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:28	1
Calcium	**160**		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:28	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:28	1
Cobalt	**0.00020**	**J**	0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:28	1
Chromium	ND		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:28	1
Molybdenum	**0.030**		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:28	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:28	1
Selenium	**0.0021**	**J**	0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:28	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:28	1
Lithium	**0.066**		0.0080	0.0017	mg/L		03/13/20 14:00	03/16/20 13:28	1
Sodium	**140**		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 13:28	1
Potassium	**11**		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 13:28	1
Manganese	**0.016**		0.0050	0.0021	mg/L		03/13/20 14:00	03/16/20 13:28	1

Client Sample ID: COM-PLP
Date Collected: 03/05/20 16:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0025**		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:40	1
Arsenic	**0.0020**	**J**	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:40	1
Barium	**0.22**		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:40	1
Beryllium	**0.00031**	**J**	0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:40	1
Calcium	**100**		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:40	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:40	1
Cobalt	**0.00046**	**J**	0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:40	1
Chromium	**0.0039**		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:40	1
Molybdenum	**0.014**		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:40	1
Lead	**0.00069**	**J**	0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:40	1
Selenium	**0.011**		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:40	1
Thallium	**0.00042**	**J**	0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:40	1
Lithium	**0.036**		0.0080	0.0017	mg/L		03/13/20 14:00	03/16/20 13:40	1
Sodium	**56**		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 13:40	1
Potassium	**5.5**		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 13:40	1
Manganese	**0.017**		0.0050	0.0021	mg/L		03/13/20 14:00	03/16/20 13:40	1

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0021**		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:43	1
Arsenic	**0.0028**	**J**	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:43	1
Barium	**0.28**		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:43	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:43	1
Calcium	**92**		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:43	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:43	1
Cobalt	**0.00050**	**J**	0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:43	1
Chromium	**0.0054**		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:43	1
Molybdenum	**0.015**		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:43	1
Lead	**0.00086**	**J**	0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:43	1
Selenium	**0.0094**		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:43	1

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

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:43	1
Lithium	**0.031**		0.0080	0.0017	mg/L		03/13/20 14:00	03/16/20 13:43	1
Sodium	**48**		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 13:43	1
Potassium	**5.4**		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 13:43	1
Manganese	**0.0088**		0.0050	0.0021	mg/L		03/13/20 14:00	03/16/20 13:43	1

Client Sample ID: COM-RAW
Date Collected: 03/05/20 17:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:50	1
Arsenic	ND		0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:50	1
Barium	**0.053**		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:50	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:50	1
Calcium	**43**		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:50	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:50	1
Cobalt	ND		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:50	1
Chromium	ND		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:50	1
Molybdenum	**0.0041**	**J**	0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:50	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:50	1
Selenium	**0.0035**	**J**	0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:50	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:50	1
Lithium	**0.012**		0.0080	0.0017	mg/L		03/13/20 14:00	03/16/20 15:51	1
Sodium	**17**		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 15:51	1
Potassium	**2.1**		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 13:50	1
Manganese	**0.0052**		0.0050	0.0021	mg/L		03/13/20 14:00	03/16/20 13:50	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: COM-SPW
Date Collected: 03/05/20 15:15
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:21	1

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:27	1

Client Sample ID: COM-PLP
Date Collected: 03/05/20 16:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:29	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:31	1

Client Sample ID: COM-RAW
Date Collected: 03/05/20 17:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:34	1

General Chemistry

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**330**		15	5.1	mg/L			03/23/20 19:18	5
Sulfate	**37000**		2500	520	mg/L			03/30/20 15:33	500
Alkalinity	**880**		10	3.1	mg/L			03/13/20 10:51	1
Bicarbonate Alkalinity as CaCO3	**880**		10	3.1	mg/L			03/13/20 10:51	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/13/20 10:51	1

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1700**		30	10	mg/L			03/23/20 19:53	10
Sulfate	**18000**		2500	520	mg/L			03/30/20 15:49	500
Alkalinity	**1400**		10	3.1	mg/L			03/13/20 11:04	1
Bicarbonate Alkalinity as CaCO3	**1400**		10	3.1	mg/L			03/13/20 11:04	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/13/20 11:04	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**210**		15	5.1	mg/L			03/24/20 20:48	5
Sulfate	**3800**		250	52	mg/L			03/30/20 16:05	50
Alkalinity	**150**		10	3.1	mg/L			03/13/20 11:10	1
Bicarbonate Alkalinity as CaCO3	**150**		10	3.1	mg/L			03/13/20 11:10	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/13/20 11:10	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**85**		15	5.1	mg/L			03/23/20 20:27	5
Sulfate	**2800**		100	21	mg/L			03/23/20 20:45	20
Alkalinity	**250**		10	3.1	mg/L			03/13/20 11:16	1
Bicarbonate Alkalinity as CaCO3	**250**		10	3.1	mg/L			03/13/20 11:16	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/13/20 11:16	1

General Chemistry

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**440**	**F1**	15	5.1	mg/L			03/23/20 21:02	5
Sulfate	**18000**		2500	520	mg/L			03/30/20 16:22	500
Alkalinity	**730**		10	3.1	mg/L			03/13/20 11:25	1
Bicarbonate Alkalinity as CaCO3	**730**		10	3.1	mg/L			03/13/20 11:25	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/13/20 11:25	1

Client Sample ID: COM-SPW
Date Collected: 03/05/20 15:15
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.9**	**HF**	0.1	0.1	SU			04/08/20 20:56	1
Temperature	**21.7**	**HF**	1.0	1.0	Degrees C			04/08/20 20:56	1
Chloride	**24**		3.0	1.0	mg/L			03/24/20 23:16	1
Fluoride	**0.72**		0.50	0.17	mg/L			03/24/20 23:16	1
Sulfate	**470**		25	5.2	mg/L			03/24/20 23:32	5
Alkalinity	**60**		10	3.1	mg/L			03/16/20 10:40	1
Bicarbonate Alkalinity as CaCO3	**60**		10	3.1	mg/L			03/16/20 10:40	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/16/20 10:40	1
Total Dissolved Solids (TDS)	**800**		10	4.7	mg/L			03/11/20 13:51	1
Total Suspended Solids	**13**		4.0	1.1	mg/L			03/12/20 17:25	1

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.6**	**HF**	0.1	0.1	SU			04/08/20 21:00	1
Temperature	**22.0**	**HF**	1.0	1.0	Degrees C			04/08/20 21:00	1
Chloride	**68**		15	5.1	mg/L			03/24/20 23:48	5
Fluoride	ND		2.5	0.83	mg/L			03/24/20 23:48	5
Sulfate	**990**		25	5.2	mg/L			03/24/20 23:48	5
Alkalinity	**48**		10	3.1	mg/L			03/16/20 10:57	1
Bicarbonate Alkalinity as CaCO3	**48**		10	3.1	mg/L			03/16/20 10:57	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/16/20 10:57	1
Total Dissolved Solids (TDS)	**1500**		20	9.4	mg/L			03/11/20 13:51	1
Total Suspended Solids	**27**		4.0	1.1	mg/L			03/12/20 17:25	1

Client Sample ID: COM-PLP
Date Collected: 03/05/20 16:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**8.0**	**HF**	0.1	0.1	SU			04/08/20 21:04	1
Temperature	**22.3**	**HF**	1.0	1.0	Degrees C			04/08/20 21:04	1
Chloride	**24**		3.0	1.0	mg/L			03/25/20 00:21	1
Fluoride	**0.79**		0.50	0.17	mg/L			03/25/20 00:21	1
Sulfate	**370**		100	21	mg/L			03/25/20 00:38	20
Alkalinity	**77**		10	3.1	mg/L			03/16/20 11:02	1
Bicarbonate Alkalinity as CaCO3	**77**		10	3.1	mg/L			03/16/20 11:02	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/16/20 11:02	1
Total Dissolved Solids (TDS)	**750**		10	4.7	mg/L			03/11/20 13:51	1
Total Suspended Solids	**21**		4.0	1.1	mg/L			03/12/20 17:25	1

General Chemistry

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU			04/08/20 21:07	1
Temperature	22.0	HF	1.0	1.0	Degrees C			04/08/20 21:07	1
Chloride	19		3.0	1.0	mg/L			03/24/20 21:21	1
Fluoride	0.78		0.50	0.17	mg/L			03/24/20 21:21	1
Sulfate	320		25	5.2	mg/L			03/30/20 16:38	5
Alkalinity	94		10	3.1	mg/L			03/16/20 11:07	1
Bicarbonate Alkalinity as CaCO3	94		10	3.1	mg/L			03/16/20 11:07	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/16/20 11:07	1
Total Dissolved Solids (TDS)	610		10	4.7	mg/L			03/11/20 13:51	1
Total Suspended Solids	21		4.0	1.1	mg/L			03/12/20 17:25	1

Client Sample ID: COM-RAW
Date Collected: 03/05/20 17:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU			04/08/20 21:11	1
Temperature	21.9	HF	1.0	1.0	Degrees C			04/08/20 21:11	1
Chloride	5.6		3.0	1.0	mg/L			03/25/20 01:27	1
Fluoride	0.38	J	0.50	0.17	mg/L			03/25/20 01:27	1
Sulfate	88		5.0	1.0	mg/L			03/25/20 01:27	1
Alkalinity	110		10	3.1	mg/L			03/16/20 11:13	1
Bicarbonate Alkalinity as CaCO3	110		10	3.1	mg/L			03/16/20 11:13	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/16/20 11:13	1
Total Dissolved Solids (TDS)	250		10	4.7	mg/L			03/11/20 13:51	1
Total Suspended Solids	4.8		4.0	1.1	mg/L			03/12/20 17:25	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: COM-SPW
Date Collected: 03/05/20 15:15
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0496	U	0.0851	0.0852	1.00	0.151	pCi/L	03/12/20 07:29	04/03/20 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.8*		*40 - 110*	*03/12/20 07:29*	*04/03/20 12:10*	*1*

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0308	U	0.0915	0.0916	1.00	0.228	pCi/L	03/12/20 07:29	04/03/20 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*40 - 110*	*03/12/20 07:29*	*04/03/20 12:10*	*1*

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: COM-PLP
Date Collected: 03/05/20 16:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0745	U	0.0929	0.0932	1.00	0.152	pCi/L	03/12/20 07:29	04/03/20 12:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*40 - 110*	*03/12/20 07:29*	*04/03/20 12:11*	*1*

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0403	U	0.0998	0.0999	1.00	0.186	pCi/L	03/12/20 07:29	04/03/20 12:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.1*		*40 - 110*	*03/12/20 07:29*	*04/03/20 12:11*	*1*

Client Sample ID: COM-RAW
Date Collected: 03/05/20 17:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00434	U	0.0909	0.0909	1.00	0.191	pCi/L	03/12/20 07:29	04/03/20 12:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.1*		*40 - 110*	*03/12/20 07:29*	*04/03/20 12:11*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: COM-SPW
Date Collected: 03/05/20 15:15
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.240	U	0.226	0.227	1.00	0.364	pCi/L	03/12/20 07:58	04/01/20 16:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.8*		*40 - 110*	*03/12/20 07:58*	*04/01/20 16:59*	*1*
Y Carrier	*85.6*		*40 - 110*	*03/12/20 07:58*	*04/01/20 16:59*	*1*

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.142	U	0.350	0.351	1.00	0.602	pCi/L	03/12/20 07:58	04/01/20 16:59	1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110	03/12/20 07:58	04/01/20 16:59	1
Y Carrier	85.2		40 - 110	03/12/20 07:58	04/01/20 16:59	1

Client Sample ID: COM-PLP
Date Collected: 03/05/20 16:30
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134343-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.189	U	0.235	0.236	1.00	0.390	pCi/L	03/12/20 07:58	04/01/20 17:02	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110	03/12/20 07:58	04/01/20 17:02	1
Y Carrier	83.0		40 - 110	03/12/20 07:58	04/01/20 17:02	1

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.221	U	0.215	0.216	1.00	0.348	pCi/L	03/12/20 07:58	04/01/20 17:02	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		40 - 110	03/12/20 07:58	04/01/20 17:02	1
Y Carrier	86.4		40 - 110	03/12/20 07:58	04/01/20 17:02	1

Client Sample ID: COM-RAW
Date Collected: 03/05/20 17:20
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134343-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.726**		0.323	0.330	1.00	0.465	pCi/L	03/12/20 07:58	04/01/20 17:02	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.1		40 - 110	03/12/20 07:58	04/01/20 17:02	1
Y Carrier	80.0		40 - 110	03/12/20 07:58	04/01/20 17:02	1

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

Client Sample ID: COM-SPW
Date Collected: 03/05/20 15:15
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134343-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.290	U	0.241	0.242	5.00	0.364	pCi/L		04/06/20 10:11	1

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

Client Sample ID: COM-SPE
Date Collected: 03/05/20 16:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.111	U	0.362	0.363	5.00	0.602	pCi/L		04/06/20 10:11	1

Client Sample ID: COM-PLP
Date Collected: 03/05/20 16:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.264	U	0.253	0.254	5.00	0.390	pCi/L		04/06/20 10:11	1

Client Sample ID: COM-BAP
Date Collected: 03/05/20 16:50
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.261	U	0.237	0.238	5.00	0.348	pCi/L		04/06/20 10:11	1

Client Sample ID: COM-RAW
Date Collected: 03/05/20 17:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134343-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.730**		0.336	0.342	5.00	0.465	pCi/L		04/06/20 10:12	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-426611/1-A
Matrix: Water
Analysis Batch: 426890

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 11:00	1

Lab Sample ID: LCS 240-426611/2-A
Matrix: Water
Analysis Batch: 426890

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: 280-134343-6 MS
Matrix: Water
Analysis Batch: 426890

Client Sample ID: COM-SPW
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.19		1.00	1.29		mg/L		111	75 - 125

Lab Sample ID: 280-134343-6 MSD
Matrix: Water
Analysis Batch: 426890

Client Sample ID: COM-SPW
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.19		1.00	1.32		mg/L		114	75 - 125	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-426611/1-A
Matrix: Water
Analysis Batch: 426906

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:21	1
Arsenic	ND		0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:21	1
Barium	ND		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:21	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:21	1
Calcium	ND		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:21	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:21	1
Cobalt	ND		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:21	1
Chromium	ND		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:21	1
Molybdenum	ND		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:21	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:21	1
Selenium	ND		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:21	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:21	1
Lithium	ND		0.0080	0.0017	mg/L		03/13/20 14:00	03/16/20 13:21	1
Sodium	ND		1.0	0.33	mg/L		03/13/20 14:00	03/16/20 13:21	1
Potassium	ND		1.0	0.22	mg/L		03/13/20 14:00	03/16/20 13:21	1
Magnesium	ND		1.0	0.20	mg/L		03/13/20 14:00	03/16/20 13:21	1
Manganese	ND		0.0050	0.0021	mg/L		03/13/20 14:00	03/16/20 13:21	1

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

Lab Sample ID: LCS 240-426611/3-A
Matrix: Water
Analysis Batch: 426906

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0983		mg/L		98	80 - 120
Arsenic	1.00	0.946		mg/L		95	80 - 120
Barium	1.00	1.01		mg/L		101	80 - 120
Beryllium	0.500	0.480		mg/L		96	80 - 120
Calcium	25.0	23.8		mg/L		95	80 - 120
Cadmium	0.500	0.478		mg/L		96	80 - 120
Cobalt	0.500	0.502		mg/L		100	80 - 120
Chromium	0.500	0.499		mg/L		100	80 - 120
Molybdenum	0.500	0.495		mg/L		99	80 - 120
Lead	0.500	0.493		mg/L		99	80 - 120
Selenium	1.00	0.937		mg/L		94	80 - 120
Thallium	1.00	0.922		mg/L		92	80 - 120
Lithium	0.500	0.461		mg/L		92	80 - 120
Sodium	25.0	23.9		mg/L		96	80 - 120
Potassium	25.0	23.9		mg/L		96	80 - 120
Magnesium	25.0	24.1		mg/L		96	80 - 120
Manganese	0.500	0.511		mg/L		102	80 - 120

Lab Sample ID: 280-134343-7 MS
Matrix: Water
Analysis Batch: 426906

Client Sample ID: COM-SPE
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0014	J	0.100	0.110		mg/L		108	75 - 125
Arsenic	0.0042	J	1.00	1.05		mg/L		105	75 - 125
Barium	0.16	F1 F2	1.00	1.17		mg/L		100	75 - 125
Beryllium	ND		0.500	0.510		mg/L		102	75 - 125
Calcium	160		25.0	184	4	mg/L		94	75 - 125
Cadmium	ND		0.500	0.507		mg/L		101	75 - 125
Cobalt	0.00020	J	0.500	0.555		mg/L		111	75 - 125
Chromium	ND		0.500	0.531		mg/L		106	75 - 125
Molybdenum	0.030		0.500	0.590		mg/L		112	75 - 125
Lead	ND		0.500	0.515		mg/L		103	75 - 125
Selenium	0.0021	J	1.00	1.07		mg/L		107	75 - 125
Thallium	ND		1.00	0.973		mg/L		97	75 - 125
Lithium	0.066		0.500	0.551		mg/L		97	75 - 125
Sodium	140		25.0	169	4	mg/L		96	75 - 125
Potassium	11		25.0	35.7		mg/L		99	75 - 125
Magnesium	81		25.0	105		mg/L		97	75 - 125
Manganese	0.016		0.500	0.563		mg/L		109	75 - 125

Lab Sample ID: 280-134343-7 MSD
Matrix: Water
Analysis Batch: 426906

Client Sample ID: COM-SPE
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0014	J	0.100	0.107		mg/L		106	75 - 125	2	20
Arsenic	0.0042	J	1.00	1.05		mg/L		104	75 - 125	1	20
Barium	0.16	F1 F2	1.00	0.716	F1 F7	mg/L		55	75 - 125	48	20

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

Lab Sample ID: 280-134343-7 MSD
Matrix: Water
Analysis Batch: 426906

Client Sample ID: COM-SPE
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	ND		0.500	0.507		mg/L		101	75 - 125	1	20
Calcium	160		25.0	183	4	mg/L		90	75 - 125	0	20
Cadmium	ND		0.500	0.502		mg/L		100	75 - 125	1	20
Cobalt	0.00020	J	0.500	0.551		mg/L		110	75 - 125	1	20
Chromium	ND		0.500	0.515		mg/L		103	75 - 125	3	20
Molybdenum	0.030		0.500	0.586		mg/L		111	75 - 125	1	20
Lead	ND		0.500	0.512		mg/L		102	75 - 125	1	20
Selenium	0.0021	J	1.00	1.06		mg/L		106	75 - 125	2	20
Thallium	ND		1.00	0.969		mg/L		97	75 - 125	0	20
Lithium	0.066		0.500	0.546		mg/L		96	75 - 125	1	20
Sodium	140		25.0	168	4	mg/L		94	75 - 125	0	20
Potassium	11		25.0	35.9		mg/L		100	75 - 125	0	20
Magnesium	81		25.0	105		mg/L		98	75 - 125	0	20
Manganese	0.016		0.500	0.557		mg/L		108	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-426617/1-A
Matrix: Water
Analysis Batch: 426977

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 426617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:17	1

Lab Sample ID: LCS 240-426617/2-A
Matrix: Water
Analysis Batch: 426977

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 426617

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00500	0.00513		mg/L		103	80 - 120		

Lab Sample ID: 280-134343-6 MS
Matrix: Water
Analysis Batch: 426977

Client Sample ID: COM-SPW
Prep Type: Total/NA
Prep Batch: 426617

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00100	0.00104		mg/L		104	80 - 120		

Lab Sample ID: 280-134343-6 MSD
Matrix: Water
Analysis Batch: 426977

Client Sample ID: COM-SPW
Prep Type: Total/NA
Prep Batch: 426617

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.000932		mg/L		93	80 - 120	11	20

Method: 9040B - pH

Lab Sample ID: LCS 280-491265/4
Matrix: Water
Analysis Batch: 491265

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH adj. to 25 deg C			7.00	7.0		SU		100	99 - 101		

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-489538/13
Matrix: Water
Analysis Batch: 489538

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			03/23/20 17:00	1
Sulfate	ND		5.0	1.0	mg/L			03/23/20 17:00	1

Lab Sample ID: LCS 280-489538/11
Matrix: Water
Analysis Batch: 489538

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	94.8		mg/L		95	90 - 110		
Sulfate			100	96.9		mg/L		97	90 - 110		

Lab Sample ID: LCSD 280-489538/12
Matrix: Water
Analysis Batch: 489538

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	95.0		mg/L		95	90 - 110	0	10
Sulfate			100	96.2		mg/L		96	90 - 110	1	10

Lab Sample ID: MRL 280-489538/10
Matrix: Water
Analysis Batch: 489538

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.49		mg/L		90	50 - 150		
Sulfate			5.00	4.59	J	mg/L		92	50 - 150		

Lab Sample ID: 280-134343-5 MS
Matrix: Water
Analysis Batch: 489538

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	440	F1	250	724		mg/L		112	80 - 120		

Lab Sample ID: 280-134343-5 MSD
Matrix: Water
Analysis Batch: 489538

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	440	F1	250	778	F1	mg/L		133	80 - 120	7	20

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-134343-5 DU
Matrix: Water
Analysis Batch: 489538

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	440	F1	468		mg/L		5	15

Lab Sample ID: MB 280-489673/6
Matrix: Water
Analysis Batch: 489673

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			03/24/20 13:04	1
Fluoride	ND		0.50	0.17	mg/L			03/24/20 13:04	1
Sulfate	ND		5.0	1.0	mg/L			03/24/20 13:04	1

Lab Sample ID: LCS 280-489673/4
Matrix: Water
Analysis Batch: 489673

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	97.7		mg/L		98	90 - 110
Fluoride	5.00	4.88		mg/L		98	90 - 110
Sulfate	100	95.9		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-489673/5
Matrix: Water
Analysis Batch: 489673

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.6		mg/L		99	90 - 110	1	10
Fluoride	5.00	4.95		mg/L		99	90 - 110	1	10
Sulfate	100	97.0		mg/L		97	90 - 110	1	10

Lab Sample ID: MRL 280-489673/3
Matrix: Water
Analysis Batch: 489673

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.38		mg/L		88	50 - 150
Fluoride	0.500	0.510		mg/L		102	50 - 150
Sulfate	5.00	4.60	J	mg/L		92	50 - 150

Lab Sample ID: MB 280-490276/6
Matrix: Water
Analysis Batch: 490276

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.0	mg/L			03/30/20 10:49	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-490276/4
Matrix: Water
Analysis Batch: 490276

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	96.0		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-490276/5
Matrix: Water
Analysis Batch: 490276

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100	95.9		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 280-490276/3
Matrix: Water
Analysis Batch: 490276

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.68	J	mg/L		94	50 - 150

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-488770/6
Matrix: Water
Analysis Batch: 488770

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		10	3.1	mg/L			03/13/20 10:23	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/13/20 10:23	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/13/20 10:23	1

Lab Sample ID: LCS 280-488770/4
Matrix: Water
Analysis Batch: 488770

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	207		mg/L		103	89 - 109

Lab Sample ID: LCSD 280-488770/5
Matrix: Water
Analysis Batch: 488770

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity	200	205		mg/L		103	89 - 109	1	10

Lab Sample ID: MB 280-488910/6
Matrix: Water
Analysis Batch: 488910

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		10	3.1	mg/L			03/16/20 09:41	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/16/20 09:41	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			03/16/20 09:41	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 280-488910/4
Matrix: Water
Analysis Batch: 488910

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	209		mg/L		104	89 - 109

Lab Sample ID: LCSD 280-488910/5
Matrix: Water
Analysis Batch: 488910

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity	200	205		mg/L		103	89 - 109	2	10

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-488424/1
Matrix: Water
Analysis Batch: 488424

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			03/11/20 13:51	1

Lab Sample ID: LCS 280-488424/2
Matrix: Water
Analysis Batch: 488424

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	502		mg/L		100	93 - 110

Lab Sample ID: 280-134343-6 DU
Matrix: Water
Analysis Batch: 488424

Client Sample ID: COM-SPW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	800		764		mg/L		4	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-488579/2
Matrix: Water
Analysis Batch: 488579

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			03/12/20 17:25	1

Lab Sample ID: LCS 280-488579/1
Matrix: Water
Analysis Batch: 488579

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	103		mg/L		103	79 - 114

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-463874/19-A
Matrix: Water
Analysis Batch: 466614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 463874

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.09044	U	0.124	0.124	1.00	0.208	pCi/L	03/12/20 07:29	04/03/20 12:11	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*40 - 110*	*03/12/20 07:29*	*04/03/20 12:11*	*1*

Lab Sample ID: LCS 160-463874/1-A
Matrix: Water
Analysis Batch: 466614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 463874

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	9.239		1.08	1.00	0.121	pCi/L	81	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.3*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-464134/19-A
Matrix: Water
Analysis Batch: 466282

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 464134

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.03399	U	0.225	0.225	1.00	0.412	pCi/L	03/12/20 07:58	04/01/20 17:02	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*40 - 110*	*03/12/20 07:58*	*04/01/20 17:02*	*1*
Y Carrier	*79.6*		*40 - 110*	*03/12/20 07:58*	*04/01/20 17:02*	*1*

Lab Sample ID: LCS 160-464134/1-A
Matrix: Water
Analysis Batch: 466472

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 464134

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.97	8.372		0.994	1.00	0.396	pCi/L	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.3*		*40 - 110*
Y Carrier	*83.7*		*40 - 110*

Metals

Prep Batch: 426611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-1	MW-3	Total Recoverable	Water	3005A	
280-134343-2	MW-5	Total Recoverable	Water	3005A	
280-134343-3	MW-6	Total Recoverable	Water	3005A	
280-134343-4	W-3	Total Recoverable	Water	3005A	
280-134343-5	W-6	Total Recoverable	Water	3005A	
280-134343-6	COM-SPW	Total Recoverable	Water	3005A	
280-134343-7	COM-SPE	Total Recoverable	Water	3005A	
280-134343-8	COM-PLP	Total Recoverable	Water	3005A	
280-134343-9	COM-BAP	Total Recoverable	Water	3005A	
280-134343-10	COM-RAW	Total Recoverable	Water	3005A	
MB 240-426611/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-426611/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-426611/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-134343-6 MS	COM-SPW	Total Recoverable	Water	3005A	
280-134343-6 MSD	COM-SPW	Total Recoverable	Water	3005A	
280-134343-7 MS	COM-SPE	Total Recoverable	Water	3005A	
280-134343-7 MSD	COM-SPE	Total Recoverable	Water	3005A	

Prep Batch: 426617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	7470A	
280-134343-7	COM-SPE	Total/NA	Water	7470A	
280-134343-8	COM-PLP	Total/NA	Water	7470A	
280-134343-9	COM-BAP	Total/NA	Water	7470A	
280-134343-10	COM-RAW	Total/NA	Water	7470A	
MB 240-426617/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-426617/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-134343-6 MS	COM-SPW	Total/NA	Water	7470A	
280-134343-6 MSD	COM-SPW	Total/NA	Water	7470A	

Analysis Batch: 426890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total Recoverable	Water	6010C	426611
280-134343-7	COM-SPE	Total Recoverable	Water	6010C	426611
280-134343-8	COM-PLP	Total Recoverable	Water	6010C	426611
280-134343-9	COM-BAP	Total Recoverable	Water	6010C	426611
280-134343-10	COM-RAW	Total Recoverable	Water	6010C	426611
MB 240-426611/1-A	Method Blank	Total Recoverable	Water	6010C	426611
LCS 240-426611/2-A	Lab Control Sample	Total Recoverable	Water	6010C	426611
280-134343-6 MS	COM-SPW	Total Recoverable	Water	6010C	426611
280-134343-6 MSD	COM-SPW	Total Recoverable	Water	6010C	426611

Analysis Batch: 426906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-1	MW-3	Total Recoverable	Water	6020A	426611
280-134343-1	MW-3	Total Recoverable	Water	6020A	426611
280-134343-2	MW-5	Total Recoverable	Water	6020A	426611
280-134343-2	MW-5	Total Recoverable	Water	6020A	426611
280-134343-3	MW-6	Total Recoverable	Water	6020A	426611
280-134343-4	W-3	Total Recoverable	Water	6020A	426611
280-134343-5	W-6	Total Recoverable	Water	6020A	426611

Metals (Continued)

Analysis Batch: 426906 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total Recoverable	Water	6020A	426611
280-134343-7	COM-SPE	Total Recoverable	Water	6020A	426611
280-134343-8	COM-PLP	Total Recoverable	Water	6020A	426611
280-134343-9	COM-BAP	Total Recoverable	Water	6020A	426611
280-134343-10	COM-RAW	Total Recoverable	Water	6020A	426611
280-134343-10	COM-RAW	Total Recoverable	Water	6020A	426611
MB 240-426611/1-A	Method Blank	Total Recoverable	Water	6020A	426611
LCS 240-426611/3-A	Lab Control Sample	Total Recoverable	Water	6020A	426611
280-134343-7 MS	COM-SPE	Total Recoverable	Water	6020A	426611
280-134343-7 MSD	COM-SPE	Total Recoverable	Water	6020A	426611

Analysis Batch: 426977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	7470A	426617
280-134343-7	COM-SPE	Total/NA	Water	7470A	426617
280-134343-8	COM-PLP	Total/NA	Water	7470A	426617
280-134343-9	COM-BAP	Total/NA	Water	7470A	426617
280-134343-10	COM-RAW	Total/NA	Water	7470A	426617
MB 240-426617/1-A	Method Blank	Total/NA	Water	7470A	426617
LCS 240-426617/2-A	Lab Control Sample	Total/NA	Water	7470A	426617
280-134343-6 MS	COM-SPW	Total/NA	Water	7470A	426617
280-134343-6 MSD	COM-SPW	Total/NA	Water	7470A	426617

General Chemistry

Analysis Batch: 488424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	SM 2540C	
280-134343-7	COM-SPE	Total/NA	Water	SM 2540C	
280-134343-8	COM-PLP	Total/NA	Water	SM 2540C	
280-134343-9	COM-BAP	Total/NA	Water	SM 2540C	
280-134343-10	COM-RAW	Total/NA	Water	SM 2540C	
MB 280-488424/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-488424/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-134343-6 DU	COM-SPW	Total/NA	Water	SM 2540C	

Analysis Batch: 488579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	SM 2540D	
280-134343-7	COM-SPE	Total/NA	Water	SM 2540D	
280-134343-8	COM-PLP	Total/NA	Water	SM 2540D	
280-134343-9	COM-BAP	Total/NA	Water	SM 2540D	
280-134343-10	COM-RAW	Total/NA	Water	SM 2540D	
MB 280-488579/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-488579/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 488770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-1	MW-3	Total/NA	Water	SM 2320B	
280-134343-2	MW-5	Total/NA	Water	SM 2320B	
280-134343-3	MW-6	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 488770 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-4	W-3	Total/NA	Water	SM 2320B	
280-134343-5	W-6	Total/NA	Water	SM 2320B	
MB 280-488770/6	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-488770/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-488770/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 488910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	SM 2320B	
280-134343-7	COM-SPE	Total/NA	Water	SM 2320B	
280-134343-8	COM-PLP	Total/NA	Water	SM 2320B	
280-134343-9	COM-BAP	Total/NA	Water	SM 2320B	
280-134343-10	COM-RAW	Total/NA	Water	SM 2320B	
MB 280-488910/6	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-488910/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-488910/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 489538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-1	MW-3	Total/NA	Water	9056A	
280-134343-2	MW-5	Total/NA	Water	9056A	
280-134343-4	W-3	Total/NA	Water	9056A	
280-134343-4	W-3	Total/NA	Water	9056A	
280-134343-5	W-6	Total/NA	Water	9056A	
MB 280-489538/13	Method Blank	Total/NA	Water	9056A	
LCS 280-489538/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-489538/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-489538/10	Lab Control Sample	Total/NA	Water	9056A	
280-134343-5 MS	W-6	Total/NA	Water	9056A	
280-134343-5 MSD	W-6	Total/NA	Water	9056A	
280-134343-5 DU	W-6	Total/NA	Water	9056A	

Analysis Batch: 489673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-3	MW-6	Total/NA	Water	9056A	
280-134343-6	COM-SPW	Total/NA	Water	9056A	
280-134343-6	COM-SPW	Total/NA	Water	9056A	
280-134343-7	COM-SPE	Total/NA	Water	9056A	
280-134343-8	COM-PLP	Total/NA	Water	9056A	
280-134343-8	COM-PLP	Total/NA	Water	9056A	
280-134343-9	COM-BAP	Total/NA	Water	9056A	
280-134343-10	COM-RAW	Total/NA	Water	9056A	
MB 280-489673/6	Method Blank	Total/NA	Water	9056A	
LCS 280-489673/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-489673/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-489673/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 490276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-1	MW-3	Total/NA	Water	9056A	
280-134343-2	MW-5	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 490276 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-3	MW-6	Total/NA	Water	9056A	
280-134343-5	W-6	Total/NA	Water	9056A	
280-134343-9	COM-BAP	Total/NA	Water	9056A	
MB 280-490276/6	Method Blank	Total/NA	Water	9056A	
LCS 280-490276/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-490276/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-490276/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 491265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	9040B	
280-134343-7	COM-SPE	Total/NA	Water	9040B	
280-134343-8	COM-PLP	Total/NA	Water	9040B	
280-134343-9	COM-BAP	Total/NA	Water	9040B	
280-134343-10	COM-RAW	Total/NA	Water	9040B	
LCS 280-491265/4	Lab Control Sample	Total/NA	Water	9040B	

Rad

Prep Batch: 463874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	PrecSep-21	
280-134343-7	COM-SPE	Total/NA	Water	PrecSep-21	
280-134343-8	COM-PLP	Total/NA	Water	PrecSep-21	
280-134343-9	COM-BAP	Total/NA	Water	PrecSep-21	
280-134343-10	COM-RAW	Total/NA	Water	PrecSep-21	
MB 160-463874/19-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-463874/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 464134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134343-6	COM-SPW	Total/NA	Water	PrecSep_0	
280-134343-7	COM-SPE	Total/NA	Water	PrecSep_0	
280-134343-8	COM-PLP	Total/NA	Water	PrecSep_0	
280-134343-9	COM-BAP	Total/NA	Water	PrecSep_0	
280-134343-10	COM-RAW	Total/NA	Water	PrecSep_0	
MB 160-464134/19-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-464134/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-3
Lab Sample ID: 280-134343-1
Date Collected: 03/04/20 15:20
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:13	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		100			426906	03/16/20 14:52	DSH	TAL CAN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489538	03/23/20 19:18	CCJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	490276	03/30/20 15:33	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488770	03/13/20 10:51	SPG	TAL DEN

Client Sample ID: MW-5
Lab Sample ID: 280-134343-2
Date Collected: 03/04/20 14:40
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:26	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			426906	03/16/20 14:55	DSH	TAL CAN
Total/NA	Analysis	9056A		10	5 mL	5 mL	489538	03/23/20 19:53	CCJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	490276	03/30/20 15:49	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488770	03/13/20 11:04	SPG	TAL DEN

Client Sample ID: MW-6
Lab Sample ID: 280-134343-3
Date Collected: 03/05/20 11:20
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:29	DSH	TAL CAN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489673	03/24/20 20:48	JAP	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	490276	03/30/20 16:05	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488770	03/13/20 11:10	SPG	TAL DEN

Client Sample ID: W-3
Lab Sample ID: 280-134343-4
Date Collected: 03/04/20 12:25
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:31	DSH	TAL CAN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489538	03/23/20 20:27	CCJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	489538	03/23/20 20:45	CCJ	TAL DEN
Total/NA	Analysis	SM 2320B		1			488770	03/13/20 11:16	SPG	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-6
Lab Sample ID: 280-134343-5
Date Collected: 03/04/20 13:45
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:34	DSH	TAL CAN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489538	03/23/20 21:02	CCJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	490276	03/30/20 16:22	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488770	03/13/20 11:25	SPG	TAL DEN

Client Sample ID: COM-SPW
Lab Sample ID: 280-134343-6
Date Collected: 03/05/20 15:15
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 11:09	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:26	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:21	SLD	TAL CAN
Total/NA	Analysis	9040B		1			491265	04/08/20 20:56	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	489673	03/24/20 23:16	JAP	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489673	03/24/20 23:32	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488910	03/16/20 10:40	SPG	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	488424	03/11/20 13:51	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488579	03/12/20 17:25	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			999.79 mL	1.0 g	463874	03/12/20 07:29	MNH	TAL SL
Total/NA	Analysis	9315		1			466614	04/03/20 12:10	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			999.79 mL	1.0 g	464134	03/12/20 07:58	MNH	TAL SL
Total/NA	Analysis	9320		1			466472	04/01/20 16:59	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			466727	04/06/20 10:11	SMP	TAL SL

Client Sample ID: COM-SPE
Lab Sample ID: 280-134343-7
Date Collected: 03/05/20 16:00
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 11:31	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:28	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:27	SLD	TAL CAN
Total/NA	Analysis	9040B		1			491265	04/08/20 21:00	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489673	03/24/20 23:48	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488910	03/16/20 10:57	SPG	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: COM-SPE
Lab Sample ID: 280-134343-7
Date Collected: 03/05/20 16:00
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	488424	03/11/20 13:51	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488579	03/12/20 17:25	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			750.34 mL	1.0 g	463874	03/12/20 07:29	MNH	TAL SL
Total/NA	Analysis	9315		1			466614	04/03/20 12:10	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			750.34 mL	1.0 g	464134	03/12/20 07:58	MNH	TAL SL
Total/NA	Analysis	9320		1			466472	04/01/20 16:59	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			466727	04/06/20 10:11	SMP	TAL SL

Client Sample ID: COM-PLP
Lab Sample ID: 280-134343-8
Date Collected: 03/05/20 16:30
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 11:49	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:40	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:29	SLD	TAL CAN
Total/NA	Analysis	9040B		1			491265	04/08/20 21:04	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	489673	03/25/20 00:21	JAP	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	489673	03/25/20 00:38	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488910	03/16/20 11:02	SPG	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	488424	03/11/20 13:51	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488579	03/12/20 17:25	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			999.98 mL	1.0 g	463874	03/12/20 07:29	MNH	TAL SL
Total/NA	Analysis	9315		1			466614	04/03/20 12:11	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			999.98 mL	1.0 g	464134	03/12/20 07:58	MNH	TAL SL
Total/NA	Analysis	9320		1			466282	04/01/20 17:02	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			466727	04/06/20 10:11	SMP	TAL SL

Client Sample ID: COM-BAP
Lab Sample ID: 280-134343-9
Date Collected: 03/05/20 16:50
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 11:53	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:43	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:31	SLD	TAL CAN
Total/NA	Analysis	9040B		1			491265	04/08/20 21:07	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	489673	03/24/20 21:21	JAP	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: COM-BAP
Lab Sample ID: 280-134343-9
Date Collected: 03/05/20 16:50
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	490276	03/30/20 16:38	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488910	03/16/20 11:07	SPG	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	488424	03/11/20 13:51	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488579	03/12/20 17:25	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			999.48 mL	1.0 g	463874	03/12/20 07:29	MNH	TAL SL
Total/NA	Analysis	9315		1			466614	04/03/20 12:11	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			999.48 mL	1.0 g	464134	03/12/20 07:58	MNH	TAL SL
Total/NA	Analysis	9320		1			466282	04/01/20 17:02	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			466727	04/06/20 10:11	SMP	TAL SL

Client Sample ID: COM-RAW
Lab Sample ID: 280-134343-10
Date Collected: 03/05/20 17:20
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 11:57	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:50	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 15:51	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:34	SLD	TAL CAN
Total/NA	Analysis	9040B		1			491265	04/08/20 21:11	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	489673	03/25/20 01:27	JAP	TAL DEN
Total/NA	Analysis	SM 2320B		1			488910	03/16/20 11:13	SPG	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	488424	03/11/20 13:51	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488579	03/12/20 17:25	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			999.24 mL	1.0 g	463874	03/12/20 07:29	MNH	TAL SL
Total/NA	Analysis	9315		1			466614	04/03/20 12:11	CJQ	TAL SL
Total/NA	Prep	PrecSep_0			999.24 mL	1.0 g	464134	03/12/20 07:58	MNH	TAL SL
Total/NA	Analysis	9320		1			466282	04/01/20 17:02	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			466727	04/06/20 10:12	SMP	TAL SL

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Emily Miller	Lab PM: Darlene Bandy	Carrier Tracking No(s):	COC No: 280-66598-22539.1
Client Contact: ~~Anna Lundin~~ Molly Reaves	Phone: 720 273 3136	E-Mail: Darlene.bandy@testamericainc.com		Page: Page 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days):			
State, Zip: CO, 80112				
Phone: ~~907-644-3075(Tel)~~ 731 263 7138	PO #: DEN-001			
Email: molly.reaves ~~anna.lundin~~@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			Other:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sediment, Solid, Oil/Waste, Air=Tissue, Air=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C, 6020A, 7470A	9040B, 9056A_28D	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Anions_Suite Chloride, Carbonate	Metals_Ca, Mg, Na, K	Alkalinity + Alk and Calcs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	U	N	N	D	X	D	X		
~~MW-1~~ MW-3	03/04/20	1520	G	Water	N	N						X	X	X	3	
~~MW-2~~ MW-5	03/04/20	1440	G	Water	N	N						X	X	X	3	
~~MW-3~~ MW-6	03/05/20	1120	G	Water	N	N						X	X	X	3	
~~MW-4~~ W-1	03/05/20	1400	G	Water	N	N						X	X	X	3	Insufficient volume. Use extra or copy results from other chain
~~MW-5~~ W-3	03/04/20	1225	G	Water	N	N						X	X	X	3	
~~MW-6~~ W-4	03/05/20	1440	G	Water	N	N						X	X	X	3	Insufficient volume. Contact Molly for direction.
~~MW-7~~ W-5	03/05/20	1240	G	Water	N	N						X	X	X	3	Insufficient volume. Use extra or copy results from other chain
~~MW-8~~ W-6	03/04/20	1345	G	Water	N	N						X	X	X	3	
~~MW-9~~ COM-SPW	03/05/20	1515	G	Water	N	N	1	2	1	1	2	X	X	X	3	
~~MW-10~~ COM-SPE	03/05/20	1600	G	Water	N	N	1	2	1	1	2	X	X	X	3	
~~Field Duplicate~~ COM-PLP	03/05/20	1630	G	Water	N	N	1	2	1	1	2	X	X	X	3	

280-134343 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 03/06/20 0837	Company: HDR	Received by:	Date/Time: 03/06/2020 0837	Company: ETA DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: -0.3, 0.4, 0.4, 0.9, 1.4, 5.8, 3/6/20

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Emily Mutter	Lab PM: ~~Rollmeyer, Stephanie K~~ Darlene Bordy	Carrier Tracking No(s):	COC No: 280-66598-22539.2
Client Contact: ~~Anna Jordan~~ Molly Reeves	Phone: 720 273 3136	E-Mail: ~~stephanie.rollmeyer@testamericainc.com~~ darlene.bordy		Page: Page 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd. Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days):			
State, Zip: CO, 80112				
Phone: ~~907-644-2070(Tel)~~ 784 263 7138	PO #: DEN-001			
Email: molly.reeves ~~anna.jordan~~@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C, 6020A, 7470A	9040B, 9056A_28D	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Anions, Sulfate, Chloride, Calcium	Metals: Boron, Lithium, K	Alkalinity as CaCO3	Total Number of containers	Special Instructions/Note:
	Preservation Code:				X	X	N	D	N	N	D				X	
~~Equipment Blank~~	03/05/20	1650	G	Water	N	N	1	2	1	1	2	X	X	X	5	
COM-BAP	03/05/20	1650	G	Water	N	N	1	2	1	1	2	X	X	X	5	
COM-RAW	03/05/20	1720	G	Water	N	N	1	2	1	1	2	X	X	X	5	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 03/06/20 0537	Company: HDR	Received by:	Date/Time: 03/06/2020 0837	Company: ETA DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-517357.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-134343-1
Address: 13715 Rider Trail North,	Due Date Requested: 4/1/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCl, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	280-134343 Chain of Custody	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
COM-SPW (280-134343-6)	3/5/20	16:15 Mountain		Water			X	X	X		3	
COM-SPE (280-134343-7)	3/5/20	16:00 Mountain		Water			X	X	X		2	
COM-PLP (280-134343-8)	3/5/20	16:30 Mountain		Water			X	X	X		2	
COM-BAP (280-134343-9)	3/5/20	16:50 Mountain		Water			X	X	X		2	
COM-RAW (280-134343-10)	3/5/20	17:20 Mountain		Water			X	X	X		2	

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

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	3/9/2020 1440		FE		
Relinquished by: FE	Date/Time:	Company	Received by:	Date/Time: 3/11/2020 1035	Company ETA STL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-617356.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-134343-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 3/30/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 13 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-3 (280-134343-1)	3/4/20	15:20 Mountain		Water			X			1	Use Collision Cell
MW-5 (280-134343-2)	3/4/20	14:40 Mountain		Water			X			1	Use Collision Cell
MW-6 (280-134343-3)	3/5/20	11:20 Mountain		Water			X			1	Use Collision Cell
W-3 (280-134343-4)	3/4/20	12:25 Mountain		Water			X			1	Use Collision Cell
W-6 (280-134343-5)	3/4/20	13:45 Mountain		Water			X			1	Use Collision Cell
COM-SPW (280-134343-6)	3/5/20	15:15 Mountain		Water			X	X	X	3	Use Collision Cell
COM-SPE (280-134343-7)	3/5/20	16:00 Mountain		Water			X	X	X	2	Use Collision Cell
COM-PLP (280-134343-8)	3/5/20	16:30 Mountain		Water			X	X	X	2	Use Collision Cell
COM-BAP (280-134343-9)	3/5/20	16:50 Mountain		Water			X	X	X	2	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
J. Bowman	3-9-2020 1405			3/12/20	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-517356.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-134343-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 3/30/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 13 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
COM RAW (280-134343-10)	3/5/20	17:20 Mountain		Water			X	X	X	2	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
J. Barron	3-9-2020 1405		Matthew Zak	3/12/20 9:35	PTS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 280-134345

Client ETA Denver Site Name

Cooler Received on 3/12/20 Opened on 3/12/20

Cooler unpacked by: Mitch Lee b

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time ET 30 MRC Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 3.5 °C Corrected Cooler Temp. 4.2 °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No MRL 3/12/20
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No MRL 3/12/20
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC995364
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
16. Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-134343-1

Login Number: 134343
List Number: 1
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver

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

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-134343-1

Login Number: 134343
List Number: 2
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis
List Creation: 03/11/20 12:59 PM

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

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-134343-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)
280-134343-6	COM-SPW	91.8
280-134343-7	COM-SPE	82.1
280-134343-8	COM-PLP	90.9
280-134343-9	COM-BAP	88.1
280-134343-10	COM-RAW	81.1
LCS 160-463874/1-A	Lab Control Sample	94.3
MB 160-463874/19-A	Method Blank	85.8

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	Y Carrier (40-110)
280-134343-6	COM-SPW	91.8	85.6
280-134343-7	COM-SPE	82.1	85.2
280-134343-8	COM-PLP	90.9	83.0
280-134343-9	COM-BAP	88.1	86.4
280-134343-10	COM-RAW	81.1	80.0
LCS 160-464134/1-A	Lab Control Sample	94.3	83.7
MB 160-464134/19-A	Method Blank	85.8	79.6

Tracer/Carrier Legend

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-134350-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Darlene Bandy

Authorized for release by:
4/14/2020 10:40:02 AM

Darlene Bandy, Project Manager I
(303)736-0188
darlene.bandy@testamericainc.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

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

Glossary

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

Job ID: 280-134350-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-134350-1

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

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

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

RECEIPT

The samples were received on 3/6/2020 8:37 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.6º C, 0.7º C and 1.2º C.

Receipt Exceptions

The following samples were received with containers not completely filled with volume: W-4 (280-134350-7) and W-5 (280-134350-8).
W-4: 1 x 1L unpreserved plastic container filled with ~650mL of volume.
W-5: 1 of 2 x 1L unpreserved plastic container filled with ~500mL of volume.
Per client discussion on 03/09/20, sufficient volume is available for all requested analyses except for Radium analysis on sample W-4 (280-134350-7). The client indicated they will recollect volume for Radium analysis at a later date.

Limited volume was submitted for sample W-1 (280-134350-10) for all tests listed on the COC. Per client discussion on 03/09/20, they will recollect volume for Radium analysis at a later date. Therefore, Radium analysis was not logged on sample W-1 (280-134350-10).

TOTAL RECOVERABLE METALS

Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-4 (280-134350-7), W-5 (280-134350-8), W-6 (280-134350-9) and W-1 (280-134350-10) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/13/2020 and 03/16/2020 and analyzed on 03/16/2020 and 03/17/2020.

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

TOTAL RECOVERABLE METALS (ICPMS)

Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-4 (280-134350-7), W-5 (280-134350-8), W-6 (280-134350-9) and W-1 (280-134350-10) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 03/13/2020 and 03/17/2020 and analyzed on 03/16/2020, 03/17/2020 and 03/18/2020.

It appears that Calcium needs to be added as an analyte.

Samples MW-3 (280-134350-1)[5X], MW-5 (280-134350-2)[5X] and W-1 (280-134350-10)[10X] required dilution prior to analysis. The

Job ID: 280-134350-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

reporting limits have been adjusted accordingly.

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

TOTAL MERCURY
Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-4 (280-134350-7), W-5 (280-134350-8), W-6 (280-134350-9) and W-1 (280-134350-10) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/13/2020 and 03/16/2020 and analyzed on 03/16/2020.

The hot block temperature was 96 degrees C at the time samples completed digestion. The SOP specifies a range of 90-95 degrees C. The analysis of the QC in this batch shows acceptable recoveries and therefore validates the results of the associated samples. The following samples were impacted: MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-6 (280-134350-9) and W-1 (280-134350-10).

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

TOTAL DISSOLVED SOLIDS
Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-4 (280-134350-7), W-5 (280-134350-8), W-6 (280-134350-9) and W-1 (280-134350-10) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 03/11/2020.

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

TOTAL SUSPENDED SOLIDS
Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-4 (280-134350-7), W-5 (280-134350-8), W-6 (280-134350-9) and W-1 (280-134350-10) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 03/10/2020.

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

CORROSIVITY (PH)
Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-4 (280-134350-7), W-5 (280-134350-8), W-6 (280-134350-9) and W-1 (280-134350-10) were analyzed for corrosivity (pH) in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 03/09/2020 and 03/10/2020.

Sample pH did not equilibrate to 0.05 pH units after 3 measurements for the following sample: W-3EB (280-134350-6). This was observed in a previous analysis thus the sample was not rerun.

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

ANIONS (28 DAYS)
Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-4 (280-134350-7), W-5 (280-134350-8), W-6 (280-134350-9) and W-1 (280-134350-10) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 03/24/2020, 03/26/2020, 03/30/2020 and 03/31/2020.

Samples MW-3 (280-134350-1)[5X], MW-3 (280-134350-1)[500X], MW-5 (280-134350-2)[10X], MW-5 (280-134350-2)[200X], MW-6 (280-134350-3)[5X], MW-6 (280-134350-3)[50X], W-3 (280-134350-4)[20X], W-3 (280-134350-4)[5X], W-3D (280-134350-5)[20X], W-3D (280-134350-5)[5X], W-4 (280-134350-7)[5X], W-4 (280-134350-7)[500X], W-5 (280-134350-8)[5X], W-5 (280-134350-8)[500X], W-6 (280-134350-9)[100X], W-6 (280-134350-9)[5X], W-1 (280-134350-10)[5X] and W-1 (280-134350-10)[500X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Chloride and Fluoride failed the recovery criteria low for the MS of sample MW-5 (280-134350-2) in batch 280-490276. Several analytes failed the recovery criteria low for the MSD of sample MW-5MSD (280-134350-2) in batch 280-490276. Refer to the QC report for details.

Job ID: 280-134350-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

RADIUM-226 (GFPC)

Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-5 (280-134350-8) and W-6 (280-134350-9) were analyzed for Radium-226 (GFPC) in accordance with SW 846 9315. The samples were prepared on 03/12/2020 and analyzed on 04/06/2020.

The following samples were prepared at a reduced aliquot due to yellow-orange discoloration: MW-3 (280-134350-1), MW-5 (280-134350-2), W-5 (280-134350-8) and W-6 (280-134350-9).

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-5 (280-134350-8), W-6 (280-134350-9), (LCS 160-464153/1-A), (MB 160-464153/21-A).

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

RADIUM-228

Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-5 (280-134350-8) and W-6 (280-134350-9) were analyzed for Radium-228 in accordance with 9320. The samples were prepared on 03/12/2020 and analyzed on 04/02/2020.

The following samples were prepared at a reduced aliquot due to yellow-orange discoloration: MW-3 (280-134350-1), MW-5 (280-134350-2), W-5 (280-134350-8) and W-6 (280-134350-9).

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-5 (280-134350-8), W-6 (280-134350-9), (LCS 160-464153/1-A), (MB 160-464153/21-A).

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

RADIUM-226/RADIUM-228 (GFPC)

Samples MW-3 (280-134350-1), MW-5 (280-134350-2), MW-6 (280-134350-3), W-3 (280-134350-4), W-3D (280-134350-5), W-3EB (280-134350-6), W-5 (280-134350-8) and W-6 (280-134350-9) were analyzed for Radium-226/Radium-228 (GFPC) in accordance with 9315/9320. The samples were analyzed on 04/09/2020.

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

Detection Summary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-3 — Lab Sample ID: 280-134350-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.9		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0082		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.012		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Cadmium	0.0046		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Calcium	72		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0021		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.032		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.00082	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	2.1		0.040	0.0083	mg/L	5		6020A	Total Recoverable
Molybdenum	0.0028	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.62		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0026		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	320		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	39000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	51000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	18		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-134350-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.9		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0016	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0047	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.032		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Cadmium	0.00041	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Calcium	180		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0056		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.0058		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lithium	3.0		0.040	0.0083	mg/L	5		6020A	Total Recoverable
Molybdenum	0.014		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.19		0.0050	0.00089	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued)
Lab Sample ID: 280-134350-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.00062	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1500	F1	30	10	mg/L	10		9056A	Total/NA
Sulfate	19000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	31000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	21		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6
Lab Sample ID: 280-134350-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0079		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0062		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	78		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.00099	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.00033	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lithium	0.20		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0094	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.93		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	200		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	3800		250	52	mg/L	50		9056A	Total/NA
Total Dissolved Solids (TDS)	6500		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	3.2	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3
Lab Sample ID: 280-134350-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.030		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	180		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0029		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.00040	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.00046	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	0.15		0.0080	0.0017	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-3 (Continued) — Lab Sample ID: 280-134350-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.024		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.044		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	90		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	2400		100	21	mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	4200		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	8.0		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3D — Lab Sample ID: 280-134350-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0013	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.031		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	310		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0030		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.00042	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.00058	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	0.15		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Molybdenum	0.024		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.045		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	91		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	2400		100	21	mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	4000		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	10		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3EB — Lab Sample ID: 280-134350-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Dissolved Solids (TDS)	1200		10	4.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: W-4 — Lab Sample ID: 280-134350-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.8		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00063	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-4 (Continued)
Lab Sample ID: 280-134350-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0021	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.034		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Cadmium	0.00022	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Calcium	110		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0024		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.023		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.0015		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	1.1		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Molybdenum	0.073		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0027	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00041	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	23.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	420		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	4.7		2.5	0.83	mg/L	5		9056A	Total/NA
Fluoride	4.7		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	24000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	39000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	67		10	2.8	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5
Lab Sample ID: 280-134350-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0023		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0029	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.023		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Cadmium	0.00030	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Calcium	98		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0027		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.019		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.00064	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	0.75		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Molybdenum	0.063		0.010	0.0011	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-5 (Continued) — Lab Sample ID: 280-134350-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.020		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	770		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	6.7		2.5	0.83	mg/L	5		9056A	Total/NA
Fluoride	6.7		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	23000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	34000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	17		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-134350-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	7.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0012	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0033	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.053		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Cadmium	0.0015		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Calcium	240		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0040		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.0043		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.0021		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	0.43		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Molybdenum	0.19		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.043		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00047	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	320		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	5.6		2.5	0.83	mg/L	5		9056A	Total/NA
Fluoride	5.6		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	9700		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	4300		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	34		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-1 — Lab Sample ID: 280-134350-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	8.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00072	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1 (Continued)
Lab Sample ID: 280-134350-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.017		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.056		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	170		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.010		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.0036		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lithium	2.4		0.080	0.017	mg/L	10		6020A	Total Recoverable
Molybdenum	0.028		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.6		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	990		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	46		2.5	0.83	mg/L	5		9056A	Total/NA
Fluoride	46		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	35000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	87000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	270		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-134350-1	MW-3	Water	03/04/20 15:20	03/06/20 08:37	
280-134350-2	MW-5	Water	03/04/20 14:40	03/06/20 08:37	
280-134350-3	MW-6	Water	03/05/20 11:20	03/06/20 08:37	
280-134350-4	W-3	Water	03/04/20 12:25	03/06/20 08:37	
280-134350-5	W-3D	Water	03/04/20 12:30	03/06/20 08:37	
280-134350-6	W-3EB	Water	03/04/20 13:00	03/06/20 08:37	
280-134350-7	W-4	Water	03/05/20 14:40	03/06/20 08:37	
280-134350-8	W-5	Water	03/05/20 12:40	03/06/20 08:37	
280-134350-9	W-6	Water	03/04/20 13:45	03/06/20 08:37	
280-134350-10	W-1	Water	03/05/20 14:00	03/06/20 08:37	

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

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.9		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:02	1

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.9		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:07	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.4		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:11	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.4		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:16	1

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.5		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:20	1

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:25	1

Client Sample ID: W-4
Date Collected: 03/05/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.8		0.10	0.023	mg/L		03/16/20 14:00	03/17/20 15:45	1

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.10	0.023	mg/L		03/16/20 14:00	03/17/20 15:50	1

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7.7		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:38	1

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

Client Sample ID: W-1
Date Collected: 03/05/20 14:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**8.1**		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 12:43	1

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

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:53	1
Arsenic	**0.0082**		0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:53	1
Barium	**0.012**		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:53	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:53	1
Cadmium	**0.0046**		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:53	1
Calcium	**72**		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:53	1
Chromium	**0.0021**		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:53	1
Cobalt	**0.032**		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:53	1
Lead	**0.00082**	**J**	0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:53	1
Lithium	**2.1**		0.040	0.0083	mg/L		03/13/20 14:00	03/17/20 17:59	5
Molybdenum	**0.0028**	**J**	0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:53	1
Selenium	**0.62**		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:53	1
Thallium	**0.0026**		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:53	1

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0016**	**J**	0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:55	1
Arsenic	**0.0047**	**J**	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:55	1
Barium	**0.032**		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:55	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:55	1
Cadmium	**0.00041**	**J**	0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:55	1
Calcium	**180**		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:55	1
Chromium	**0.0056**		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:55	1
Cobalt	**0.0058**		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:55	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:55	1
Lithium	**3.0**		0.040	0.0083	mg/L		03/13/20 14:00	03/17/20 18:02	5
Molybdenum	**0.014**		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:55	1
Selenium	**0.19**		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:55	1
Thallium	**0.00062**	**J**	0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:55	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:58	1
Arsenic	**0.0079**		0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:58	1
Barium	**0.0062**		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:58	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:58	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:58	1
Calcium	**78**		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:58	1

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

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.00099	J	0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:58	1
Cobalt	0.00033	J	0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:58	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:58	1
Lithium	0.20		0.0080	0.0017	mg/L		03/13/20 14:00	03/17/20 18:04	1
Molybdenum	0.0094	J	0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:58	1
Selenium	0.93		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:58	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:58	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 14:00	1
Arsenic	0.0018	J	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 14:00	1
Barium	0.030		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 14:00	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 14:00	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:00	1
Calcium	180		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:00	1
Chromium	0.0029		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 14:00	1
Cobalt	0.00040	J	0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 14:00	1
Lead	0.00046	J	0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 14:00	1
Lithium	0.15		0.0080	0.0017	mg/L		03/13/20 14:00	03/17/20 18:12	1
Molybdenum	0.024		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 14:00	1
Selenium	0.044		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 14:00	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:00	1

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 14:03	1
Arsenic	0.0013	J	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 14:03	1
Barium	0.031		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 14:03	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 14:03	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:03	1
Calcium	310		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:03	1
Chromium	0.0030		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 14:03	1
Cobalt	0.00042	J	0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 14:03	1
Lead	0.00058	J	0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 14:03	1
Lithium	0.15		0.0080	0.0017	mg/L		03/13/20 14:00	03/17/20 18:14	1
Molybdenum	0.024		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 14:03	1
Selenium	0.045		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 14:03	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:03	1

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 14:06	1
Arsenic	ND		0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 14:06	1

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

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 14:06	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 14:06	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:06	1
Calcium	ND		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:06	1
Chromium	ND		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 14:06	1
Cobalt	ND		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 14:06	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 14:06	1
Lithium	ND		0.0080	0.0017	mg/L		03/13/20 14:00	03/17/20 18:17	1
Molybdenum	ND		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 14:06	1
Selenium	ND		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 14:06	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:06	1

Client Sample ID: W-4
Date Collected: 03/05/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00063**	**J**	0.0020	0.00057	mg/L		03/17/20 14:00	03/18/20 12:31	1
Arsenic	**0.0021**	**J**	0.0050	0.00075	mg/L		03/17/20 14:00	03/18/20 12:31	1
Barium	**0.034**		0.0050	0.0022	mg/L		03/17/20 14:00	03/18/20 12:31	1
Beryllium	ND		0.0010	0.00031	mg/L		03/17/20 14:00	03/18/20 12:31	1
Cadmium	**0.00022**	**J**	0.0010	0.00020	mg/L		03/17/20 14:00	03/18/20 12:31	1
Calcium	**110**		1.0	0.58	mg/L		03/17/20 14:00	03/18/20 12:31	1
Chromium	**0.0024**		0.0020	0.00098	mg/L		03/17/20 14:00	03/18/20 12:31	1
Cobalt	**0.023**		0.0010	0.00019	mg/L		03/17/20 14:00	03/18/20 12:31	1
Lead	**0.0015**		0.0010	0.00045	mg/L		03/17/20 14:00	03/18/20 12:31	1
Lithium	**1.1**		0.0080	0.0017	mg/L		03/17/20 14:00	03/18/20 12:31	1
Molybdenum	**0.073**		0.010	0.0011	mg/L		03/17/20 14:00	03/18/20 12:31	1
Selenium	**0.0027**	**J**	0.0050	0.00089	mg/L		03/17/20 14:00	03/18/20 12:31	1
Thallium	**0.00041**	**J**	0.0010	0.00020	mg/L		03/17/20 14:00	03/18/20 12:31	1

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0023**		0.0020	0.00057	mg/L		03/17/20 14:00	03/18/20 12:34	1
Arsenic	**0.0029**	**J**	0.0050	0.00075	mg/L		03/17/20 14:00	03/18/20 12:34	1
Barium	**0.023**		0.0050	0.0022	mg/L		03/17/20 14:00	03/18/20 12:34	1
Beryllium	ND		0.0010	0.00031	mg/L		03/17/20 14:00	03/18/20 12:34	1
Cadmium	**0.00030**	**J**	0.0010	0.00020	mg/L		03/17/20 14:00	03/18/20 12:34	1
Calcium	**98**		1.0	0.58	mg/L		03/17/20 14:00	03/18/20 12:34	1
Chromium	**0.0027**		0.0020	0.00098	mg/L		03/17/20 14:00	03/18/20 12:34	1
Cobalt	**0.019**		0.0010	0.00019	mg/L		03/17/20 14:00	03/18/20 12:34	1
Lead	**0.00064**	**J**	0.0010	0.00045	mg/L		03/17/20 14:00	03/18/20 12:34	1
Lithium	**0.75**		0.0080	0.0017	mg/L		03/17/20 14:00	03/18/20 12:34	1
Molybdenum	**0.063**		0.010	0.0011	mg/L		03/17/20 14:00	03/18/20 12:34	1
Selenium	**0.020**		0.0050	0.00089	mg/L		03/17/20 14:00	03/18/20 12:34	1
Thallium	ND		0.0010	0.00020	mg/L		03/17/20 14:00	03/18/20 12:34	1

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

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0012	J	0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 14:08	1
Arsenic	0.0033	J	0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 14:08	1
Barium	0.053		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 14:08	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 14:08	1
Cadmium	0.0015		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:08	1
Calcium	240		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:08	1
Chromium	0.0040		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 14:08	1
Cobalt	0.0043		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 14:08	1
Lead	0.0021		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 14:08	1
Lithium	0.43		0.0080	0.0017	mg/L		03/13/20 14:00	03/17/20 18:19	1
Molybdenum	0.19		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 14:08	1
Selenium	0.043		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 14:08	1
Thallium	0.00047	J	0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:08	1

Client Sample ID: W-1
Date Collected: 03/05/20 14:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00072	J	0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 14:11	1
Arsenic	0.017		0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 14:11	1
Barium	0.056		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 14:11	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 14:11	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:11	1
Calcium	170		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 14:11	1
Chromium	0.010		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 14:11	1
Cobalt	0.0036		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 14:11	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 14:11	1
Lithium	2.4		0.080	0.017	mg/L		03/13/20 14:00	03/17/20 18:22	10
Molybdenum	0.028		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 14:11	1
Selenium	1.6		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 14:11	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 14:11	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:40	1

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:42	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:44	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:46	1

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:48	1

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:50	1

Client Sample ID: W-4
Date Collected: 03/05/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/16/20 12:00	03/16/20 23:29	1

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/16/20 12:00	03/16/20 23:31	1

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:52	1

Client Sample ID: W-1
Date Collected: 03/05/20 14:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:54	1

General Chemistry

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.0**	**HF**	0.1	0.1	SU			03/09/20 21:58	1
Temperature	**22.0**	**HF**	1.0	1.0	Degrees C			03/09/20 21:58	1
Chloride	**320**		15	5.1	mg/L			03/24/20 16:25	5
Fluoride	ND		2.5	0.83	mg/L			03/24/20 16:25	5
Fluoride	ND		2.5	0.83	mg/L			03/24/20 16:25	5
Sulfate	**39000**		2500	520	mg/L			03/30/20 16:54	500
Total Dissolved Solids (TDS)	**51000**		1000	470	mg/L			03/11/20 14:04	1

General Chemistry (Continued)

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**18**		4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.3**	**HF**	0.1	0.1	SU			03/09/20 22:03	1
Temperature	**22.3**	**HF**	1.0	1.0	Degrees C			03/09/20 22:03	1
Chloride	**1500**	**F1**	30	10	mg/L			03/24/20 16:58	10
Fluoride	ND		5.0	1.7	mg/L			03/24/20 16:58	10
Fluoride	ND	F1	5.0	1.7	mg/L			03/24/20 16:58	10
Sulfate	**19000**		1000	210	mg/L			03/31/20 22:53	200
Total Dissolved Solids (TDS)	**31000**		200	94	mg/L			03/11/20 14:04	1
Total Suspended Solids	**21**		4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.5**	**HF**	0.1	0.1	SU			03/09/20 22:07	1
Temperature	**22.6**	**HF**	1.0	1.0	Degrees C			03/09/20 22:07	1
Chloride	**200**		15	5.1	mg/L			03/26/20 15:39	5
Fluoride	ND		2.5	0.83	mg/L			03/26/20 15:39	5
Fluoride	ND		2.5	0.83	mg/L			03/26/20 15:39	5
Sulfate	**3800**		250	52	mg/L			03/30/20 18:49	50
Total Dissolved Solids (TDS)	**6500**		40	19	mg/L			03/11/20 14:04	1
Total Suspended Solids	**3.2**	**J**	4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.7**	**HF**	0.1	0.1	SU			03/09/20 22:11	1
Temperature	**22.6**	**HF**	1.0	1.0	Degrees C			03/09/20 22:11	1
Chloride	**90**		15	5.1	mg/L			03/24/20 19:42	5
Fluoride	ND		2.5	0.83	mg/L			03/24/20 19:42	5
Fluoride	ND		2.5	0.83	mg/L			03/24/20 19:42	5
Sulfate	**2400**		100	21	mg/L			03/30/20 19:06	20
Total Dissolved Solids (TDS)	**4200**		40	19	mg/L			03/11/20 14:04	1
Total Suspended Solids	**8.0**		4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.7**	**HF**	0.1	0.1	SU			03/09/20 22:15	1
Temperature	**22.1**	**HF**	1.0	1.0	Degrees C			03/09/20 22:15	1
Chloride	**91**		15	5.1	mg/L			03/24/20 20:15	5
Fluoride	ND		2.5	0.83	mg/L			03/24/20 20:15	5
Fluoride	ND		2.5	0.83	mg/L			03/24/20 20:15	5

General Chemistry (Continued)

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2400		100	21	mg/L			03/30/20 19:22	20
Total Dissolved Solids (TDS)	4000		40	19	mg/L			03/11/20 14:04	1
Total Suspended Solids	10		4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU			03/10/20 20:45	1
Temperature	21.3	HF	1.0	1.0	Degrees C			03/10/20 20:45	1
Chloride	ND		3.0	1.0	mg/L			03/24/20 21:54	1
Fluoride	ND		0.50	0.17	mg/L			03/24/20 21:54	1
Fluoride	ND		0.50	0.17	mg/L			03/24/20 21:54	1
Sulfate	ND		5.0	1.0	mg/L			03/24/20 21:54	1
Total Dissolved Solids (TDS)	1200		10	4.7	mg/L			03/11/20 14:04	1
Total Suspended Solids	ND		4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: W-4
Date Collected: 03/05/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU			03/09/20 22:44	1
Temperature	23.1	HF	1.0	1.0	Degrees C			03/09/20 22:44	1
Chloride	420		15	5.1	mg/L			03/26/20 16:12	5
Fluoride	4.7		2.5	0.83	mg/L			03/26/20 16:12	5
Fluoride	4.7		2.5	0.83	mg/L			03/26/20 16:12	5
Sulfate	24000		2500	520	mg/L			03/30/20 19:39	500
Total Dissolved Solids (TDS)	39000		200	94	mg/L			03/11/20 14:04	1
Total Suspended Solids	67		10	2.8	mg/L			03/10/20 17:13	1

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU			03/09/20 22:37	1
Temperature	22.4	HF	1.0	1.0	Degrees C			03/09/20 22:37	1
Chloride	770		15	5.1	mg/L			03/26/20 16:44	5
Fluoride	6.7		2.5	0.83	mg/L			03/26/20 16:44	5
Fluoride	6.7		2.5	0.83	mg/L			03/26/20 16:44	5
Sulfate	23000		2500	520	mg/L			03/30/20 19:55	500
Total Dissolved Solids (TDS)	34000		200	94	mg/L			03/11/20 14:04	1
Total Suspended Solids	17		4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU			03/09/20 22:48	1
Temperature	22.6	HF	1.0	1.0	Degrees C			03/09/20 22:48	1
Chloride	320		15	5.1	mg/L			03/24/20 20:48	5

General Chemistry (Continued)

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	5.6		2.5	0.83	mg/L			03/24/20 20:48	5
Fluoride	5.6		2.5	0.83	mg/L			03/24/20 20:48	5
Sulfate	9700		500	100	mg/L			03/30/20 20:12	100
Total Dissolved Solids (TDS)	4300		100	47	mg/L			03/11/20 14:04	1
Total Suspended Solids	34		4.0	1.1	mg/L			03/10/20 17:13	1

Client Sample ID: W-1
Date Collected: 03/05/20 14:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			03/09/20 22:52	1
Temperature	22.4	HF	1.0	1.0	Degrees C			03/09/20 22:52	1
Chloride	990		15	5.1	mg/L			03/26/20 19:12	5
Fluoride	46		2.5	0.83	mg/L			03/26/20 19:12	5
Fluoride	46		2.5	0.83	mg/L			03/26/20 19:12	5
Sulfate	35000		2500	520	mg/L			03/30/20 20:28	500
Total Dissolved Solids (TDS)	87000		1000	470	mg/L			03/11/20 14:04	1
Total Suspended Solids	270		4.0	1.1	mg/L			03/10/20 17:13	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.583		0.261	0.266	1.00	0.309	pCi/L	03/12/20 11:16	04/06/20 08:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*63.5*		*40 - 110*	*03/12/20 11:16*	*04/06/20 08:14*	*1*

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0255	U	0.133	0.133	1.00	0.257	pCi/L	03/12/20 11:16	04/06/20 08:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.2*		*40 - 110*	*03/12/20 11:16*	*04/06/20 08:14*	*1*

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.369		0.136	0.140	1.00	0.137	pCi/L	03/12/20 11:16	04/06/20 10:14	1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110	03/12/20 11:16	04/06/20 10:14	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0569	U	0.0951	0.0952	1.00	0.166	pCi/L	03/12/20 11:16	04/06/20 10:14	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110	03/12/20 11:16	04/06/20 10:14	1

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0552	U	0.0859	0.0860	1.00	0.148	pCi/L	03/12/20 11:16	04/06/20 10:15	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.8		40 - 110	03/12/20 11:16	04/06/20 10:15	1

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0492	U	0.0808	0.0809	1.00	0.186	pCi/L	03/12/20 11:16	04/06/20 10:15	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110	03/12/20 11:16	04/06/20 10:15	1

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.165	U	0.126	0.127	1.00	0.178	pCi/L	03/12/20 11:16	04/06/20 10:15	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110	03/12/20 11:16	04/06/20 10:15	1

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.105	U	0.112	0.112	1.00	0.177	pCi/L	03/12/20 11:16	04/06/20 10:15	1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110	03/12/20 11:16	04/06/20 10:15	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.776	U	0.539	0.543	1.00	0.838	pCi/L	03/12/20 13:06	04/02/20 17:51	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	63.5		40 - 110	03/12/20 13:06	04/02/20 17:51	1
Y Carrier	81.5		40 - 110	03/12/20 13:06	04/02/20 17:51	1

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.816**		0.483	0.489	1.00	0.736	pCi/L	03/12/20 13:06	04/02/20 17:52	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110	03/12/20 13:06	04/02/20 17:52	1
Y Carrier	77.8		40 - 110	03/12/20 13:06	04/02/20 17:52	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.625**		0.274	0.280	1.00	0.388	pCi/L	03/12/20 13:06	04/02/20 17:52	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110	03/12/20 13:06	04/02/20 17:52	1
Y Carrier	82.6		40 - 110	03/12/20 13:06	04/02/20 17:52	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.303	0.304	1.00	0.491	pCi/L	03/12/20 13:06	04/02/20 17:52	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110	03/12/20 13:06	04/02/20 17:52	1
Y Carrier	77.0		40 - 110	03/12/20 13:06	04/02/20 17:52	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.153	U	0.249	0.250	1.00	0.421	pCi/L	03/12/20 13:06	04/02/20 17:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.8*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:52*	*1*
Y Carrier	*76.6*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:52*	*1*

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.390	U	0.269	0.272	1.00	0.415	pCi/L	03/12/20 13:06	04/02/20 17:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.8*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:52*	*1*
Y Carrier	*83.4*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:52*	*1*

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.609**		0.391	0.395	1.00	0.600	pCi/L	03/12/20 13:06	04/02/20 17:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.7*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:53*	*1*
Y Carrier	*80.4*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:53*	*1*

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.384	U	0.349	0.350	1.00	0.559	pCi/L	03/12/20 13:06	04/02/20 17:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.4*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:53*	*1*
Y Carrier	*80.7*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:53*	*1*

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

Client Sample ID: MW-3
Date Collected: 03/04/20 15:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.36		0.599	0.605	5.00	0.838	pCi/L		04/09/20 07:47	1

Client Sample ID: MW-5
Date Collected: 03/04/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.841		0.501	0.507	5.00	0.736	pCi/L		04/09/20 07:47	1

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.994		0.306	0.313	5.00	0.388	pCi/L		04/09/20 07:47	1

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.364	U	0.318	0.319	5.00	0.491	pCi/L		04/09/20 07:47	1

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.208	U	0.263	0.264	5.00	0.421	pCi/L		04/09/20 07:47	1

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.340	U	0.281	0.284	5.00	0.415	pCi/L		04/09/20 07:47	1

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.774**		0.411	0.415	5.00	0.600	pCi/L		04/09/20 07:47	1

Client Sample ID: W-6
Date Collected: 03/04/20 13:45
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.489	U	0.367	0.367	5.00	0.559	pCi/L		04/09/20 07:47	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-426611/1-A
Matrix: Water
Analysis Batch: 426890

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		03/13/20 14:00	03/16/20 11:00	1

Lab Sample ID: LCS 240-426611/2-A
Matrix: Water
Analysis Batch: 426890

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: MB 240-426812/1-A
Matrix: Water
Analysis Batch: 427173

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 426812

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		03/16/20 14:00	03/17/20 13:43	1

Lab Sample ID: LCS 240-426812/2-A
Matrix: Water
Analysis Batch: 427173

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 426812

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.893		mg/L		89	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-426611/1-A
Matrix: Water
Analysis Batch: 426906

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/13/20 14:00	03/16/20 13:21	1
Arsenic	ND		0.0050	0.00075	mg/L		03/13/20 14:00	03/16/20 13:21	1
Barium	ND		0.0050	0.0022	mg/L		03/13/20 14:00	03/16/20 13:21	1
Beryllium	ND		0.0010	0.00031	mg/L		03/13/20 14:00	03/16/20 13:21	1
Cadmium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:21	1
Calcium	ND		1.0	0.58	mg/L		03/13/20 14:00	03/16/20 13:21	1
Chromium	ND		0.0020	0.00098	mg/L		03/13/20 14:00	03/16/20 13:21	1
Cobalt	ND		0.0010	0.00019	mg/L		03/13/20 14:00	03/16/20 13:21	1
Lead	ND		0.0010	0.00045	mg/L		03/13/20 14:00	03/16/20 13:21	1
Lithium	ND		0.0080	0.0017	mg/L		03/13/20 14:00	03/16/20 13:21	1
Molybdenum	ND		0.010	0.0011	mg/L		03/13/20 14:00	03/16/20 13:21	1
Selenium	ND		0.0050	0.00089	mg/L		03/13/20 14:00	03/16/20 13:21	1
Thallium	ND		0.0010	0.00020	mg/L		03/13/20 14:00	03/16/20 13:21	1

Lab Sample ID: LCS 240-426611/3-A
Matrix: Water
Analysis Batch: 426906

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0983		mg/L		98	80 - 120

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

Lab Sample ID: LCS 240-426611/3-A
Matrix: Water
Analysis Batch: 426906

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 426611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.946		mg/L		95	80 - 120
Barium	1.00	1.01		mg/L		101	80 - 120
Beryllium	0.500	0.480		mg/L		96	80 - 120
Cadmium	0.500	0.478		mg/L		96	80 - 120
Calcium	25.0	23.8		mg/L		95	80 - 120
Chromium	0.500	0.499		mg/L		100	80 - 120
Cobalt	0.500	0.502		mg/L		100	80 - 120
Lead	0.500	0.493		mg/L		99	80 - 120
Lithium	0.500	0.461		mg/L		92	80 - 120
Molybdenum	0.500	0.495		mg/L		99	80 - 120
Selenium	1.00	0.937		mg/L		94	80 - 120
Thallium	1.00	0.922		mg/L		92	80 - 120

Lab Sample ID: MB 240-427060/1-A
Matrix: Water
Analysis Batch: 427309

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 427060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		03/17/20 14:00	03/18/20 11:09	1
Arsenic	ND		0.0050	0.00075	mg/L		03/17/20 14:00	03/18/20 11:09	1
Barium	ND		0.0050	0.0022	mg/L		03/17/20 14:00	03/18/20 11:09	1
Beryllium	ND		0.0010	0.00031	mg/L		03/17/20 14:00	03/18/20 11:09	1
Cadmium	ND		0.0010	0.00020	mg/L		03/17/20 14:00	03/18/20 11:09	1
Calcium	ND		1.0	0.58	mg/L		03/17/20 14:00	03/18/20 11:09	1
Chromium	ND		0.0020	0.00098	mg/L		03/17/20 14:00	03/18/20 11:09	1
Cobalt	ND		0.0010	0.00019	mg/L		03/17/20 14:00	03/18/20 11:09	1
Lead	ND		0.0010	0.00045	mg/L		03/17/20 14:00	03/18/20 11:09	1
Lithium	ND		0.0080	0.0017	mg/L		03/17/20 14:00	03/18/20 11:09	1
Molybdenum	ND		0.010	0.0011	mg/L		03/17/20 14:00	03/18/20 11:09	1
Selenium	ND		0.0050	0.00089	mg/L		03/17/20 14:00	03/18/20 11:09	1
Thallium	ND		0.0010	0.00020	mg/L		03/17/20 14:00	03/18/20 11:09	1

Lab Sample ID: LCS 240-427060/2-A
Matrix: Water
Analysis Batch: 427309

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 427060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0996		mg/L		100	80 - 120
Arsenic	1.00	0.918		mg/L		92	80 - 120
Barium	1.00	0.948		mg/L		95	80 - 120
Beryllium	0.500	0.459		mg/L		92	80 - 120
Cadmium	0.500	0.463		mg/L		93	80 - 120
Calcium	25.0	23.2		mg/L		93	80 - 120
Chromium	0.500	0.477		mg/L		95	80 - 120
Cobalt	0.500	0.492		mg/L		98	80 - 120
Lead	0.500	0.484		mg/L		97	80 - 120
Lithium	0.500	0.451		mg/L		90	80 - 120
Molybdenum	0.500	0.464		mg/L		93	80 - 120
Selenium	1.00	0.884		mg/L		88	80 - 120

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

Lab Sample ID: LCS 240-427060/2-A
Matrix: Water
Analysis Batch: 427309

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 427060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	1.00	0.916		mg/L		92	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-426617/1-A
Matrix: Water
Analysis Batch: 426977

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 426617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/13/20 12:00	03/16/20 21:17	1

Lab Sample ID: LCS 240-426617/2-A
Matrix: Water
Analysis Batch: 426977

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 426617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00513		mg/L		103	80 - 120

Lab Sample ID: MB 240-426813/1-A
Matrix: Water
Analysis Batch: 426977

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 426813

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		03/16/20 12:00	03/16/20 22:34	1

Lab Sample ID: LCS 240-426813/2-A
Matrix: Water
Analysis Batch: 426977

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 426813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00473		mg/L		95	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-488291/4
Matrix: Water
Analysis Batch: 488291

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 280-134350-8 DU
Matrix: Water
Analysis Batch: 488291

Client Sample ID: W-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.7	HF	7.8		SU		0.4	5
Temperature	22.4	HF	22.7		Degrees C		2	10

Method: 9040B - pH (Continued)

Lab Sample ID: LCS 280-488421/4
Matrix: Water
Analysis Batch: 488421

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-489708/6
Matrix: Water
Analysis Batch: 489708

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			03/24/20 14:19	1
Fluoride	ND		0.50	0.17	mg/L			03/24/20 14:19	1
Sulfate	ND		5.0	1.0	mg/L			03/24/20 14:19	1

Lab Sample ID: LCS 280-489708/4
Matrix: Water
Analysis Batch: 489708

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	93.7		mg/L		94	90 - 110
Fluoride	5.00	5.10		mg/L		102	90 - 110
Sulfate	100	94.4		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-489708/5
Matrix: Water
Analysis Batch: 489708

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	93.6		mg/L		94	90 - 110	0	10
Fluoride	5.00	5.10		mg/L		102	90 - 110	0	10
Sulfate	100	94.6		mg/L		95	90 - 110	0	10

Lab Sample ID: MRL 280-489708/3
Matrix: Water
Analysis Batch: 489708

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.93		mg/L		99	50 - 150
Fluoride	0.500	0.477	J	mg/L		95	50 - 150
Sulfate	5.00	4.98	J	mg/L		100	50 - 150

Lab Sample ID: 280-134350-2 MS
Matrix: Water
Analysis Batch: 489708

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1500	F1	500	1910	F1	mg/L		76	80 - 120
Chloride	1500	F1	500	1910	F1	mg/L		76	80 - 120
Fluoride	ND	F1	50.0	38.4	F1	mg/L		77	80 - 120
Fluoride	ND	F1	50.0	38.4	F1	mg/L		77	80 - 120

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-134350-2 MS
Matrix: Water
Analysis Batch: 489708

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1500		1000	2400		mg/L		91	80 - 120
Chloride	1500		1000	2400		mg/L		91	80 - 120
Fluoride	ND		100	82.4		mg/L		82	80 - 120
Fluoride	ND		100	82.4		mg/L		82	80 - 120

Lab Sample ID: 280-134350-2 MSD
Matrix: Water
Analysis Batch: 489708

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1500	F1	500	1900	F1	mg/L		74	80 - 120	1	20
Chloride	1500	F1	500	1900	F1	mg/L		74	80 - 120	1	20
Fluoride	ND	F1	50.0	38.1	F1	mg/L		76	80 - 120	1	20
Fluoride	ND	F1	50.0	38.1	F1	mg/L		76	80 - 120	1	20

Lab Sample ID: 280-134350-2 MSD
Matrix: Water
Analysis Batch: 489708

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1500		1000	2370		mg/L		89	80 - 120	1	20
Chloride	1500		1000	2370		mg/L		89	80 - 120	1	20
Fluoride	ND		100	82.7		mg/L		83	80 - 120	0	20
Fluoride	ND		100	82.7		mg/L		83	80 - 120	0	20

Lab Sample ID: 280-134350-2 DU
Matrix: Water
Analysis Batch: 489708

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	1500	F1	1470		mg/L		4	15
Chloride	1500	F1	1470		mg/L		4	15
Fluoride	ND	F1	ND		mg/L		NC	15
Fluoride	ND	F1	ND		mg/L		NC	15

Lab Sample ID: 280-134350-2 DU
Matrix: Water
Analysis Batch: 489708

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	1500		1460		mg/L		2	15
Chloride	1500		1460		mg/L		2	15
Fluoride	ND		ND		mg/L		NC	15
Fluoride	ND		ND		mg/L		NC	15

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-489945/6
Matrix: Water
Analysis Batch: 489945

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			03/26/20 11:06	1
Fluoride	ND		0.50	0.17	mg/L			03/26/20 11:06	1
Sulfate	ND		5.0	1.0	mg/L			03/26/20 11:06	1

Lab Sample ID: LCS 280-489945/4
Matrix: Water
Analysis Batch: 489945

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.4		mg/L		98	90 - 110
Fluoride	5.00	4.72		mg/L		94	90 - 110
Sulfate	100	96.7		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-489945/5
Matrix: Water
Analysis Batch: 489945

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	97.9		mg/L		98	90 - 110	0	10
Fluoride	5.00	4.67		mg/L		93	90 - 110	1	10
Sulfate	100	96.1		mg/L		96	90 - 110	1	10

Lab Sample ID: MRL 280-489945/3
Matrix: Water
Analysis Batch: 489945

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.20		mg/L		84	50 - 150
Fluoride	0.500	0.473	J	mg/L		95	50 - 150
Sulfate	5.00	4.39	J	mg/L		88	50 - 150

Lab Sample ID: MB 280-490276/6
Matrix: Water
Analysis Batch: 490276

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.0	mg/L			03/30/20 10:49	1

Lab Sample ID: LCS 280-490276/4
Matrix: Water
Analysis Batch: 490276

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	96.0		mg/L		96	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-490276/5
Matrix: Water
Analysis Batch: 490276

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate			100	95.9		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 280-490276/3
Matrix: Water
Analysis Batch: 490276

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	4.68	J	mg/L		94	50 - 150		

Lab Sample ID: 280-134350-2 MS
Matrix: Water
Analysis Batch: 490276

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	21000	E	5000	26100	E 4	mg/L		105	80 - 120		

Lab Sample ID: 280-134350-2 MSD
Matrix: Water
Analysis Batch: 490276

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	21000	E	5000	22800	E 4	mg/L		40	80 - 120	13	20

Lab Sample ID: 280-134350-2 DU
Matrix: Water
Analysis Batch: 490276

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfate	21000	E		19000		mg/L				9	15

Lab Sample ID: MB 280-490398/6
Matrix: Water
Analysis Batch: 490398

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.0	mg/L			03/31/20 10:46	1

Lab Sample ID: LCS 280-490398/4
Matrix: Water
Analysis Batch: 490398

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			100	97.9		mg/L		98	90 - 110		

Lab Sample ID: LCSD 280-490398/5
Matrix: Water
Analysis Batch: 490398

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate			100	97.0		mg/L		97	90 - 110	1	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MRL 280-490398/3
Matrix: Water
Analysis Batch: 490398
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	4.83	J	mg/L		97	50 - 150		

Lab Sample ID: 280-134350-2 MS
Matrix: Water
Analysis Batch: 490398
Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	19000		10000	27900		mg/L		92	80 - 120		

Lab Sample ID: 280-134350-2 MSD
Matrix: Water
Analysis Batch: 490398
Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	19000		10000	27500		mg/L		89	80 - 120	1	20

Lab Sample ID: 280-134350-2 DU
Matrix: Water
Analysis Batch: 490398
Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	19000		17800		mg/L		5	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-488425/1
Matrix: Water
Analysis Batch: 488425
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			03/11/20 14:04	1

Lab Sample ID: LCS 280-488425/2
Matrix: Water
Analysis Batch: 488425
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			501	493		mg/L		98	93 - 110		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-488326/2
Matrix: Water
Analysis Batch: 488326
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			03/10/20 17:13	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 280-488326/1
Matrix: Water
Analysis Batch: 488326

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	94.8		mg/L		95	79 - 114

Lab Sample ID: 280-134350-9 DU
Matrix: Water
Analysis Batch: 488326

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	34		35.6		mg/L		6	10

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-464153/21-A
Matrix: Water
Analysis Batch: 466706

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 464153

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01579	U	0.0556	0.0557	1.00	0.128	pCi/L	03/12/20 11:16	04/06/20 10:15	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*03/12/20 11:16*	*04/06/20 10:15*	*1*

Lab Sample ID: LCS 160-464153/1-A
Matrix: Water
Analysis Batch: 466706

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 464153

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.3	8.884		0.989	1.00	0.146	pCi/L	78	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-464159/21-A
Matrix: Water
Analysis Batch: 466589

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 464159

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2670	U	0.246	0.247	1.00	0.396	pCi/L	03/12/20 13:06	04/02/20 17:53	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:53*	*1*
Y Carrier	*79.3*		*40 - 110*	*03/12/20 13:06*	*04/02/20 17:53*	*1*

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

Lab Sample ID: LCS 160-464159/1-A
Matrix: Water
Analysis Batch: 466591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 464159

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.97	7.526		0.928	1.00	0.426	pCi/L	84	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*
Y Carrier	*83.7*		*40 - 110*

Metals

Prep Batch: 426611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total Recoverable	Water	3005A	
280-134350-2	MW-5	Total Recoverable	Water	3005A	
280-134350-3	MW-6	Total Recoverable	Water	3005A	
280-134350-4	W-3	Total Recoverable	Water	3005A	
280-134350-5	W-3D	Total Recoverable	Water	3005A	
280-134350-6	W-3EB	Total Recoverable	Water	3005A	
280-134350-9	W-6	Total Recoverable	Water	3005A	
280-134350-10	W-1	Total Recoverable	Water	3005A	
MB 240-426611/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-426611/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-426611/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 426617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	7470A	
280-134350-2	MW-5	Total/NA	Water	7470A	
280-134350-3	MW-6	Total/NA	Water	7470A	
280-134350-4	W-3	Total/NA	Water	7470A	
280-134350-5	W-3D	Total/NA	Water	7470A	
280-134350-6	W-3EB	Total/NA	Water	7470A	
280-134350-9	W-6	Total/NA	Water	7470A	
280-134350-10	W-1	Total/NA	Water	7470A	
MB 240-426617/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-426617/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 426812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-7	W-4	Total Recoverable	Water	3005A	
280-134350-8	W-5	Total Recoverable	Water	3005A	
MB 240-426812/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-426812/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 426813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-7	W-4	Total/NA	Water	7470A	
280-134350-8	W-5	Total/NA	Water	7470A	
MB 240-426813/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-426813/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 426890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total Recoverable	Water	6010C	426611
280-134350-2	MW-5	Total Recoverable	Water	6010C	426611
280-134350-3	MW-6	Total Recoverable	Water	6010C	426611
280-134350-4	W-3	Total Recoverable	Water	6010C	426611
280-134350-5	W-3D	Total Recoverable	Water	6010C	426611
280-134350-6	W-3EB	Total Recoverable	Water	6010C	426611
280-134350-9	W-6	Total Recoverable	Water	6010C	426611
280-134350-10	W-1	Total Recoverable	Water	6010C	426611
MB 240-426611/1-A	Method Blank	Total Recoverable	Water	6010C	426611
LCS 240-426611/2-A	Lab Control Sample	Total Recoverable	Water	6010C	426611

Metals

Analysis Batch: 426906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total Recoverable	Water	6020A	426611
280-134350-2	MW-5	Total Recoverable	Water	6020A	426611
280-134350-3	MW-6	Total Recoverable	Water	6020A	426611
280-134350-4	W-3	Total Recoverable	Water	6020A	426611
280-134350-5	W-3D	Total Recoverable	Water	6020A	426611
280-134350-6	W-3EB	Total Recoverable	Water	6020A	426611
280-134350-9	W-6	Total Recoverable	Water	6020A	426611
280-134350-10	W-1	Total Recoverable	Water	6020A	426611
MB 240-426611/1-A	Method Blank	Total Recoverable	Water	6020A	426611
LCS 240-426611/3-A	Lab Control Sample	Total Recoverable	Water	6020A	426611

Analysis Batch: 426977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	7470A	426617
280-134350-2	MW-5	Total/NA	Water	7470A	426617
280-134350-3	MW-6	Total/NA	Water	7470A	426617
280-134350-4	W-3	Total/NA	Water	7470A	426617
280-134350-5	W-3D	Total/NA	Water	7470A	426617
280-134350-6	W-3EB	Total/NA	Water	7470A	426617
280-134350-7	W-4	Total/NA	Water	7470A	426813
280-134350-8	W-5	Total/NA	Water	7470A	426813
280-134350-9	W-6	Total/NA	Water	7470A	426617
280-134350-10	W-1	Total/NA	Water	7470A	426617
MB 240-426617/1-A	Method Blank	Total/NA	Water	7470A	426617
MB 240-426813/1-A	Method Blank	Total/NA	Water	7470A	426813
LCS 240-426617/2-A	Lab Control Sample	Total/NA	Water	7470A	426617
LCS 240-426813/2-A	Lab Control Sample	Total/NA	Water	7470A	426813

Prep Batch: 427060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-7	W-4	Total Recoverable	Water	3005A	
280-134350-8	W-5	Total Recoverable	Water	3005A	
MB 240-427060/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-427060/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 427173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-7	W-4	Total Recoverable	Water	6010C	426812
280-134350-8	W-5	Total Recoverable	Water	6010C	426812
MB 240-426812/1-A	Method Blank	Total Recoverable	Water	6010C	426812
LCS 240-426812/2-A	Lab Control Sample	Total Recoverable	Water	6010C	426812

Analysis Batch: 427204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total Recoverable	Water	6020A	426611
280-134350-2	MW-5	Total Recoverable	Water	6020A	426611
280-134350-3	MW-6	Total Recoverable	Water	6020A	426611
280-134350-4	W-3	Total Recoverable	Water	6020A	426611
280-134350-5	W-3D	Total Recoverable	Water	6020A	426611
280-134350-6	W-3EB	Total Recoverable	Water	6020A	426611
280-134350-9	W-6	Total Recoverable	Water	6020A	426611

Metals (Continued)

Analysis Batch: 427204 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-10	W-1	Total Recoverable	Water	6020A	426611

Analysis Batch: 427309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-7	W-4	Total Recoverable	Water	6020A	427060
280-134350-8	W-5	Total Recoverable	Water	6020A	427060
MB 240-427060/1-A	Method Blank	Total Recoverable	Water	6020A	427060
LCS 240-427060/2-A	Lab Control Sample	Total Recoverable	Water	6020A	427060

General Chemistry

Analysis Batch: 488291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	9040B	
280-134350-2	MW-5	Total/NA	Water	9040B	
280-134350-3	MW-6	Total/NA	Water	9040B	
280-134350-4	W-3	Total/NA	Water	9040B	
280-134350-5	W-3D	Total/NA	Water	9040B	
280-134350-7	W-4	Total/NA	Water	9040B	
280-134350-8	W-5	Total/NA	Water	9040B	
280-134350-9	W-6	Total/NA	Water	9040B	
280-134350-10	W-1	Total/NA	Water	9040B	
LCS 280-488291/4	Lab Control Sample	Total/NA	Water	9040B	
280-134350-8 DU	W-5	Total/NA	Water	9040B	

Analysis Batch: 488326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	SM 2540D	
280-134350-2	MW-5	Total/NA	Water	SM 2540D	
280-134350-3	MW-6	Total/NA	Water	SM 2540D	
280-134350-4	W-3	Total/NA	Water	SM 2540D	
280-134350-5	W-3D	Total/NA	Water	SM 2540D	
280-134350-6	W-3EB	Total/NA	Water	SM 2540D	
280-134350-7	W-4	Total/NA	Water	SM 2540D	
280-134350-8	W-5	Total/NA	Water	SM 2540D	
280-134350-9	W-6	Total/NA	Water	SM 2540D	
280-134350-10	W-1	Total/NA	Water	SM 2540D	
MB 280-488326/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-488326/1	Lab Control Sample	Total/NA	Water	SM 2540D	
280-134350-9 DU	W-6	Total/NA	Water	SM 2540D	

Analysis Batch: 488421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-6	W-3EB	Total/NA	Water	9040B	
LCS 280-488421/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 488425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	SM 2540C	
280-134350-2	MW-5	Total/NA	Water	SM 2540C	
280-134350-3	MW-6	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 488425 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-4	W-3	Total/NA	Water	SM 2540C	
280-134350-5	W-3D	Total/NA	Water	SM 2540C	
280-134350-6	W-3EB	Total/NA	Water	SM 2540C	
280-134350-7	W-4	Total/NA	Water	SM 2540C	
280-134350-8	W-5	Total/NA	Water	SM 2540C	
280-134350-9	W-6	Total/NA	Water	SM 2540C	
280-134350-10	W-1	Total/NA	Water	SM 2540C	
MB 280-488425/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-488425/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 489708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	9056A	
280-134350-2	MW-5	Total/NA	Water	9056A	
280-134350-4	W-3	Total/NA	Water	9056A	
280-134350-5	W-3D	Total/NA	Water	9056A	
280-134350-6	W-3EB	Total/NA	Water	9056A	
280-134350-9	W-6	Total/NA	Water	9056A	
MB 280-489708/6	Method Blank	Total/NA	Water	9056A	
LCS 280-489708/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-489708/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-489708/3	Lab Control Sample	Total/NA	Water	9056A	
280-134350-2 MS	MW-5	Total/NA	Water	9056A	
280-134350-2 MS	MW-5	Total/NA	Water	9056A	
280-134350-2 MSD	MW-5	Total/NA	Water	9056A	
280-134350-2 MSD	MW-5	Total/NA	Water	9056A	
280-134350-2 DU	MW-5	Total/NA	Water	9056A	
280-134350-2 DU	MW-5	Total/NA	Water	9056A	

Analysis Batch: 489945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-3	MW-6	Total/NA	Water	9056A	
280-134350-7	W-4	Total/NA	Water	9056A	
280-134350-8	W-5	Total/NA	Water	9056A	
280-134350-10	W-1	Total/NA	Water	9056A	
MB 280-489945/6	Method Blank	Total/NA	Water	9056A	
LCS 280-489945/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-489945/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-489945/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 490276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	9056A	
280-134350-3	MW-6	Total/NA	Water	9056A	
280-134350-4	W-3	Total/NA	Water	9056A	
280-134350-5	W-3D	Total/NA	Water	9056A	
280-134350-7	W-4	Total/NA	Water	9056A	
280-134350-8	W-5	Total/NA	Water	9056A	
280-134350-9	W-6	Total/NA	Water	9056A	
280-134350-10	W-1	Total/NA	Water	9056A	
MB 280-490276/6	Method Blank	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 490276 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-490276/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-490276/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-490276/3	Lab Control Sample	Total/NA	Water	9056A	
280-134350-2 MS	MW-5	Total/NA	Water	9056A	
280-134350-2 MSD	MW-5	Total/NA	Water	9056A	
280-134350-2 DU	MW-5	Total/NA	Water	9056A	

Analysis Batch: 490398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-2	MW-5	Total/NA	Water	9056A	
MB 280-490398/6	Method Blank	Total/NA	Water	9056A	
LCS 280-490398/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-490398/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-490398/3	Lab Control Sample	Total/NA	Water	9056A	
280-134350-2 MS	MW-5	Total/NA	Water	9056A	
280-134350-2 MSD	MW-5	Total/NA	Water	9056A	
280-134350-2 DU	MW-5	Total/NA	Water	9056A	

Rad

Prep Batch: 464153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	PrecSep-21	
280-134350-2	MW-5	Total/NA	Water	PrecSep-21	
280-134350-3	MW-6	Total/NA	Water	PrecSep-21	
280-134350-4	W-3	Total/NA	Water	PrecSep-21	
280-134350-5	W-3D	Total/NA	Water	PrecSep-21	
280-134350-6	W-3EB	Total/NA	Water	PrecSep-21	
280-134350-8	W-5	Total/NA	Water	PrecSep-21	
280-134350-9	W-6	Total/NA	Water	PrecSep-21	
MB 160-464153/21-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-464153/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 464159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-1	MW-3	Total/NA	Water	PrecSep_0	
280-134350-2	MW-5	Total/NA	Water	PrecSep_0	
280-134350-3	MW-6	Total/NA	Water	PrecSep_0	
280-134350-4	W-3	Total/NA	Water	PrecSep_0	
280-134350-5	W-3D	Total/NA	Water	PrecSep_0	
280-134350-6	W-3EB	Total/NA	Water	PrecSep_0	
280-134350-8	W-5	Total/NA	Water	PrecSep_0	
280-134350-9	W-6	Total/NA	Water	PrecSep_0	
MB 160-464159/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-464159/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Client Sample ID: MW-3
Lab Sample ID: 280-134350-1

Date Collected: 03/04/20 15:20
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:02	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:53	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			427204	03/17/20 17:59	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:40	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 21:58	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489708	03/24/20 16:25	JAP	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	490276	03/30/20 16:54	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			750.4 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1			466706	04/06/20 08:14	KLS	TAL SL
Total/NA	Prep	PrecSep_0			750.4 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:51	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Client Sample ID: MW-5
Lab Sample ID: 280-134350-2

Date Collected: 03/04/20 14:40
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:07	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:55	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			427204	03/17/20 18:02	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:42	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:03	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	489708	03/24/20 16:58	JAP	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	490398	03/31/20 22:53	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			749.56 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1			466706	04/06/20 08:14	KLS	TAL SL
Total/NA	Prep	PrecSep_0			749.56 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:52	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6
Date Collected: 03/05/20 11:20
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:11	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 13:58	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			427204	03/17/20 18:04	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:44	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:07	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489945	03/26/20 15:39	JAP	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	490276	03/30/20 18:49	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			1000.65 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1			466706	04/06/20 10:14	KLS	TAL SL
Total/NA	Prep	PrecSep_0			1000.65 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:52	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Client Sample ID: W-3
Date Collected: 03/04/20 12:25
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:16	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:00	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			427204	03/17/20 18:12	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:46	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:11	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489708	03/24/20 19:42	JAP	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	490276	03/30/20 19:06	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			999.74 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1			466706	04/06/20 10:14	KLS	TAL SL
Total/NA	Prep	PrecSep_0			999.74 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:52	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-3D
Date Collected: 03/04/20 12:30
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:20	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:03	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			427204	03/17/20 18:14	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:48	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:15	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489708	03/24/20 20:15	JAP	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	490276	03/30/20 19:22	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			1000.00 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1			466706	04/06/20 10:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			1000.00 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:52	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Client Sample ID: W-3EB
Date Collected: 03/04/20 13:00
Date Received: 03/06/20 08:37

Lab Sample ID: 280-134350-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:25	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:06	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			427204	03/17/20 18:17	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:50	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488421	03/10/20 20:45	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	489708	03/24/20 21:54	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			999.13 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1			466706	04/06/20 10:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			999.13 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:52	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4
Lab Sample ID: 280-134350-7
Date Collected: 03/05/20 14:40
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426812	03/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			427173	03/17/20 15:45	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	427060	03/17/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			427309	03/18/20 12:31	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426813	03/16/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 23:29	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:44	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489945	03/26/20 16:12	JAP	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	490276	03/30/20 19:39	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-134350-8
Date Collected: 03/05/20 12:40
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426812	03/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			427173	03/17/20 15:50	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	427060	03/17/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			427309	03/18/20 12:34	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426813	03/16/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 23:31	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:37	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489945	03/26/20 16:44	JAP	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	490276	03/30/20 19:55	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			750.11 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1			466706	04/06/20 10:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			750.11 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:53	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Client Sample ID: W-6
Lab Sample ID: 280-134350-9
Date Collected: 03/04/20 13:45
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:38	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:08	DSH	TAL CAN

Client Sample ID: W-6
Lab Sample ID: 280-134350-9

Date Collected: 03/04/20 13:45
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			427204	03/17/20 18:19	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:52	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:48	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489708	03/24/20 20:48	JAP	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	490276	03/30/20 20:12	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN
Total/NA	Prep	PrecSep-21			750.23 mL	1.0 g	464153	03/12/20 11:16	MNH	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	466706	04/06/20 10:15	KLS	TAL SL
Total/NA	Prep	PrecSep_0			750.23 mL	1.0 g	464159	03/12/20 13:06	MNH	TAL SL
Total/NA	Analysis	9320		1			466589	04/02/20 17:53	CJQ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			467277	04/09/20 07:47	SMP	TAL SL

Client Sample ID: W-1
Lab Sample ID: 280-134350-10

Date Collected: 03/05/20 14:00
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			426890	03/16/20 12:43	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			426906	03/16/20 14:11	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	426611	03/13/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			427204	03/17/20 18:22	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	426617	03/13/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			426977	03/16/20 21:54	SLD	TAL CAN
Total/NA	Analysis	9040B		1			488291	03/09/20 22:52	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	489945	03/26/20 19:12	JAP	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	490276	03/30/20 20:28	JAP	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	488425	03/11/20 14:04	AAD	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	488326	03/10/20 17:13	SVC	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-20
California	State	2886	06-30-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-20
HI - RadChem Recognition	State	n/a	06-30-20
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-20
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
MI - RadChem Recognition	State	9005	06-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-20
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-20
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-20
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-20
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

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

Chain of Custody Record

TestAmerica ENVIRONMENTAL TESTING

280-134350 Chain of Custody

Client Information

Sampler: Emily Munoz
Lab PM: ~~Roll~~meyer, Stephanie K / Darlene Bandy
Phone: (720) 223 3436
E-Mail: ~~stephanie.rollmeyer~~darlene.bandy@testamericainc.com

Page: Page 1 of 1 (2nd) 1 of 1
Job #: 280-139539.1

Client Contact: ~~Anna Lundin~~ Molly Reeves
Company: HDR Inc
Address: 9781 S. Meridian Blvd Suite 400
City: Englewood
State, Zip: CO, 80112
Phone: ~~907-644-2078(Tel)~~ 731 263 7138
Email: ~~anna.lundin~~molly.reeves@hdrinc.com
Project Name: Xcel Energy GW CCR Monitoring - Comanche
Site: Colorado

Due Date Requested:
TAT Requested (days):
PO #: DEN-001
WO #:
Project #: 28014376
SSOW#:

Analysis Requested

Preservation Codes:

A - HCl	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C, 6020A, 7470A	9040B, 9056A_2IO	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of Containers	Special Instructions/Note:
			Preservation Code:			N	D	N	N	D		
~~MW1~~ MW-3	03/01/20	1520	G	Water	N	1	2	1	1	2		
~~MW2~~ MW-5	03/01/20	1440	G	Water	N	1	2	1	1	2		
~~MW3~~ MW-6	03/03/20	1120	G	Water	N	1	2	1	1	2		
~~MW4~~ W-3	03/04/20	1225	G	Water	N	1	2	1	1	2		
~~MW5~~ W-30	03/01/20	1230	G	Water	N	1	2	1	1	2		
~~MW6~~ W-3EB	03/04/20	1300	G	Water	N	1	2	1	1	2		
~~MW7~~ W-4	03/05/20	1440	G	Water	N	X	X	X	X	X		60ml wipes Contact Molly
~~MW8~~ W-5	03/05/20	1240	G	Water	N	1	1	X	1	2		Pull error from TDS/TSS bottles
~~MW9~~ W-6	03/04/20	1315	G	Water	N	1	2	1	1	2		
~~MW10~~				Water								
~~Field Duplicate~~				Water								

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	03/02/20 0857	HDR		03/02/2020 0837	TA DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: -0.1, -0.3, 0.3°C IR9 IR 3-6-20

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4/14/2020

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Emily Muñoz	Lab PM: ~~Darlene Purdy~~ Rothmeyer, Stephanie K	Carrier Tracking No(s):	COC No: 280-66596-22539.1
Client Contact: ~~Anna Lundin~~ Holly Reeves	Phone: 720 273 3436	E-Mail: ~~darlene.purdy~~ stephanie.rothmeyer@testamericainc.com		Page: ~~Page 1 of 2~~ 1 of 1
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd. Suite 400	Due Date Requested:	Analysis Requested		
City: Englewood	TAT Requested (days):			
State, Zip: CO, 80112				
Phone: ~~907-644-2070(Tel)~~ 734 263 7138	PO #: DEN-001			
Email: holly.reeves anna.lundin@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wwater, Ssolid, Oowaste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C, 6020A, 7470A	9040B, 9056A_28D	2540D - Total Suspended Solids	9315_Ra226; 9320_Ra228; Ra226Ra228_GPPC	Total Number of Containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
~~MW1~~ W-1	03/05/20	1400	G	Water	N	N	X	X	X	X	X	7	1000mL unpreserved 500mL HNO_3 - preserved Contact Holly Reeves for analysis priority
~~MW2~~				Water									
~~MW3~~				Water									
~~MW4~~				Water									
~~MW8~~				Water									
~~MW7~~				Water									
~~MW9~~				Water									
~~MW6~~				Water									
~~MW-5~~				Water									
~~MW-6~~				Water									
~~Field Duplicate~~				Water									

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 03/06/2020 0552	Company: HDR	Received by:	Date/Time: 03/06/2020 0837	Company: ETADEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-517436.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-134350-1
Address: 13715 Rider Trail North,	Due Date Requested: 4/1/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226Rn4228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
MW-3 (280-134350-1)	3/4/20	15:20 Mountain		Water				X	X	X	2	
MW-5 (280-134350-2)	3/4/20	14:40 Mountain		Water				X	X	X	2	
MW-6 (280-134350-3)	3/5/20	11:20 Mountain		Water				X	X	X	2	
W-3 (280-134350-4)	3/4/20	12:25 Mountain		Water				X	X	X	2	
W-3D (280-134350-5)	3/4/20	12:30 Mountain		Water				X	X	X	2	
W-3EB (280-134350-6)	3/4/20	13:00 Mountain		Water				X	X	X	2	
W-5 (280-134350-8)	3/5/20	12:40 Mountain		Water				X	X	X	2	
W-6 (280-134350-9)	3/4/20	13:45 Mountain		Water				X	X	X	2	

260-134350 Chain of Custody

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 3/4/2020 1400	Company	Received by: FE	Date/Time:	Company
Relinquished by: FE	Date/Time:	Company	Received by:	Date/Time: 3/11/2020 1035	Company STA STL
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-517371.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-134350-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 3/30/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

S69

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air, Tissue, A/Vol.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 12 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-3 (280-134350-1)	3/4/20	15:20 Mountain		Water			X	X	X	1	Use Collision Cell
MW-5 (280-134350-2)	3/4/20	14:40 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-134350-3)	3/5/20	11:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-3 (280-134350-4)	3/4/20	12:25 Mountain		Water			X	X	X	1	Use Collision Cell
W-3D (280-134350-5)	3/4/20	12:30 Mountain		Water			X	X	X	1	Use Collision Cell
W-3EB (280-134350-6)	3/4/20	13:00 Mountain		Water			X	X	X	1	Use Collision Cell
W-4 (280-134350-7)	3/5/20	14:40 Mountain		Water			X	X	X	1	Use Collision Cell
W-5 (280-134350-8)	3/5/20	12:40 Mountain		Water			X	X	X	1	Use Collision Cell
W-6 (280-134350-9)	3/4/20	13:45 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	3-9-2020 1405			3/12/20 9:30	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-517371.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-134350-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 3/30/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 26014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wastewater, Sediment, Solid, Oil, Tissue, Air, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 12 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-1 (280-134350-10)	3/5/20	14:00 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 280-134358

Client ETA Denver Site Name

Cooler Received on 3/12/20 Opened on 3/12/20

Cooler unpacked by: Matt Webb

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time 0730 MRC Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 3.5 °C Corrected Cooler Temp. 4.2 °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No MRC 3/12/20
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No MRC 3/12/20
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC995364
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
16. Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Did not receive Samples 7+10.

Received 1x 250mL unpreserved for Sample #7 not on COC.

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

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

Chain of Custody Record

1.5/2.2

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-517371.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-134350-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 3/30/2020	Analysis Requested		Preservation Codes:
City: North Canton	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			569

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sewage, Groundwater, Soil, Solid, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 12 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-1 (280-134350-10)	3/5/20	14:00 Mountain		Water			X	X	X		Use Collision Cell

280-134350 Chain of Custody

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

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-9-2020 1405		Micha Koziuliuga	3/11/2020 10:35	ETA STL
Relinquished by: Micha Koziuliuga	Date/Time: 3/11/2020 3:20PM	Company: ETA STL	Received by: [signature]	Date/Time: 3/12/20 9:30	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 280-134350**
Canton Facility

Client TA Denver Site Name

Cooler Received on 3-12-20 Opened on 3-12-20

Cooler unpacked by: Alex

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 1.5 °C Corrected Cooler Temp. 2.2 °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⇦ Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
16. Was a LL Hg or Me Hg trip blank present?	Yes	No

pH Strip Lot# HC995364

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-134350-1

Login Number: 134350
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-134350-1

Login Number: 134350
List Number: 2
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis
List Creation: 03/11/20 01:26 PM

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

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-134350-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)
280-134350-1	MW-3	63.5
280-134350-2	MW-5	79.2
280-134350-3	MW-6	96.2
280-134350-4	W-3	87.7
280-134350-5	W-3D	97.8
280-134350-6	W-3EB	81.8
280-134350-8	W-5	87.7
280-134350-9	W-6	88.4
LCS 160-464153/1-A	Lab Control Sample	101
MB 160-464153/21-A	Method Blank	95.0

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	Y Carrier (40-110)
280-134350-1	MW-3	63.5	81.5
280-134350-2	MW-5	79.2	77.8
280-134350-3	MW-6	96.2	82.6
280-134350-4	W-3	87.7	77.0
280-134350-5	W-3D	97.8	76.6
280-134350-6	W-3EB	81.8	83.4
280-134350-8	W-5	87.7	80.4
280-134350-9	W-6	88.4	80.7
LCS 160-464159/1-A	Lab Control Sample	101	83.7
MB 160-464159/21-A	Method Blank	95.0	79.3

Tracer/Carrier Legend

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-134350-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Darlene Bandy

Authorized for release by:
4/21/2020 7:52:24 AM

Darlene Bandy, Project Manager I
(303)736-0188
darlene.bandy@testamericainc.com

LINKS
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Have a Question? Ask The Expert
Visit us at: www.testamericainc.com

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

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

Job ID: 280-134350-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-134350-2

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

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

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

RECEIPT

The samples were received on 3/6/2020 8:37 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.6º C, 0.7º C and 1.2º C.

Receipt Exceptions

This report for job 280-134350-2 was created in order to report the Alkalinity 2320B results for samples W-4 (280-134350-7), W-5 (280-134350-8) and W-1 (280-134350-10). The client requested these analyses after other analyses for these samples had been invoiced, so these are reported separately.

The following samples were received with containers not completely filled with volume: W-4 (280-134350-7) and W-5 (280-134350-8).

W-4: 1 x 1L unpreserved plastic container filled with ~650mL of volume.
W-5: 1 of 2 x 1L unpreserved plastic container filled with ~500mL of volume.

Per client discussion on 03/09/20, sufficient volume is available for all requested analyses except for Radium analysis on sample W-4 (280-134350-7). The client indicated they will recollect volume for Radium analysis at a later date. It can be noted that if re-analysis is required for any of the tests logged, there may not be sufficient volume available.

Limited volume was submitted for sample W-1 (280-134350-10) for all tests listed on the COC. Per client discussion on 03/09/20, they will recollect volume for Radium analysis at a later date. Therefore, Radium analysis was not logged on sample W-1 (280-134350-10).

ALKALINITY

Samples W-4 (280-134350-7), W-5 (280-134350-8) and W-1 (280-134350-10) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 04/16/2020.

The following samples were requested by the client outside of holding time: W-4 (280-134350-7), W-5 (280-134350-8) and W-1 (280-134350-10).

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

Detection Summary

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4 — Lab Sample ID: 280-134350-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	530	H	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	530	H	10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-5 — Lab Sample ID: 280-134350-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	660	H	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	660	H	10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-1 — Lab Sample ID: 280-134350-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	820	H	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	820	H	10	3.1	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
SM 2320B	Alkalinity	SM	TAL DEN

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-134350-7	W-4	Water	03/05/20 14:40	03/06/20 08:37	
280-134350-8	W-5	Water	03/05/20 12:40	03/06/20 08:37	
280-134350-10	W-1	Water	03/05/20 14:00	03/06/20 08:37	

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: W-4
Date Collected: 03/05/20 14:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**530**	**H**	10	3.1	mg/L			04/16/20 11:51	1
Bicarbonate Alkalinity as CaCO3	**530**	**H**	10	3.1	mg/L			04/16/20 11:51	1
Carbonate Alkalinity as CaCO3	ND	H	10	3.1	mg/L			04/16/20 11:51	1

Client Sample ID: W-5
Date Collected: 03/05/20 12:40
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**660**	**H**	10	3.1	mg/L			04/16/20 12:01	1
Bicarbonate Alkalinity as CaCO3	**660**	**H**	10	3.1	mg/L			04/16/20 12:01	1
Carbonate Alkalinity as CaCO3	ND	H	10	3.1	mg/L			04/16/20 12:01	1

Client Sample ID: W-1
Date Collected: 03/05/20 14:00
Date Received: 03/06/20 08:37
Lab Sample ID: 280-134350-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**820**	**H**	10	3.1	mg/L			04/16/20 12:10	1
Bicarbonate Alkalinity as CaCO3	**820**	**H**	10	3.1	mg/L			04/16/20 12:10	1
Carbonate Alkalinity as CaCO3	ND	H	10	3.1	mg/L			04/16/20 12:10	1

QC Sample Results

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-492046/5
Matrix: Water
Analysis Batch: 492046

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		10	3.1	mg/L			04/16/20 10:13	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			04/16/20 10:13	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			04/16/20 10:13	1

Lab Sample ID: LCS 280-492046/4
Matrix: Water
Analysis Batch: 492046

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	207		mg/L		104	89 - 109

QC Association Summary

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Analysis Batch: 492046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-134350-7	W-4	Total/NA	Water	SM 2320B	
280-134350-8	W-5	Total/NA	Water	SM 2320B	
280-134350-10	W-1	Total/NA	Water	SM 2320B	
MB 280-492046/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-492046/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4
Lab Sample ID: 280-134350-7
Date Collected: 03/05/20 14:40
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			492046	04/16/20 11:51	SPG	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-134350-8
Date Collected: 03/05/20 12:40
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			492046	04/16/20 12:01	SPG	TAL DEN

Client Sample ID: W-1
Lab Sample ID: 280-134350-10
Date Collected: 03/05/20 14:00
Matrix: Water
Date Received: 03/06/20 08:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			492046	04/16/20 12:10	SPG	TAL DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-134350-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3

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

Chain of Custody Record

TestAmerica ENVIRONMENTAL TESTING

260-134350 Chain of Custody

Client Information

Client Contact: ~~Anna Lundin~~ Molly Reeves
Company: HDR Inc
Address: 9781 S. Meridian Blvd Suite 400
City: Englewood
State, Zip: CO, 80112
Phone: ~~907-644-2078(Tel)~~ 731 263 7138
Email: ~~anna.lundin@hdrinc.com~~ Molly.reeves

Project Name: Xcel Energy GW CCR Monitoring - Comanche
Site: Colorado

Sampler: Emily Munoz
Phone: (720) 223 3436

Lab PM: ~~Stephanie Rothmeyer~~ Darlene Bandy
E-Mail: ~~stephanie.rothmeyer@testamericainc.com~~ darlene.bandy

Due Date Requested:
TAT Requested (days):
PO #: DEN-001
WO #:
Project #: 28014376
SSOW#:

Page: Page 1 of 1
Job #:

Analysis Requested

Preservation Codes:

A - HCl	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C, 6020A, 7470A	9040B, 9056A_240	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of Containers	Special Instructions/Note:
			Preservation Code:			N	D	N	N	D		
~~MW1~~ MW-3	03/01/20	1520	G	Water	N	1	2	1	1	2		
~~MW2~~ MW-5	03/01/20	1440	G	Water	N	1	2	1	1	2		
~~MW3~~ MW-6	03/03/20	1120	G	Water	N	1	2	1	1	2		
~~MW4~~ W-3	03/04/20	1225	G	Water	N	1	2	1	1	2		
~~MW5~~ W-30	03/01/20	1230	G	Water	N	1	2	1	1	2		
~~MW6~~ W-3EB	03/04/20	1300	G	Water	N	1	2	1	1	2		
~~MW7~~ W-4	03/05/20	1440	G	Water	N	X	X	X	X	X		6 equal aliquots Contact Molly
~~MW8~~ W-5	03/05/20	1240	G	Water	N	1	1	X	1	2		Pull error from TDS/TSS bottles
~~MW9~~ W-6	03/04/20	1315	G	Water	N	1	2	1	1	2		
~~MW10~~				Water								
~~Field Duplicate~~				Water								

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by:	03/02/20 0857	HDR		03/04/2020 0837	TA DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: -0.1, -0.3, 0.3°C IR9 IR 3-6-20

4/21/2020

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Emily Muñoz	Lab PM: Darlene Brady Rothmeyer, Stephanie K	Carrier Tracking No(s):	COC No: 280-66596-22539.1
Client Contact: ~~Anna Lundin~~ Holly Reeves	Phone: 720 273 3436	E-Mail: darlene.brady stephanie.rothmeyer@testamericainc.com		Page: ~~Page 1 of 2~~ Page 1 of 1
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd. Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112				
Phone: ~~907-644-2070(Tel)~~ 734 263 7138	PO #: DEN-001			
Email: holly.reeves anna.lundin@hdrinc.com	WO #:			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, BT=Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C, 6020A, 7470A	300.0, 9056A, 28D	2540D - Total Suspended Solids	9315_Ra226; 9320_Ra228; Ra226Ra228_GFPC	Total Number of Containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
~~MW1~~ MW-1	03/05/20	1400	G	Water	N	N	X	X	X	X	X	2	1000mL unpreserved 500mL HNO_3 - preserve Contact Holly Reeves for analysis priority
~~MW2~~				Water									
~~MW3~~				Water									
~~MW4~~				Water									
~~MW~~				Water									
~~MW~~				Water									
~~MW~~				Water									
~~MW~~				Water									
~~MW-5~~				Water									
~~MW-6~~				Water									
~~Field Duplicate~~				Water									

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		03/06/2020 0552	HDR		03/06/2020 0837	ETADEN
2						
3						

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-134350-2

Login Number: 134350
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing TestAmerica



ANALYTICAL REPORT

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

Laboratory Job ID: 280-135533-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Darlene Bandy

Authorized for release by:
4/22/2020 10:27:56 AM

Darlene Bandy, Project Manager I
(303)736-0188
darlene.bandy@testamericainc.com

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.testamericainc.com

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-135533-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-135533-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-135533-2

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

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

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

RECEIPT

The samples were received on 4/14/2020 8:48 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.2º C.

Receipt Exceptions

The following samples were received with limited volume for Metals analysis: W-2 (280-135533-2) and W-2 (280-135533-3).
W-2 (280-135533-2): 500mL Nitric Acid plastic container filled with ~250mL of volume.
W-2 (280-135533-3): 250mL Nitric Acid plastic container filled with ~125mL of volume.
Though limited volume was submitted, it can be noted that samples -2 and -3 are the same well. Therefore, sample -2 was logged for 6010C and 6020A, while sample -3 was logged for 7470A Mercury.

TOTAL RECOVERABLE METALS

Sample W-2 (280-135533-2) was analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/17/2020 and analyzed on 04/20/2020.

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

TOTAL RECOVERABLE METALS (ICPMS)

Sample W-2 (280-135533-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 04/17/2020 and 04/20/2020 and analyzed on 04/20/2020 and 04/21/2020.

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

TOTAL MERCURY

Sample W-2 (280-135533-3) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/17/2020.

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

Detection Summary

Client: HDR Inc
Job ID: 280-135533-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2
Lab Sample ID: 280-135533-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0011	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.017		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.19		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.00076	J	0.0010	0.00031	mg/L	1		6020A	Total Recoverable
Calcium	270		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0053		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.038		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.011		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.012		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00058	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.0		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Sodium	1700		1.0	0.33	mg/L	1		6020A	Total Recoverable
Potassium	17		1.0	0.22	mg/L	1		6020A	Total Recoverable
Magnesium	1300		1.0	0.20	mg/L	1		6020A	Total Recoverable

Client Sample ID: W-2
Lab Sample ID: 280-135533-3

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-135533-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-135533-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-135533-2	W-2	Water	03/24/20 12:30	04/14/20 08:48	
280-135533-3	W-2	Water	04/13/20 12:20	04/14/20 08:48	

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

Client Sample ID: W-2
Date Collected: 03/24/20 12:30
Date Received: 04/14/20 08:48

Lab Sample ID: 280-135533-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.3		0.10	0.023	mg/L		04/17/20 16:30	04/20/20 23:58	1

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

Client Sample ID: W-2
Date Collected: 03/24/20 12:30
Date Received: 04/14/20 08:48

Lab Sample ID: 280-135533-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0020	0.00057	mg/L		04/17/20 16:30	04/20/20 14:57	1
Arsenic	0.017		0.0050	0.00075	mg/L		04/17/20 16:30	04/20/20 14:57	1
Barium	0.19		0.0050	0.0022	mg/L		04/17/20 16:30	04/20/20 14:57	1
Beryllium	0.00076	J	0.0010	0.00031	mg/L		04/17/20 16:30	04/20/20 14:57	1
Calcium	270		1.0	0.58	mg/L		04/17/20 16:30	04/20/20 14:57	1
Cadmium	0.0011		0.0010	0.00020	mg/L		04/17/20 16:30	04/20/20 14:57	1
Cobalt	0.0053		0.0010	0.00019	mg/L		04/17/20 16:30	04/20/20 14:57	1
Chromium	0.038		0.0020	0.00098	mg/L		04/20/20 15:05	04/21/20 11:57	1
Molybdenum	0.011		0.010	0.0011	mg/L		04/17/20 16:30	04/20/20 14:57	1
Lead	0.012		0.0010	0.00045	mg/L		04/17/20 16:30	04/20/20 14:57	1
Selenium	1.1		0.0050	0.00089	mg/L		04/17/20 16:30	04/20/20 14:57	1
Thallium	0.00058	J	0.0010	0.00020	mg/L		04/17/20 16:30	04/20/20 14:57	1
Lithium	1.0		0.0080	0.0017	mg/L		04/17/20 16:30	04/20/20 14:57	1
Sodium	1700		1.0	0.33	mg/L		04/17/20 16:30	04/20/20 14:57	1
Potassium	17		1.0	0.22	mg/L		04/17/20 16:30	04/20/20 14:57	1
Magnesium	1300		1.0	0.20	mg/L		04/17/20 16:30	04/20/20 14:57	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2
Date Collected: 04/13/20 12:20
Date Received: 04/14/20 08:48

Lab Sample ID: 280-135533-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		04/17/20 12:00	04/17/20 17:29	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-431181/1-A
Matrix: Water
Analysis Batch: 431526

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 431181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		04/17/20 16:30	04/20/20 23:49	1

Lab Sample ID: LCS 240-431181/2-A
Matrix: Water
Analysis Batch: 431526

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 431181

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.02		mg/L		102	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-431181/1-A
Matrix: Water
Analysis Batch: 431499

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 431181

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		04/17/20 16:30	04/20/20 14:19	1
Arsenic	ND		0.0050	0.00075	mg/L		04/17/20 16:30	04/20/20 14:19	1
Barium	ND		0.0050	0.0022	mg/L		04/17/20 16:30	04/20/20 14:19	1
Beryllium	ND		0.0010	0.00031	mg/L		04/17/20 16:30	04/20/20 14:19	1
Calcium	ND		1.0	0.58	mg/L		04/17/20 16:30	04/20/20 14:19	1
Cadmium	ND		0.0010	0.00020	mg/L		04/17/20 16:30	04/20/20 14:19	1
Cobalt	ND		0.0010	0.00019	mg/L		04/17/20 16:30	04/20/20 14:19	1
Molybdenum	ND		0.010	0.0011	mg/L		04/17/20 16:30	04/20/20 14:19	1
Lead	ND		0.0010	0.00045	mg/L		04/17/20 16:30	04/20/20 14:19	1
Selenium	ND		0.0050	0.00089	mg/L		04/17/20 16:30	04/20/20 14:19	1
Thallium	ND		0.0010	0.00020	mg/L		04/17/20 16:30	04/20/20 14:19	1
Lithium	ND		0.0080	0.0017	mg/L		04/17/20 16:30	04/20/20 14:19	1
Sodium	ND		1.0	0.33	mg/L		04/17/20 16:30	04/20/20 14:19	1
Potassium	ND		1.0	0.22	mg/L		04/17/20 16:30	04/20/20 14:19	1
Magnesium	ND		1.0	0.20	mg/L		04/17/20 16:30	04/20/20 14:19	1

Lab Sample ID: LCS 240-431181/3-A
Matrix: Water
Analysis Batch: 431499

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 431181

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0990		mg/L		99	80 - 120
Arsenic	1.00	0.962		mg/L		96	80 - 120
Barium	1.00	0.916		mg/L		92	80 - 120
Beryllium	0.500	0.458		mg/L		92	80 - 120
Calcium	25.0	23.7		mg/L		95	80 - 120
Cadmium	0.500	0.465		mg/L		93	80 - 120
Cobalt	0.500	0.496		mg/L		99	80 - 120
Molybdenum	0.500	0.469		mg/L		94	80 - 120
Lead	0.500	0.490		mg/L		98	80 - 120
Selenium	1.00	0.940		mg/L		94	80 - 120
Thallium	1.00	0.949		mg/L		95	80 - 120
Lithium	0.500	0.466		mg/L		93	80 - 120

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

Lab Sample ID: LCS 240-431181/3-A
Matrix: Water
Analysis Batch: 431499

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 431181

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	25.0	23.4		mg/L		94	80 - 120
Potassium	25.0	23.9		mg/L		96	80 - 120
Magnesium	25.0	23.7		mg/L		95	80 - 120

Lab Sample ID: MB 240-431348/1-A
Matrix: Water
Analysis Batch: 431565

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 431348

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0020	0.00098	mg/L		04/20/20 14:00	04/21/20 11:52	1

Lab Sample ID: LCS 240-431348/3-A
Matrix: Water
Analysis Batch: 431565

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 431348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.500	0.505		mg/L		101	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-431188/1-A
Matrix: Water
Analysis Batch: 431314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 431188

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		04/17/20 12:00	04/17/20 17:06	1

Lab Sample ID: LCS 240-431188/2-A
Matrix: Water
Analysis Batch: 431314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 431188

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00531		mg/L		106	80 - 120

QC Association Summary

Client: HDR Inc
Job ID: 280-135533-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Metals

Prep Batch: 431181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135533-2	W-2	Total Recoverable	Water	3005A	
MB 240-431181/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-431181/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-431181/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 431188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135533-3	W-2	Total/NA	Water	7470A	
MB 240-431188/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-431188/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 431314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135533-3	W-2	Total/NA	Water	7470A	431188
MB 240-431188/1-A	Method Blank	Total/NA	Water	7470A	431188
LCS 240-431188/2-A	Lab Control Sample	Total/NA	Water	7470A	431188

Prep Batch: 431348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135533-2	W-2	Total Recoverable	Water	3005A	
MB 240-431348/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-431348/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 431499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135533-2	W-2	Total Recoverable	Water	6020A	431181
MB 240-431181/1-A	Method Blank	Total Recoverable	Water	6020A	431181
LCS 240-431181/3-A	Lab Control Sample	Total Recoverable	Water	6020A	431181

Analysis Batch: 431526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135533-2	W-2	Total Recoverable	Water	6010C	431181
MB 240-431181/1-A	Method Blank	Total Recoverable	Water	6010C	431181
LCS 240-431181/2-A	Lab Control Sample	Total Recoverable	Water	6010C	431181

Analysis Batch: 431565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135533-2	W-2	Total Recoverable	Water	6020A	431348
MB 240-431348/1-A	Method Blank	Total Recoverable	Water	6020A	431348
LCS 240-431348/3-A	Lab Control Sample	Total Recoverable	Water	6020A	431348

Lab Chronicle

Client: HDR Inc
Job ID: 280-135533-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2
Lab Sample ID: 280-135533-2
Date Collected: 03/24/20 12:30
Matrix: Water
Date Received: 04/14/20 08:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	431181	04/17/20 16:30	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			431526	04/20/20 23:58	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	431181	04/17/20 16:30	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			431499	04/20/20 14:57	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	431348	04/20/20 15:05	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			431565	04/21/20 11:57	DSH	TAL CAN

Client Sample ID: W-2
Lab Sample ID: 280-135533-3
Date Collected: 04/13/20 12:20
Matrix: Water
Date Received: 04/14/20 08:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	431188	04/17/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			431314	04/17/20 17:29	SLD	TAL CAN

Laboratory References:

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-135533-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20 *
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Emily Muñoz	Lab PM: ~~Roth meyer, Stephanie R~~ Parlene Bondy	Carrier Tracking No(s):	COC No: 280-66598-22539.2
Client Contact: ~~Anna Lundin~~ Molly Reeves	Phone: 720 273-3136	E-Mail: parlene.bondy ~~stephanie.rothmeyer~~@testamericainc.com		Page: ~~Page 2 of 2~~ 1 of 1
Company: HDR Inc				Job #:

Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:
City: Englewood	TAT Requested (days): RUSH
State, Zip: CO, 80112	PO #: DEN-001
Phone: ~~907-644-2076(Tel)~~ (734) 263-7138	WO #:
Email: Molly.Reeves@hdrinc.com anna.lundin@hdrinc.com	Project #: 28014376
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:
Site: Colorado	

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sediment, Solid, Oil/Waste, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C, 6020A, 7470A	9040B, 9056A_28D	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
~~Equipment Blank~~			G	Water	N	N					X	2	
W-1	03/24/20	1250	G	Water	N	N		X				1	W-2: ~375 mL across 2 samples. Combine as needed for metals analysis. METALS RESULTS NEEDED ASAP
W-2	03/24/20	1230	G	Water	N	N		X				1	
W-2	04/13/20	1220	G	Water	N	N		X				1	

280-135533 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological	☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 04/14/20 0848	Company: HDR	Received by:	Date/Time: 04/14/2020 0848	Company: ETA DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: -0.1 IR9, +0.3 JO 04/14/2020

4/22/2020

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

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-520981.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-135533-2
Address: 4101 Shuffel Street NW,	Due Date Requested: 4/21/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sewage, Groundwater, Drinking Water, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	Total Number of containers	Special Instructions/Note:
			Preservation Code:							5004
W-2 (280-135533-2)	3/24/20	12:30 Mountain		Water			X	X	2	Use Collision Cell SCO(N)

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	[signature]	4/6/2020 1410		[signature]	4-6-20 933	EAT
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client TA Denver Site Name _____ Cooler unpacked by: Adam Gamet

Cooler Received on 4-15-20 Opened on 4-16-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 0.1 °C Corrected Cooler Temp. 1.0 °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC902937
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble ≥6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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

1/1/18

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-520981.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: darlene.bandy@testamericainc.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): DoD - A2LA		Job #: 280-135533-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 5/7/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Special Instructions/Note: SOO4

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/waste, BT=Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	7470A/7470A_Prep Mercury	Total Number of containers
			Preservation Code:					
W-2 (280-135533-3)	4/13/20	12:20 Mountain		Water			X	1

280 (N)

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
DLB	4/15/2020 1410			4.16.20 920	EAL
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

4/22/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client TA Denver Site Name _____ Cooler unpacked by: Adam Gossett

Cooler Received on 4-16-20 Opened on 4-16-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 1.1 °C Corrected Cooler Temp. 1.8 °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⇦ Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

pH Strip Lot# **HC902937**

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-135533-2

Login Number: 135533
List Number: 1
Creator: Bandy, Darlene F

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 280-139925-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Shelby Turner

Authorized for release by:
9/9/2020 12:00:40 PM
Shelby Turner, Project Manager I
Shelby.Turner@Eurofinset.com

Designee for

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-139925-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-139925-1

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

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

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

RECEIPT

The samples were received on 8/28/2020 1:05 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 5.3º C and 5.9º C.

Receipt Exceptions

There is a client sample ID MW-7-Dup, but no MW-7. The sample was logged with ID "W-7-DUP" unless instructed otherwise.

2320B Alkalinity analysis is reported separately under SDG 280-139925-2. The requested 6020A Total Metals analysis is reported under this SDG 280-139925-1.

TOTAL RECOVERABLE METALS (ICPMS)

Samples W-2A (280-139925-1), W-3 (280-139925-2), W-5 (280-139925-3), W-6 (280-139925-4), W-7 (280-139925-5), MW-1 (280-139925-6), MW-2 (280-139925-7), MW-3 (280-139925-8), MW-4 (280-139925-9), MW-5 (280-139925-10), MW-6 (280-139925-11), W-7-DUP (280-139925-12) and MW-3-EB (280-139925-13) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 09/02/2020 and analyzed on 09/03/2020, 09/04/2020 and 09/08/2020.

Magnesium failed the recovery criteria low for the MS of sample W-2A (280-139925-1) in batch 240-450444. Potassium, Magnesium and Sodium failed the recovery criteria low for the MSD of sample W-2A (280-139925-1) in batch 240-450444. The acceptable LCS data indicate that the analytical system was operating within control. Refer to the QC report for details.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples W-2A (280-139925-1)[10X], W-3 (280-139925-2)[2X], W-5 (280-139925-3)[2X], W-6 (280-139925-4)[2X], W-7 (280-139925-5)[10X], MW-1 (280-139925-6)[10X], MW-2 (280-139925-7)[10X], MW-3 (280-139925-8)[10X], MW-5 (280-139925-10)[10X] and W-7-DUP (280-139925-12)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Detection Summary

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A — Lab Sample ID: 280-139925-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	7900		10	2.0	mg/L	10		6020A	Total Recoverable
Potassium	59	F1	1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	5500		10	3.3	mg/L	10		6020A	Total Recoverable

Client Sample ID: W-3 — Lab Sample ID: 280-139925-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	280		2.0	0.40	mg/L	2		6020A	Total Recoverable
Potassium	15		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	290		2.0	0.66	mg/L	2		6020A	Total Recoverable

Client Sample ID: W-5 — Lab Sample ID: 280-139925-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	580		2.0	0.40	mg/L	2		6020A	Total Recoverable
Potassium	9.5		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	2000		2.0	0.66	mg/L	2		6020A	Total Recoverable

Client Sample ID: W-6 — Lab Sample ID: 280-139925-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	860		2.0	0.40	mg/L	2		6020A	Total Recoverable
Potassium	9.9		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	1600		2.0	0.66	mg/L	2		6020A	Total Recoverable

Client Sample ID: W-7 — Lab Sample ID: 280-139925-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	7200		10	2.0	mg/L	10		6020A	Total Recoverable
Potassium	58		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	7600		10	3.3	mg/L	10		6020A	Total Recoverable

Client Sample ID: MW-1 — Lab Sample ID: 280-139925-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	2000		10	2.0	mg/L	10		6020A	Total Recoverable
Potassium	35		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	3300		10	3.3	mg/L	10		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2 — Lab Sample ID: 280-139925-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	3600		10	2.0	mg/L	10		6020A	Total Recoverable
Potassium	68		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	7400		10	3.3	mg/L	10		6020A	Total Recoverable

Client Sample ID: MW-3 — Lab Sample ID: 280-139925-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	5600		10	2.0	mg/L	10		6020A	Total Recoverable
Potassium	53		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	6600		10	3.3	mg/L	10		6020A	Total Recoverable

Client Sample ID: MW-4 — Lab Sample ID: 280-139925-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	220		1.0	0.20	mg/L	1		6020A	Total Recoverable
Potassium	14		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	810		1.0	0.33	mg/L	1		6020A	Total Recoverable

Client Sample ID: MW-5 — Lab Sample ID: 280-139925-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	2200		10	2.0	mg/L	10		6020A	Total Recoverable
Potassium	39		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	5200		10	3.3	mg/L	10		6020A	Total Recoverable

Client Sample ID: MW-6 — Lab Sample ID: 280-139925-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	350		1.0	0.20	mg/L	1		6020A	Total Recoverable
Potassium	9.8		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	930		1.0	0.33	mg/L	1		6020A	Total Recoverable

Client Sample ID: W-7-DUP — Lab Sample ID: 280-139925-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	7200		10	2.0	mg/L	10		6020A	Total Recoverable
Potassium	56		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	7600		10	3.3	mg/L	10		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-3-EB
Lab Sample ID: 280-139925-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	0.20	J	1.0	0.20	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-139925-1	W-2A	Water	08/26/20 14:40	08/28/20 13:05	
280-139925-2	W-3	Water	08/27/20 17:10	08/28/20 13:05	
280-139925-3	W-5	Water	08/27/20 09:05	08/28/20 13:05	
280-139925-4	W-6	Water	08/27/20 09:00	08/28/20 13:05	
280-139925-5	W-7	Water	08/27/20 14:00	08/28/20 13:05	
280-139925-6	MW-1	Water	08/27/20 13:25	08/28/20 13:05	
280-139925-7	MW-2	Water	08/28/20 09:30	08/28/20 13:05	
280-139925-8	MW-3	Water	08/27/20 10:55	08/28/20 13:05	
280-139925-9	MW-4	Water	08/26/20 16:50	08/28/20 13:05	
280-139925-10	MW-5	Water	08/26/20 16:20	08/28/20 13:05	
280-139925-11	MW-6	Water	08/27/20 16:35	08/28/20 13:05	
280-139925-12	W-7-DUP	Water	08/27/20 14:05	08/28/20 13:05	
280-139925-13	MW-3-EB	Water	08/27/20 10:15	08/28/20 13:05	

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

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	7900		10	2.0	mg/L		09/02/20 14:00	09/08/20 14:54	10
Potassium	59	F1	1.0	0.22	mg/L		09/02/20 14:00	09/03/20 19:44	1
Sodium	5500		10	3.3	mg/L		09/02/20 14:00	09/08/20 14:54	10

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	280		2.0	0.40	mg/L		09/02/20 14:00	09/04/20 18:00	2
Potassium	15		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:07	1
Sodium	290		2.0	0.66	mg/L		09/02/20 14:00	09/04/20 18:00	2

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	580		2.0	0.40	mg/L		09/02/20 14:00	09/04/20 18:02	2
Potassium	9.5		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:09	1
Sodium	2000		2.0	0.66	mg/L		09/02/20 14:00	09/04/20 18:02	2

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	860		2.0	0.40	mg/L		09/02/20 14:00	09/04/20 18:10	2
Potassium	9.9		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:12	1
Sodium	1600		2.0	0.66	mg/L		09/02/20 14:00	09/04/20 18:10	2

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	7200		10	2.0	mg/L		09/02/20 14:00	09/04/20 18:12	10
Potassium	58		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:15	1
Sodium	7600		10	3.3	mg/L		09/02/20 14:00	09/04/20 18:12	10

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	2000		10	2.0	mg/L		09/02/20 14:00	09/04/20 18:15	10
Potassium	35		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:17	1
Sodium	3300		10	3.3	mg/L		09/02/20 14:00	09/04/20 18:15	10

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	3600		10	2.0	mg/L		09/02/20 14:00	09/04/20 18:17	10
Potassium	68		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:20	1
Sodium	7400		10	3.3	mg/L		09/02/20 14:00	09/04/20 18:17	10

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

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	5600		10	2.0	mg/L		09/02/20 14:00	09/04/20 18:20	10
Potassium	53		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:22	1
Sodium	6600		10	3.3	mg/L		09/02/20 14:00	09/04/20 18:20	10

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	220		1.0	0.20	mg/L		09/02/20 14:00	09/04/20 18:22	1
Potassium	14		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:25	1
Sodium	810		1.0	0.33	mg/L		09/02/20 14:00	09/04/20 18:22	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	2200		10	2.0	mg/L		09/02/20 14:00	09/04/20 18:25	10
Potassium	39		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:27	1
Sodium	5200		10	3.3	mg/L		09/02/20 14:00	09/04/20 18:25	10

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	350		1.0	0.20	mg/L		09/02/20 14:00	09/04/20 18:28	1
Potassium	9.8		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:30	1
Sodium	930		1.0	0.33	mg/L		09/02/20 14:00	09/04/20 18:28	1

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	7200		10	2.0	mg/L		09/02/20 14:00	09/04/20 18:30	10
Potassium	56		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 20:38	1
Sodium	7600		10	3.3	mg/L		09/02/20 14:00	09/04/20 18:30	10

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	0.20	J	1.0	0.20	mg/L		09/02/20 14:00	09/04/20 18:33	1
Potassium	ND		1.0	0.22	mg/L		09/02/20 14:00	09/04/20 18:33	1
Sodium	ND		1.0	0.33	mg/L		09/02/20 14:00	09/04/20 18:33	1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-449833/1-A
Matrix: Water
Analysis Batch: 450058

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 449833

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		1.0	0.22	mg/L		09/02/20 14:00	09/03/20 19:39	1

Lab Sample ID: MB 240-449833/1-A
Matrix: Water
Analysis Batch: 450311

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 449833

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	ND		1.0	0.20	mg/L		09/02/20 14:00	09/04/20 17:42	1
Sodium	ND		1.0	0.33	mg/L		09/02/20 14:00	09/04/20 17:42	1

Lab Sample ID: LCS 240-449833/2-A
Matrix: Water
Analysis Batch: 450058

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	25.0	25.4		mg/L		101	80 - 120

Lab Sample ID: LCS 240-449833/2-A
Matrix: Water
Analysis Batch: 450311

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	25.0	25.4		mg/L		102	80 - 120
Sodium	25.0	24.7		mg/L		99	80 - 120

Lab Sample ID: 280-139925-1 MS
Matrix: Water
Analysis Batch: 450058

Client Sample ID: W-2A
Prep Type: Total Recoverable
Prep Batch: 449833

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	59	F1	25.0	77.8		mg/L		75	75 - 125

Lab Sample ID: 280-139925-1 MS
Matrix: Water
Analysis Batch: 450444

Client Sample ID: W-2A
Prep Type: Total Recoverable
Prep Batch: 449833

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	7900		25.0	7800	4	mg/L		-280	75 - 125
Sodium	5500		25.0	5500	4	mg/L		86	75 - 125

Lab Sample ID: 280-139925-1 MSD
Matrix: Water
Analysis Batch: 450058

Client Sample ID: W-2A
Prep Type: Total Recoverable
Prep Batch: 449833

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	59	F1	25.0	76.3	F1	mg/L		69	75 - 125	2	20

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Lab Sample ID: 280-139925-1 MSD
Client Sample ID: W-2A
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 450444
Prep Batch: 449833

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Magnesium	7900		25.0	7250	4	mg/L		-2471	75 - 125	7	20
Sodium	5500		25.0	5080	4	mg/L		-1581	75 - 125	8	20

Metals

Prep Batch: 449833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139925-1	W-2A	Total Recoverable	Water	3005A	
280-139925-2	W-3	Total Recoverable	Water	3005A	
280-139925-3	W-5	Total Recoverable	Water	3005A	
280-139925-4	W-6	Total Recoverable	Water	3005A	
280-139925-5	W-7	Total Recoverable	Water	3005A	
280-139925-6	MW-1	Total Recoverable	Water	3005A	
280-139925-7	MW-2	Total Recoverable	Water	3005A	
280-139925-8	MW-3	Total Recoverable	Water	3005A	
280-139925-9	MW-4	Total Recoverable	Water	3005A	
280-139925-10	MW-5	Total Recoverable	Water	3005A	
280-139925-11	MW-6	Total Recoverable	Water	3005A	
280-139925-12	W-7-DUP	Total Recoverable	Water	3005A	
280-139925-13	MW-3-EB	Total Recoverable	Water	3005A	
MB 240-449833/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-449833/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-139925-1 MS	W-2A	Total Recoverable	Water	3005A	
280-139925-1 MSD	W-2A	Total Recoverable	Water	3005A	

Analysis Batch: 450058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139925-1	W-2A	Total Recoverable	Water	6020A	449833
280-139925-2	W-3	Total Recoverable	Water	6020A	449833
280-139925-3	W-5	Total Recoverable	Water	6020A	449833
280-139925-4	W-6	Total Recoverable	Water	6020A	449833
280-139925-5	W-7	Total Recoverable	Water	6020A	449833
280-139925-6	MW-1	Total Recoverable	Water	6020A	449833
280-139925-7	MW-2	Total Recoverable	Water	6020A	449833
280-139925-8	MW-3	Total Recoverable	Water	6020A	449833
280-139925-9	MW-4	Total Recoverable	Water	6020A	449833
280-139925-10	MW-5	Total Recoverable	Water	6020A	449833
280-139925-11	MW-6	Total Recoverable	Water	6020A	449833
280-139925-12	W-7-DUP	Total Recoverable	Water	6020A	449833
MB 240-449833/1-A	Method Blank	Total Recoverable	Water	6020A	449833
LCS 240-449833/2-A	Lab Control Sample	Total Recoverable	Water	6020A	449833
280-139925-1 MS	W-2A	Total Recoverable	Water	6020A	449833
280-139925-1 MSD	W-2A	Total Recoverable	Water	6020A	449833

Analysis Batch: 450311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139925-2	W-3	Total Recoverable	Water	6020A	449833
280-139925-3	W-5	Total Recoverable	Water	6020A	449833
280-139925-4	W-6	Total Recoverable	Water	6020A	449833
280-139925-5	W-7	Total Recoverable	Water	6020A	449833
280-139925-6	MW-1	Total Recoverable	Water	6020A	449833
280-139925-7	MW-2	Total Recoverable	Water	6020A	449833
280-139925-8	MW-3	Total Recoverable	Water	6020A	449833
280-139925-9	MW-4	Total Recoverable	Water	6020A	449833
280-139925-10	MW-5	Total Recoverable	Water	6020A	449833
280-139925-11	MW-6	Total Recoverable	Water	6020A	449833
280-139925-12	W-7-DUP	Total Recoverable	Water	6020A	449833
280-139925-13	MW-3-EB	Total Recoverable	Water	6020A	449833

Metals (Continued)

Analysis Batch: 450311 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-449833/1-A	Method Blank	Total Recoverable	Water	6020A	449833
LCS 240-449833/2-A	Lab Control Sample	Total Recoverable	Water	6020A	449833

Analysis Batch: 450444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139925-1	W-2A	Total Recoverable	Water	6020A	449833
280-139925-1 MS	W-2A	Total Recoverable	Water	6020A	449833
280-139925-1 MSD	W-2A	Total Recoverable	Water	6020A	449833

Lab Chronicle

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-139925-1
Date Collected: 08/26/20 14:40
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 19:44	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			450444	09/08/20 14:54	RKT	TAL CAN

Client Sample ID: W-3
Lab Sample ID: 280-139925-2
Date Collected: 08/27/20 17:10
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:07	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			450311	09/04/20 18:00	RKT	TAL CAN

Client Sample ID: W-5
Lab Sample ID: 280-139925-3
Date Collected: 08/27/20 09:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:09	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			450311	09/04/20 18:02	RKT	TAL CAN

Client Sample ID: W-6
Lab Sample ID: 280-139925-4
Date Collected: 08/27/20 09:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:12	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			450311	09/04/20 18:10	RKT	TAL CAN

Client Sample ID: W-7
Lab Sample ID: 280-139925-5
Date Collected: 08/27/20 14:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:15	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			450311	09/04/20 18:12	RKT	TAL CAN

Lab Chronicle

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-1
Lab Sample ID: 280-139925-6
Date Collected: 08/27/20 13:25
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:17	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			450311	09/04/20 18:15	RKT	TAL CAN

Client Sample ID: MW-2
Lab Sample ID: 280-139925-7
Date Collected: 08/28/20 09:30
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:20	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			450311	09/04/20 18:17	RKT	TAL CAN

Client Sample ID: MW-3
Lab Sample ID: 280-139925-8
Date Collected: 08/27/20 10:55
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:22	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			450311	09/04/20 18:20	RKT	TAL CAN

Client Sample ID: MW-4
Lab Sample ID: 280-139925-9
Date Collected: 08/26/20 16:50
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:25	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450311	09/04/20 18:22	RKT	TAL CAN

Client Sample ID: MW-5
Lab Sample ID: 280-139925-10
Date Collected: 08/26/20 16:20
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:27	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			450311	09/04/20 18:25	RKT	TAL CAN

Lab Chronicle

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6
Lab Sample ID: 280-139925-11
Date Collected: 08/27/20 16:35
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:30	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450311	09/04/20 18:28	RKT	TAL CAN

Client Sample ID: W-7-DUP
Lab Sample ID: 280-139925-12
Date Collected: 08/27/20 14:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 20:38	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			450311	09/04/20 18:30	RKT	TAL CAN

Client Sample ID: MW-3-EB
Lab Sample ID: 280-139925-13
Date Collected: 08/27/20 10:15
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449833	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450311	09/04/20 18:33	RKT	TAL CAN

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-139925-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20 *
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

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

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-101467-30342.1 2
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 1 of 2
Company: HDR Inc				Job #:
Address: 9761 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days): Rush Fastest Possible			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Wastewater, Air, Etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B - Alkalinity	6020A - 3 Total Metals - Mg, K, Na	Total Number of containers	Special Instructions/Note:
			Preservation Code				N	D		
W-1				Water	N					
W-2A	8/26/20	1440	G	Water	N		X	X		
W-2B				Water	N					
W-3	8/27/20	1710	G	Water	N		X	X		
W-4				Water	N					
W-5	8/27/20	0905	G	Water	N		X	X		
W-6	8/27/20	0900	G	Water	N		X	X		
W-7	8/27/20	1400	G	Water	N		X	X		
W-8A				Water	N					
W-8B				Water	N					
MW-1	8/27/20	1325	G	Water	N		X	X		

280-139925 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 8/28/20 1305	Company: HDR	Received by:	Date/Time: 08/28/2020 1305	Company: ETADEN		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:		

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 1308923/8889

Cooler Temperature(s) °C and Other Remarks: 5.5, 6.1 IR#11 -0.2 RP 8/28/20

Ver: 01/16/2019

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9/9/2020

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-101467-30342.2 2
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days): Rush Fastest Possible			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B - Alkalinity	6020A - 3 Total Metals - Mg, K, Na	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D		
MW-2	8/28/20	0930	G	Water	N		X	X		
MW-3	8/27/20	1055	G	Water	N		X	X		
MW-4	8/26/20	1650	G	Water	N		X	X		
MW-5	8/26/20	1620	G	Water	N		X	X		
MW-6	8/27/20	1635	G	Water	N		X	X		
MW-7 -DUP	8/27/20	1405	G	Water	N		X	X		
MW-3 -EB	8/27/20	1015	G	Water	N		X	X		
				Water						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 8/28/20 1305	Company: HDR	Received by:	Date/Time: 08/28/2020 1305	Company: EMDEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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9/9/2020

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-537252.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): DoD - A2LA		Job #: 280-139925-1
Address: 4101 Shuttel Street NW	Due Date Requested: 9/9/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #			
Email:				
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:

534

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 3 Total Metals (w/collision cell)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
W-2A (280-139925-1)	8/26/20	14:40 Mountain		Water			X	1	Use Collision Cell
W-3 (280-139925-2)	8/27/20	17:10 Mountain		Water			X	1	Use Collision Cell
W-5 (280-139925-3)	8/27/20	09:05 Mountain		Water			X	1	Use Collision Cell
W-6 (280-139925-4)	8/27/20	09:00 Mountain		Water			X	1	Use Collision Cell
W-7 (280-139925-5)	8/27/20	14:00 Mountain		Water			X	1	Use Collision Cell
MW-1 (280-139925-6)	8/27/20	13:25 Mountain		Water			X	1	Use Collision Cell
MW-2 (280-139925-7)	8/28/20	09:30 Mountain		Water			X	1	Use Collision Cell
MW-3 (280-139925-8)	8/27/20	10:55 Mountain		Water			X	1	Use Collision Cell
MW-4 (280-139925-9)	8/26/20	16:50 Mountain		Water			X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	Return To Client / Disposal By Lab / Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	8/31/2020 1300		[signature]	9-1-20 1040	ETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver. 07/16/2019

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-597252.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-139925-1
Address: 4101 Shuffel Street NW.	Due Date Requested: 9/9/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 1 Total Metals (w/collision cell)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-5 (280-139925-10)	8/26/20	16:20 Mountain		Water			X	1	Use Collision Cell
MW-6 (280-139925-11)	8/27/20	16:35 Mountain		Water			X	1	Use Collision Cell
MW-7-DUP (280-139925-12)	8/27/20	14:05 Mountain		Water			X	1	Use Collision Cell
MW-3-EB (280-139925-13)	8/27/20	10:15 Mountain		Water			X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	8/31/2020 1300			9-1-20 1040	ETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # :
Canton Facility

Client ETA Denver Site Name

Cooler Received on 9-1-20 Opened on 9-1-20

Cooler unpacked by: Matt Smith

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # NA Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. 1.3 °C Corrected Cooler Temp. 2.2 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	(No)
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels be reconciled with the COC?	(Yes)	No
9. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
10. Sufficient quantity received to perform indicated analyses?	(Yes)	No
11. Are these work share samples?	(Yes)	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA	pH Strip Lot# HC911298
13. Were VOAs on the COC?	(Yes)	No
14. Were air bubbles >6 mm in any VOA vials? ⬤ ⇐ Larger than this.	Yes (No)	NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	(No)
16. Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-139925-1

Login Number: 139925
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-139925-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Shelby Turner

Authorized for release by:
9/8/2020 11:13:48 AM
Shelby Turner, Project Manager I
Shelby.Turner@Eurofinset.com

Designee for

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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

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Glossary

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

Job ID: 280-139925-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-139925-2

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

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

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

RECEIPT

The samples were received on 8/28/2020 1:05 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 5.3º C and 5.9º C.

Receipt Exceptions

There is a client sample ID MW-7-Dup, but no MW-7. The sample was logged with ID "W-7-DUP" unless instructed otherwise.

2320B Alkalinity analysis is reported separately under SDG 280-139925-2. The requested 6020A Total Metals analysis will be reported under SDG 280-139925-1.

ALKALINITY

Samples W-2A (280-139925-1), W-3 (280-139925-2), W-5 (280-139925-3), W-6 (280-139925-4), W-7 (280-139925-5), MW-1 (280-139925-6), MW-2 (280-139925-7), MW-3 (280-139925-8), MW-4 (280-139925-9), MW-5 (280-139925-10), MW-6 (280-139925-11), W-7-DUP (280-139925-12) and MW-3-EB (280-139925-13) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 09/01/2020.

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

Detection Summary

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A — Lab Sample ID: 280-139925-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	620		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	620		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-3 — Lab Sample ID: 280-139925-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	290		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	290		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-5 — Lab Sample ID: 280-139925-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	360		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	360		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-139925-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	610		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	610		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-139925-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	910		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	910		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 280-139925-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	1100		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	1100		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 280-139925-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	1500		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	1500		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 280-139925-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	770		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	770		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 280-139925-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	250		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	250		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-139925-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	1300		10	3.1	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 280-139925-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bicarbonate Alkalinity as CaCO3	1300		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-139925-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	130		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	130		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-7-DUP — Lab Sample ID: 280-139925-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	900		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	900		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-3-EB — Lab Sample ID: 280-139925-13

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
SM 2320B	Alkalinity	SM	TAL DEN

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-139925-1	W-2A	Water	08/26/20 14:40	08/28/20 13:05	
280-139925-2	W-3	Water	08/27/20 17:10	08/28/20 13:05	
280-139925-3	W-5	Water	08/27/20 09:05	08/28/20 13:05	
280-139925-4	W-6	Water	08/27/20 09:00	08/28/20 13:05	
280-139925-5	W-7	Water	08/27/20 14:00	08/28/20 13:05	
280-139925-6	MW-1	Water	08/27/20 13:25	08/28/20 13:05	
280-139925-7	MW-2	Water	08/28/20 09:30	08/28/20 13:05	
280-139925-8	MW-3	Water	08/27/20 10:55	08/28/20 13:05	
280-139925-9	MW-4	Water	08/26/20 16:50	08/28/20 13:05	
280-139925-10	MW-5	Water	08/26/20 16:20	08/28/20 13:05	
280-139925-11	MW-6	Water	08/27/20 16:35	08/28/20 13:05	
280-139925-12	W-7-DUP	Water	08/27/20 14:05	08/28/20 13:05	
280-139925-13	MW-3-EB	Water	08/27/20 10:15	08/28/20 13:05	

General Chemistry

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**620**		10	3.1	mg/L			09/01/20 16:57	1
Bicarbonate Alkalinity as CaCO3	**620**		10	3.1	mg/L			09/01/20 16:57	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 16:57	1

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**290**		10	3.1	mg/L			09/01/20 17:04	1
Bicarbonate Alkalinity as CaCO3	**290**		10	3.1	mg/L			09/01/20 17:04	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 17:04	1

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**360**		10	3.1	mg/L			09/01/20 17:10	1
Bicarbonate Alkalinity as CaCO3	**360**		10	3.1	mg/L			09/01/20 17:10	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 17:10	1

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**610**		10	3.1	mg/L			09/01/20 17:18	1
Bicarbonate Alkalinity as CaCO3	**610**		10	3.1	mg/L			09/01/20 17:18	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 17:18	1

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**910**		10	3.1	mg/L			09/01/20 17:26	1
Bicarbonate Alkalinity as CaCO3	**910**		10	3.1	mg/L			09/01/20 17:26	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 17:26	1

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**1100**		10	3.1	mg/L			09/01/20 17:35	1
Bicarbonate Alkalinity as CaCO3	**1100**		10	3.1	mg/L			09/01/20 17:35	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 17:35	1

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**1500**		10	3.1	mg/L			09/01/20 17:57	1
Bicarbonate Alkalinity as CaCO3	**1500**		10	3.1	mg/L			09/01/20 17:57	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 17:57	1

General Chemistry

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**770**		10	3.1	mg/L			09/01/20 18:05	1
Bicarbonate Alkalinity as CaCO3	**770**		10	3.1	mg/L			09/01/20 18:05	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 18:05	1

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**250**		10	3.1	mg/L			09/01/20 18:11	1
Bicarbonate Alkalinity as CaCO3	**250**		10	3.1	mg/L			09/01/20 18:11	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 18:11	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**1300**		10	3.1	mg/L			09/01/20 18:20	1
Bicarbonate Alkalinity as CaCO3	**1300**		10	3.1	mg/L			09/01/20 18:20	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 18:20	1

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**130**		10	3.1	mg/L			09/01/20 18:26	1
Bicarbonate Alkalinity as CaCO3	**130**		10	3.1	mg/L			09/01/20 18:26	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 18:26	1

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**900**		10	3.1	mg/L			09/01/20 18:34	1
Bicarbonate Alkalinity as CaCO3	**900**		10	3.1	mg/L			09/01/20 18:34	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 18:34	1

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139925-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		10	3.1	mg/L			09/01/20 18:40	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 18:40	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 18:40	1

QC Sample Results

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-507714/31
Matrix: Water
Analysis Batch: 507714

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		10	3.1	mg/L			09/01/20 16:30	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 16:30	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/01/20 16:30	1

Lab Sample ID: LCS 280-507714/30
Matrix: Water
Analysis Batch: 507714

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	184		mg/L		92	89 - 109

QC Association Summary

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Analysis Batch: 507714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139925-1	W-2A	Total/NA	Water	SM 2320B	
280-139925-2	W-3	Total/NA	Water	SM 2320B	
280-139925-3	W-5	Total/NA	Water	SM 2320B	
280-139925-4	W-6	Total/NA	Water	SM 2320B	
280-139925-5	W-7	Total/NA	Water	SM 2320B	
280-139925-6	MW-1	Total/NA	Water	SM 2320B	
280-139925-7	MW-2	Total/NA	Water	SM 2320B	
280-139925-8	MW-3	Total/NA	Water	SM 2320B	
280-139925-9	MW-4	Total/NA	Water	SM 2320B	
280-139925-10	MW-5	Total/NA	Water	SM 2320B	
280-139925-11	MW-6	Total/NA	Water	SM 2320B	
280-139925-12	W-7-DUP	Total/NA	Water	SM 2320B	
280-139925-13	MW-3-EB	Total/NA	Water	SM 2320B	
MB 280-507714/31	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-507714/30	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-139925-1
Date Collected: 08/26/20 14:40
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 16:57	RAF	TAL DEN

Client Sample ID: W-3
Lab Sample ID: 280-139925-2
Date Collected: 08/27/20 17:10
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 17:04	RAF	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-139925-3
Date Collected: 08/27/20 09:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 17:10	RAF	TAL DEN

Client Sample ID: W-6
Lab Sample ID: 280-139925-4
Date Collected: 08/27/20 09:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 17:18	RAF	TAL DEN

Client Sample ID: W-7
Lab Sample ID: 280-139925-5
Date Collected: 08/27/20 14:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 17:26	RAF	TAL DEN

Client Sample ID: MW-1
Lab Sample ID: 280-139925-6
Date Collected: 08/27/20 13:25
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 17:35	RAF	TAL DEN

Client Sample ID: MW-2
Lab Sample ID: 280-139925-7
Date Collected: 08/28/20 09:30
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 17:57	RAF	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-3
Lab Sample ID: 280-139925-8
Date Collected: 08/27/20 10:55
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 18:05	RAF	TAL DEN

Client Sample ID: MW-4
Lab Sample ID: 280-139925-9
Date Collected: 08/26/20 16:50
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 18:11	RAF	TAL DEN

Client Sample ID: MW-5
Lab Sample ID: 280-139925-10
Date Collected: 08/26/20 16:20
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 18:20	RAF	TAL DEN

Client Sample ID: MW-6
Lab Sample ID: 280-139925-11
Date Collected: 08/27/20 16:35
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 18:26	RAF	TAL DEN

Client Sample ID: W-7-DUP
Lab Sample ID: 280-139925-12
Date Collected: 08/27/20 14:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 18:34	RAF	TAL DEN

Client Sample ID: MW-3-EB
Lab Sample ID: 280-139925-13
Date Collected: 08/27/20 10:15
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			507714	09/01/20 18:40	RAF	TAL DEN

Laboratory References:

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-139925-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3

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

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-101467-30342.1 2
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 1 of 2
Company: HDR Inc				Job #:
Address: 9761 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days): Rush Fastest Possible			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Wastetoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B - Alkalinity	6020A - 3 Total Metals - Mg, K, Na	Total Number of containers	Special Instructions/Note:
			Preservation Code		X	X	N	D	X	
W-1				Water	N					
W-2A	8/26/20	1440	G	Water	N		X	X		
W-2B				Water	N					
W-3	8/27/20	1710	G	Water	N		X	X		
W-4				Water	N					
W-5	8/27/20	0905	G	Water	N		X	X		
W-6	8/27/20	0900	G	Water	N		X	X		
W-7	8/27/20	1400	G	Water	N		X	X		
W-8A				Water	N					
W-8B				Water	N					
MW-1	8/27/20	1325	G	Water	N		X	X		

280-139925 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 8/28/20 1305	Company: HDR	Received by:	Date/Time: 08/28/2020 1305	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 1308923/8889

Cooler Temperature(s) °C and Other Remarks: 5.5, 6.1 IR#11 -0.2 RP 8/28/20

Ver: 01/16/2019

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9/8/2020

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-101467-30342.2 2
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days): Rush Fastest Possible			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B - Alkalinity	6020A - 3 Total Metals - Mg, K, Na	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D		
MW-2	8/28/20	0930	G	Water	N		X	X		
MW-3	8/27/20	1055	G	Water	N		X	X		
MW-4	8/26/20	1650	G	Water	N		X	X		
MW-5	8/26/20	1620	G	Water	N		X	X		
MW-6	8/27/20	1635	G	Water	N		X	X		
MW-7 -DUP	8/27/20	1405	G	Water	N		X	X		
MW-3 -EB	8/27/20	1015	G	Water	N		X	X		
				Water						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 8/28/20 1305	Company: HDR	Received by:	Date/Time: 08/28/2020 1305	Company: EMDEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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9/8/2020

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-139925-2

Login Number: 139925
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 280-139932-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Darlene Bandy

Authorized for release by:
10/1/2020 5:11:17 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

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

Glossary

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

Job ID: 280-139932-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-139932-1

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

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

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

RECEIPT

The samples were received on 8/28/2020 1:05 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.6º C, 4.5º C, 4.6º C, 5.6º C, 5.7º C and 6.0º C.

Receipt Exceptions

The laboratory received a client sample ID MW-7-DUP, but no MW-7. As instructed by the client, this is a duplicate for sample W-7, and was re-named W-7-DUP.

The following samples were received at Eurofins TestAmerica St. Louis in 1L Nitric acid-preserved bottles, but had pHs anywhere from 4 to 7 S.U.: 280-139932-A-1, B-1, A-4, B-4, B-6, A-13, & B-13. 6 mL of Nitric acid was added to each bottle to reduce the pH to <2 for the requested radiochemistry analyses. This was successful for all but bottles B-1 & B-6, which still have pHs ~ 7 S.U.
MW-2 (280-139932-1), MW-5 (280-139932-4), W-7-DUP (280-139932-6) and MW-1 (280-139932-13)

RADIUM-226 (GFPC)

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for Radium-226 (GFPC) in accordance with SW 846 9315. The samples were prepared on 09/04/2020 and analyzed on 09/29/2020.

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Insufficient sample volume was available to perform a sample duplicate for the following samples: MW-4 (280-139932-3), MW-6 (280-139932-5), MW-3-EB (280-139932-7), W-5 (280-139932-10) and W-6 (280-139932-11). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Sample 240-135710-2 was reduced further due to brown discoloration, a cloudy appearance, and heavy sediment levels: Samples 280-139932-1, 280-139932-2, 280-139932-6, 280-139932-8, 280-139932-12, and 280-139932-13 were reduced further due to orange discolorations and a cloudy appearance. Samples 280-139932-4 and 280-139932-9 were reduced further due to a yellow discoloration. A

Job ID: 280-139932-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

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

RADIUM-228

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for Radium-228 in accordance with 9320. The samples were prepared on 09/04/2020 and analyzed on 09/24/2020.

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Insufficient sample volume was available to perform a sample duplicate for the following samples: MW-4 (280-139932-3), MW-6 (280-139932-5), MW-3-EB (280-139932-7), W-5 (280-139932-10) and W-6 (280-139932-11). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

The following samples did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences. The data have been reported with this narrative.
W-7-DUP (280-139932-6) and W-7 (280-139932-12)

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), W-7-DUP (280-139932-6), W-2A (280-139932-8), W-7 (280-139932-12) and MW-1 (280-139932-13) were reduced further due to orange discolorations and a cloudy appearance. Samples MW-5 (280-139932-4) and W-3 (280-139932-9) were reduced further due to a yellow discoloration. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

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

RADIUM-226/RADIUM-228 (GFPC)

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for Radium-226/Radium-228 (GFPC) in accordance with 9315/9320. The samples were analyzed on 09/30/2020.

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

Detection Summary

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2 — Lab Sample ID: 280-139932-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 280-139932-2

No Detections.

Client Sample ID: MW-4 — Lab Sample ID: 280-139932-3

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 280-139932-4

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 280-139932-5

No Detections.

Client Sample ID: W-7-DUP — Lab Sample ID: 280-139932-6

No Detections.

Client Sample ID: MW-3-EB — Lab Sample ID: 280-139932-7

No Detections.

Client Sample ID: W-2A — Lab Sample ID: 280-139932-8

No Detections.

Client Sample ID: W-3 — Lab Sample ID: 280-139932-9

No Detections.

Client Sample ID: W-5 — Lab Sample ID: 280-139932-10

No Detections.

Client Sample ID: W-6 — Lab Sample ID: 280-139932-11

No Detections.

Client Sample ID: W-7 — Lab Sample ID: 280-139932-12

No Detections.

Client Sample ID: MW-1 — Lab Sample ID: 280-139932-13

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Protocol References:

None = None

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

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-139932-1	MW-2	Water	08/28/20 09:30	08/28/20 13:05	
280-139932-2	MW-3	Water	08/27/20 10:55	08/28/20 13:05	
280-139932-3	MW-4	Water	08/26/20 16:50	08/28/20 13:05	
280-139932-4	MW-5	Water	08/26/20 16:20	08/28/20 13:05	
280-139932-5	MW-6	Water	08/27/20 16:35	08/28/20 13:05	
280-139932-6	W-7-DUP	Water	08/27/20 14:05	08/28/20 13:05	
280-139932-7	MW-3-EB	Water	08/27/20 10:15	08/28/20 13:05	
280-139932-8	W-2A	Water	08/26/20 14:40	08/28/20 13:05	
280-139932-9	W-3	Water	08/27/20 17:10	08/28/20 13:05	
280-139932-10	W-5	Water	08/27/20 09:05	08/28/20 13:05	
280-139932-11	W-6	Water	08/27/20 09:00	08/28/20 13:05	
280-139932-12	W-7	Water	08/27/20 14:00	08/28/20 13:05	
280-139932-13	MW-1	Water	08/27/20 13:25	08/28/20 13:05	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.38		0.258	0.286	1.00	0.133	pCi/L	09/04/20 14:15	09/29/20 08:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110	09/04/20 14:15	09/29/20 08:57	1

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.639		0.189	0.197	1.00	0.146	pCi/L	09/04/20 14:15	09/29/20 08:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110	09/04/20 14:15	09/29/20 08:57	1

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.668		0.160	0.171	1.00	0.107	pCi/L	09/04/20 14:15	09/29/20 08:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110	09/04/20 14:15	09/29/20 08:57	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.229		0.152	0.154	1.00	0.198	pCi/L	09/04/20 14:15	09/29/20 08:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	62.1		40 - 110	09/04/20 14:15	09/29/20 08:57	1

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.381		0.122	0.127	1.00	0.101	pCi/L	09/04/20 14:15	09/29/20 08:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110	09/04/20 14:15	09/29/20 08:57	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.28		0.444	0.489	1.00	0.239	pCi/L	09/04/20 14:15	09/29/20 08:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	77.4		40 - 110	09/04/20 14:15	09/29/20 08:58	1

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0372	U	0.0542	0.0543	1.00	0.137	pCi/L	09/04/20 14:15	09/29/20 08:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110	09/04/20 14:15	09/29/20 08:58	1

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.58		0.295	0.328	1.00	0.178	pCi/L	09/04/20 14:15	09/29/20 08:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110	09/04/20 14:15	09/29/20 08:58	1

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.256		0.134	0.136	1.00	0.161	pCi/L	09/04/20 14:15	09/29/20 08:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110	09/04/20 14:15	09/29/20 08:58	1

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.254		0.112	0.114	1.00	0.111	pCi/L	09/04/20 14:15	09/29/20 12:25	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	77.7		40 - 110	09/04/20 14:15	09/29/20 12:25	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.224		0.0970	0.0991	1.00	0.0955	pCi/L	09/04/20 14:15	09/29/20 12:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*40 - 110*	*09/04/20 14:15*	*09/29/20 12:25*	*1*

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.14		0.433	0.474	1.00	0.288	pCi/L	09/04/20 14:15	09/29/20 12:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.2*		*40 - 110*	*09/04/20 14:15*	*09/29/20 12:25*	*1*

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.733		0.215	0.225	1.00	0.204	pCi/L	09/04/20 14:15	09/29/20 12:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.5*		*40 - 110*	*09/04/20 14:15*	*09/29/20 12:25*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.18		0.466	0.508	1.00	0.516	pCi/L	09/04/20 15:14	09/24/20 11:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:17*	*1*
Y Carrier	*80.0*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:17*	*1*

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.778		0.444	0.450	1.00	0.673	pCi/L	09/04/20 15:14	09/24/20 11:17	1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110	09/04/20 15:14	09/24/20 11:17	1
Y Carrier	76.6		40 - 110	09/04/20 15:14	09/24/20 11:17	1

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.483		0.298	0.301	1.00	0.455	pCi/L	09/04/20 15:14	09/24/20 11:17	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110	09/04/20 15:14	09/24/20 11:17	1
Y Carrier	76.6		40 - 110	09/04/20 15:14	09/24/20 11:17	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.743	U	0.549	0.553	1.00	0.857	pCi/L	09/04/20 15:14	09/24/20 11:17	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	62.1		40 - 110	09/04/20 15:14	09/24/20 11:17	1
Y Carrier	76.3		40 - 110	09/04/20 15:14	09/24/20 11:17	1

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.549		0.282	0.286	1.00	0.416	pCi/L	09/04/20 15:14	09/24/20 11:17	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110	09/04/20 15:14	09/24/20 11:17	1
Y Carrier	76.6		40 - 110	09/04/20 15:14	09/24/20 11:17	1

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.27	G	0.796	0.823	1.00	1.10	pCi/L	09/04/20 15:14	09/24/20 11:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	77.4		40 - 110	09/04/20 15:14	09/24/20 11:18	1
Y Carrier	81.1		40 - 110	09/04/20 15:14	09/24/20 11:18	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.161	U	0.299	0.300	1.00	0.509	pCi/L	09/04/20 15:14	09/24/20 11:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.3*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*
Y Carrier	*73.6*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.89**		0.576	0.634	1.00	0.643	pCi/L	09/04/20 15:14	09/24/20 11:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*
Y Carrier	*79.3*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.20**		0.417	0.431	1.00	0.569	pCi/L	09/04/20 15:14	09/24/20 11:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*
Y Carrier	*83.0*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.24**		0.390	0.407	1.00	0.517	pCi/L	09/04/20 15:14	09/24/20 11:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.7*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*
Y Carrier	*81.1*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:19*	*1*

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.856**		0.279	0.290	1.00	0.360	pCi/L	09/04/20 15:14	09/24/20 11:19	1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110	09/04/20 15:14	09/24/20 11:19	1
Y Carrier	83.7		40 - 110	09/04/20 15:14	09/24/20 11:19	1

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.60	G	0.773	0.809	1.00	1.01	pCi/L	09/04/20 15:14	09/24/20 11:19	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110	09/04/20 15:14	09/24/20 11:19	1
Y Carrier	82.2		40 - 110	09/04/20 15:14	09/24/20 11:19	1

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.42		0.424	0.444	1.00	0.544	pCi/L	09/04/20 15:14	09/24/20 11:20	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.5		40 - 110	09/04/20 15:14	09/24/20 11:20	1
Y Carrier	86.7		40 - 110	09/04/20 15:14	09/24/20 11:20	1

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

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.56		0.533	0.583	5.00	0.516	pCi/L		09/30/20 17:14	1

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.42		0.483	0.491	5.00	0.673	pCi/L		09/30/20 17:14	1

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.15		0.338	0.346	5.00	0.455	pCi/L		09/30/20 17:14	1

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

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.972		0.570	0.574	5.00	0.857	pCi/L		09/30/20 17:14	1

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.930		0.307	0.313	5.00	0.416	pCi/L		09/30/20 17:14	1

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.55		0.911	0.957	5.00	1.10	pCi/L		09/30/20 17:14	1

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.124	U	0.304	0.305	5.00	0.509	pCi/L		09/30/20 17:14	1

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.48		0.647	0.714	5.00	0.643	pCi/L		09/30/20 17:14	1

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.45		0.438	0.452	5.00	0.569	pCi/L		09/30/20 17:14	1

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.50		0.406	0.423	5.00	0.517	pCi/L		09/30/20 17:14	1

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.08		0.295	0.306	5.00	0.360	pCi/L		09/30/20 17:14	1

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.74		0.886	0.938	5.00	1.01	pCi/L		09/30/20 17:14	1

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.15		0.475	0.498	5.00	0.544	pCi/L		09/30/20 17:14	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-481649/23-A
Matrix: Water
Analysis Batch: 484047

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481649

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04720	U	0.0700	0.0702	1.00	0.120	pCi/L	09/04/20 14:15	09/29/20 12:25	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.9*		*40 - 110*	*09/04/20 14:15*	*09/29/20 12:25*	*1*

Lab Sample ID: LCS 160-481649/1-A
Matrix: Water
Analysis Batch: 484047

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481649

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	11.12		1.18	1.00	0.0994	pCi/L	98	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.3*		*40 - 110*

Lab Sample ID: LCSD 160-481649/2-A
Matrix: Water
Analysis Batch: 484047

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 481649

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	10.54		1.16	1.00	0.115	pCi/L	93	75 - 125	0.25	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*77.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-481651/23-A
Matrix: Water
Analysis Batch: 483512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481651

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1713	U	0.257	0.257	1.00	0.431	pCi/L	09/04/20 15:14	09/24/20 11:20	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.9*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:20*	*1*
Y Carrier	*83.4*		*40 - 110*	*09/04/20 15:14*	*09/24/20 11:20*	*1*

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

Lab Sample ID: LCS 160-481651/1-A
Matrix: Water
Analysis Batch: 483510

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481651

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.79	7.784		0.988	1.00	0.488	pCi/L	100	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.3*		*40 - 110*
Y Carrier	*77.4*		*40 - 110*

Lab Sample ID: LCSD 160-481651/2-A
Matrix: Water
Analysis Batch: 483510

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 481651

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			7.79	9.211		1.19	1.00	0.602	pCi/L	118	75 - 125	0.66	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*77.1*		*40 - 110*
Y Carrier	*71.0*		*40 - 110*

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Prep Batch: 481649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	PrecSep-21	
280-139932-2	MW-3	Total/NA	Water	PrecSep-21	
280-139932-3	MW-4	Total/NA	Water	PrecSep-21	
280-139932-4	MW-5	Total/NA	Water	PrecSep-21	
280-139932-5	MW-6	Total/NA	Water	PrecSep-21	
280-139932-6	W-7-DUP	Total/NA	Water	PrecSep-21	
280-139932-7	MW-3-EB	Total/NA	Water	PrecSep-21	
280-139932-8	W-2A	Total/NA	Water	PrecSep-21	
280-139932-9	W-3	Total/NA	Water	PrecSep-21	
280-139932-10	W-5	Total/NA	Water	PrecSep-21	
280-139932-11	W-6	Total/NA	Water	PrecSep-21	
280-139932-12	W-7	Total/NA	Water	PrecSep-21	
280-139932-13	MW-1	Total/NA	Water	PrecSep-21	
MB 160-481649/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-481649/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-481649/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 481651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	PrecSep_0	
280-139932-2	MW-3	Total/NA	Water	PrecSep_0	
280-139932-3	MW-4	Total/NA	Water	PrecSep_0	
280-139932-4	MW-5	Total/NA	Water	PrecSep_0	
280-139932-5	MW-6	Total/NA	Water	PrecSep_0	
280-139932-6	W-7-DUP	Total/NA	Water	PrecSep_0	
280-139932-7	MW-3-EB	Total/NA	Water	PrecSep_0	
280-139932-8	W-2A	Total/NA	Water	PrecSep_0	
280-139932-9	W-3	Total/NA	Water	PrecSep_0	
280-139932-10	W-5	Total/NA	Water	PrecSep_0	
280-139932-11	W-6	Total/NA	Water	PrecSep_0	
280-139932-12	W-7	Total/NA	Water	PrecSep_0	
280-139932-13	MW-1	Total/NA	Water	PrecSep_0	
MB 160-481651/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-481651/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-481651/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2
Lab Sample ID: 280-139932-1
Date Collected: 08/28/20 09:30
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.57 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.57 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483510	09/24/20 11:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: MW-3
Lab Sample ID: 280-139932-2
Date Collected: 08/27/20 10:55
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.47 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.47 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483510	09/24/20 11:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: MW-4
Lab Sample ID: 280-139932-3
Date Collected: 08/26/20 16:50
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.41 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.41 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483510	09/24/20 11:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: MW-5
Lab Sample ID: 280-139932-4
Date Collected: 08/26/20 16:20
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.95 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.95 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483510	09/24/20 11:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6
Lab Sample ID: 280-139932-5
Date Collected: 08/27/20 16:35
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.62 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.62 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483510	09/24/20 11:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: W-7-DUP
Lab Sample ID: 280-139932-6
Date Collected: 08/27/20 14:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.36 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.36 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483510	09/24/20 11:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: MW-3-EB
Lab Sample ID: 280-139932-7
Date Collected: 08/27/20 10:15
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.33 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.33 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483512	09/24/20 11:19	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: W-2A
Lab Sample ID: 280-139932-8
Date Collected: 08/26/20 14:40
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.74 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.74 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483512	09/24/20 11:19	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-3
Lab Sample ID: 280-139932-9
Date Collected: 08/27/20 17:10
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.54 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 08:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.54 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483512	09/24/20 11:19	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: W-5
Lab Sample ID: 280-139932-10
Date Collected: 08/27/20 09:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.34 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 12:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.34 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483512	09/24/20 11:19	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: W-6
Lab Sample ID: 280-139932-11
Date Collected: 08/27/20 09:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.08 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 12:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.08 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483512	09/24/20 11:19	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Client Sample ID: W-7
Lab Sample ID: 280-139932-12
Date Collected: 08/27/20 14:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.83 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1			484047	09/29/20 12:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.83 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1			483512	09/24/20 11:19	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-1
Lab Sample ID: 280-139932-13
Date Collected: 08/27/20 13:25
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.76 mL	1.0 g	481649	09/04/20 14:15	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	484047	09/29/20 12:25	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.76 mL	1.0 g	481651	09/04/20 15:14	AVB	TAL SL
Total/NA	Analysis	9320		1	1.0 mL	1.0 mL	483512	09/24/20 11:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			484382	09/30/20 17:14	CMM	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	07-01-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No:
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): Rush Fastest Possible			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appendix IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226/Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2	8/28/20	0930	G	Water	N		X	X	X	X	X		
MW-3	8/27/20	1055	G	Water	N		X	X	X	X	X		
MW-4	8/26/20	1650	G	Water	N		X	X	X	X	X		
MW-5	8/26/20	1620	G	Water	N		X	X	X	X	X		
MW-6	8/27/20	1635	G	Water	N		X	X	X	X	X		
MW-7 - DUP	8/27/20	1405	G	Water	N		X	X	X	X	X		
MW-3 - EB	8/27/20	1015	G	Water	N		X	X	X	X	X		
				Water	N								

280-139932 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	8/28/20 1305	HDR		08/28/2020 1305	EADEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 130 8883/8881/8879/8882/8878

Cooler Temperature(s) °C and Other Remarks: 5.8, 4.7, 5.9, 4.8, 1.8, 6.2 IR#11-0-28 8/28/20

New 01/16/2019

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): Rush Fastest Possible			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7138(Tel)	WO #:			Other:
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wastewater, Sediment, Solid, Oil/waste, Air=Air, Biota)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2340C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appendix IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226R8Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
W-1				Water									
W-2A	8/26/20	1440	G	Water	N		X	X	X	X	X		
W-2B				Water	N								
W-3	8/27/20	1710	G	Water	N		X	X	X	X	X		
W-4	T-8/26/20			Water	N								
W-5	8/27/20	0905	G	Water	N		X	X	X	X	X		
W-6	8/27/20	0900	G	Water	N		X	X	X	X	X		
W-7	8/27/20	1400	G	Water	N		X	X	X	X	X		
W-8A				Water	N								
W-8B				Water	N								
MW-1	8/27/20	1325	G	Water	N		X	X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	8/28/20 1505	HDR		09/23/2020 1305	EA DEN
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-537254.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-139932-1
Address: 13715 Rider Trail North,	Due Date Requested: 9/29/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Preservation Codes:

A - HCl	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PreSep_21 Ra226 (1/3) - SUB	9320_Ra228/PreSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-2 (280-139932-1)	8/28/20	09:30 Mountain		Water			X	X	X	2	
MW-3 (280-139932-2)	8/27/20	10:55 Mountain		Water			X	X	X	2	
MW-4 (280-139932-3)	8/26/20	16:50 Mountain		Water			X	X	X	2	
MW-5 (280-139932-4)	8/26/20	16:20 Mountain		Water			X	X	X	2	
MW-6 (280-139932-5)	8/27/20	16:35 Mountain		Water			X	X	X	2	
MW-7-DUP (280-139932-6)	8/27/20	14:05 Mountain		Water			X	X	X	2	
MW-3-EB (280-139932-7)	8/27/20	10:15 Mountain		Water			X	X	X	2	
W-2A (280-139932-8)	8/26/20	14:40 Mountain		Water			X	X	X	2	
W-3 (280-139932-9)	8/27/20	17:10 Mountain		Water			X	X	X	2	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Scott Hall	8/31/20 1255	ETA Denver	FedEx		
Relinquished by: FedEx	Date/Time:	Company	Received by:	Date/Time: 9/1/20 09:30	Company: ETASTL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-537254.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-139932-1
Address: 13715 Rider Trail North,	Due Date Requested: 9/29/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SEOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-5 (280-139932-10)	8/27/20	09:05 Mountain		Water			X	X	X	2	
W-6 (280-139932-11)	8/27/20	09:00 Mountain		Water			X	X	X	2	
W-7 (280-139932-12)	8/27/20	14:00 Mountain		Water			X	X	X	3	
MW-1 (280-139932-13)	8/27/20	13:25 Mountain		Water			X	X	X	2	

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

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time:	Company	Received by: FedEx	Date/Time:	Company
Relinquished by: FedEx	Date/Time:	Company	Received by:	Date/Time: 9/1/20 09:30	Company ETASTL
Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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10/1/2020

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-139932-1

Login Number: 139932
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-139932-1

Login Number: 139932
List Number: 2
Creator: Boyd, Jacob C

List Source: Eurofins TestAmerica, St. Louis
List Creation: 09/01/20 01:15 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	See CUR and NCM for pH issue for 7 bottles that did not have pH <2.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-139932-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
280-139932-1	MW-2	92.4
280-139932-2	MW-3	85.0
280-139932-3	MW-4	92.4
280-139932-4	MW-5	62.1
280-139932-5	MW-6	96.9
280-139932-6	W-7-DUP	77.4
280-139932-7	MW-3-EB	85.3
280-139932-8	W-2A	85.6
280-139932-9	W-3	93.3
280-139932-10	W-5	77.7
280-139932-11	W-6	94.8
280-139932-12	W-7	79.2
280-139932-13	MW-1	86.5
LCS 160-481649/1-A	Lab Control Sample	89.3
LCSD 160-481649/2-A	Lab Control Sample Dup	77.1
MB 160-481649/23-A	Method Blank	85.9

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
280-139932-1	MW-2	92.4	80.0
280-139932-2	MW-3	85.0	76.6
280-139932-3	MW-4	92.4	76.6
280-139932-4	MW-5	62.1	76.3
280-139932-5	MW-6	96.9	76.6
280-139932-6	W-7-DUP	77.4	81.1
280-139932-7	MW-3-EB	85.3	73.6
280-139932-8	W-2A	85.6	79.3
280-139932-9	W-3	93.3	83.0
280-139932-10	W-5	77.7	81.1
280-139932-11	W-6	94.8	83.7
280-139932-12	W-7	79.2	82.2
280-139932-13	MW-1	86.5	86.7
LCS 160-481651/1-A	Lab Control Sample	89.3	77.4
LCSD 160-481651/2-A	Lab Control Sample Dup	77.1	71.0
MB 160-481651/23-A	Method Blank	85.9	83.4

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-139932-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Shelby Turner

Authorized for release by:
9/14/2020 12:22:36 PM
Shelby Turner, Project Manager I
Shelby.Turner@Eurofinset.com

Designee for

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-139932-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-139932-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-139932-2

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

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

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

RECEIPT

The samples were received on 8/28/2020 1:05 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.6º C, 4.5º C, 4.6º C, 5.6º C, 5.7º C and 6.0º C.

Receipt Exceptions

There is a client sample ID MW-7-Dup, but no MW-7. The sample was logged with ID "W-7-DUP" unless instructed otherwise.

The requested Radiochemistry analyses will be reported separately under SDG 280-139932-1. All other requested analyses are reported under this SDG: 280-139932-2.

TOTAL RECOVERABLE METALS

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 09/02/2020 and analyzed on 09/03/2020 and 09/04/2020.

Samples MW-2 (280-139932-1)[5X], MW-3 (280-139932-2)[5X], MW-5 (280-139932-4)[5X], MW-6 (280-139932-5)[5X], W-7-DUP (280-139932-6)[5X], W-2A (280-139932-8)[5X], W-3 (280-139932-9)[5X], W-5 (280-139932-10)[5X], W-6 (280-139932-11)[5X], W-7 (280-139932-12)[5X] and MW-1 (280-139932-13)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

TOTAL RECOVERABLE METALS (ICPMS)

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 09/02/2020 and analyzed on 09/03/2020 and 09/04/2020.

Samples MW-2 (280-139932-1)[20X], MW-3 (280-139932-2)[20X], MW-5 (280-139932-4)[20X], MW-6 (280-139932-5)[5X], W-7-DUP (280-139932-6)[20X], W-2A (280-139932-8)[20X], W-5 (280-139932-10)[5X], W-6 (280-139932-11)[5X], W-7 (280-139932-12)[20X] and

Job ID: 280-139932-2 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

MW-1 (280-139932-13)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

TOTAL MERCURY

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/02/2020 and analyzed on 09/03/2020.

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

TOTAL DISSOLVED SOLIDS

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 09/01/2020 and 09/08/2020.

Reanalysis of the following samples for method 2540C_Calcd batch 508324 were performed outside of the analytical holding time due to the solids residue being over the acceptable range: MW-4 (280-139932-3), MW-5 (280-139932-4) and W-2A (280-139932-8).

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

TOTAL SUSPENDED SOLIDS

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 08/31/2020.

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

CORROSIVITY (PH)

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for corrosivity (pH) in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 08/31/2020 and 09/03/2020.

The following sample pH did not equilibrate to 0.05 pH units after three measurements: MW-3-EB (280-139932-7). This was observed in a previous analysis thus the sample was not rerun.

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

ANIONS (28 DAYS)

Samples MW-2 (280-139932-1), MW-3 (280-139932-2), MW-4 (280-139932-3), MW-5 (280-139932-4), MW-6 (280-139932-5), W-7-DUP (280-139932-6), MW-3-EB (280-139932-7), W-2A (280-139932-8), W-3 (280-139932-9), W-5 (280-139932-10), W-6 (280-139932-11), W-7 (280-139932-12) and MW-1 (280-139932-13) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 09/03/2020, 09/04/2020, 09/05/2020 and 09/10/2020.

Sulfate failed the recovery criteria low for the MS and MSD of sample MW-2 (280-139932-1) in batch 280-508062. The acceptable LCS data indicate that the analytical system was operating within control. Refer to the QC report for details.

Chloride and Fluoride failed the recovery criteria high for the MS and MSD of sample MW-5 (280-139932-4) in batch 280-507905. The acceptable LCS data indicate that the analytical system was operating within control. Refer to the QC report for details.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking

Job ID: 280-139932-2 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

amount. Refer to the QC report for details.

Samples MW-2 (280-139932-1)[20X], MW-2 (280-139932-1)[200X], MW-3 (280-139932-2)[20X], MW-3 (280-139932-2)[200X], MW-4 (280-139932-3)[20X], MW-5 (280-139932-4)[20X], MW-5 (280-139932-4)[200X], MW-6 (280-139932-5)[100X], MW-6 (280-139932-5)[20X], W-7-DUP (280-139932-6)[1000X], W-7-DUP (280-139932-6)[20X], MW-3-EB (280-139932-7)[20X], W-2A (280-139932-8)[20X], W-2A (280-139932-8)[500X], W-3 (280-139932-9)[100X], W-3 (280-139932-9)[20X], W-5 (280-139932-10)[100X], W-5 (280-139932-10)[20X], W-6 (280-139932-11)[100X], W-6 (280-139932-11)[20X], W-7 (280-139932-12)[20X], W-7 (280-139932-12)[500X], MW-1 (280-139932-13)[20X] and MW-1 (280-139932-13)[500X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration blank (CCB) for analytical batch 280-507905 contained sulfate above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank. Affected samples: CCB 280-507905/42, CCB 280-507905/54.

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

Detection Summary

Client: HDR Inc
Job ID: 280-139932-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2 — Lab Sample ID: 280-139932-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.6		0.50	0.12	mg/L	5		6010C	Total Recoverable
Antimony	0.00062	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.012		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.025		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	500		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.015		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0018	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0073	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00052	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0096		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	4.6		0.16	0.033	mg/L	20		6020A	Total Recoverable
Mercury	0.00016	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	560		60	20	mg/L	20		9056A	Total/NA
Sulfate	32000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	50000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	110		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 280-139932-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.0		0.50	0.12	mg/L	5		6010C	Total Recoverable
Arsenic	0.0065		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.013		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	290		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.023		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0024		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0027	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.53		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0031		0.0010	0.00020	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3 (Continued) — Lab Sample ID: 280-139932-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	2.1		0.16	0.033	mg/L	20		6020A	Total Recoverable
Mercury	0.00016	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	350		60	20	mg/L	20		9056A	Total/NA
Sulfate	40000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	58000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	78		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 280-139932-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.59		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.020		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.033		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	590		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00038	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0018		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0014	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.015		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.6		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00029	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.31		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	200		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.38	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3000		100	21	mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	6500	H	40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	36		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-139932-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.7		0.50	0.12	mg/L	5		6010C	Total Recoverable
Antimony	0.0014	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0038	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.026		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	470		1.0	0.58	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 280-139932-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00070	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0056		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.030		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.14		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00087	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.7		0.16	0.033	mg/L	20		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1600	F1	60	20	mg/L	20		9056A	Total/NA
Sulfate	19000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	31000	H	200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	41		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-139932-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2		0.50	0.12	mg/L	5		6010C	Total Recoverable
Arsenic	0.0098		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0074		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	500		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00060	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0020		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0097	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.17		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	250		60	20	mg/L	20		9056A	Total/NA
Sulfate	4300		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	7600		67	31	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	17		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7-DUP — Lab Sample ID: 280-139932-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.2		0.50	0.12	mg/L	5		6010C	Total Recoverable
Arsenic	0.010		0.0050	0.00075	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-7-DUP (Continued) — Lab Sample ID: 280-139932-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.026		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	540		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0055		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.017		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0037		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0050	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0012		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.9		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0046		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	4.1		0.16	0.033	mg/L	20		6020A	Total Recoverable
Mercury	0.00019	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	710		60	20	mg/L	20		9056A	Total/NA
Sulfate	55000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	76000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	140		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3-EB — Lab Sample ID: 280-139932-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	8.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Sulfate	41	J	100	21	mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	620		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	1.6	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2A — Lab Sample ID: 280-139932-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.6		0.50	0.12	mg/L	5		6010C	Total Recoverable
Arsenic	0.011		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.020		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	310		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0037		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0075		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.021		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0051	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-2A (Continued) — Lab Sample ID: 280-139932-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00055	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.9		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0044		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.6		0.16	0.033	mg/L	20		6020A	Total Recoverable
Mercury	0.00015	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	840		60	20	mg/L	20		9056A	Total/NA
Sulfate	49000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	68000	H	1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	100		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3 — Lab Sample ID: 280-139932-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.2		0.50	0.12	mg/L	5		6010C	Total Recoverable
Arsenic	0.0028	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.036		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	550		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00067	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0012	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.043		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00068	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.019		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.11		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	59	J	60	20	mg/L	20		9056A	Total/NA
Sulfate	3000	^	500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	4700		50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	41		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5 — Lab Sample ID: 280-139932-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.0		0.50	0.12	mg/L	5		6010C	Total Recoverable
Antimony	0.0028		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0033	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-5 (Continued) — Lab Sample ID: 280-139932-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.050		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	450		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00057	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0053		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0079		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.060		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0015		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.055		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00052	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.43		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	350		60	20	mg/L	20		9056A	Total/NA
Fluoride	4.3	J	10	3.3	mg/L	20		9056A	Total/NA
Sulfate	12000	^	500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	14000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	54		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-139932-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	8.7		0.50	0.12	mg/L	5		6010C	Total Recoverable
Antimony	0.00093	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0040	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.033		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	270		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00067	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0011		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0052		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.36		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0010		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.062		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00020	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.14		0.040	0.0083	mg/L	5		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-6 (Continued) — Lab Sample ID: 280-139932-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	190		60	20	mg/L	20		9056A	Total/NA
Sulfate	11000	^	500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	14000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	21		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-139932-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.8		0.50	0.12	mg/L	5		6010C	Total Recoverable
Antimony	0.00057	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.015		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.040		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	460		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0060		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.017		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0069		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0053	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0025		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.8		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0047		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.6		0.16	0.033	mg/L	20		6020A	Total Recoverable
Mercury	0.00019	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	23.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	740		60	20	mg/L	20		9056A	Total/NA
Sulfate	54000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	68000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	120		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 280-139932-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.6		0.50	0.12	mg/L	5		6010C	Total Recoverable
Antimony	0.0011	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0055		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.016		0.0050	0.0022	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1 (Continued)
Lab Sample ID: 280-139932-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	510		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0023		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.019		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0014	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0052	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.65		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0030		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.3		0.16	0.033	mg/L	20		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	350		60	20	mg/L	20		9056A	Total/NA
Sulfate	17000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	26000		330	160	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	37		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-139932-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-139932-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-139932-1	MW-2	Water	08/28/20 09:30	08/28/20 13:05	
280-139932-2	MW-3	Water	08/27/20 10:55	08/28/20 13:05	
280-139932-3	MW-4	Water	08/26/20 16:50	08/28/20 13:05	
280-139932-4	MW-5	Water	08/26/20 16:20	08/28/20 13:05	
280-139932-5	MW-6	Water	08/27/20 16:35	08/28/20 13:05	
280-139932-6	W-7-DUP	Water	08/27/20 14:05	08/28/20 13:05	
280-139932-7	MW-3-EB	Water	08/27/20 10:15	08/28/20 13:05	
280-139932-8	W-2A	Water	08/26/20 14:40	08/28/20 13:05	
280-139932-9	W-3	Water	08/27/20 17:10	08/28/20 13:05	
280-139932-10	W-5	Water	08/27/20 09:05	08/28/20 13:05	
280-139932-11	W-6	Water	08/27/20 09:00	08/28/20 13:05	
280-139932-12	W-7	Water	08/27/20 14:00	08/28/20 13:05	
280-139932-13	MW-1	Water	08/27/20 13:25	08/28/20 13:05	

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

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.6		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:08	5

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.0		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:12	5

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.59		0.10	0.023	mg/L		09/02/20 14:00	09/03/20 18:46	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:16	5

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.2		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:21	5

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.2		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:33	5

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		09/02/20 14:00	09/04/20 08:05	1

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:42	5

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.2		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:46	5

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

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.0		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:51	5

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.7		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:55	5

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.8		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 19:59	5

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.6		0.50	0.12	mg/L		09/02/20 14:00	09/03/20 20:04	5

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

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00062	J	0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:46	1
Arsenic	0.012		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:46	1
Barium	0.025		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:46	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:46	1
Calcium	500		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:46	1
Cadmium	0.0011		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:46	1
Cobalt	0.015		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:46	1
Chromium	0.0018	J	0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:46	1
Molybdenum	0.0073	J	0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:46	1
Lead	0.00052	J	0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:46	1
Selenium	2.1		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:46	1
Thallium	0.0096		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:46	1
Lithium	4.6		0.16	0.033	mg/L		09/02/20 14:00	09/04/20 14:30	20

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:48	1
Arsenic	0.0065		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:48	1
Barium	0.013		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:48	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:48	1
Calcium	290		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:48	1
Cadmium	0.011		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:48	1
Cobalt	0.023		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:48	1

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

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0024		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:48	1
Molybdenum	0.0027	J	0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:48	1
Lead	ND		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:48	1
Selenium	0.53		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:48	1
Thallium	0.0031		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:48	1
Lithium	2.1		0.16	0.033	mg/L		09/02/20 14:00	09/04/20 14:32	20

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:16	1
Arsenic	0.020		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:16	1
Barium	0.033		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:16	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:16	1
Calcium	590		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:16	1
Cadmium	0.00038	J	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:16	1
Cobalt	0.0018		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:16	1
Chromium	0.0014	J	0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:16	1
Molybdenum	0.015		0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:16	1
Lead	ND		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:16	1
Selenium	2.6		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:16	1
Thallium	0.00029	J	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:16	1
Lithium	0.31		0.0080	0.0017	mg/L		09/02/20 14:00	09/04/20 14:20	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0014	J	0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:51	1
Arsenic	0.0038	J	0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:51	1
Barium	0.026		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:51	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:51	1
Calcium	470		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:51	1
Cadmium	0.00070	J	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:51	1
Cobalt	0.0056		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:51	1
Chromium	0.030		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:51	1
Molybdenum	0.016		0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:51	1
Lead	ND		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:51	1
Selenium	0.14		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:51	1
Thallium	0.00087	J	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:51	1
Lithium	2.7		0.16	0.033	mg/L		09/02/20 14:00	09/04/20 14:35	20

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:53	1
Arsenic	0.0098		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:53	1
Barium	0.0074		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:53	1

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

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:53	1
Calcium	**500**		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:53	1
Cadmium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:53	1
Cobalt	**0.00060**	**J**	0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:53	1
Chromium	**0.0020**		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:53	1
Molybdenum	**0.0097**	**J**	0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:53	1
Lead	ND		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:53	1
Selenium	**1.1**		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:53	1
Thallium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:53	1
Lithium	**0.17**		0.040	0.0083	mg/L		09/02/20 14:00	09/04/20 14:37	5

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:56	1
Arsenic	**0.010**		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:56	1
Barium	**0.026**		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:56	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:56	1
Calcium	**540**		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:56	1
Cadmium	**0.0055**		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:56	1
Cobalt	**0.017**		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:56	1
Chromium	**0.0037**		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:56	1
Molybdenum	**0.0050**	**J**	0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:56	1
Lead	**0.0012**		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:56	1
Selenium	**1.9**		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:56	1
Thallium	**0.0046**		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:56	1
Lithium	**4.1**		0.16	0.033	mg/L		09/02/20 14:00	09/04/20 14:44	20

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:58	1
Arsenic	ND		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:58	1
Barium	ND		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:58	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:58	1
Calcium	ND		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:58	1
Cadmium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:58	1
Cobalt	ND		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:58	1
Chromium	ND		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:58	1
Molybdenum	ND		0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:58	1
Lead	ND		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:58	1
Selenium	ND		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:58	1
Thallium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:58	1
Lithium	ND		0.0080	0.0017	mg/L		09/02/20 14:00	09/04/20 14:47	1

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

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 12:01	1
Arsenic	**0.011**		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 12:01	1
Barium	**0.020**		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 12:01	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 12:01	1
Calcium	**310**		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 12:01	1
Cadmium	**0.0037**		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:01	1
Cobalt	**0.0075**		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 12:01	1
Chromium	**0.021**		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 12:01	1
Molybdenum	**0.0051**	**J**	0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 12:01	1
Lead	**0.00055**	**J**	0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 12:01	1
Selenium	**2.9**		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 12:01	1
Thallium	**0.0044**		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:01	1
Lithium	**3.6**		0.16	0.033	mg/L		09/02/20 14:00	09/04/20 14:49	20

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 12:08	1
Arsenic	**0.0028**	**J**	0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 12:08	1
Barium	**0.036**		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 12:08	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 12:08	1
Calcium	**550**		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 12:08	1
Cadmium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:08	1
Cobalt	**0.00067**	**J**	0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 12:08	1
Chromium	**0.0012**	**J**	0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 12:08	1
Molybdenum	**0.043**		0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 12:08	1
Lead	**0.00068**	**J**	0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 12:08	1
Selenium	**0.019**		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 12:08	1
Thallium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:08	1
Lithium	**0.11**		0.0080	0.0017	mg/L		09/02/20 14:00	09/04/20 14:52	1

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0028**		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 12:11	1
Arsenic	**0.0033**	**J**	0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 12:11	1
Barium	**0.050**		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 12:11	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 12:11	1
Calcium	**450**		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 12:11	1
Cadmium	**0.00057**	**J**	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:11	1
Cobalt	**0.0053**		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 12:11	1
Chromium	**0.0079**		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 12:11	1
Molybdenum	**0.060**		0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 12:11	1
Lead	**0.0015**		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 12:11	1
Selenium	**0.055**		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 12:11	1
Thallium	**0.00052**	**J**	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:11	1
Lithium	**0.43**		0.040	0.0083	mg/L		09/02/20 14:00	09/04/20 14:54	5

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

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00093	J	0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 12:13	1
Arsenic	0.0040	J	0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 12:13	1
Barium	0.033		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 12:13	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 12:13	1
Calcium	270		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 12:13	1
Cadmium	0.00067	J	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:13	1
Cobalt	0.0011		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 12:13	1
Chromium	0.0052		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 12:13	1
Molybdenum	0.36		0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 12:13	1
Lead	0.0010		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 12:13	1
Selenium	0.062		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 12:13	1
Thallium	0.00020	J	0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:13	1
Lithium	0.14		0.040	0.0083	mg/L		09/02/20 14:00	09/04/20 14:57	5

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00057	J	0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 12:16	1
Arsenic	0.015		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 12:16	1
Barium	0.040		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 12:16	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 12:16	1
Calcium	460		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 12:16	1
Cadmium	0.0060		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:16	1
Cobalt	0.017		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 12:16	1
Chromium	0.0069		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 12:16	1
Molybdenum	0.0053	J	0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 12:16	1
Lead	0.0025		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 12:16	1
Selenium	1.8		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 12:16	1
Thallium	0.0047		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:16	1
Lithium	3.6		0.16	0.033	mg/L		09/02/20 14:00	09/04/20 14:59	20

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 12:19	1
Arsenic	0.0055		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 12:19	1
Barium	0.016		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 12:19	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 12:19	1
Calcium	510		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 12:19	1
Cadmium	0.0023		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:19	1
Cobalt	0.019		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 12:19	1
Chromium	0.0014	J	0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 12:19	1
Molybdenum	0.0052	J	0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 12:19	1
Lead	ND		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 12:19	1
Selenium	0.65		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 12:19	1
Thallium	0.0030		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 12:19	1
Lithium	2.3		0.16	0.033	mg/L		09/02/20 14:00	09/04/20 15:02	20

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00016**	**J**	0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:26	1

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00016**	**J**	0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:28	1

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:07	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:30	1

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:32	1

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00019**	**J**	0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:34	1

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:36	1

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00015**	**J**	0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:38	1

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:40	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:42	1

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:49	1

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00019**	**J**	0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:51	1

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:53	1

General Chemistry

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.0**	**HF**	0.1	0.1	SU			08/31/20 19:22	1
Temperature	**20.2**	**HF**	1.0	1.0	Degrees C			08/31/20 19:22	1
Chloride	**560**		60	20	mg/L			09/03/20 16:35	20
Fluoride	ND		10	3.3	mg/L			09/03/20 16:35	20
Sulfate	**32000**		1000	210	mg/L			09/10/20 02:06	200
Total Dissolved Solids (TDS)	**50000**		1000	470	mg/L			09/01/20 16:31	1
Total Suspended Solids	**110**		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.9**	**HF**	0.1	0.1	SU			08/31/20 19:37	1
Temperature	**22.4**	**HF**	1.0	1.0	Degrees C			08/31/20 19:37	1
Chloride	**350**		60	20	mg/L			09/03/20 17:08	20
Fluoride	ND		10	3.3	mg/L			09/03/20 17:08	20
Sulfate	**40000**		1000	210	mg/L			09/10/20 02:38	200
Total Dissolved Solids (TDS)	**58000**		1000	470	mg/L			09/01/20 16:31	1
Total Suspended Solids	**78**		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.0**	**HF**	0.1	0.1	SU			08/31/20 19:40	1

General Chemistry (Continued)

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature	20.9	HF	1.0	1.0	Degrees C			08/31/20 19:40	1
Chloride	200		3.0	1.0	mg/L			09/03/20 17:25	1
Fluoride	0.38	J	0.50	0.17	mg/L			09/03/20 17:25	1
Sulfate	3000		100	21	mg/L			09/03/20 17:41	20
Total Dissolved Solids (TDS)	6500	H	40	19	mg/L			09/08/20 18:03	1
Total Suspended Solids	36		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: MW-5
Date Collected: 08/26/20 16:20
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			08/31/20 19:43	1
Temperature	20.0	HF	1.0	1.0	Degrees C			08/31/20 19:43	1
Chloride	1600	F1	60	20	mg/L			09/03/20 19:36	20
Fluoride	ND	F1	10	3.3	mg/L			09/03/20 19:36	20
Sulfate	19000		1000	210	mg/L			09/10/20 03:11	200
Total Dissolved Solids (TDS)	31000	H	200	94	mg/L			09/08/20 18:03	1
Total Suspended Solids	41		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: MW-6
Date Collected: 08/27/20 16:35
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			08/31/20 19:47	1
Temperature	20.4	HF	1.0	1.0	Degrees C			08/31/20 19:47	1
Chloride	250		60	20	mg/L			09/03/20 20:58	20
Fluoride	ND		10	3.3	mg/L			09/03/20 20:58	20
Sulfate	4300		500	100	mg/L			09/03/20 20:42	100
Total Dissolved Solids (TDS)	7600		67	31	mg/L			09/01/20 16:31	1
Total Suspended Solids	17		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: W-7-DUP
Date Collected: 08/27/20 14:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU			08/31/20 19:51	1
Temperature	20.8	HF	1.0	1.0	Degrees C			08/31/20 19:51	1
Chloride	710		60	20	mg/L			09/03/20 21:31	20
Fluoride	ND		10	3.3	mg/L			09/03/20 21:31	20
Sulfate	55000		5000	1000	mg/L			09/10/20 12:09	1000
Total Dissolved Solids (TDS)	76000		1000	470	mg/L			09/01/20 16:31	1
Total Suspended Solids	140		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.5	HF	0.1	0.1	SU			09/03/20 18:50	1
Temperature	21.5	HF	1.0	1.0	Degrees C			09/03/20 18:50	1
Chloride	ND		60	20	mg/L			09/03/20 22:04	20

General Chemistry (Continued)

Client Sample ID: MW-3-EB
Date Collected: 08/27/20 10:15
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		10	3.3	mg/L			09/03/20 22:04	20
Sulfate	**41**	**J**	100	21	mg/L			09/03/20 22:04	20
Total Dissolved Solids (TDS)	**620**		200	94	mg/L			09/01/20 16:31	1
Total Suspended Solids	**1.6**	**J**	4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: W-2A
Date Collected: 08/26/20 14:40
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.9**	**HF**	0.1	0.1	SU			08/31/20 20:02	1
Temperature	**22.5**	**HF**	1.0	1.0	Degrees C			08/31/20 20:02	1
Chloride	**840**		60	20	mg/L			09/03/20 23:10	20
Fluoride	ND		10	3.3	mg/L			09/03/20 23:10	20
Sulfate	**49000**		2500	520	mg/L			09/04/20 22:04	500
Total Dissolved Solids (TDS)	**68000**	**H**	1000	470	mg/L			09/08/20 18:03	1
Total Suspended Solids	**100**		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: W-3
Date Collected: 08/27/20 17:10
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.6**	**HF**	0.1	0.1	SU			08/31/20 20:06	1
Temperature	**22.3**	**HF**	1.0	1.0	Degrees C			08/31/20 20:06	1
Chloride	**59**	**J**	60	20	mg/L			09/03/20 23:43	20
Fluoride	ND		10	3.3	mg/L			09/03/20 23:43	20
Sulfate	**3000**	**^**	500	100	mg/L			09/03/20 23:26	100
Total Dissolved Solids (TDS)	**4700**		50	24	mg/L			09/01/20 16:31	1
Total Suspended Solids	**41**		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: W-5
Date Collected: 08/27/20 09:05
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.8**	**HF**	0.1	0.1	SU			08/31/20 20:10	1
Temperature	**21.2**	**HF**	1.0	1.0	Degrees C			08/31/20 20:10	1
Chloride	**350**		60	20	mg/L			09/04/20 00:15	20
Fluoride	**4.3**	**J**	10	3.3	mg/L			09/04/20 00:15	20
Sulfate	**12000**	**^**	500	100	mg/L			09/03/20 23:59	100
Total Dissolved Solids (TDS)	**14000**		200	94	mg/L			09/01/20 16:31	1
Total Suspended Solids	**54**		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.7**	**HF**	0.1	0.1	SU			08/31/20 20:14	1
Temperature	**21.0**	**HF**	1.0	1.0	Degrees C			08/31/20 20:14	1
Chloride	**190**		60	20	mg/L			09/04/20 02:27	20
Fluoride	ND		10	3.3	mg/L			09/04/20 02:27	20
Sulfate	**11000**	**^**	500	100	mg/L			09/04/20 02:10	100

General Chemistry (Continued)

Client Sample ID: W-6
Date Collected: 08/27/20 09:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	14000		200	94	mg/L			09/01/20 16:31	1
Total Suspended Solids	21		4.0	1.1	mg/L			08/31/20 10:30	1

Client Sample ID: W-7
Date Collected: 08/27/20 14:00
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU			08/31/20 20:39	1
Temperature	23.3	HF	1.0	1.0	Degrees C			08/31/20 20:39	1
Chloride	740		60	20	mg/L			09/04/20 03:00	20
Fluoride	ND		10	3.3	mg/L			09/04/20 03:00	20
Sulfate	54000		2500	520	mg/L			09/05/20 01:21	500
Total Dissolved Solids (TDS)	68000		1000	470	mg/L			09/01/20 16:31	1
Total Suspended Solids	120		4.0	1.1	mg/L			08/31/20 11:42	1

Client Sample ID: MW-1
Date Collected: 08/27/20 13:25
Date Received: 08/28/20 13:05
Lab Sample ID: 280-139932-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			08/31/20 20:45	1
Temperature	21.6	HF	1.0	1.0	Degrees C			08/31/20 20:45	1
Chloride	350		60	20	mg/L			09/04/20 03:32	20
Fluoride	ND		10	3.3	mg/L			09/04/20 03:32	20
Sulfate	17000		2500	520	mg/L			09/05/20 01:37	500
Total Dissolved Solids (TDS)	26000		330	160	mg/L			09/01/20 16:31	1
Total Suspended Solids	37		4.0	1.1	mg/L			08/31/20 11:43	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-449733/1-A
Matrix: Water
Analysis Batch: 450107

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		09/02/20 14:00	09/03/20 18:29	1

Lab Sample ID: LCS 240-449733/2-A
Matrix: Water
Analysis Batch: 450107

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.01		mg/L		101	80 - 120

Lab Sample ID: 280-139932-3 MS
Matrix: Water
Analysis Batch: 450107

Client Sample ID: MW-4
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.59		1.00	1.58		mg/L		99	75 - 125

Lab Sample ID: 280-139932-3 MSD
Matrix: Water
Analysis Batch: 450107

Client Sample ID: MW-4
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.59		1.00	1.64		mg/L		105	75 - 125	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-449733/1-A
Matrix: Water
Analysis Batch: 450058

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/02/20 14:00	09/03/20 11:08	1
Arsenic	ND		0.0050	0.00075	mg/L		09/02/20 14:00	09/03/20 11:08	1
Barium	ND		0.0050	0.0022	mg/L		09/02/20 14:00	09/03/20 11:08	1
Beryllium	ND		0.0010	0.00031	mg/L		09/02/20 14:00	09/03/20 11:08	1
Calcium	ND		1.0	0.58	mg/L		09/02/20 14:00	09/03/20 11:08	1
Cadmium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:08	1
Cobalt	ND		0.0010	0.00019	mg/L		09/02/20 14:00	09/03/20 11:08	1
Chromium	ND		0.0020	0.00098	mg/L		09/02/20 14:00	09/03/20 11:08	1
Molybdenum	ND		0.010	0.0011	mg/L		09/02/20 14:00	09/03/20 11:08	1
Lead	ND		0.0010	0.00045	mg/L		09/02/20 14:00	09/03/20 11:08	1
Selenium	ND		0.0050	0.00089	mg/L		09/02/20 14:00	09/03/20 11:08	1
Thallium	ND		0.0010	0.00020	mg/L		09/02/20 14:00	09/03/20 11:08	1

Lab Sample ID: MB 240-449733/1-A
Matrix: Water
Analysis Batch: 450311

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		0.0080	0.0017	mg/L		09/02/20 14:00	09/04/20 14:15	1

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

Lab Sample ID: LCS 240-449733/3-A
Matrix: Water
Analysis Batch: 450058

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.102		mg/L		102	80 - 120
Arsenic	1.00	0.954		mg/L		95	80 - 120
Barium	1.00	0.946		mg/L		95	80 - 120
Beryllium	0.500	0.484		mg/L		97	80 - 120
Calcium	25.0	24.0		mg/L		96	80 - 120
Cadmium	0.500	0.471		mg/L		94	80 - 120
Cobalt	0.500	0.480		mg/L		96	80 - 120
Chromium	0.500	0.478		mg/L		96	80 - 120
Molybdenum	0.500	0.478		mg/L		96	80 - 120
Lead	0.500	0.483		mg/L		97	80 - 120
Selenium	1.00	0.946		mg/L		95	80 - 120
Thallium	1.00	0.964		mg/L		96	80 - 120

Lab Sample ID: LCS 240-449733/3-A
Matrix: Water
Analysis Batch: 450311

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449733

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.462		mg/L		92	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-449734/1-A
Matrix: Water
Analysis Batch: 450063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 449734

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/02/20 12:00	09/03/20 14:03	1

Lab Sample ID: LCS 240-449734/2-A
Matrix: Water
Analysis Batch: 450063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 449734

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00470		mg/L		94	80 - 120

Lab Sample ID: 280-139932-3 MS
Matrix: Water
Analysis Batch: 450063

Client Sample ID: MW-4
Prep Type: Total/NA
Prep Batch: 449734

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.00111		mg/L		111	80 - 120

Lab Sample ID: 280-139932-3 MSD
Matrix: Water
Analysis Batch: 450063

Client Sample ID: MW-4
Prep Type: Total/NA
Prep Batch: 449734

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00103		mg/L		103	80 - 120	7	20

Method: 9040B - pH

Lab Sample ID: LCS 280-507678/30
Matrix: Water
Analysis Batch: 507678

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 280-507678/4
Matrix: Water
Analysis Batch: 507678

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 280-139932-12 DU
Matrix: Water
Analysis Batch: 507678

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	6.9	HF	6.9		SU		0.4	5
Temperature	23.3	HF	22.4		Degrees C		4	10

Lab Sample ID: LCS 280-508066/4
Matrix: Water
Analysis Batch: 508066

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-507905/6
Matrix: Water
Analysis Batch: 507905

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/03/20 13:56	1
Fluoride	ND		0.50	0.17	mg/L			09/03/20 13:56	1
Sulfate	ND		5.0	1.0	mg/L			09/03/20 13:56	1

Lab Sample ID: LCS 280-507905/4
Matrix: Water
Analysis Batch: 507905

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	97.4		mg/L		97	90 - 110
Fluoride	5.00	4.96		mg/L		99	90 - 110
Sulfate	100	99.9		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-507905/5
Matrix: Water
Analysis Batch: 507905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	97.8		mg/L		98	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-507905/5
Matrix: Water
Analysis Batch: 507905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride			5.00	4.95		mg/L		99	90 - 110	0	10
Sulfate			100	100		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-507905/3
Matrix: Water
Analysis Batch: 507905

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.92		mg/L		98	50 - 150		
Fluoride			0.500	0.485	J	mg/L		97	50 - 150		
Sulfate			5.00	5.05		mg/L		101	50 - 150		

Lab Sample ID: 280-139932-4 MS
Matrix: Water
Analysis Batch: 507905

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1600	F1	1000	3360	F1	mg/L		172	80 - 120		
Fluoride	ND	F1	100	166	F1	mg/L		166	80 - 120		

Lab Sample ID: 280-139932-4 MSD
Matrix: Water
Analysis Batch: 507905

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1600	F1	1000	3310	F1	mg/L		166	80 - 120	2	20
Fluoride	ND	F1	100	165	F1	mg/L		165	80 - 120	1	20

Lab Sample ID: 280-139932-4 DU
Matrix: Water
Analysis Batch: 507905

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	1600	F1	1620		mg/L		2	15
Fluoride	ND	F1	ND		mg/L		NC	15

Lab Sample ID: MB 280-508062/6
Matrix: Water
Analysis Batch: 508062

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/04/20 17:27	1
Fluoride	ND		0.50	0.17	mg/L			09/04/20 17:27	1
Sulfate	ND		5.0	1.0	mg/L			09/04/20 17:27	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-508062/4
Matrix: Water
Analysis Batch: 508062

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	97.2		mg/L		97	90 - 110		
Fluoride			5.00	4.86		mg/L		97	90 - 110		
Sulfate			100	100		mg/L		100	90 - 110		

Lab Sample ID: LCSD 280-508062/5
Matrix: Water
Analysis Batch: 508062

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	97.7		mg/L		98	90 - 110	1	10
Fluoride			5.00	4.88		mg/L		98	90 - 110	0	10
Sulfate			100	101		mg/L		101	90 - 110	0	10

Lab Sample ID: MRL 280-508062/3
Matrix: Water
Analysis Batch: 508062

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	5.06		mg/L		101	50 - 150		
Fluoride			0.500	0.477	J	mg/L		95	50 - 150		
Sulfate			5.00	5.39		mg/L		108	50 - 150		

Lab Sample ID: 280-139932-1 MS
Matrix: Water
Analysis Batch: 508062

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	550		2500	3070		mg/L		101	80 - 120		
Fluoride	ND		250	230		mg/L		92	80 - 120		
Sulfate	29000	E	2500	30400	E 4	mg/L		52	80 - 120		

Lab Sample ID: 280-139932-1 MSD
Matrix: Water
Analysis Batch: 508062

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	550		2500	3070		mg/L		101	80 - 120	0	20
Fluoride	ND		250	229		mg/L		92	80 - 120	1	20
Sulfate	29000	E	2500	30400	E 4	mg/L		53	80 - 120	0	20

Lab Sample ID: 280-139932-1 DU
Matrix: Water
Analysis Batch: 508062

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	550		535		mg/L		3	15
Fluoride	ND		ND		mg/L		NC	15
Sulfate	29000	E	28800	E	mg/L		0.9	15

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-508465/6
Matrix: Water
Analysis Batch: 508465

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/09/20 15:30	1
Fluoride	ND		0.50	0.17	mg/L			09/09/20 15:30	1
Sulfate	ND		5.0	1.0	mg/L			09/09/20 15:30	1

Lab Sample ID: LCS 280-508465/4
Matrix: Water
Analysis Batch: 508465

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.4		mg/L		98	90 - 110
Fluoride	5.00	4.91		mg/L		98	90 - 110
Sulfate	100	100		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-508465/5
Matrix: Water
Analysis Batch: 508465

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.8		mg/L		99	90 - 110	0	10
Fluoride	5.00	4.91		mg/L		98	90 - 110	0	10
Sulfate	100	101		mg/L		101	90 - 110	0	10

Lab Sample ID: MRL 280-508465/3
Matrix: Water
Analysis Batch: 508465

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.00		mg/L		100	50 - 150
Fluoride	0.500	0.485	J	mg/L		97	50 - 150
Sulfate	5.00	5.23		mg/L		105	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-507636/2
Matrix: Water
Analysis Batch: 507636

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			09/01/20 16:31	1

Lab Sample ID: LCS 280-507636/1
Matrix: Water
Analysis Batch: 507636

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	513		mg/L		103	93 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 280-139932-13 DU
Matrix: Water
Analysis Batch: 507636

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids (TDS)	26000			25500		mg/L				0.8	10

Lab Sample ID: MB 280-508324/2
Matrix: Water
Analysis Batch: 508324

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			09/08/20 18:03	1

Lab Sample ID: LCS 280-508324/1
Matrix: Water
Analysis Batch: 508324

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			500	515		mg/L		103	93 - 110		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-507384/1
Matrix: Water
Analysis Batch: 507384

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			08/31/20 10:30	1

Lab Sample ID: LCS 280-507384/2
Matrix: Water
Analysis Batch: 507384

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	82.8		mg/L		83	79 - 114		

Lab Sample ID: 280-139932-6 DU
Matrix: Water
Analysis Batch: 507384

Client Sample ID: W-7-DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	140			142		mg/L				4	10

Metals

Prep Batch: 449733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total Recoverable	Water	3005A	
280-139932-2	MW-3	Total Recoverable	Water	3005A	
280-139932-3	MW-4	Total Recoverable	Water	3005A	
280-139932-4	MW-5	Total Recoverable	Water	3005A	
280-139932-5	MW-6	Total Recoverable	Water	3005A	
280-139932-6	W-7-DUP	Total Recoverable	Water	3005A	
280-139932-7	MW-3-EB	Total Recoverable	Water	3005A	
280-139932-8	W-2A	Total Recoverable	Water	3005A	
280-139932-9	W-3	Total Recoverable	Water	3005A	
280-139932-10	W-5	Total Recoverable	Water	3005A	
280-139932-11	W-6	Total Recoverable	Water	3005A	
280-139932-12	W-7	Total Recoverable	Water	3005A	
280-139932-13	MW-1	Total Recoverable	Water	3005A	
MB 240-449733/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-449733/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-449733/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-139932-3 MS	MW-4	Total Recoverable	Water	3005A	
280-139932-3 MSD	MW-4	Total Recoverable	Water	3005A	

Prep Batch: 449734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	7470A	
280-139932-2	MW-3	Total/NA	Water	7470A	
280-139932-3	MW-4	Total/NA	Water	7470A	
280-139932-4	MW-5	Total/NA	Water	7470A	
280-139932-5	MW-6	Total/NA	Water	7470A	
280-139932-6	W-7-DUP	Total/NA	Water	7470A	
280-139932-7	MW-3-EB	Total/NA	Water	7470A	
280-139932-8	W-2A	Total/NA	Water	7470A	
280-139932-9	W-3	Total/NA	Water	7470A	
280-139932-10	W-5	Total/NA	Water	7470A	
280-139932-11	W-6	Total/NA	Water	7470A	
280-139932-12	W-7	Total/NA	Water	7470A	
280-139932-13	MW-1	Total/NA	Water	7470A	
MB 240-449734/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-449734/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-139932-3 MS	MW-4	Total/NA	Water	7470A	
280-139932-3 MSD	MW-4	Total/NA	Water	7470A	

Analysis Batch: 450058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total Recoverable	Water	6020A	449733
280-139932-2	MW-3	Total Recoverable	Water	6020A	449733
280-139932-3	MW-4	Total Recoverable	Water	6020A	449733
280-139932-4	MW-5	Total Recoverable	Water	6020A	449733
280-139932-5	MW-6	Total Recoverable	Water	6020A	449733
280-139932-6	W-7-DUP	Total Recoverable	Water	6020A	449733
280-139932-7	MW-3-EB	Total Recoverable	Water	6020A	449733
280-139932-8	W-2A	Total Recoverable	Water	6020A	449733
280-139932-9	W-3	Total Recoverable	Water	6020A	449733
280-139932-10	W-5	Total Recoverable	Water	6020A	449733

Metals (Continued)

Analysis Batch: 450058 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-11	W-6	Total Recoverable	Water	6020A	449733
280-139932-12	W-7	Total Recoverable	Water	6020A	449733
280-139932-13	MW-1	Total Recoverable	Water	6020A	449733
MB 240-449733/1-A	Method Blank	Total Recoverable	Water	6020A	449733
LCS 240-449733/3-A	Lab Control Sample	Total Recoverable	Water	6020A	449733

Analysis Batch: 450063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	7470A	449734
280-139932-2	MW-3	Total/NA	Water	7470A	449734
280-139932-3	MW-4	Total/NA	Water	7470A	449734
280-139932-4	MW-5	Total/NA	Water	7470A	449734
280-139932-5	MW-6	Total/NA	Water	7470A	449734
280-139932-6	W-7-DUP	Total/NA	Water	7470A	449734
280-139932-7	MW-3-EB	Total/NA	Water	7470A	449734
280-139932-8	W-2A	Total/NA	Water	7470A	449734
280-139932-9	W-3	Total/NA	Water	7470A	449734
280-139932-10	W-5	Total/NA	Water	7470A	449734
280-139932-11	W-6	Total/NA	Water	7470A	449734
280-139932-12	W-7	Total/NA	Water	7470A	449734
280-139932-13	MW-1	Total/NA	Water	7470A	449734
MB 240-449734/1-A	Method Blank	Total/NA	Water	7470A	449734
LCS 240-449734/2-A	Lab Control Sample	Total/NA	Water	7470A	449734
280-139932-3 MS	MW-4	Total/NA	Water	7470A	449734
280-139932-3 MSD	MW-4	Total/NA	Water	7470A	449734

Analysis Batch: 450107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total Recoverable	Water	6010C	449733
280-139932-2	MW-3	Total Recoverable	Water	6010C	449733
280-139932-3	MW-4	Total Recoverable	Water	6010C	449733
280-139932-4	MW-5	Total Recoverable	Water	6010C	449733
280-139932-5	MW-6	Total Recoverable	Water	6010C	449733
280-139932-6	W-7-DUP	Total Recoverable	Water	6010C	449733
280-139932-7	MW-3-EB	Total Recoverable	Water	6010C	449733
280-139932-8	W-2A	Total Recoverable	Water	6010C	449733
280-139932-9	W-3	Total Recoverable	Water	6010C	449733
280-139932-10	W-5	Total Recoverable	Water	6010C	449733
280-139932-11	W-6	Total Recoverable	Water	6010C	449733
280-139932-12	W-7	Total Recoverable	Water	6010C	449733
280-139932-13	MW-1	Total Recoverable	Water	6010C	449733
MB 240-449733/1-A	Method Blank	Total Recoverable	Water	6010C	449733
LCS 240-449733/2-A	Lab Control Sample	Total Recoverable	Water	6010C	449733
280-139932-3 MS	MW-4	Total Recoverable	Water	6010C	449733
280-139932-3 MSD	MW-4	Total Recoverable	Water	6010C	449733

Analysis Batch: 450311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total Recoverable	Water	6020A	449733
280-139932-2	MW-3	Total Recoverable	Water	6020A	449733
280-139932-3	MW-4	Total Recoverable	Water	6020A	449733

Metals (Continued)

Analysis Batch: 450311 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-4	MW-5	Total Recoverable	Water	6020A	449733
280-139932-5	MW-6	Total Recoverable	Water	6020A	449733
280-139932-6	W-7-DUP	Total Recoverable	Water	6020A	449733
280-139932-7	MW-3-EB	Total Recoverable	Water	6020A	449733
280-139932-8	W-2A	Total Recoverable	Water	6020A	449733
280-139932-9	W-3	Total Recoverable	Water	6020A	449733
280-139932-10	W-5	Total Recoverable	Water	6020A	449733
280-139932-11	W-6	Total Recoverable	Water	6020A	449733
280-139932-12	W-7	Total Recoverable	Water	6020A	449733
280-139932-13	MW-1	Total Recoverable	Water	6020A	449733
MB 240-449733/1-A	Method Blank	Total Recoverable	Water	6020A	449733
LCS 240-449733/3-A	Lab Control Sample	Total Recoverable	Water	6020A	449733

General Chemistry

Analysis Batch: 507384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	SM 2540D	
280-139932-2	MW-3	Total/NA	Water	SM 2540D	
280-139932-3	MW-4	Total/NA	Water	SM 2540D	
280-139932-4	MW-5	Total/NA	Water	SM 2540D	
280-139932-5	MW-6	Total/NA	Water	SM 2540D	
280-139932-6	W-7-DUP	Total/NA	Water	SM 2540D	
280-139932-7	MW-3-EB	Total/NA	Water	SM 2540D	
280-139932-8	W-2A	Total/NA	Water	SM 2540D	
280-139932-9	W-3	Total/NA	Water	SM 2540D	
280-139932-10	W-5	Total/NA	Water	SM 2540D	
280-139932-11	W-6	Total/NA	Water	SM 2540D	
280-139932-12	W-7	Total/NA	Water	SM 2540D	
280-139932-13	MW-1	Total/NA	Water	SM 2540D	
MB 280-507384/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-507384/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-139932-6 DU	W-7-DUP	Total/NA	Water	SM 2540D	

Analysis Batch: 507636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	SM 2540C	
280-139932-2	MW-3	Total/NA	Water	SM 2540C	
280-139932-5	MW-6	Total/NA	Water	SM 2540C	
280-139932-6	W-7-DUP	Total/NA	Water	SM 2540C	
280-139932-7	MW-3-EB	Total/NA	Water	SM 2540C	
280-139932-9	W-3	Total/NA	Water	SM 2540C	
280-139932-10	W-5	Total/NA	Water	SM 2540C	
280-139932-11	W-6	Total/NA	Water	SM 2540C	
280-139932-12	W-7	Total/NA	Water	SM 2540C	
280-139932-13	MW-1	Total/NA	Water	SM 2540C	
MB 280-507636/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-507636/1	Lab Control Sample	Total/NA	Water	SM 2540C	
280-139932-13 DU	MW-1	Total/NA	Water	SM 2540C	

General Chemistry

Analysis Batch: 507678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	9040B	
280-139932-2	MW-3	Total/NA	Water	9040B	
280-139932-3	MW-4	Total/NA	Water	9040B	
280-139932-4	MW-5	Total/NA	Water	9040B	
280-139932-5	MW-6	Total/NA	Water	9040B	
280-139932-6	W-7-DUP	Total/NA	Water	9040B	
280-139932-8	W-2A	Total/NA	Water	9040B	
280-139932-9	W-3	Total/NA	Water	9040B	
280-139932-10	W-5	Total/NA	Water	9040B	
280-139932-11	W-6	Total/NA	Water	9040B	
280-139932-12	W-7	Total/NA	Water	9040B	
280-139932-13	MW-1	Total/NA	Water	9040B	
LCS 280-507678/30	Lab Control Sample	Total/NA	Water	9040B	
LCS 280-507678/4	Lab Control Sample	Total/NA	Water	9040B	
280-139932-12 DU	W-7	Total/NA	Water	9040B	

Analysis Batch: 507905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	9056A	
280-139932-2	MW-3	Total/NA	Water	9056A	
280-139932-3	MW-4	Total/NA	Water	9056A	
280-139932-3	MW-4	Total/NA	Water	9056A	
280-139932-4	MW-5	Total/NA	Water	9056A	
280-139932-5	MW-6	Total/NA	Water	9056A	
280-139932-5	MW-6	Total/NA	Water	9056A	
280-139932-6	W-7-DUP	Total/NA	Water	9056A	
280-139932-7	MW-3-EB	Total/NA	Water	9056A	
280-139932-8	W-2A	Total/NA	Water	9056A	
280-139932-9	W-3	Total/NA	Water	9056A	
280-139932-9	W-3	Total/NA	Water	9056A	
280-139932-10	W-5	Total/NA	Water	9056A	
280-139932-10	W-5	Total/NA	Water	9056A	
280-139932-11	W-6	Total/NA	Water	9056A	
280-139932-11	W-6	Total/NA	Water	9056A	
280-139932-12	W-7	Total/NA	Water	9056A	
280-139932-13	MW-1	Total/NA	Water	9056A	
MB 280-507905/6	Method Blank	Total/NA	Water	9056A	
LCS 280-507905/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-507905/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-507905/3	Lab Control Sample	Total/NA	Water	9056A	
280-139932-4 MS	MW-5	Total/NA	Water	9056A	
280-139932-4 MSD	MW-5	Total/NA	Water	9056A	
280-139932-4 DU	MW-5	Total/NA	Water	9056A	

Analysis Batch: 508062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-8	W-2A	Total/NA	Water	9056A	
280-139932-12	W-7	Total/NA	Water	9056A	
280-139932-13	MW-1	Total/NA	Water	9056A	
MB 280-508062/6	Method Blank	Total/NA	Water	9056A	
LCS 280-508062/4	Lab Control Sample	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 508062 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-508062/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-508062/3	Lab Control Sample	Total/NA	Water	9056A	
280-139932-1 MS	MW-2	Total/NA	Water	9056A	
280-139932-1 MSD	MW-2	Total/NA	Water	9056A	
280-139932-1 DU	MW-2	Total/NA	Water	9056A	

Analysis Batch: 508066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-7	MW-3-EB	Total/NA	Water	9040B	
LCS 280-508066/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 508324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-3	MW-4	Total/NA	Water	SM 2540C	
280-139932-4	MW-5	Total/NA	Water	SM 2540C	
280-139932-8	W-2A	Total/NA	Water	SM 2540C	
MB 280-508324/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-508324/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 508465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-139932-1	MW-2	Total/NA	Water	9056A	
280-139932-2	MW-3	Total/NA	Water	9056A	
280-139932-4	MW-5	Total/NA	Water	9056A	
280-139932-6	W-7-DUP	Total/NA	Water	9056A	
MB 280-508465/6	Method Blank	Total/NA	Water	9056A	
LCS 280-508465/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-508465/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-508465/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-139932-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2
Date Collected: 08/28/20 09:30
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:08	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 11:46	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			450311	09/04/20 14:30	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:26	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 19:22	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 16:35	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	508465	09/10/20 02:06	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: MW-3
Date Collected: 08/27/20 10:55
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:12	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 11:48	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			450311	09/04/20 14:32	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:28	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 19:37	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 17:08	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	508465	09/10/20 02:38	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: MW-4
Date Collected: 08/26/20 16:50
Date Received: 08/28/20 13:05

Lab Sample ID: 280-139932-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			450107	09/03/20 18:46	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 11:16	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450311	09/04/20 14:20	RKT	TAL CAN

Client Sample ID: MW-4
Lab Sample ID: 280-139932-3
Date Collected: 08/26/20 16:50
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:07	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 19:40	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	507905	09/03/20 17:25	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 17:41	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	508324	09/08/20 18:03	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: MW-5
Lab Sample ID: 280-139932-4
Date Collected: 08/26/20 16:20
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:16	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 11:51	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			450311	09/04/20 14:35	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:30	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 19:43	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 19:36	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	508465	09/10/20 03:11	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	508324	09/08/20 18:03	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: MW-6
Lab Sample ID: 280-139932-5
Date Collected: 08/27/20 16:35
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:21	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 11:53	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			450311	09/04/20 14:37	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:32	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 19:47	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	507905	09/03/20 20:42	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 20:58	CJ	TAL DEN

Client Sample ID: MW-6
Lab Sample ID: 280-139932-5
Date Collected: 08/27/20 16:35
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	15 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: W-7-DUP
Lab Sample ID: 280-139932-6
Date Collected: 08/27/20 14:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:33	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 11:56	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			450311	09/04/20 14:44	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:34	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 19:51	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 21:31	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	508465	09/10/20 12:09	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: MW-3-EB
Lab Sample ID: 280-139932-7
Date Collected: 08/27/20 10:15
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			450107	09/04/20 08:05	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 11:58	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450311	09/04/20 14:47	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:36	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508066	09/03/20 18:50	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 22:04	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: W-2A
Lab Sample ID: 280-139932-8
Date Collected: 08/26/20 14:40
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:42	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 12:01	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			450311	09/04/20 14:49	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:38	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 20:02	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 23:10	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	508062	09/04/20 22:04	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	508324	09/08/20 18:03	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: W-3
Lab Sample ID: 280-139932-9
Date Collected: 08/27/20 17:10
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:46	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 12:08	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450311	09/04/20 14:52	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:40	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 20:06	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	507905	09/03/20 23:26	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/03/20 23:43	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-139932-10
Date Collected: 08/27/20 09:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:51	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 12:11	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			450311	09/04/20 14:54	RKT	TAL CAN

Client Sample ID: W-5
Lab Sample ID: 280-139932-10
Date Collected: 08/27/20 09:05
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:42	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 20:10	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	507905	09/03/20 23:59	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/04/20 00:15	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: W-6
Lab Sample ID: 280-139932-11
Date Collected: 08/27/20 09:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:55	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 12:13	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			450311	09/04/20 14:57	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:49	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 20:14	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	507905	09/04/20 02:10	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/04/20 02:27	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 10:30	BAR	TAL DEN

Client Sample ID: W-7
Lab Sample ID: 280-139932-12
Date Collected: 08/27/20 14:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 19:59	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 12:16	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			450311	09/04/20 14:59	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:51	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 20:39	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/04/20 03:00	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	508062	09/05/20 01:21	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-139932-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-7
Lab Sample ID: 280-139932-12
Date Collected: 08/27/20 14:00
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 11:42	BAR	TAL DEN

Client Sample ID: MW-1
Lab Sample ID: 280-139932-13
Date Collected: 08/27/20 13:25
Matrix: Water
Date Received: 08/28/20 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		5			450107	09/03/20 20:04	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			450058	09/03/20 12:19	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	449733	09/02/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			450311	09/04/20 15:02	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	449734	09/02/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			450063	09/03/20 14:53	SLD	TAL CAN
Total/NA	Analysis	9040B		1			507678	08/31/20 20:45	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	507905	09/04/20 03:32	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	508062	09/05/20 01:37	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	3 mL	100 mL	507636	09/01/20 16:31	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	507384	08/31/20 11:43	BAR	TAL DEN

Laboratory References:
TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-139932-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20 *
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): Rush Fastest Possible			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli+Hg, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226/Ra228 combined	Total Number of Containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2	8/28/20	0930	G	Water	N		X	X	X	X	X		
MW-3	8/27/20	1055	G	Water	N		X	X	X	X	X		
MW-4	8/26/20	1650	G	Water	N		X	X	X	X	X		
MW-5	8/26/20	1620	G	Water	N		X	X	X	X	X		
MW-6	8/27/20	1635	G	Water	N		X	X	X	X	X		
MW-7 - DUP	8/27/20	1405	G	Water	N		X	X	X	X	X		
MW-3 - EB	8/27/20	1015	G	Water	N		X	X	X	X	X		
				Water	N								

280-139932 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	8/28/20 1305	HDR		08/28/2020 1305	EADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 130 8883/8881/8879/8882/8878

Cooler Temperature(s) °C and Other Remarks: 5.8, 4.7, 5.9, 4.8, 1.8, 6.2 IR#11-0-28 8/28/20

New 01/16/2019

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720-838-6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): Rush Fastest Possible			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			Other:
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wastewater, Sediment, Solid, Oil/waste, Air, Tissue, Biota)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2340C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appendix IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226R3Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
W-1				Water									
W-2A	8/26/20	1440	G	Water	N		X	X	X	X	X		
W-2B				Water	N								
W-3	8/27/20	1710	G	Water	N		X	X	X	X	X		
W-4	T-8/26/20			Water	N								
W-5	8/27/20	0905	G	Water	N		X	X	X	X	X		
W-6	8/27/20	0900	G	Water	N		X	X	X	X	X		
W-7	8/27/20	1400	G	Water	N		X	X	X	X	X		
W-8A				Water	N								
W-8B				Water	N								
MW-1	8/27/20	1325	G	Water	N		X	X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 8/28/20 1505	Company: HDR	Received by:	Date/Time: 01/23/2020 1305	Company: ETA DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

1.3/22

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-537253.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): DoD - A2LA		Job #: 280-139932-2
Address: 4101 Shuttel Street NW,	Due Date Requested: 9/9/2020	Analysis Requested		Preservation Codes:
City: North Canton	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - Neone C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wastewater, Sediment, Solid, Oil, Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury											Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
MW-2 (280-139932-1)	8/28/20	09:30 Mountain		Water			X	X	X											1	Use Collision Cell
MW-3 (280-139932-2)	8/27/20	10:55 Mountain		Water			X	X	X											1	Use Collision Cell
MW-4 (280-139932-3)	8/26/20	16:50 Mountain		Water			X	X	X											1	Use Collision Cell
MW-5 (280-139932-4)	8/26/20	16:20 Mountain		Water			X	X	X											1	Use Collision Cell
MW-6 (280-139932-5)	8/27/20	16:35 Mountain		Water			X	X	X											1	Use Collision Cell
MW-7-DUP (280-139932-6)	8/27/20	14:05 Mountain		Water			X	X	X											1	Use Collision Cell
MW-3-EB (280-139932-7)	8/27/20	10:15 Mountain		Water			X	X	X											1	Use Collision Cell
W-2A (280-139932-8)	8/26/20	14:30 Mountain		Water			X	X	X											1	Use Collision Cell
W-3 (280-139932-9)	8/27/20	17:10 Mountain		Water			X	X	X											1	Use Collision Cell

S24

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 8/31/2020 1300	Company	Received by:	Date/Time: 9-1-20 1040	Company: ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-537253.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-139932-2
Address: 4101 Shuffel Street NW.	Due Date Requested: 9/9/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014370			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Oil, Biota, Sediment, Air, Filter, Wipe)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-5 (280-139932-10)	8/27/20	09:05 Mountain		Water			X	X	X	4	Use Collision Cell
W-6 (280-139932-11)	8/27/20	09:00 Mountain		Water			X	X	X	4	Use Collision Cell
W-7 (280-139932-12)	8/27/20	14:00 Mountain		Water			X	X	X	4	Use Collision Cell
MW-1 (280-139932-13)	8/27/20	13:25 Mountain		Water			X	X	X	4	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	9/3/2020 1300			9.1.20 1040	ETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: Matt Snyder

Cooler Received on 9-1-20 Opened on 9-1-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # 11 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. 1.3 °C Corrected Cooler Temp. 2.2 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA	pH Strip Lot# HC911298
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? Larger than this.	Yes No NA	
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-139932-2

Login Number: 139932
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 280-140202-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
10/15/2020 3:46:35 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

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

Glossary

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

Job ID: 280-140202-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140202-1

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

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

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

RECEIPT
The samples were received on 09/04/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.9 C.

Please note, this report only contains the results for the RAD-226 and RAD-228. All other methods are reported under job 280-140202-2.

RADIUM-226 (GFPC)
The sample W-2B was prepared at a reduced aliquot due to yellow discoloration. Sample W-1 were prepared at a reduced aliquot due to a cloudy appearance and brown discoloration.

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

RADIUM-228
The sample W-2B was prepared at a reduced aliquot due to yellow discoloration. Sample W-1 were prepared at a reduced aliquot due to a cloudy appearance and brown discoloration.

Radium-228 was detected in method blank MB 160-482379/24-A at a level that was above the method detection limit but below the reporting limit. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

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

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B
Lab Sample ID: 280-140202-1

No Detections.

Client Sample ID: W-1
Lab Sample ID: 280-140202-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Protocol References:

None = None

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

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140202-1	W-2B	Water	09/04/20 12:10	09/04/20 16:53	
280-140202-2	W-1	Water	09/04/20 13:00	09/04/20 16:53	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53

Lab Sample ID: 280-140202-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	6.12		0.634	0.840	1.00	0.273	pCi/L	09/14/20 06:47	10/06/20 08:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.9*		*40 - 110*	*09/14/20 06:47*	*10/06/20 08:41*	*1*

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53

Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.385		0.178	0.181	1.00	0.216	pCi/L	09/14/20 06:47	10/06/20 08:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*60.6*		*40 - 110*	*09/14/20 06:47*	*10/06/20 08:41*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53

Lab Sample ID: 280-140202-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.76	G	1.08	1.24	1.00	1.04	pCi/L	09/14/20 07:35	09/21/20 11:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.9*		*40 - 110*	*09/14/20 07:35*	*09/21/20 11:47*	*1*
Y Carrier	*79.3*		*40 - 110*	*09/14/20 07:35*	*09/21/20 11:47*	*1*

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53

Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.21		0.555	0.566	1.00	0.800	pCi/L	09/14/20 07:35	09/21/20 11:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*60.6*		*40 - 110*	*09/14/20 07:35*	*09/21/20 11:47*	*1*
Y Carrier	*83.4*		*40 - 110*	*09/14/20 07:35*	*09/21/20 11:47*	*1*

Client Sample Results

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53

Lab Sample ID: 280-140202-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	12.9		1.25	1.50	5.00	1.04	pCi/L		10/08/20 20:22	1

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53

Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.59		0.583	0.594	5.00	0.800	pCi/L		10/08/20 20:22	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-482377/24-A
Matrix: Water
Analysis Batch: 484998

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 482377

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1091	U	0.112	0.113	1.00	0.179	pCi/L	09/14/20 06:47	10/06/20 18:59	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.7*		*40 - 110*	*09/14/20 06:47*	*10/06/20 18:59*	*1*

Lab Sample ID: LCS 160-482377/1-A
Matrix: Water
Analysis Batch: 484998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 482377

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			15.1	13.89		1.47	1.00	0.198	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*75.5*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-482379/24-A
Matrix: Water
Analysis Batch: 483126

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 482379

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.8266		0.404	0.411	1.00	0.583	pCi/L	09/14/20 07:35	09/21/20 11:51	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.7*		*40 - 110*	*09/14/20 07:35*	*09/21/20 11:51*	*1*
Y Carrier	*87.5*		*40 - 110*	*09/14/20 07:35*	*09/21/20 11:51*	*1*

Lab Sample ID: LCS 160-482379/1-A
Matrix: Water
Analysis Batch: 483125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 482379

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			10.4	12.32		1.51	1.00	0.683	pCi/L	119	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*75.5*		*40 - 110*
Y Carrier	*86.0*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 482377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	PrecSep-21	
280-140202-2	W-1	Total/NA	Water	PrecSep-21	
MB 160-482377/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-482377/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 482379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	PrecSep_0	
280-140202-2	W-1	Total/NA	Water	PrecSep_0	
MB 160-482379/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-482379/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B
Lab Sample ID: 280-140202-1
Date Collected: 09/04/20 12:10
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.90 mL	1.0 g	482377	09/14/20 06:47	AVB	TAL SL
Total/NA	Analysis	9315		1			484998	10/06/20 08:41	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.90 mL	1.0 g	482379	09/14/20 07:35	AVB	TAL SL
Total/NA	Analysis	9320		1			483125	09/21/20 11:47	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			485161	10/08/20 20:22	SCB	TAL SL

Client Sample ID: W-1
Lab Sample ID: 280-140202-2
Date Collected: 09/04/20 13:00
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.87 mL	1.0 g	482377	09/14/20 06:47	AVB	TAL SL
Total/NA	Analysis	9315		1			484998	10/06/20 08:41	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.87 mL	1.0 g	482379	09/14/20 07:35	AVB	TAL SL
Total/NA	Analysis	9320		1			483125	09/21/20 11:47	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			485161	10/08/20 20:22	SCB	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Chain of Custody Record

Sampler ID: _____
Temperature on Receipt: _____
Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: HDR, Inc	Project Manager: Matt Rehr	Date: 09/01/20	Chain of Custody Number: 194113 HDR 1
Address: 9781 S Meridian Blvd Ste 400	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City: Englewood ~~CO~~ NM	State: CO	Zip Code: 80112	
Site Contact: Emily Munoz	Lab Contact: Doriene Bandy		
Project Name and Location (State): Xcel - Comanche	Carrier/Waybill Number: Hand Carry		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed): Metals App III + IV; Anions 1/14; Ra 226/228; TDS; TSS

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	Zn(Ac) NaOH
W-2B	09/01/20	1210		X			3		3			
W-1	09/01/20	1300		X			3		3			
W-4	09/01/20	1315		X			1		1			
W-8B	09/01/20	1340		X					1			

400mL total
125mL total

CCR List
Contact Molly Reeves for priority on low volume samples

280-140202 Chain of Custody

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other RUSH

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	09/01/20	1653	1. Received By	09/01/20	1653
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: 1.1C IR#11 CF-0.2C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
WPX Inc	Matt Rahr	9/16/20	194113 HOU
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
7801 S Meridian Blvd Ste 400			
City	**State**	**Zip Code**	**Site Contact** / **Lab Contact**
Englewood	CO	80112	Eric Mauer / Debra Sandy
Project Name and Location (State)	**Carrier/Waybill Number**		
Xcel - Comanche	Hand Carry		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Metals (Full)	Diesel (Full)	Methane/Ethane	TDS	TSS	Special Instructions/ Conditions of Receipt
MW-2B	09/16/20	1110		X			3		3				X	X	X	X	X	
MW-1	09/16/20	1300		X			3		3				X	X	X	X	X	
MW-4	09/16/20	1315		X			1		1				X	X				400mL Total
MW-5B	09/16/20	1310		X					1				X					125mL total
																		COC Last Contact Holly leaves for lunch on last sampled

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other Rush

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature]	9/16/20	1652	[signature]	9/16/20	1652
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: 1.1C IR#11 CF-0.2C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID: _____

Temperature on Receipt: _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: HDR, Inc	Project Manager: Matt Rohr	Date: 09/04/20	Chain of Custody Number: 194114 HDR 2
Address: 9781 S Meridian Blvd Ste 400	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City: Englewood	State: CO	Zip Code: 80112	Site Contact: Emily Munroe	Lab Contact: Darlene Bordy	Analysis (Attach list if more space is needed): Metals: Mg, Na, K; Alkalinity; Carbonate/Bicarbonate
Project Name and Location (State): Xcel - Comanche	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Metals: Mg, Na, K	Alkalinity	Carbonate/Bicarbonate	Special Instructions/ Conditions of Receipt
W-2B	09/04/20	1210		X			1		1				X	X	X	Limited volume, use bottles listed on HDR-1 chain if possible. Contact Molly Reeves to discuss analyte priority
W-1	09/04/20	1330		X			X		X				X	X	X	
W-4	09/04/20	1315		X			X		X				X	X	X	
W-8B	09/04/20	1340		X					X				X	X	X	

dlw 9/4

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other Rush

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	09/04/20	1653	1. Received By	09/04/20	1653
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: I.C IR#11 CF-0.2C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140202-1

Login Number: 140202
List Number: 1
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver

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

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140202-1

Login Number: 140202
List Number: 2
Creator: Boyd, Jacob C

List Source: Eurofins TestAmerica, St. Louis
List Creation: 09/10/20 01:02 PM

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

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-140202-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
280-140202-1	W-2B	70.9
280-140202-2	W-1	60.6
LCS 160-482377/1-A	Lab Control Sample	75.5
MB 160-482377/24-A	Method Blank	73.7

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
280-140202-1	W-2B	70.9	79.3
280-140202-2	W-1	60.6	83.4
LCS 160-482379/1-A	Lab Control Sample	75.5	86.0
MB 160-482379/24-A	Method Blank	73.7	87.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-140202-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/27/2020 11:53:53 AM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-140202-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140202-2

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

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

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

RECEIPT
The samples were received on 9/4/2020 4:53 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9º C.

Receipt Exceptions

Limited volume was provided for the following samples: W-4 (280-140202-3) and W-8B (280-140202-4).
W-4: 1 x 250mL unpreserved plastic container filled with ~150mL. 1 x 500mL Nitric Acid plastic container filled with ~300mL of volume.
W-8: 1 x 500mL Nitric Acid plastic container filled with ~100mL of volume.

W-2B (280-140202-1), W-1 (280-140202-2), W-4 (280-140202-3) and W-8B (280-140202-4):
Sample 1: 1 plastic 500mL nitric preserved and 1 plastic unpreserved 250mL moved to other job per request.
Sample 2: 250mL split from 500ml nitric preserved and 125mL split from plastic 250mL unpreserved. Volume needed for other job per request.
Sample 3: Limited volume provided. Volume in containers received split in half for other job per request.
Sample 4: Limited volume provided. Volume in container received split in half for other job per request.

The requested RadChem analyses will be reported with the standard 22 business day turnaround time (TAT) under SDG 280-140202-1.
All other analyses requested on COC HDR1 are reported here under SDG 280-140202-2 with a rush 5 business day TAT.

The samples listed on COC HDR2 requesting Metals and Alkalinity are reported in their own SDG 280-140272-1.

TOTAL RECOVERABLE METALS
Samples W-2B (280-140202-1), W-1 (280-140202-2), W-4 (280-140202-3) and W-8B (280-140202-4) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 09/11/2020 and analyzed on 09/14/2020.

The following sample was diluted due to the limited volume: W-8B (280-140202-4). Elevated reporting limits (RLs) are provided.

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

TOTAL RECOVERABLE METALS (ICPMS)
Samples W-2B (280-140202-1), W-1 (280-140202-2), W-4 (280-140202-3) and W-8B (280-140202-4) were analyzed for total recoverable

Job ID: 280-140202-2 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 09/11/2020 and analyzed on 09/14/2020.

The following sample was diluted due to the limited volume: W-8B (280-140202-4). Elevated reporting limits (RLs) are provided.

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

TOTAL MERCURY
Samples W-2B (280-140202-1), W-1 (280-140202-2), W-4 (280-140202-3) and W-8B (280-140202-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/11/2020 and analyzed on 09/14/2020.

The following sample was diluted due to the limited volume: W-8B (280-140202-4). Elevated reporting limits (RLs) are provided.

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

TOTAL DISSOLVED SOLIDS
Samples W-2B (280-140202-1) and W-1 (280-140202-2) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 09/09/2020.

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

TOTAL SUSPENDED SOLIDS
Samples W-2B (280-140202-1) and W-1 (280-140202-2) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 09/08/2020.

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

CORROSIVITY (PH)
Samples W-2B (280-140202-1), W-1 (280-140202-2) and W-4 (280-140202-3) were analyzed for corrosivity (pH) in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 09/08/2020.

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

ANIONS (28 DAYS)
Samples W-2B (280-140202-1), W-1 (280-140202-2) and W-4 (280-140202-3) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 09/10/2020 and 09/12/2020.

Samples W-2B (280-140202-1)[10X], W-2B (280-140202-1)[1000X], W-1 (280-140202-2)[10X], W-1 (280-140202-2)[100X], W-4 (280-140202-3)[10X] and W-4 (280-140202-3)[200X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Due to a required dilution, sample W-1 (280-140202-2) was analyzed past the EPA-recommended holding time for method 9056A; the original analysis of the undiluted sample was performed within holding time. The out-of-hold, diluted result is confirmed by the undiluted result; only the diluted result has been reported. There is no impact on data usability.

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

REVISION
The Sulfate for sample W-1 was reanalyzed outside of holding time to confirm the initial "E" flagged result as compared to the re-analysis within hold result. The re-analysis outside of holding time result is being reported for Sulfate onsample W-1 as there was a dilution factor error on the original reported result.

Detection Summary

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B
Lab Sample ID: 280-140202-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0043		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.026		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.075		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.028		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.013		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.020		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0059		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.4		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00082	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.5	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	820		30	10	mg/L	10		9056A	Total/NA
Fluoride	2.6	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	110000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	85000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	310		10	2.8	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-1
Lab Sample ID: 280-140202-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00066	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.013		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.092		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.00041	J	0.0010	0.00031	mg/L	1		6020A	Total Recoverable
Calcium	260		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00046	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0034		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.020		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.027		0.010	0.0011	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-1 (Continued) — Lab Sample ID: 280-140202-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0064		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.3		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00036	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.7	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	860		30	10	mg/L	10		9056A	Total/NA
Fluoride	28		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	36000	H	5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	57000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	100		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-4 — Lab Sample ID: 280-140202-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00059	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0026	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.048		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	260		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.014		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.018		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.10		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0012		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.0032	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00039	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.3	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	410		30	10	mg/L	10		9056A	Total/NA
Fluoride	6.7		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	34000		1000	210	mg/L	200		9056A	Total/NA

Client Sample ID: W-8B — Lab Sample ID: 280-140202-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.6		0.50	0.12	mg/L	1		6010C	Total Recoverable
Antimony	0.077		0.010	0.0029	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-8B (Continued)
Lab Sample ID: 280-140202-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.2		0.025	0.0038	mg/L	1		6020A	Total Recoverable
Barium	2.9		0.025	0.011	mg/L	1		6020A	Total Recoverable
Beryllium	0.059		0.0050	0.0015	mg/L	1		6020A	Total Recoverable
Calcium	2500		5.0	2.9	mg/L	1		6020A	Total Recoverable
Cadmium	0.24		0.0050	0.00099	mg/L	1		6020A	Total Recoverable
Cobalt	0.65		0.0050	0.00095	mg/L	1		6020A	Total Recoverable
Chromium	2.1		0.010	0.0049	mg/L	1		6020A	Total Recoverable
Molybdenum	0.68		0.050	0.0054	mg/L	1		6020A	Total Recoverable
Lead	1.6		0.0050	0.0023	mg/L	1		6020A	Total Recoverable
Selenium	0.52		0.025	0.0045	mg/L	1		6020A	Total Recoverable
Thallium	0.038		0.0050	0.0010	mg/L	1		6020A	Total Recoverable
Lithium	1.2	^	0.040	0.0083	mg/L	1		6020A	Total Recoverable
Mercury	0.0032		0.0010	0.00065	mg/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140202-1	W-2B	Water	09/04/20 12:10	09/04/20 16:53	
280-140202-2	W-1	Water	09/04/20 13:00	09/04/20 16:53	
280-140202-3	W-4	Water	09/04/20 13:15	09/04/20 16:53	
280-140202-4	W-8B	Water	09/04/20 13:40	09/04/20 16:53	

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

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.5		0.10	0.023	mg/L		09/11/20 14:00	09/14/20 21:33	1

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.4		0.10	0.023	mg/L		09/11/20 14:00	09/14/20 21:38	1

Client Sample ID: W-4
Date Collected: 09/04/20 13:15
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.1		0.10	0.023	mg/L		09/11/20 14:00	09/14/20 21:42	1

Client Sample ID: W-8B
Date Collected: 09/04/20 13:40
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.6		0.50	0.12	mg/L		09/11/20 14:00	09/14/20 21:46	1

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

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0043		0.0020	0.00057	mg/L		09/11/20 14:00	09/14/20 13:02	1
Arsenic	0.026		0.0050	0.00075	mg/L		09/11/20 14:00	09/14/20 13:02	1
Barium	0.075		0.0050	0.0022	mg/L		09/11/20 14:00	09/14/20 13:02	1
Beryllium	ND		0.0010	0.00031	mg/L		09/11/20 14:00	09/14/20 13:02	1
Calcium	120		1.0	0.58	mg/L		09/11/20 14:00	09/14/20 13:02	1
Cadmium	0.0011		0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 13:02	1
Cobalt	0.028		0.0010	0.00019	mg/L		09/11/20 14:00	09/14/20 13:02	1
Chromium	0.013		0.0020	0.00098	mg/L		09/11/20 14:00	09/14/20 13:02	1
Molybdenum	0.020		0.010	0.0011	mg/L		09/11/20 14:00	09/14/20 13:02	1
Lead	0.0059		0.0010	0.00045	mg/L		09/11/20 14:00	09/14/20 13:02	1
Selenium	2.4		0.0050	0.00089	mg/L		09/11/20 14:00	09/14/20 13:02	1
Thallium	0.00082	J	0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 13:02	1
Lithium	3.5	^	0.0080	0.0017	mg/L		09/11/20 14:00	09/14/20 13:02	1

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00066	J	0.0020	0.00057	mg/L		09/11/20 14:00	09/14/20 13:05	1
Arsenic	0.013		0.0050	0.00075	mg/L		09/11/20 14:00	09/14/20 13:05	1
Barium	0.092		0.0050	0.0022	mg/L		09/11/20 14:00	09/14/20 13:05	1
Beryllium	0.00041	J	0.0010	0.00031	mg/L		09/11/20 14:00	09/14/20 13:05	1
Calcium	260		1.0	0.58	mg/L		09/11/20 14:00	09/14/20 13:05	1
Cadmium	0.00046	J	0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 13:05	1
Cobalt	0.0034		0.0010	0.00019	mg/L		09/11/20 14:00	09/14/20 13:05	1

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

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.020		0.0020	0.00098	mg/L		09/11/20 14:00	09/14/20 13:05	1
Molybdenum	0.027		0.010	0.0011	mg/L		09/11/20 14:00	09/14/20 13:05	1
Lead	0.0064		0.0010	0.00045	mg/L		09/11/20 14:00	09/14/20 13:05	1
Selenium	1.3		0.0050	0.00089	mg/L		09/11/20 14:00	09/14/20 13:05	1
Thallium	0.00036	J	0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 13:05	1
Lithium	1.7	^	0.0080	0.0017	mg/L		09/11/20 14:00	09/14/20 13:05	1

Client Sample ID: W-4
Date Collected: 09/04/20 13:15
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00059	J	0.0020	0.00057	mg/L		09/11/20 14:00	09/14/20 13:12	1
Arsenic	0.0026	J	0.0050	0.00075	mg/L		09/11/20 14:00	09/14/20 13:12	1
Barium	0.048		0.0050	0.0022	mg/L		09/11/20 14:00	09/14/20 13:12	1
Beryllium	ND		0.0010	0.00031	mg/L		09/11/20 14:00	09/14/20 13:12	1
Calcium	260		1.0	0.58	mg/L		09/11/20 14:00	09/14/20 13:12	1
Cadmium	ND		0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 13:12	1
Cobalt	0.014		0.0010	0.00019	mg/L		09/11/20 14:00	09/14/20 13:12	1
Chromium	0.018		0.0020	0.00098	mg/L		09/11/20 14:00	09/14/20 13:12	1
Molybdenum	0.10		0.010	0.0011	mg/L		09/11/20 14:00	09/14/20 13:12	1
Lead	0.0012		0.0010	0.00045	mg/L		09/11/20 14:00	09/14/20 13:12	1
Selenium	0.0032	J	0.0050	0.00089	mg/L		09/11/20 14:00	09/14/20 13:12	1
Thallium	0.00039	J	0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 13:12	1
Lithium	1.3	^	0.0080	0.0017	mg/L		09/11/20 14:00	09/14/20 13:12	1

Client Sample ID: W-8B
Date Collected: 09/04/20 13:40
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.077		0.010	0.0029	mg/L		09/11/20 14:00	09/14/20 13:15	1
Arsenic	1.2		0.025	0.0038	mg/L		09/11/20 14:00	09/14/20 13:15	1
Barium	2.9		0.025	0.011	mg/L		09/11/20 14:00	09/14/20 13:15	1
Beryllium	0.059		0.0050	0.0015	mg/L		09/11/20 14:00	09/14/20 13:15	1
Calcium	2500		5.0	2.9	mg/L		09/11/20 14:00	09/14/20 13:15	1
Cadmium	0.24		0.0050	0.00099	mg/L		09/11/20 14:00	09/14/20 13:15	1
Cobalt	0.65		0.0050	0.00095	mg/L		09/11/20 14:00	09/14/20 13:15	1
Chromium	2.1		0.010	0.0049	mg/L		09/11/20 14:00	09/14/20 13:15	1
Molybdenum	0.68		0.050	0.0054	mg/L		09/11/20 14:00	09/14/20 13:15	1
Lead	1.6		0.0050	0.0023	mg/L		09/11/20 14:00	09/14/20 13:15	1
Selenium	0.52		0.025	0.0045	mg/L		09/11/20 14:00	09/14/20 13:15	1
Thallium	0.038		0.0050	0.0010	mg/L		09/11/20 14:00	09/14/20 13:15	1
Lithium	1.2	^	0.040	0.0083	mg/L		09/11/20 14:00	09/14/20 13:15	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/11/20 13:00	09/14/20 16:43	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/11/20 13:00	09/14/20 16:45	1

Client Sample ID: W-4
Date Collected: 09/04/20 13:15
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/11/20 13:00	09/14/20 16:47	1

Client Sample ID: W-8B
Date Collected: 09/04/20 13:40
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0032		0.0010	0.00065	mg/L		09/11/20 13:00	09/14/20 15:33	1

General Chemistry

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			09/08/20 20:02	1
Temperature	20.1	HF	1.0	1.0	Degrees C			09/08/20 20:02	1
Chloride	820		30	10	mg/L			09/10/20 04:21	10
Fluoride	2.6	J	5.0	1.7	mg/L			09/10/20 04:21	10
Sulfate	110000		5000	1000	mg/L			09/10/20 22:58	1000
Total Dissolved Solids (TDS)	85000		1000	470	mg/L			09/09/20 16:43	1
Total Suspended Solids	310		10	2.8	mg/L			09/08/20 12:40	1

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			09/08/20 20:06	1
Temperature	20.7	HF	1.0	1.0	Degrees C			09/08/20 20:06	1
Chloride	860		30	10	mg/L			09/10/20 05:10	10
Fluoride	28		5.0	1.7	mg/L			09/10/20 05:10	10
Sulfate	36000	H	5000	1000	mg/L			11/20/20 16:44	1000
Total Dissolved Solids (TDS)	57000		1000	470	mg/L			09/09/20 16:43	1
Total Suspended Solids	100		4.0	1.1	mg/L			09/08/20 12:40	1

Client Sample ID: W-4
Date Collected: 09/04/20 13:15
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140202-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			09/08/20 20:10	1
Temperature	20.2	HF	1.0	1.0	Degrees C			09/08/20 20:10	1
Chloride	410		30	10	mg/L			09/10/20 05:59	10
Fluoride	6.7		5.0	1.7	mg/L			09/10/20 05:59	10
Sulfate	34000		1000	210	mg/L			09/10/20 23:31	200

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-450929/1-A
Matrix: Water
Analysis Batch: 451299

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 450929

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		09/11/20 14:00	09/14/20 20:00	1

Lab Sample ID: LCS 240-450929/2-A
Matrix: Water
Analysis Batch: 451299

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 450929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.02		mg/L		102	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-450929/1-A
Matrix: Water
Analysis Batch: 451369

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 450929

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/11/20 14:00	09/14/20 12:43	1
Arsenic	ND		0.0050	0.00075	mg/L		09/11/20 14:00	09/14/20 12:43	1
Barium	ND		0.0050	0.0022	mg/L		09/11/20 14:00	09/14/20 12:43	1
Beryllium	ND		0.0010	0.00031	mg/L		09/11/20 14:00	09/14/20 12:43	1
Calcium	ND		1.0	0.58	mg/L		09/11/20 14:00	09/14/20 12:43	1
Cadmium	ND		0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 12:43	1
Cobalt	ND		0.0010	0.00019	mg/L		09/11/20 14:00	09/14/20 12:43	1
Chromium	ND		0.0020	0.00098	mg/L		09/11/20 14:00	09/14/20 12:43	1
Molybdenum	ND		0.010	0.0011	mg/L		09/11/20 14:00	09/14/20 12:43	1
Lead	ND		0.0010	0.00045	mg/L		09/11/20 14:00	09/14/20 12:43	1
Selenium	ND		0.0050	0.00089	mg/L		09/11/20 14:00	09/14/20 12:43	1
Thallium	ND		0.0010	0.00020	mg/L		09/11/20 14:00	09/14/20 12:43	1
Lithium	ND		0.0080	0.0017	mg/L		09/11/20 14:00	09/14/20 12:43	1

Lab Sample ID: LCS 240-450929/3-A
Matrix: Water
Analysis Batch: 451369

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 450929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0966		mg/L		97	80 - 120
Arsenic	1.00	0.937		mg/L		94	80 - 120
Barium	1.00	0.945		mg/L		94	80 - 120
Beryllium	0.500	0.494		mg/L		99	80 - 120
Calcium	25.0	23.9		mg/L		96	80 - 120
Cadmium	0.500	0.468		mg/L		94	80 - 120
Cobalt	0.500	0.479		mg/L		96	80 - 120
Chromium	0.500	0.488		mg/L		98	80 - 120
Molybdenum	0.500	0.463		mg/L		93	80 - 120
Lead	0.500	0.487		mg/L		97	80 - 120
Selenium	1.00	0.930		mg/L		93	80 - 120
Thallium	1.00	0.936		mg/L		94	80 - 120
Lithium	0.500	0.448		mg/L		90	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-450932/1-A
Matrix: Water
Analysis Batch: 451336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 450932

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/11/20 13:00	09/14/20 16:16	1

Lab Sample ID: LCS 240-450932/2-A
Matrix: Water
Analysis Batch: 451336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 450932

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00490		mg/L		98	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-508414/4
Matrix: Water
Analysis Batch: 508414

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-508463/6
Matrix: Water
Analysis Batch: 508463

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/09/20 15:25	1
Fluoride	ND		0.50	0.17	mg/L			09/09/20 15:25	1
Sulfate	ND		5.0	1.0	mg/L			09/09/20 15:25	1

Lab Sample ID: LCS 280-508463/4
Matrix: Water
Analysis Batch: 508463

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.2		mg/L		94	90 - 110
Fluoride	5.00	4.94		mg/L		99	90 - 110
Sulfate	100	92.2		mg/L		92	90 - 110

Lab Sample ID: LCSD 280-508463/5
Matrix: Water
Analysis Batch: 508463

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.2		mg/L		94	90 - 110	0	10
Fluoride	5.00	4.97		mg/L		99	90 - 110	1	10
Sulfate	100	92.1		mg/L		92	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-508463/3
Matrix: Water
Analysis Batch: 508463

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.09		mg/L		82	50 - 150
Fluoride	0.500	0.511		mg/L		102	50 - 150
Sulfate	5.00	4.33	J	mg/L		87	50 - 150

Lab Sample ID: MB 280-508637/6
Matrix: Water
Analysis Batch: 508637

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/10/20 16:51	1
Sulfate	ND		5.0	1.0	mg/L			09/10/20 16:51	1

Lab Sample ID: LCS 280-508637/4
Matrix: Water
Analysis Batch: 508637

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.1		mg/L		98	90 - 110
Sulfate	100	98.6		mg/L		99	90 - 110

Lab Sample ID: LCSD 280-508637/5
Matrix: Water
Analysis Batch: 508637

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.4		mg/L		98	90 - 110	0	10
Sulfate	100	98.6		mg/L		99	90 - 110	0	10

Lab Sample ID: MRL 280-508637/3
Matrix: Water
Analysis Batch: 508637

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.15		mg/L		103	50 - 150
Sulfate	5.00	5.38		mg/L		108	50 - 150

Lab Sample ID: MB 280-517540/6
Matrix: Water
Analysis Batch: 517540

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/20/20 15:19	1
Sulfate	ND		5.0	1.0	mg/L			11/20/20 15:19	1

Lab Sample ID: LCS 280-517540/4
Matrix: Water
Analysis Batch: 517540

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.8		mg/L		95	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-517540/4
Matrix: Water
Analysis Batch: 517540

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	96.1		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-517540/5
Matrix: Water
Analysis Batch: 517540

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.1		mg/L		95	90 - 110	0	10
Sulfate	100	96.0		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 280-517540/3
Matrix: Water
Analysis Batch: 517540

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.72		mg/L		94	50 - 150
Sulfate	5.00	4.60	J	mg/L		92	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-508502/2
Matrix: Water
Analysis Batch: 508502

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			09/09/20 16:43	1

Lab Sample ID: LCS 280-508502/1
Matrix: Water
Analysis Batch: 508502

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	487		mg/L		97	93 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-508261/1
Matrix: Water
Analysis Batch: 508261

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			09/08/20 12:40	1

Lab Sample ID: LCS 280-508261/2
Matrix: Water
Analysis Batch: 508261

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	96.4		mg/L		96	79 - 114

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 280-508261/3
Matrix: Water
Analysis Batch: 508261

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids			100	88.8		mg/L		89	79 - 114	8	20

QC Association Summary

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Metals

Prep Batch: 450929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total Recoverable	Water	3005A	
280-140202-2	W-1	Total Recoverable	Water	3005A	
280-140202-3	W-4	Total Recoverable	Water	3005A	
280-140202-4	W-8B	Total Recoverable	Water	3005A	
MB 240-450929/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-450929/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-450929/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 450932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	7470A	
280-140202-2	W-1	Total/NA	Water	7470A	
280-140202-3	W-4	Total/NA	Water	7470A	
280-140202-4	W-8B	Total/NA	Water	7470A	
MB 240-450932/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-450932/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 451299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total Recoverable	Water	6010C	450929
280-140202-2	W-1	Total Recoverable	Water	6010C	450929
280-140202-3	W-4	Total Recoverable	Water	6010C	450929
280-140202-4	W-8B	Total Recoverable	Water	6010C	450929
MB 240-450929/1-A	Method Blank	Total Recoverable	Water	6010C	450929
LCS 240-450929/2-A	Lab Control Sample	Total Recoverable	Water	6010C	450929

Analysis Batch: 451336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	7470A	450932
280-140202-2	W-1	Total/NA	Water	7470A	450932
280-140202-3	W-4	Total/NA	Water	7470A	450932
280-140202-4	W-8B	Total/NA	Water	7470A	450932
MB 240-450932/1-A	Method Blank	Total/NA	Water	7470A	450932
LCS 240-450932/2-A	Lab Control Sample	Total/NA	Water	7470A	450932

Analysis Batch: 451369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total Recoverable	Water	6020A	450929
280-140202-2	W-1	Total Recoverable	Water	6020A	450929
280-140202-3	W-4	Total Recoverable	Water	6020A	450929
280-140202-4	W-8B	Total Recoverable	Water	6020A	450929
MB 240-450929/1-A	Method Blank	Total Recoverable	Water	6020A	450929
LCS 240-450929/3-A	Lab Control Sample	Total Recoverable	Water	6020A	450929

General Chemistry

Analysis Batch: 508261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	SM 2540D	
280-140202-2	W-1	Total/NA	Water	SM 2540D	
MB 280-508261/1	Method Blank	Total/NA	Water	SM 2540D	

General Chemistry (Continued)

Analysis Batch: 508261 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-508261/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-508261/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 508414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	9040B	
280-140202-2	W-1	Total/NA	Water	9040B	
280-140202-3	W-4	Total/NA	Water	9040B	
LCS 280-508414/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 508463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	9056A	
280-140202-2	W-1	Total/NA	Water	9056A	
280-140202-3	W-4	Total/NA	Water	9056A	
MB 280-508463/6	Method Blank	Total/NA	Water	9056A	
LCS 280-508463/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-508463/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-508463/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 508502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	SM 2540C	
280-140202-2	W-1	Total/NA	Water	SM 2540C	
MB 280-508502/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-508502/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 508637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-1	W-2B	Total/NA	Water	9056A	
280-140202-3	W-4	Total/NA	Water	9056A	
MB 280-508637/6	Method Blank	Total/NA	Water	9056A	
LCS 280-508637/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-508637/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-508637/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 517540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140202-2	W-1	Total/NA	Water	9056A	
MB 280-517540/6	Method Blank	Total/NA	Water	9056A	
LCS 280-517540/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-517540/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-517540/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B
Lab Sample ID: 280-140202-1
Date Collected: 09/04/20 12:10
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451299	09/14/20 21:33	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:02	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	450932	09/11/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451336	09/14/20 16:43	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508414	09/08/20 20:02	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	508463	09/10/20 04:21	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	508637	09/10/20 22:58	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	508502	09/09/20 16:43	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	508261	09/08/20 12:40	LEB	TAL DEN

Client Sample ID: W-1
Lab Sample ID: 280-140202-2
Date Collected: 09/04/20 13:00
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451299	09/14/20 21:38	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:05	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	450932	09/11/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451336	09/14/20 16:45	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508414	09/08/20 20:06	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	508463	09/10/20 05:10	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	517540	11/20/20 16:44	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	508502	09/09/20 16:43	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	508261	09/08/20 12:40	LEB	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-140202-3
Date Collected: 09/04/20 13:15
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451299	09/14/20 21:42	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:12	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	450932	09/11/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451336	09/14/20 16:47	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508414	09/08/20 20:10	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	508463	09/10/20 05:59	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	508637	09/10/20 23:31	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-8B
Date Collected: 09/04/20 13:40
Date Received: 09/04/20 16:53

Lab Sample ID: 280-140202-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			10 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451299	09/14/20 21:46	WKD	TAL CAN
Total Recoverable	Prep	3005A			10 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:15	RKT	TAL CAN
Total/NA	Prep	7470A			10 mL	50 mL	450932	09/11/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451336	09/14/20 15:33	SLD	TAL CAN

Laboratory References:

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

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140202-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Chain of Custody Record

Sampler ID: _____
Temperature on Receipt: _____
Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: HDR, Inc	Project Manager: Matt Rehr	Date: 09/01/20	Chain of Custody Number: 194113 HDR 1
Address: 9781 S Meridian Blvd Ste 400	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City: Englewood ~~CO~~ NM	State: CO	Zip Code: 80112	
Site Contact: Emily Munoz	Lab Contact: Doriene Bandy		
Project Name and Location (State): Xcel - Comanche	Carrier/Waybill Number: Hand Carry		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed): Metals App III + IV; Anions 1/14; 9226/228; TDS; TSS

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	Zn Acet./NaOH
W-2B	09/01/20	1210		X			3		3			
W-1	09/01/20	1300		X			3		3			
W-4	09/01/20	1315		X			1		1			
W-8B	09/01/20	1340		X					1			

400mL total
125mL total

CCR List
Contact Molly Reeves for priority on low volume samples

280-140202 Chain of Custody

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other RUSH

QC Requirements (Specify)

1. Relinquished By	Date: 09/01/20	Time: 1653	1. Received By	Date: 09/04/20	Time: 1653
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: 1.1C IR#11 CF-0.2C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
WPX Inc	Matt Rahr	9/14/20	194113 HOU
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
7801 S Meridian Blvd Ste 400			
City	**State**	**Zip Code**	**Site Contact**
Edmond	OK	73173	Eric Moore
Project Name and Location (State)	**Carrier/Waybill Number**		
Xcel - Comanche	Hand Carry		

Lab Contact: Debra Bandy

Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed): Metals (Ba, Cl, Ca, Mg, Na, SO4, TDS) | Phenol, Total | Alkalinity (as CaCO3), Total | TDS | TSS

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Metals	Phenol	Alk	TDS	TSS	Special Instructions/ Conditions of Receipt
MW-2B	09/10/20	1110		X			3		3				X	X	X	X	X	
MW-1	09/10/20	1300		X			3		3				X	X	X	X	X	
MW-4	09/10/20	1315		X			1		1				X	X				400mL Total
MW-5B	09/10/20	1310		X					1				X					125mL Total
																		CCN List Contact Holly Lewis for Analysis on Low Volume Sample

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other Rush

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	9/14/20	1652	1. Received By	9/14/20	1652
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: I.C IR#1 CF-0.2C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: HDR, Inc	Project Manager: Matt Rohr	Date: 09/04/20	Chain of Custody Number: 194114 HDR 2
Address: 9781 S Meridian Blvd Ste 400	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
City: Englewood	State: CO	Zip Code: 80112	Site Contact: Emily Munroe	Lab Contact: Darlene Bordy	Analysis (Attach list if more space is needed): Metals: Mg, Na, K; Alkalinity; Carbonate/Bicarbonate
Project Name and Location (State): Xcel - Comanche	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Metals: Mg, Na, K	Alkalinity	Carbonate/Bicarbonate	Special Instructions/ Conditions of Receipt
W-2B	09/04/20	1210		X			1		1				X	X	X	Limited volume, use bottles listed on HDR-1 chain if possible. Contact Molly Reeves to discuss analyte priority
W-1	09/04/20	1330		X			X		X				X	X	X	
W-4	09/04/20	1315		X			X		X				X	X	X	
W-8B	09/04/20	1340		X					X				X	X	X	

dw 9/4

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other Rush

QC Requirements (Specify)

1. Relinquished By	Date: 09/04/20	Time: 1653	1. Received By	Date: 09/04/20	Time: 1653
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments: I.C IR#11 CF-0.2C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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

11.1/12.0

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sample:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-538309.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140202-2
Address: 4101 Shuffel Street NW,	Due Date Requested: 9/15/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 26014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Barium	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2B (280-140202-1)	9/4/20	12:10 Mountain		Water			X	X	X	1	Use Collision Cell
W-1 (280-140202-2)	9/4/20	13:00 Mountain		Water			X	X	X	1	Use Collision Cell
W-4 (280-140202-3)	9/4/20	13:15 Mountain		Water			X	X	X	1	Use Collision Cell
W-8B (280-140202-4)	9/4/20	13:40 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/4 1410			9/11/20	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 280-140202**
Canton Facility

Client ETA Denver Site Name

Cooler Received on 9/11/20 Opened on 9/11/20

Cooler unpacked by:

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. 11.0 °C Corrected Cooler Temp. 12.0 °C

AMM 9/11/20 11.1

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No

-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all boutle labels (ID/Date/Time) be reconciled with the COC? Yes No

9. For each sample, does the COC specify preservatives (Y N) # of containers (Y N), and sample type of grab/comp(Y N)?

10. Were correct bottle(s) used for the test(s) indicated? Yes No

11. Sufficient quantity received to perform indicated analyses? Yes No

12. Are these work share samples and all listed on the COC? Yes No

If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA ~~pH Strip Lot#~~ HC907861

14. Were VOAs on the COC? Yes No

15. Were air bubbles >6 mm in any VOA vials? ⬅ Larger than this. Yes No NA

16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes No

17. Was a LL Hg or Me Hg trip blank present? Yes No AMM 9/11/20

Contacted PM Date by via Verbal Voice Mail Other

Concerning

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140202-2

Login Number: 140202
List Number: 1
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-140272-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Darlene Bandy

Authorized for release by:
9/15/2020 6:20:22 PM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

Glossary

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

Job ID: 280-140272-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140272-1

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

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

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

RECEIPT

The samples were received on 9/4/2020 4:53 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9º C.

Receipt Exceptions

Limited volume was received for the following samples: W-4 (280-140272-3) and W-8B (280-140272-4).
W-4: ~150mL of Nitric Acid preserved volume available, ~50mL of unpreserved volume available.
W-8B: ~50mL of Nitric Acid preserved volume available.

The following sample requests 2320B Alkalinity analysis but unpreserved volume was not received for this sample: W-8B (280-140272-4). Therefore, only 6020A was able to be logged for sample W-8B (280-140272-4).

TOTAL RECOVERABLE METALS (ICPMS)

Samples W-2B (280-140272-1), W-1 (280-140272-2), W-4 (280-140272-3) and W-8B (280-140272-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 09/11/2020 and analyzed on 09/14/2020.

Samples W-2B (280-140272-1)[50X], W-1 (280-140272-2)[50X] and W-4 (280-140272-3)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following sample was diluted due to the limited volume: W-8B (280-140272-4). Elevated reporting limits (RLs) are provided.

The low level CCV (CCVL) recovered low; however, the main CCV recovered within control limits for the following samples, and the associated samples are controlled to the CCV, not the CCVL: W-2B (280-140272-1), W-1 (280-140272-2), W-4 (280-140272-3) and W-8B (280-140272-4).

The CCV following the MB and LCS recovered high; however, the MB was non-detect and the LCS was well within control limits; therefore, the data have been reported.

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

ALKALINITY

Job ID: 280-140272-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Samples W-2B (280-140272-1), W-1 (280-140272-2) and W-4 (280-140272-3) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 09/10/2020.

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

Detection Summary

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B — Lab Sample ID: 280-140272-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	8100		50	10	mg/L	50		6020A	Total Recoverable
Potassium	62		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	6500	^	50	16	mg/L	50		6020A	Total Recoverable
Alkalinity	920		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	920		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-1 — Lab Sample ID: 280-140272-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	4100		50	10	mg/L	50		6020A	Total Recoverable
Potassium	13		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	7100	^	50	16	mg/L	50		6020A	Total Recoverable
Alkalinity	710		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	710		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-4 — Lab Sample ID: 280-140272-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	3000		50	10	mg/L	50		6020A	Total Recoverable
Potassium	25		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	5100	^	50	16	mg/L	50		6020A	Total Recoverable
Alkalinity	470		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	470		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-8B — Lab Sample ID: 280-140272-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	680		5.0	1.0	mg/L	1		6020A	Total Recoverable
Potassium	280		5.0	1.1	mg/L	1		6020A	Total Recoverable
Sodium	720	^	5.0	1.6	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CAN
SM 2320B	Alkalinity	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140272-1	W-2B	Water	09/04/20 12:10	09/04/20 16:53	
280-140272-2	W-1	Water	09/04/20 13:00	09/04/20 16:53	
280-140272-3	W-4	Water	09/04/20 13:15	09/04/20 16:53	
280-140272-4	W-8B	Water	09/04/20 13:40	09/04/20 16:53	

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

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140272-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	8100		50	10	mg/L		09/11/20 14:00	09/14/20 16:09	50
Potassium	62		1.0	0.22	mg/L		09/11/20 14:00	09/14/20 13:17	1
Sodium	6500	^	50	16	mg/L		09/11/20 14:00	09/14/20 16:09	50

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140272-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	4100		50	10	mg/L		09/11/20 14:00	09/14/20 16:16	50
Potassium	13		1.0	0.22	mg/L		09/11/20 14:00	09/14/20 13:20	1
Sodium	7100	^	50	16	mg/L		09/11/20 14:00	09/14/20 16:16	50

Client Sample ID: W-4
Date Collected: 09/04/20 13:15
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140272-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	3000		50	10	mg/L		09/11/20 14:00	09/14/20 16:19	50
Potassium	25		1.0	0.22	mg/L		09/11/20 14:00	09/14/20 13:24	1
Sodium	5100	^	50	16	mg/L		09/11/20 14:00	09/14/20 16:19	50

Client Sample ID: W-8B
Date Collected: 09/04/20 13:40
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140272-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	680		5.0	1.0	mg/L		09/11/20 14:00	09/14/20 16:21	1
Potassium	280		5.0	1.1	mg/L		09/11/20 14:00	09/14/20 13:26	1
Sodium	720	^	5.0	1.6	mg/L		09/11/20 14:00	09/14/20 16:21	1

General Chemistry

Client Sample ID: W-2B
Date Collected: 09/04/20 12:10
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140272-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	920		10	3.1	mg/L			09/10/20 12:11	1
Bicarbonate Alkalinity as CaCO3	920		10	3.1	mg/L			09/10/20 12:11	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/10/20 12:11	1

Client Sample ID: W-1
Date Collected: 09/04/20 13:00
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140272-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	710		10	3.1	mg/L			09/10/20 12:19	1
Bicarbonate Alkalinity as CaCO3	710		10	3.1	mg/L			09/10/20 12:19	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/10/20 12:19	1

Client Sample ID: W-4
Date Collected: 09/04/20 13:15
Date Received: 09/04/20 16:53
Lab Sample ID: 280-140272-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	470		10	3.1	mg/L			09/10/20 12:25	1

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry (Continued)

Client Sample ID: W-4
Lab Sample ID: 280-140272-3
Date Collected: 09/04/20 13:15
Matrix: Water
Date Received: 09/04/20 16:53

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	**470**		10	3.1	mg/L			09/10/20 12:25	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/10/20 12:25	1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-450929/1-A
Matrix: Water
Analysis Batch: 451369

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 450929

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	ND	^	1.0	0.20	mg/L		09/11/20 14:00	09/14/20 12:43	1
Potassium	ND		1.0	0.22	mg/L		09/11/20 14:00	09/14/20 12:43	1
Sodium	ND	^	1.0	0.33	mg/L		09/11/20 14:00	09/14/20 12:43	1

Lab Sample ID: LCS 240-450929/3-A
Matrix: Water
Analysis Batch: 451369

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 450929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	25.0	23.8	^	mg/L		95	80 - 120
Potassium	25.0	23.3		mg/L		93	80 - 120
Sodium	25.0	23.4	^	mg/L		94	80 - 120

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-508736/5
Matrix: Water
Analysis Batch: 508736

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		10	3.1	mg/L			09/10/20 11:26	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/10/20 11:26	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			09/10/20 11:26	1

Lab Sample ID: LCS 280-508736/4
Matrix: Water
Analysis Batch: 508736

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	182		mg/L		91	89 - 109

QC Association Summary

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Metals

Prep Batch: 450929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140272-1	W-2B	Total Recoverable	Water	3005A	
280-140272-2	W-1	Total Recoverable	Water	3005A	
280-140272-3	W-4	Total Recoverable	Water	3005A	
280-140272-4	W-8B	Total Recoverable	Water	3005A	
MB 240-450929/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-450929/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 451369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140272-1	W-2B	Total Recoverable	Water	6020A	450929
280-140272-1	W-2B	Total Recoverable	Water	6020A	450929
280-140272-2	W-1	Total Recoverable	Water	6020A	450929
280-140272-2	W-1	Total Recoverable	Water	6020A	450929
280-140272-3	W-4	Total Recoverable	Water	6020A	450929
280-140272-3	W-4	Total Recoverable	Water	6020A	450929
280-140272-4	W-8B	Total Recoverable	Water	6020A	450929
280-140272-4	W-8B	Total Recoverable	Water	6020A	450929
MB 240-450929/1-A	Method Blank	Total Recoverable	Water	6020A	450929
LCS 240-450929/3-A	Lab Control Sample	Total Recoverable	Water	6020A	450929

General Chemistry

Analysis Batch: 508736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140272-1	W-2B	Total/NA	Water	SM 2320B	
280-140272-2	W-1	Total/NA	Water	SM 2320B	
280-140272-3	W-4	Total/NA	Water	SM 2320B	
MB 280-508736/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-508736/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B
Lab Sample ID: 280-140272-1
Date Collected: 09/04/20 12:10
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:17	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		50			451369	09/14/20 16:09	RKT	TAL CAN
Total/NA	Analysis	SM 2320B		1			508736	09/10/20 12:11	RAF	TAL DEN

Client Sample ID: W-1
Lab Sample ID: 280-140272-2
Date Collected: 09/04/20 13:00
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:20	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		50			451369	09/14/20 16:16	RKT	TAL CAN
Total/NA	Analysis	SM 2320B		1			508736	09/10/20 12:19	RAF	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-140272-3
Date Collected: 09/04/20 13:15
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:24	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		50			451369	09/14/20 16:19	RKT	TAL CAN
Total/NA	Analysis	SM 2320B		1			508736	09/10/20 12:25	RAF	TAL DEN

Client Sample ID: W-8B
Lab Sample ID: 280-140272-4
Date Collected: 09/04/20 13:40
Matrix: Water
Date Received: 09/04/20 16:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			10 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 13:26	RKT	TAL CAN
Total Recoverable	Prep	3005A			10 mL	50 mL	450929	09/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451369	09/14/20 16:21	RKT	TAL CAN

Laboratory References:

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

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140272-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Water	Carbonate Alkalinity as CaCO3

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20 *
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

Chain of Custody Record

Sampler ID. _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (1309)

Client: HDR, Inc
Address: 9781 S Meridian Blvd Ste 400
City: Englewood | State: Co | Zip Code: 80112

Project Manager: Matt Rahr
Telephone Number (Area Code)/Fax Number:

Site Contact: Emily Mitros | Lab Contact: Darlene Harding
Carrier/Waybill Number:

Date: 09/04/20
Lab Number:

Chain of Custody Number: 94116 HDR 2
Page 1 of 1

Project Name and Location (State): Xcel - Comanche
Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed)
Methane, Ethane, Ethene by RSK-175 (Low Level)
Alkalinity
Carbonate / Bicarbonate

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Water	Soil	Sed	Containers & Preservatives: Volume	Type	HNO3	H2O	NaOH	Zn Acet
W-2B	09/04/20	1210	X				1		1			
W-1	09/04/20	1300	X				X		X			
W-4	09/04/20	1315	X				X		X			
W-8B	09/04/20	1340	X						X			

Special Instructions/ Conditions of Receipt:
Limited volume, use bottles listed on HDR-1 chain if possible. Contact Molly Reeves to discuss analyte priority.

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other Rush

QC Requirements (Specify)

1. Relinquished By: [signature] Date: 09/04/20 Time: 1653
2. Relinquished By: Date: Time:
3. Relinquished By: Date: Time:

1. Received By: [signature] Date: 9/4/20 Time: 1654
2. Received By: Date: Time:
3. Received By: Date: Time:

Comments
I.IC IE#11 CF-0.2C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-536310.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140272-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 9/15/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 3 Total Metals (w/collision cell)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
W-2B (280-140272-1)	9/4/20	12:10 Mountain		Water			X	1	Use Collision Cell
W-1 (280-140272-2)	9/4/20	13:00 Mountain		Water			X	1	Use Collision Cell
W-4 (280-140272-3)	9/4/20	13:15 Mountain		Water			X	1	Use Collision Cell
W-8B (280-140272-4)	9/4/20	13:40 Mountain		Water			X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/9/2020 1410			9/11/20	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 240-140272

Client ETA Denver Site Name

Cooler Received on 9/11/20 Opened on 9/11/20

Cooler unpacked by: Amanda

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice (Water) None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. 11.9 °C Corrected Cooler Temp. 12.0 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No

Amm 9/11/20

-Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)

-Were tamper/custody seals intact and uncompromised? (Yes) No NA

3. Shippers' packing slip attached to the cooler(s)? (Yes) No

4. Did custody papers accompany the sample(s)? (Yes) No

5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)

7. Did all bottles arrive in good condition (Unbroken)? (Yes) No

8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No

9. For each sample, does the COC specify preservatives (Y(N)) # of containers (Y(N)), and sample type of grab/comp(Y(N))?

10. Were correct bottle(s) used for the test(s) indicated? (Yes) No

11. Sufficient quantity received to perform indicated analyses? (Yes) No

12. Are these work share samples and all listed on the COC? (Yes) No

If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA ~~pH Strip Lot#~~ HC907861

14. Were VOAs on the COC? Yes No

15. Were air bubbles >6 mm in any VOA vials? ● ⇐ Larger than this. Yes No NA

16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Yes No

17. Was a LL Hg or Me Hg trip blank present? Yes No

Amm 9/11/20

Contacted PM Date by via Verbal Voice Mail Other

Concerning

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140272-1

Login Number: 140272
List Number: 1
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 280-140398-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
10/28/2020 9:32:09 AM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-140398-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140398-1

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

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

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

RECEIPT

The samples were received on 9/11/2020 2:05 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 3.4º C, 4.1º C, 4.2º C, 5.0º C, 5.1º C, 5.2º C and 5.5º C.

Receipt Exceptions

Volume for sample W-1 was split off from a plastic 1L unpreserved bottle to make 1x 250mL plastic unpreserved and 500mL HNO3 for another job that was received the same day for this sample.

TOTAL RECOVERABLE METALS

Samples W-1 (280-140398-1), W-2A (280-140398-2), W-2B (280-140398-3), W-3 (280-140398-4), W-5 (280-140398-5), W-6 (280-140398-6), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10), MW-4 (280-140398-11), MW-5 (280-140398-12), MW-6 (280-140398-13), MW-6-DUP (280-140398-14), W-3-DUP (280-140398-15) and W-5-EB (280-140398-16) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 09/16/2020 and analyzed on 09/17/2020.

Boron was detected in method blank MB 240-451600/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

TOTAL RECOVERABLE METALS (ICPMS)

Samples W-1 (280-140398-1), W-2A (280-140398-2), W-2B (280-140398-3), W-3 (280-140398-4), W-5 (280-140398-5), W-6 (280-140398-6), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10), MW-4 (280-140398-11), MW-5 (280-140398-12), MW-6 (280-140398-13), MW-6-DUP (280-140398-14), W-3-DUP (280-140398-15) and W-5-EB (280-140398-16) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 09/16/2020 and analyzed on 09/17/2020 and 09/18/2020.

Antimony, Barium, Beryllium and Lithium failed the recovery criteria low for the MS of sample W-2BMS (280-140398-3) in batch 240-451902. Calcium and Selenium failed the recovery criteria high. For the MSD of sample W-2BMSD (280-140398-3) in batch 240-451902, Antimony, Barium, Beryllium and Lithium failed the recovery criteria low. Selenium failed the recovery criteria high. Also,

Job ID: 280-140398-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Calcium exceeded the RPD limit. Refer to the QC report for details.

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

TOTAL MERCURY

Samples W-1 (280-140398-1), W-2A (280-140398-2), W-2B (280-140398-3), W-3 (280-140398-4), W-5 (280-140398-5), W-6 (280-140398-6), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10), MW-4 (280-140398-11), MW-5 (280-140398-12), MW-6 (280-140398-13), MW-6-DUP (280-140398-14), W-3-DUP (280-140398-15) and W-5-EB (280-140398-16) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/16/2020 and analyzed on 09/17/2020.

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

TOTAL DISSOLVED SOLIDS

Samples W-1 (280-140398-1), W-2A (280-140398-2), W-2B (280-140398-3), W-3 (280-140398-4), W-5 (280-140398-5), W-6 (280-140398-6), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10), MW-4 (280-140398-11), MW-5 (280-140398-12), MW-6 (280-140398-13), MW-6-DUP (280-140398-14), W-3-DUP (280-140398-15) and W-5-EB (280-140398-16) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 09/15/2020 and 09/20/2020.

Reanalysis of the following sample for method 2540C_Calcd batch 509712 was performed outside of the analytical holding time due to sample having more than 200mg residue in the initial in-hold analysis: W-6 (280-140398-6). The reanalysis result did not confirm the initial result; therefore, the reanalysis result is reported.

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

TOTAL SUSPENDED SOLIDS

Samples W-1 (280-140398-1), W-2A (280-140398-2), W-2B (280-140398-3), W-3 (280-140398-4), W-5 (280-140398-5), W-6 (280-140398-6), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10), MW-4 (280-140398-11), MW-5 (280-140398-12), MW-6 (280-140398-13), MW-6-DUP (280-140398-14), W-3-DUP (280-140398-15) and W-5-EB (280-140398-16) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 09/14/2020.

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

CORROSIVITY (PH)

Samples W-1 (280-140398-1), W-2A (280-140398-2), W-2B (280-140398-3), W-3 (280-140398-4), W-5 (280-140398-5), W-6 (280-140398-6), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10), MW-4 (280-140398-11), MW-5 (280-140398-12), MW-6 (280-140398-13), MW-6-DUP (280-140398-14), W-3-DUP (280-140398-15) and W-5-EB (280-140398-16) were analyzed for corrosivity (pH) in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 09/11/2020, 09/15/2020 and 09/17/2020.

The pH did not equilibrate to 0.05 pH units after 3 measurements for Sample W-5-EB (280-140398-16). This was observed in a previous analysis thus the sample was not rerun.

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

ANIONS (28 DAYS)

Samples W-1 (280-140398-1), W-2A (280-140398-2), W-2B (280-140398-3), W-3 (280-140398-4), W-5 (280-140398-5), W-6 (280-140398-6), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10), MW-4 (280-140398-11), MW-5 (280-140398-12), MW-6 (280-140398-13), MW-6-DUP (280-140398-14), W-3-DUP (280-140398-15) and W-5-EB (280-140398-16) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 09/25/2020, 09/26/2020, 09/28/2020, 09/29/2020, 09/30/2020, 10/01/2020 and 10/08/2020.

Samples W-1 (280-140398-1)[10X], W-1 (280-140398-1)[200X], W-2A (280-140398-2)[10X], W-2A (280-140398-2)[1000X], W-2B (280-140398-3)[10X], W-2B (280-140398-3)[100X], W-2B (280-140398-3)[1000X], W-3 (280-140398-4)[10X], W-3 (280-140398-4)[100X], W-5 (280-140398-5)[10X], W-5 (280-140398-5)[1000X], W-6 (280-140398-6)[10X], W-6 (280-140398-6)[100X], W-7 (280-140398-7)[10X],

Job ID: 280-140398-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

W-7 (280-140398-7)[100X], W-7 (280-140398-7)[1000X], MW-1 (280-140398-8)[10X], MW-1 (280-140398-8)[200X], MW-2 (280-140398-9)[10X], MW-2 (280-140398-9)[200X], MW-3 (280-140398-10)[10X], MW-3 (280-140398-10)[1000X], MW-4 (280-140398-11)[10X], MW-4 (280-140398-11)[100X], MW-5 (280-140398-12)[10X], MW-5 (280-140398-12)[200X], MW-6 (280-140398-13)[10X], MW-6 (280-140398-13)[200X], MW-6-DUP (280-140398-14)[10X], MW-6-DUP (280-140398-14)[200X], W-3-DUP (280-140398-15)[10X], W-3-DUP (280-140398-15)[200X] and W-5-EB (280-140398-16)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Reanalysis of the following samples were performed outside of the analytical holding time due to incorrect dilution of initial analysis for Fluoride and QC failures in other analyses for Fluoride: W-3 (280-140398-4), MW-6 (280-140398-13), MW-6-DUP (280-140398-14) and W-3-DUP (280-140398-15). As requested by the client, both sets of data have been reported.

The initial calibration verification (ICV) associated with batch 280-511072 recovered above the upper control limit for Fluoride. The samples associated with this ICV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is associated with this analysis: W-5-EB (280-140398-16)
Fluoride at 111%, limits 90-110%

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 280-510902 recovered outside control limits for the following analytes: Fluoride. The samples associated with this LCS/LCSD were re-analyzed out of hold. As requested by the client, both sets of data have been reported.

The initial calibration verification (ICV) and continuing calibration verification (CCV) associated with batch 280-510902 recovered above the upper control limit for Fluoride. The samples associated with this ICV were re-analyzed out of hold. As requested by the client, both sets of data have been reported.

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

REVISION
The sample login sheet from Eurofins TestAmerica Canton stated a temperature that was corrected to 4.0. It should've read 14.0. The sample login sheet has been corrected.

Detection Summary

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1 — Lab Sample ID: 280-140398-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.4	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00066	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0098		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.065		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	370		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00036	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0029		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.011		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.029		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0036		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.2		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00033	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.7	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	790		30	10	mg/L	10		9056A	Total/NA
Fluoride	28		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	34000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	21000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	120		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2A — Lab Sample ID: 280-140398-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.7	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00089	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.032		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.062		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.00045	J	0.0010	0.00031	mg/L	1		6020A	Total Recoverable
Calcium	160		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0042		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0087		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.013		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0054	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-2A (Continued) — Lab Sample ID: 280-140398-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0077		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.8		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0053		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.5	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	750		30	10	mg/L	10		9056A	Total/NA
Fluoride	99		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	49000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	31000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	260		10	2.8	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2B — Lab Sample ID: 280-140398-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.2	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.012	F1	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.040		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.16	F1	0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.0011	F1	0.0010	0.00031	mg/L	1		6020A	Total Recoverable
Calcium	300	F2	1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0034		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.11		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.040		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.074		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.029		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.7	F1	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0017		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.3	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	890		30	10	mg/L	10		9056A	Total/NA
Fluoride	92		50	17	mg/L	100		9056A	Total/NA
Sulfate	53000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	24000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	420		10	2.8	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-3
Lab Sample ID: 280-140398-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.0	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00063	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0023	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.033		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	460		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00045	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0012	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.044		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.015		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.11	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	34		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.68	* ^	0.50	0.17	mg/L	1		9056A	Total/NA
Fluoride	0.64	H	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2200		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	3100		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	13		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5
Lab Sample ID: 280-140398-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.2	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0012	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0025	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.028		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	380		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00029	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0044		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.017		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.054		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00058	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.014		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.38	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-5 (Continued) — Lab Sample ID: 280-140398-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	19.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	200		30	10	mg/L	10		9056A	Total/NA
Fluoride	3.2	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	6100		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	7400		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	67		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-140398-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	8.7	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00093	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.050		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00063	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0030		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.042		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.30		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0019		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.025		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00025	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.21	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	140		30	10	mg/L	10		9056A	Total/NA
Fluoride	3.5	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	4200		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	9400	H	50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	1900		50	14	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-140398-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.6	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00060	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.011		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.034		0.0050	0.0022	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-7 (Continued) — Lab Sample ID: 280-140398-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	360		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0060		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.016		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0053		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0056	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0022		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.9		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0048		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.9	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Mercury	0.00013	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	670		30	10	mg/L	10		9056A	Total/NA
Fluoride	84		50	17	mg/L	100		9056A	Total/NA
Sulfate	46000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	33000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	120		6.7	1.8	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 280-140398-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.1	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00070	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0069		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.013		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0024		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.020		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0016	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0053	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.70		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0033		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.1	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	280		30	10	mg/L	10		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1 (Continued) — Lab Sample ID: 280-140398-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	30		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	16000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	21000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	7.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 280-140398-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.7	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.016		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.016		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0012		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.018		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0016	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0076	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.4		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.010		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.6	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	460		30	10	mg/L	10		9056A	Total/NA
Fluoride	65		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	35000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	19000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	25		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 280-140398-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.8	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0061		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.017		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.026		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0020		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0043	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3 (Continued) — Lab Sample ID: 280-140398-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00074	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.76		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0042		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.7	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	270		30	10	mg/L	10		9056A	Total/NA
Fluoride	84		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	37000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	53000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	39		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 280-140398-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.46	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.015		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.025		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	540		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00022	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0020		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0033		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.6		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00028	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.36	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	150		30	10	mg/L	10		9056A	Total/NA
Fluoride	1.7	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	2500		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	7600		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-140398-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.2	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0012	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 280-140398-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0037	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.035		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00062	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0050		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.011		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0094	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00051	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.17		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00099	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.5	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1700		30	10	mg/L	10		9056A	Total/NA
Fluoride	50		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	17000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	16000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	22		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-140398-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0083		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0064		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	420		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00056	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0019	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.010		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.0		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.21		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	210		30	10	mg/L	10		9056A	Total/NA
Fluoride	11	* E ^	0.50	0.17	mg/L	1		9056A	Total/NA
Fluoride	8.5	H	0.50	0.17	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-6 (Continued) — Lab Sample ID: 280-140398-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	3000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	7700		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	1.6	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6-DUP — Lab Sample ID: 280-140398-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0074		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0069		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	430		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00057	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0019	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.010		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.20		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	210		30	10	mg/L	10		9056A	Total/NA
Fluoride	12	* E ^	0.50	0.17	mg/L	1		9056A	Total/NA
Fluoride	8.3	H	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3500		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	6900		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	1.6	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3-DUP — Lab Sample ID: 280-140398-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.8	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00067	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0021	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.037		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	470		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00051	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0016	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.045		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.015		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.12		0.0080	0.0017	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-3-DUP (Continued)
Lab Sample ID: 280-140398-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	36		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.66	* ^	0.50	0.17	mg/L	1		9056A	Total/NA
Fluoride	0.63	H	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	3900		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	96		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5-EB
Lab Sample ID: 280-140398-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	6.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Sulfate	2.6	J	5.0	1.0	mg/L	1		9056A	Total/NA
Total Dissolved Solids (TDS)	19		10	4.7	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140398-1	W-1	Water	09/09/20 12:25	09/11/20 14:05	
280-140398-2	W-2A	Water	09/09/20 13:50	09/11/20 14:05	
280-140398-3	W-2B	Water	09/10/20 11:20	09/11/20 14:05	
280-140398-4	W-3	Water	09/09/20 12:15	09/11/20 14:05	
280-140398-5	W-5	Water	09/09/20 10:20	09/11/20 14:05	
280-140398-6	W-6	Water	09/09/20 11:30	09/11/20 14:05	
280-140398-7	W-7	Water	09/09/20 10:20	09/11/20 14:05	
280-140398-8	MW-1	Water	09/09/20 14:30	09/11/20 14:05	
280-140398-9	MW-2	Water	09/10/20 11:20	09/11/20 14:05	
280-140398-10	MW-3	Water	09/09/20 07:40	09/11/20 14:05	
280-140398-11	MW-4	Water	09/10/20 08:40	09/11/20 14:05	
280-140398-12	MW-5	Water	09/09/20 08:30	09/11/20 14:05	
280-140398-13	MW-6	Water	09/09/20 16:15	09/11/20 14:05	
280-140398-14	MW-6-DUP	Water	09/09/20 16:20	09/11/20 14:05	
280-140398-15	W-3-DUP	Water	09/09/20 12:20	09/11/20 14:05	
280-140398-16	W-5-EB	Water	09/09/20 10:45	09/11/20 14:05	

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

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 20:39	1

Client Sample ID: W-2A
Date Collected: 09/09/20 13:50
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.7	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 20:04	1

Client Sample ID: W-2B
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.2	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 20:35	1

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.0	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 20:43	1

Client Sample ID: W-5
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.2	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 20:48	1

Client Sample ID: W-6
Date Collected: 09/09/20 11:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.7	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 20:52	1

Client Sample ID: W-7
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.6	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 20:57	1

Client Sample ID: MW-1
Date Collected: 09/09/20 14:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:01	1

Client Sample ID: MW-2
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:06	1

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

Client Sample ID: MW-3
Date Collected: 09/09/20 07:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:19	1

Client Sample ID: MW-4
Date Collected: 09/10/20 08:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.46	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:23	1

Client Sample ID: MW-5
Date Collected: 09/09/20 08:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.2	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:28	1

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.2	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:32	1

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.2	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:37	1

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.8	B	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:41	1

Client Sample ID: W-5-EB
Date Collected: 09/09/20 10:45
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		09/16/20 14:00	09/17/20 21:46	1

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

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00066	J	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:40	1
Arsenic	0.0098		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:40	1
Barium	0.065		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:40	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:40	1
Calcium	370		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:40	1
Cadmium	0.00036	J	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:40	1
Cobalt	0.0029		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:40	1

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

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.011		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:40	1
Molybdenum	0.029		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:40	1
Lead	0.0036		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:40	1
Selenium	1.2		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:40	1
Thallium	0.00033	J	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:40	1
Lithium	1.7	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:40	1

Client Sample ID: W-2A
Date Collected: 09/09/20 13:50
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00089	J	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:19	1
Arsenic	0.032		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:19	1
Barium	0.062		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:19	1
Beryllium	0.00045	J	0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:19	1
Calcium	160		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:19	1
Cadmium	0.0042		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:19	1
Cobalt	0.0087		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:19	1
Chromium	0.013		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:19	1
Molybdenum	0.0054	J	0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:19	1
Lead	0.0077		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:19	1
Selenium	2.8		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:19	1
Thallium	0.0053		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:19	1
Lithium	3.5	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:19	1

Client Sample ID: W-2B
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.012	F1	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:22	1
Arsenic	0.040		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:22	1
Barium	0.16	F1	0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:22	1
Beryllium	0.0011	F1	0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:22	1
Calcium	300	F2	1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:22	1
Cadmium	0.0034		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:22	1
Cobalt	0.11		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:22	1
Chromium	0.040		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:22	1
Molybdenum	0.074		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:22	1
Lead	0.029		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:22	1
Selenium	1.7	F1	0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:22	1
Thallium	0.0017		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:22	1
Lithium	3.3	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:22	1

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00063	J	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:43	1
Arsenic	0.0023	J	0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:43	1
Barium	0.033		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:43	1

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

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:43	1
Calcium	**460**		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:43	1
Cadmium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:43	1
Cobalt	**0.00045**	**J**	0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:43	1
Chromium	**0.0012**	**J**	0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:43	1
Molybdenum	**0.044**		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:43	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:43	1
Selenium	**0.015**		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:43	1
Thallium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:43	1
Lithium	**0.11**	**^**	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:43	1

Client Sample ID: W-5
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0012**	**J**	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:45	1
Arsenic	**0.0025**	**J**	0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:45	1
Barium	**0.028**		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:45	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:45	1
Calcium	**380**		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:45	1
Cadmium	**0.00029**	**J**	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:45	1
Cobalt	**0.0044**		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:45	1
Chromium	**0.017**		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:45	1
Molybdenum	**0.054**		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:45	1
Lead	**0.00058**	**J**	0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:45	1
Selenium	**0.014**		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:45	1
Thallium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:45	1
Lithium	**0.38**	**^**	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:45	1

Client Sample ID: W-6
Date Collected: 09/09/20 11:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00093**	**J**	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:48	1
Arsenic	**0.0018**	**J**	0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:48	1
Barium	**0.050**		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:48	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:48	1
Calcium	**400**		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:48	1
Cadmium	**0.00063**	**J**	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:48	1
Cobalt	**0.0030**		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:48	1
Chromium	**0.042**		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:48	1
Molybdenum	**0.30**		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:48	1
Lead	**0.0019**		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:48	1
Selenium	**0.025**		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:48	1
Thallium	**0.00025**	**J**	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:48	1
Lithium	**0.21**	**^**	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:48	1

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

Client Sample ID: W-7
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00060	J	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:50	1
Arsenic	0.011		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:50	1
Barium	0.034		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:50	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:50	1
Calcium	360		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:50	1
Cadmium	0.0060		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:50	1
Cobalt	0.016		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:50	1
Chromium	0.0053		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:50	1
Molybdenum	0.0056	J	0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:50	1
Lead	0.0022		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:50	1
Selenium	1.9		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:50	1
Thallium	0.0048		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:50	1
Lithium	2.9	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:50	1

Client Sample ID: MW-1
Date Collected: 09/09/20 14:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00070	J	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:53	1
Arsenic	0.0069		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:53	1
Barium	0.013		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:53	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:53	1
Calcium	390		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:53	1
Cadmium	0.0024		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:53	1
Cobalt	0.020		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:53	1
Chromium	0.0016	J	0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:53	1
Molybdenum	0.0053	J	0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:53	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:53	1
Selenium	0.70		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:53	1
Thallium	0.0033		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:53	1
Lithium	2.1	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:53	1

Client Sample ID: MW-2
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:56	1
Arsenic	0.016		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:56	1
Barium	0.016		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:56	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:56	1
Calcium	400		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:56	1
Cadmium	0.0012		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:56	1
Cobalt	0.018		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:56	1
Chromium	0.0016	J	0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:56	1
Molybdenum	0.0076	J	0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:56	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:56	1
Selenium	2.4		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:56	1
Thallium	0.010		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:56	1
Lithium	3.6	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:56	1

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

Client Sample ID: MW-3
Date Collected: 09/09/20 07:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:58	1
Arsenic	0.0061		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:58	1
Barium	0.017		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:58	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:58	1
Calcium	390		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:58	1
Cadmium	0.017		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:58	1
Cobalt	0.026		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:58	1
Chromium	0.0020		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:58	1
Molybdenum	0.0043	J	0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:58	1
Lead	0.00074	J	0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:58	1
Selenium	0.76		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:58	1
Thallium	0.0042		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:58	1
Lithium	1.7	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:58	1

Client Sample ID: MW-4
Date Collected: 09/10/20 08:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 20:01	1
Arsenic	0.015		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 20:01	1
Barium	0.025		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 20:01	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 20:01	1
Calcium	540		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 20:01	1
Cadmium	0.00022	J	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:01	1
Cobalt	0.0020		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 20:01	1
Chromium	0.0033		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 20:01	1
Molybdenum	0.016		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 20:01	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 20:01	1
Selenium	2.6		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 20:01	1
Thallium	0.00028	J	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:01	1
Lithium	0.36	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 20:01	1

Client Sample ID: MW-5
Date Collected: 09/09/20 08:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0012	J	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 20:03	1
Arsenic	0.0037	J	0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 20:03	1
Barium	0.035		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 20:03	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 20:03	1
Calcium	390		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 20:03	1
Cadmium	0.00062	J	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:03	1
Cobalt	0.0050		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 20:03	1
Chromium	0.011		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 20:03	1
Molybdenum	0.0094	J	0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 20:03	1
Lead	0.00051	J	0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 20:03	1
Selenium	0.17		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 20:03	1
Thallium	0.00099	J	0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:03	1
Lithium	2.5	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 20:03	1

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

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 20:11	1
Arsenic	**0.0083**		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 20:11	1
Barium	**0.0064**		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 20:11	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 20:11	1
Calcium	**420**		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 20:11	1
Cadmium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:11	1
Cobalt	**0.00056**	**J**	0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 20:11	1
Chromium	**0.0019**	**J**	0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 20:11	1
Molybdenum	**0.010**		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 20:11	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 20:11	1
Selenium	**1.0**		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 20:11	1
Thallium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:11	1
Lithium	**0.21**		0.0080	0.0017	mg/L		09/16/20 14:00	09/18/20 14:49	1

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 20:13	1
Arsenic	**0.0074**		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 20:13	1
Barium	**0.0069**		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 20:13	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 20:13	1
Calcium	**430**		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 20:13	1
Cadmium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:13	1
Cobalt	**0.00057**	**J**	0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 20:13	1
Chromium	**0.0019**	**J**	0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 20:13	1
Molybdenum	**0.010**		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 20:13	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 20:13	1
Selenium	**1.1**		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 20:13	1
Thallium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:13	1
Lithium	**0.20**		0.0080	0.0017	mg/L		09/16/20 14:00	09/18/20 14:52	1

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00067**	**J**	0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 20:16	1
Arsenic	**0.0021**	**J**	0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 20:16	1
Barium	**0.037**		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 20:16	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 20:16	1
Calcium	**470**		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 20:16	1
Cadmium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:16	1
Cobalt	**0.00051**	**J**	0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 20:16	1
Chromium	**0.0016**	**J**	0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 20:16	1
Molybdenum	**0.045**		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 20:16	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 20:16	1
Selenium	**0.015**		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 20:16	1
Thallium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:16	1
Lithium	**0.12**		0.0080	0.0017	mg/L		09/16/20 14:00	09/18/20 14:54	1

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

Client Sample ID: W-5-EB
Date Collected: 09/09/20 10:45
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 20:19	1
Arsenic	ND		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 20:19	1
Barium	ND		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 20:19	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 20:19	1
Calcium	ND		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 20:19	1
Cadmium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:19	1
Cobalt	ND		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 20:19	1
Chromium	ND		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 20:19	1
Molybdenum	ND		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 20:19	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 20:19	1
Selenium	ND		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 20:19	1
Thallium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 20:19	1
Lithium	ND		0.0080	0.0017	mg/L		09/16/20 14:00	09/18/20 14:57	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 14:55	1

Client Sample ID: W-2A
Date Collected: 09/09/20 13:50
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 14:47	1

Client Sample ID: W-2B
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 14:53	1

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 14:57	1

Client Sample ID: W-5
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 14:59	1

Client Sample ID: W-6
Date Collected: 09/09/20 11:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:06	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-7
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J**	0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:08	1

Client Sample ID: MW-1
Date Collected: 09/09/20 14:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:10	1

Client Sample ID: MW-2
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:12	1

Client Sample ID: MW-3
Date Collected: 09/09/20 07:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:14	1

Client Sample ID: MW-4
Date Collected: 09/10/20 08:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:16	1

Client Sample ID: MW-5
Date Collected: 09/09/20 08:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:18	1

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:20	1

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:22	1

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:24	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-5-EB
Date Collected: 09/09/20 10:45
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 15:30	1

General Chemistry

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU			09/15/20 19:10	1
Temperature	20.4	HF	1.0	1.0	Degrees C			09/15/20 19:10	1
Chloride	790		30	10	mg/L			09/25/20 20:01	10
Fluoride	28		5.0	1.7	mg/L			09/25/20 20:01	10
Sulfate	34000		1000	210	mg/L			09/28/20 21:41	200
Total Dissolved Solids (TDS)	21000		1000	470	mg/L			09/15/20 13:56	1
Total Suspended Solids	120		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: W-2A
Date Collected: 09/09/20 13:50
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU			09/15/20 19:17	1
Temperature	18.9	HF	1.0	1.0	Degrees C			09/15/20 19:17	1
Chloride	750		30	10	mg/L			09/25/20 20:34	10
Fluoride	99		5.0	1.7	mg/L			09/25/20 20:34	10
Sulfate	49000		5000	1000	mg/L			09/30/20 01:46	1000
Total Dissolved Solids (TDS)	31000		1000	470	mg/L			09/15/20 13:56	1
Total Suspended Solids	260		10	2.8	mg/L			09/14/20 17:08	1

Client Sample ID: W-2B
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			09/15/20 19:21	1
Temperature	18.9	HF	1.0	1.0	Degrees C			09/15/20 19:21	1
Chloride	890		30	10	mg/L			09/25/20 21:24	10
Fluoride	92		50	17	mg/L			09/25/20 21:41	100
Sulfate	53000		5000	1000	mg/L			09/30/20 02:03	1000
Total Dissolved Solids (TDS)	24000		1000	470	mg/L			09/15/20 13:56	1
Total Suspended Solids	420		10	2.8	mg/L			09/14/20 17:08	1

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			09/15/20 19:25	1
Temperature	19.3	HF	1.0	1.0	Degrees C			09/15/20 19:25	1
Chloride	34		30	10	mg/L			09/25/20 23:36	10
Fluoride	0.68	* ^	0.50	0.17	mg/L			10/01/20 02:41	1
Fluoride	0.64	H	0.50	0.17	mg/L			10/08/20 20:34	1
Sulfate	2200		500	100	mg/L			09/25/20 23:52	100
Total Dissolved Solids (TDS)	3100		40	19	mg/L			09/15/20 13:56	1

General Chemistry (Continued)

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	13		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: W-5
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			09/15/20 19:28	1
Temperature	19.9	HF	1.0	1.0	Degrees C			09/15/20 19:28	1
Chloride	200		30	10	mg/L			09/26/20 00:09	10
Fluoride	3.2	J	5.0	1.7	mg/L			09/26/20 00:09	10
Sulfate	6100		5000	1000	mg/L			09/30/20 02:19	1000
Total Dissolved Solids (TDS)	7400		100	47	mg/L			09/15/20 13:56	1
Total Suspended Solids	67		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: W-6
Date Collected: 09/09/20 11:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU			09/15/20 19:32	1
Temperature	19.7	HF	1.0	1.0	Degrees C			09/15/20 19:32	1
Chloride	140		30	10	mg/L			09/26/20 00:41	10
Fluoride	3.5	J	5.0	1.7	mg/L			09/26/20 00:41	10
Sulfate	4200		500	100	mg/L			09/26/20 00:58	100
Total Dissolved Solids (TDS)	9400	H	50	24	mg/L			09/20/20 15:39	1
Total Suspended Solids	1900		50	14	mg/L			09/14/20 17:08	1

Client Sample ID: W-7
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			09/15/20 19:35	1
Temperature	18.4	HF	1.0	1.0	Degrees C			09/15/20 19:35	1
Chloride	670		30	10	mg/L			09/26/20 01:14	10
Fluoride	84		50	17	mg/L			09/26/20 01:31	100
Sulfate	46000		5000	1000	mg/L			09/30/20 02:36	1000
Total Dissolved Solids (TDS)	33000		1000	470	mg/L			09/15/20 13:56	1
Total Suspended Solids	120		6.7	1.8	mg/L			09/14/20 17:08	1

Client Sample ID: MW-1
Date Collected: 09/09/20 14:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			09/15/20 19:39	1
Temperature	18.7	HF	1.0	1.0	Degrees C			09/15/20 19:39	1
Chloride	280		30	10	mg/L			09/26/20 01:47	10
Fluoride	30		5.0	1.7	mg/L			09/26/20 01:47	10
Sulfate	16000		1000	210	mg/L			09/29/20 00:26	200
Total Dissolved Solids (TDS)	21000		200	94	mg/L			09/15/20 13:56	1
Total Suspended Solids	7.2		4.0	1.1	mg/L			09/14/20 17:08	1

General Chemistry

Client Sample ID: MW-2
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			09/11/20 21:38	1
Temperature	22.2	HF	1.0	1.0	Degrees C			09/11/20 21:38	1
Chloride	460		30	10	mg/L			09/26/20 02:53	10
Fluoride	65		5.0	1.7	mg/L			09/26/20 02:53	10
Sulfate	35000		1000	210	mg/L			09/29/20 00:42	200
Total Dissolved Solids (TDS)	19000		1000	470	mg/L			09/15/20 13:56	1
Total Suspended Solids	25		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: MW-3
Date Collected: 09/09/20 07:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			09/11/20 21:44	1
Temperature	21.8	HF	1.0	1.0	Degrees C			09/11/20 21:44	1
Chloride	270		30	10	mg/L			09/26/20 03:26	10
Fluoride	84		5.0	1.7	mg/L			09/26/20 03:26	10
Sulfate	37000		5000	1000	mg/L			09/30/20 02:52	1000
Total Dissolved Solids (TDS)	53000		1000	470	mg/L			09/15/20 13:56	1
Total Suspended Solids	39		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: MW-4
Date Collected: 09/10/20 08:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			09/15/20 20:00	1
Temperature	20.6	HF	1.0	1.0	Degrees C			09/15/20 20:00	1
Chloride	150		30	10	mg/L			09/26/20 03:58	10
Fluoride	1.7	J	5.0	1.7	mg/L			09/26/20 03:58	10
Sulfate	2500		500	100	mg/L			09/26/20 04:15	100
Total Dissolved Solids (TDS)	7600		100	47	mg/L			09/15/20 13:56	1
Total Suspended Solids	9.2		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: MW-5
Date Collected: 09/09/20 08:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU			09/11/20 21:54	1
Temperature	21.5	HF	1.0	1.0	Degrees C			09/11/20 21:54	1
Chloride	1700		30	10	mg/L			09/29/20 20:23	10
Fluoride	50		5.0	1.7	mg/L			09/29/20 20:23	10
Sulfate	17000		1000	210	mg/L			09/29/20 20:39	200
Total Dissolved Solids (TDS)	16000		1000	470	mg/L			09/15/20 13:56	1
Total Suspended Solids	22		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			09/11/20 21:58	1
Temperature	21.6	HF	1.0	1.0	Degrees C			09/11/20 21:58	1

General Chemistry (Continued)

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		30	10	mg/L			09/29/20 21:29	10
Fluoride	11	* E ^	0.50	0.17	mg/L			10/01/20 03:14	1
Fluoride	8.5	H	0.50	0.17	mg/L			10/08/20 20:50	1
Sulfate	3000		1000	210	mg/L			09/29/20 21:45	200
Total Dissolved Solids (TDS)	7700		100	47	mg/L			09/15/20 13:56	1
Total Suspended Solids	1.6	J	4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			09/11/20 22:02	1
Temperature	21.8	HF	1.0	1.0	Degrees C			09/11/20 22:02	1
Chloride	210		30	10	mg/L			09/29/20 22:01	10
Fluoride	12	* E ^	0.50	0.17	mg/L			10/01/20 03:30	1
Fluoride	8.3	H	0.50	0.17	mg/L			10/08/20 21:06	1
Sulfate	3500		1000	210	mg/L			09/29/20 22:18	200
Total Dissolved Solids (TDS)	6900		100	47	mg/L			09/15/20 13:56	1
Total Suspended Solids	1.6	J	4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			09/15/20 20:15	1
Temperature	20.7	HF	1.0	1.0	Degrees C			09/15/20 20:15	1
Chloride	36		30	10	mg/L			09/29/20 22:34	10
Fluoride	0.66	* ^	0.50	0.17	mg/L			10/01/20 03:47	1
Fluoride	0.63	H	0.50	0.17	mg/L			10/08/20 21:23	1
Sulfate	2000		1000	210	mg/L			09/29/20 22:51	200
Total Dissolved Solids (TDS)	3900		40	19	mg/L			09/15/20 13:56	1
Total Suspended Solids	96		4.0	1.1	mg/L			09/14/20 17:08	1

Client Sample ID: W-5-EB
Date Collected: 09/09/20 10:45
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.0	HF	0.1	0.1	SU			09/17/20 17:08	1
Temperature	21.8	HF	1.0	1.0	Degrees C			09/17/20 17:08	1
Chloride	ND		30	10	mg/L			09/30/20 00:46	10
Fluoride	ND	^	0.50	0.17	mg/L			10/01/20 22:54	1
Sulfate	2.6	J	5.0	1.0	mg/L			10/01/20 22:54	1
Total Dissolved Solids (TDS)	19		10	4.7	mg/L			09/15/20 13:56	1
Total Suspended Solids	ND		4.0	1.1	mg/L			09/14/20 17:08	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-451600/1-A
Matrix: Water
Analysis Batch: 451903

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0236	J	0.10	0.023	mg/L		09/16/20 14:00	09/17/20 19:56	1

Lab Sample ID: LCS 240-451600/2-A
Matrix: Water
Analysis Batch: 451903

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.05		mg/L		105	80 - 120

Lab Sample ID: 280-140398-2 MS
Matrix: Water
Analysis Batch: 451903

Client Sample ID: W-2A
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	2.7	B	1.00	3.66		mg/L		91	75 - 125

Lab Sample ID: 280-140398-2 MSD
Matrix: Water
Analysis Batch: 451903

Client Sample ID: W-2A
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	2.7	B	1.00	3.73		mg/L		98	75 - 125	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-451600/1-A
Matrix: Water
Analysis Batch: 451902

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/16/20 14:00	09/17/20 19:15	1
Arsenic	ND		0.0050	0.00075	mg/L		09/16/20 14:00	09/17/20 19:15	1
Barium	ND		0.0050	0.0022	mg/L		09/16/20 14:00	09/17/20 19:15	1
Beryllium	ND		0.0010	0.00031	mg/L		09/16/20 14:00	09/17/20 19:15	1
Calcium	ND		1.0	0.58	mg/L		09/16/20 14:00	09/17/20 19:15	1
Cadmium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:15	1
Cobalt	ND		0.0010	0.00019	mg/L		09/16/20 14:00	09/17/20 19:15	1
Chromium	ND		0.0020	0.00098	mg/L		09/16/20 14:00	09/17/20 19:15	1
Molybdenum	ND		0.010	0.0011	mg/L		09/16/20 14:00	09/17/20 19:15	1
Lead	ND		0.0010	0.00045	mg/L		09/16/20 14:00	09/17/20 19:15	1
Selenium	ND		0.0050	0.00089	mg/L		09/16/20 14:00	09/17/20 19:15	1
Thallium	ND		0.0010	0.00020	mg/L		09/16/20 14:00	09/17/20 19:15	1
Lithium	ND	^	0.0080	0.0017	mg/L		09/16/20 14:00	09/17/20 19:15	1

Lab Sample ID: LCS 240-451600/3-A
Matrix: Water
Analysis Batch: 451902

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0974		mg/L		97	80 - 120

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

Lab Sample ID: LCS 240-451600/3-A
Matrix: Water
Analysis Batch: 451902

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.917		mg/L		92	80 - 120
Barium	1.00	0.928		mg/L		93	80 - 120
Beryllium	0.500	0.466		mg/L		93	80 - 120
Calcium	25.0	23.8		mg/L		95	80 - 120
Cadmium	0.500	0.481		mg/L		96	80 - 120
Cobalt	0.500	0.478		mg/L		96	80 - 120
Chromium	0.500	0.496		mg/L		99	80 - 120
Molybdenum	0.500	0.469		mg/L		94	80 - 120
Lead	0.500	0.498		mg/L		100	80 - 120
Selenium	1.00	0.902		mg/L		90	80 - 120
Thallium	1.00	0.969		mg/L		97	80 - 120
Lithium	0.500	0.479	^	mg/L		96	80 - 120

Lab Sample ID: 280-140398-3 MS
Matrix: Water
Analysis Batch: 451902

Client Sample ID: W-2B
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.012	F1	0.100	0.0799	F1	mg/L		68	75 - 125
Arsenic	0.040		1.00	1.21		mg/L		117	75 - 125
Barium	0.16	F1	1.00	0.366	F1	mg/L		21	75 - 125
Beryllium	0.0011	F1	0.500	0.354	F1	mg/L		71	75 - 125
Calcium	300	F2	25.0	410	4	mg/L		424	75 - 125
Cadmium	0.0034		0.500	0.426		mg/L		84	75 - 125
Cobalt	0.11		0.500	0.662		mg/L		110	75 - 125
Chromium	0.040		0.500	0.484		mg/L		89	75 - 125
Molybdenum	0.074		0.500	0.574		mg/L		100	75 - 125
Lead	0.029		0.500	0.432		mg/L		81	75 - 125
Selenium	1.7	F1	1.00	3.05	F1	mg/L		133	75 - 125
Thallium	0.0017		1.00	0.791		mg/L		79	75 - 125
Lithium	3.3	^	0.500	3.37	4 ^	mg/L		14	75 - 125

Lab Sample ID: 280-140398-3 MSD
Matrix: Water
Analysis Batch: 451902

Client Sample ID: W-2B
Prep Type: Total Recoverable
Prep Batch: 451600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.012	F1	0.100	0.0831	F1	mg/L		71	75 - 125	4	20
Arsenic	0.040		1.00	1.25		mg/L		120	75 - 125	3	20
Barium	0.16	F1	1.00	0.358	F1	mg/L		20	75 - 125	2	20
Beryllium	0.0011	F1	0.500	0.366	F1	mg/L		73	75 - 125	3	20
Calcium	300	F2	25.0	325	4 F2	mg/L		81	75 - 125	23	20
Cadmium	0.0034		0.500	0.428		mg/L		85	75 - 125	1	20
Cobalt	0.11		0.500	0.680		mg/L		113	75 - 125	3	20
Chromium	0.040		0.500	0.486		mg/L		89	75 - 125	0	20
Molybdenum	0.074		0.500	0.586		mg/L		103	75 - 125	2	20
Lead	0.029		0.500	0.431		mg/L		81	75 - 125	0	20
Selenium	1.7	F1	1.00	3.13	F1	mg/L		141	75 - 125	3	20
Thallium	0.0017		1.00	0.805		mg/L		80	75 - 125	2	20

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

Lab Sample ID: 280-140398-3 MSD — **Client Sample ID: W-2B**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 451902 — **Prep Batch: 451600**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	3.3	^	0.500	3.50	4 ^	mg/L		39	75 - 125	4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-451601/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 451827 — **Prep Batch: 451601**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/16/20 14:00	09/17/20 14:43	1

Lab Sample ID: LCS 240-451601/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 451827 — **Prep Batch: 451601**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00496		mg/L		99	80 - 120

Lab Sample ID: 280-140398-2 MS — **Client Sample ID: W-2A**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 451827 — **Prep Batch: 451601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.00120		mg/L		120	80 - 120

Lab Sample ID: 280-140398-2 MSD — **Client Sample ID: W-2A**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 451827 — **Prep Batch: 451601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00117		mg/L		117	80 - 120	2	20

Method: 9040B - pH

Lab Sample ID: LCS 280-508777/41 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508777

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 280-140398-9 DU — **Client Sample ID: MW-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 508777

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.1	HF	7.0		SU		1	5
Temperature	22.2	HF	21.7		Degrees C		2	10

Method: 9040B - pH (Continued)

Lab Sample ID: LCS 280-509249/4
Matrix: Water
Analysis Batch: 509249

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 280-140398-1 DU
Matrix: Water
Analysis Batch: 509249

Client Sample ID: W-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.3	HF	7.3		SU		0.3	5
Temperature	20.4	HF	19.3		Degrees C		5	10

Lab Sample ID: LCS 280-509612/4
Matrix: Water
Analysis Batch: 509612

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-510442/6
Matrix: Water
Analysis Batch: 510442

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/25/20 18:56	1
Fluoride	ND		0.50	0.17	mg/L			09/25/20 18:56	1
Sulfate	ND		5.0	1.0	mg/L			09/25/20 18:56	1

Lab Sample ID: LCS 280-510442/4
Matrix: Water
Analysis Batch: 510442

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	93.0		mg/L		93	90 - 110
Fluoride	5.00	5.34		mg/L		107	90 - 110
Sulfate	100	109		mg/L		109	90 - 110

Lab Sample ID: LCSD 280-510442/5
Matrix: Water
Analysis Batch: 510442

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	92.7		mg/L		93	90 - 110	0	10
Fluoride	5.00	5.52		mg/L		110	90 - 110	3	10
Sulfate	100	107		mg/L		107	90 - 110	2	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-510442/3
Matrix: Water
Analysis Batch: 510442

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.93		mg/L		79	50 - 150
Fluoride	0.500	0.565		mg/L		113	50 - 150
Sulfate	5.00	4.25	J	mg/L		85	50 - 150

Lab Sample ID: MB 280-510636/6
Matrix: Water
Analysis Batch: 510636

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/28/20 16:36	1
Sulfate	ND		5.0	1.0	mg/L			09/28/20 16:36	1

Lab Sample ID: LCS 280-510636/4
Matrix: Water
Analysis Batch: 510636

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	101		mg/L		101	90 - 110
Sulfate	100	102		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-510636/5
Matrix: Water
Analysis Batch: 510636

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	101		mg/L		101	90 - 110	0	10
Sulfate	100	102		mg/L		102	90 - 110	0	10

Lab Sample ID: MRL 280-510636/3
Matrix: Water
Analysis Batch: 510636

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.03		mg/L		101	50 - 150
Sulfate	5.00	4.95	J	mg/L		99	50 - 150

Lab Sample ID: MB 280-510668/13
Matrix: Water
Analysis Batch: 510668

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/29/20 01:12	1
Fluoride	ND		0.50	0.17	mg/L			09/29/20 01:12	1
Sulfate	ND		5.0	1.0	mg/L			09/29/20 01:12	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-510668/11
Matrix: Water
Analysis Batch: 510668

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.9		mg/L		96	90 - 110
Fluoride	5.00	4.72		mg/L		94	90 - 110
Sulfate	100	96.5		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-510668/12
Matrix: Water
Analysis Batch: 510668

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	96.4		mg/L		96	90 - 110	0	10
Fluoride	5.00	4.74		mg/L		95	90 - 110	0	10
Sulfate	100	96.4		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 280-510668/10
Matrix: Water
Analysis Batch: 510668

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.98		mg/L		80	50 - 150
Fluoride	0.500	0.484	J	mg/L		97	50 - 150
Sulfate	5.00	4.39	J	mg/L		88	50 - 150

Lab Sample ID: MB 280-510819/6
Matrix: Water
Analysis Batch: 510819

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/29/20 17:18	1
Sulfate	ND		5.0	1.0	mg/L			09/29/20 17:18	1

Lab Sample ID: LCS 280-510819/4
Matrix: Water
Analysis Batch: 510819

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	100		mg/L		100	90 - 110
Sulfate	100	102		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-510819/5
Matrix: Water
Analysis Batch: 510819

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	100		mg/L		100	90 - 110	0	10
Sulfate	100	102		mg/L		102	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-510819/3
Matrix: Water
Analysis Batch: 510819

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.03		mg/L		101	50 - 150
Sulfate	5.00	5.02		mg/L		100	50 - 150

Lab Sample ID: MB 280-510902/6
Matrix: Water
Analysis Batch: 510902

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/30/20 14:25	1
Fluoride	ND	^	0.50	0.17	mg/L			09/30/20 14:25	1

Lab Sample ID: LCS 280-510902/4
Matrix: Water
Analysis Batch: 510902

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	102		mg/L		102	90 - 110
Fluoride	5.00	5.70	^ *	mg/L		114	90 - 110

Lab Sample ID: LCSD 280-510902/5
Matrix: Water
Analysis Batch: 510902

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	102		mg/L		102	90 - 110	0	10
Fluoride	5.00	5.60	* ^	mg/L		112	90 - 110	2	10

Lab Sample ID: MRL 280-510902/3
Matrix: Water
Analysis Batch: 510902

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.27		mg/L		85	50 - 150
Fluoride	0.500	0.581		mg/L		116	50 - 150

Lab Sample ID: MB 280-511072/13
Matrix: Water
Analysis Batch: 511072

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/01/20 21:32	1
Fluoride	ND	^	0.50	0.17	mg/L			10/01/20 21:32	1
Sulfate	ND		5.0	1.0	mg/L			10/01/20 21:32	1

Lab Sample ID: LCS 280-511072/11
Matrix: Water
Analysis Batch: 511072

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.9		mg/L		99	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-511072/11
Matrix: Water
Analysis Batch: 511072

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	5.00	4.99	^	mg/L		100	90 - 110
Sulfate	100	99.5		mg/L		99	90 - 110

Lab Sample ID: LCSD 280-511072/12
Matrix: Water
Analysis Batch: 511072

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	99.1		mg/L		99	90 - 110	0	10
Fluoride	5.00	4.99	^	mg/L		100	90 - 110	0	10
Sulfate	100	99.5		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-511072/10
Matrix: Water
Analysis Batch: 511072

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.96		mg/L		99	50 - 150
Fluoride	0.500	0.490	J ^	mg/L		98	50 - 150
Sulfate	5.00	4.79	J	mg/L		96	50 - 150

Lab Sample ID: MB 280-511830/13
Matrix: Water
Analysis Batch: 511830

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/08/20 20:17	1
Fluoride	ND		0.50	0.17	mg/L			10/08/20 20:17	1
Sulfate	ND		5.0	1.0	mg/L			10/08/20 20:17	1

Lab Sample ID: LCS 280-511830/11
Matrix: Water
Analysis Batch: 511830

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	97.2		mg/L		97	90 - 110
Fluoride	5.00	4.86		mg/L		97	90 - 110
Sulfate	100	94.0		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-511830/12
Matrix: Water
Analysis Batch: 511830

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.2		mg/L		98	90 - 110	1	10
Fluoride	5.00	4.86		mg/L		97	90 - 110	0	10
Sulfate	100	93.9		mg/L		94	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-511830/10
Matrix: Water
Analysis Batch: 511830

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.99		mg/L		80	50 - 150
Fluoride	0.500	0.499	J	mg/L		100	50 - 150
Sulfate	5.00	4.26	J	mg/L		85	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-509149/1
Matrix: Water
Analysis Batch: 509149

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			09/15/20 13:56	1

Lab Sample ID: LCS 280-509149/2
Matrix: Water
Analysis Batch: 509149

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	504		mg/L		101	93 - 110

Lab Sample ID: 280-140398-8 DU
Matrix: Water
Analysis Batch: 509149

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	21000		19500		mg/L		10	10

Lab Sample ID: MB 280-509712/2
Matrix: Water
Analysis Batch: 509712

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			09/20/20 15:39	1

Lab Sample ID: LCS 280-509712/1
Matrix: Water
Analysis Batch: 509712

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	494		mg/L		99	93 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-509002/2
Matrix: Water
Analysis Batch: 509002

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			09/14/20 17:08	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 280-509002/1
Matrix: Water
Analysis Batch: 509002

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	112		mg/L		112	79 - 114		

Lab Sample ID: 280-140398-15 DU
Matrix: Water
Analysis Batch: 509002

Client Sample ID: W-3-DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	96			91.6		mg/L				5	10

Metals

Prep Batch: 451600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total Recoverable	Water	3005A	
280-140398-2	W-2A	Total Recoverable	Water	3005A	
280-140398-3	W-2B	Total Recoverable	Water	3005A	
280-140398-4	W-3	Total Recoverable	Water	3005A	
280-140398-5	W-5	Total Recoverable	Water	3005A	
280-140398-6	W-6	Total Recoverable	Water	3005A	
280-140398-7	W-7	Total Recoverable	Water	3005A	
280-140398-8	MW-1	Total Recoverable	Water	3005A	
280-140398-9	MW-2	Total Recoverable	Water	3005A	
280-140398-10	MW-3	Total Recoverable	Water	3005A	
280-140398-11	MW-4	Total Recoverable	Water	3005A	
280-140398-12	MW-5	Total Recoverable	Water	3005A	
280-140398-13	MW-6	Total Recoverable	Water	3005A	
280-140398-14	MW-6-DUP	Total Recoverable	Water	3005A	
280-140398-15	W-3-DUP	Total Recoverable	Water	3005A	
280-140398-16	W-5-EB	Total Recoverable	Water	3005A	
MB 240-451600/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-451600/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-451600/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-140398-2 MS	W-2A	Total Recoverable	Water	3005A	
280-140398-2 MSD	W-2A	Total Recoverable	Water	3005A	
280-140398-3 MS	W-2B	Total Recoverable	Water	3005A	
280-140398-3 MSD	W-2B	Total Recoverable	Water	3005A	

Prep Batch: 451601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	7470A	
280-140398-2	W-2A	Total/NA	Water	7470A	
280-140398-3	W-2B	Total/NA	Water	7470A	
280-140398-4	W-3	Total/NA	Water	7470A	
280-140398-5	W-5	Total/NA	Water	7470A	
280-140398-6	W-6	Total/NA	Water	7470A	
280-140398-7	W-7	Total/NA	Water	7470A	
280-140398-8	MW-1	Total/NA	Water	7470A	
280-140398-9	MW-2	Total/NA	Water	7470A	
280-140398-10	MW-3	Total/NA	Water	7470A	
280-140398-11	MW-4	Total/NA	Water	7470A	
280-140398-12	MW-5	Total/NA	Water	7470A	
280-140398-13	MW-6	Total/NA	Water	7470A	
280-140398-14	MW-6-DUP	Total/NA	Water	7470A	
280-140398-15	W-3-DUP	Total/NA	Water	7470A	
280-140398-16	W-5-EB	Total/NA	Water	7470A	
MB 240-451601/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-451601/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-140398-2 MS	W-2A	Total/NA	Water	7470A	
280-140398-2 MSD	W-2A	Total/NA	Water	7470A	

Analysis Batch: 451827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	7470A	451601
280-140398-2	W-2A	Total/NA	Water	7470A	451601

Metals (Continued)

Analysis Batch: 451827 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-3	W-2B	Total/NA	Water	7470A	451601
280-140398-4	W-3	Total/NA	Water	7470A	451601
280-140398-5	W-5	Total/NA	Water	7470A	451601
280-140398-6	W-6	Total/NA	Water	7470A	451601
280-140398-7	W-7	Total/NA	Water	7470A	451601
280-140398-8	MW-1	Total/NA	Water	7470A	451601
280-140398-9	MW-2	Total/NA	Water	7470A	451601
280-140398-10	MW-3	Total/NA	Water	7470A	451601
280-140398-11	MW-4	Total/NA	Water	7470A	451601
280-140398-12	MW-5	Total/NA	Water	7470A	451601
280-140398-13	MW-6	Total/NA	Water	7470A	451601
280-140398-14	MW-6-DUP	Total/NA	Water	7470A	451601
280-140398-15	W-3-DUP	Total/NA	Water	7470A	451601
280-140398-16	W-5-EB	Total/NA	Water	7470A	451601
MB 240-451601/1-A	Method Blank	Total/NA	Water	7470A	451601
LCS 240-451601/2-A	Lab Control Sample	Total/NA	Water	7470A	451601
280-140398-2 MS	W-2A	Total/NA	Water	7470A	451601
280-140398-2 MSD	W-2A	Total/NA	Water	7470A	451601

Analysis Batch: 451902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total Recoverable	Water	6020A	451600
280-140398-2	W-2A	Total Recoverable	Water	6020A	451600
280-140398-3	W-2B	Total Recoverable	Water	6020A	451600
280-140398-4	W-3	Total Recoverable	Water	6020A	451600
280-140398-5	W-5	Total Recoverable	Water	6020A	451600
280-140398-6	W-6	Total Recoverable	Water	6020A	451600
280-140398-7	W-7	Total Recoverable	Water	6020A	451600
280-140398-8	MW-1	Total Recoverable	Water	6020A	451600
280-140398-9	MW-2	Total Recoverable	Water	6020A	451600
280-140398-10	MW-3	Total Recoverable	Water	6020A	451600
280-140398-11	MW-4	Total Recoverable	Water	6020A	451600
280-140398-12	MW-5	Total Recoverable	Water	6020A	451600
280-140398-13	MW-6	Total Recoverable	Water	6020A	451600
280-140398-14	MW-6-DUP	Total Recoverable	Water	6020A	451600
280-140398-15	W-3-DUP	Total Recoverable	Water	6020A	451600
280-140398-16	W-5-EB	Total Recoverable	Water	6020A	451600
MB 240-451600/1-A	Method Blank	Total Recoverable	Water	6020A	451600
LCS 240-451600/3-A	Lab Control Sample	Total Recoverable	Water	6020A	451600
280-140398-3 MS	W-2B	Total Recoverable	Water	6020A	451600
280-140398-3 MSD	W-2B	Total Recoverable	Water	6020A	451600

Analysis Batch: 451903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total Recoverable	Water	6010C	451600
280-140398-2	W-2A	Total Recoverable	Water	6010C	451600
280-140398-3	W-2B	Total Recoverable	Water	6010C	451600
280-140398-4	W-3	Total Recoverable	Water	6010C	451600
280-140398-5	W-5	Total Recoverable	Water	6010C	451600
280-140398-6	W-6	Total Recoverable	Water	6010C	451600
280-140398-7	W-7	Total Recoverable	Water	6010C	451600

Metals (Continued)

Analysis Batch: 451903 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-8	MW-1	Total Recoverable	Water	6010C	451600
280-140398-9	MW-2	Total Recoverable	Water	6010C	451600
280-140398-10	MW-3	Total Recoverable	Water	6010C	451600
280-140398-11	MW-4	Total Recoverable	Water	6010C	451600
280-140398-12	MW-5	Total Recoverable	Water	6010C	451600
280-140398-13	MW-6	Total Recoverable	Water	6010C	451600
280-140398-14	MW-6-DUP	Total Recoverable	Water	6010C	451600
280-140398-15	W-3-DUP	Total Recoverable	Water	6010C	451600
280-140398-16	W-5-EB	Total Recoverable	Water	6010C	451600
MB 240-451600/1-A	Method Blank	Total Recoverable	Water	6010C	451600
LCS 240-451600/2-A	Lab Control Sample	Total Recoverable	Water	6010C	451600
280-140398-2 MS	W-2A	Total Recoverable	Water	6010C	451600
280-140398-2 MSD	W-2A	Total Recoverable	Water	6010C	451600

Analysis Batch: 452139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-13	MW-6	Total Recoverable	Water	6020A	451600
280-140398-14	MW-6-DUP	Total Recoverable	Water	6020A	451600
280-140398-15	W-3-DUP	Total Recoverable	Water	6020A	451600
280-140398-16	W-5-EB	Total Recoverable	Water	6020A	451600

General Chemistry

Analysis Batch: 508777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-9	MW-2	Total/NA	Water	9040B	
280-140398-10	MW-3	Total/NA	Water	9040B	
280-140398-12	MW-5	Total/NA	Water	9040B	
280-140398-13	MW-6	Total/NA	Water	9040B	
280-140398-14	MW-6-DUP	Total/NA	Water	9040B	
LCS 280-508777/41	Lab Control Sample	Total/NA	Water	9040B	
280-140398-9 DU	MW-2	Total/NA	Water	9040B	

Analysis Batch: 509002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	SM 2540D	
280-140398-2	W-2A	Total/NA	Water	SM 2540D	
280-140398-3	W-2B	Total/NA	Water	SM 2540D	
280-140398-4	W-3	Total/NA	Water	SM 2540D	
280-140398-5	W-5	Total/NA	Water	SM 2540D	
280-140398-6	W-6	Total/NA	Water	SM 2540D	
280-140398-7	W-7	Total/NA	Water	SM 2540D	
280-140398-8	MW-1	Total/NA	Water	SM 2540D	
280-140398-9	MW-2	Total/NA	Water	SM 2540D	
280-140398-10	MW-3	Total/NA	Water	SM 2540D	
280-140398-11	MW-4	Total/NA	Water	SM 2540D	
280-140398-12	MW-5	Total/NA	Water	SM 2540D	
280-140398-13	MW-6	Total/NA	Water	SM 2540D	
280-140398-14	MW-6-DUP	Total/NA	Water	SM 2540D	
280-140398-15	W-3-DUP	Total/NA	Water	SM 2540D	
280-140398-16	W-5-EB	Total/NA	Water	SM 2540D	

General Chemistry (Continued)

Analysis Batch: 509002 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-509002/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-509002/1	Lab Control Sample	Total/NA	Water	SM 2540D	
280-140398-15 DU	W-3-DUP	Total/NA	Water	SM 2540D	

Analysis Batch: 509149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	SM 2540C	
280-140398-2	W-2A	Total/NA	Water	SM 2540C	
280-140398-3	W-2B	Total/NA	Water	SM 2540C	
280-140398-4	W-3	Total/NA	Water	SM 2540C	
280-140398-5	W-5	Total/NA	Water	SM 2540C	
280-140398-7	W-7	Total/NA	Water	SM 2540C	
280-140398-8	MW-1	Total/NA	Water	SM 2540C	
280-140398-9	MW-2	Total/NA	Water	SM 2540C	
280-140398-10	MW-3	Total/NA	Water	SM 2540C	
280-140398-11	MW-4	Total/NA	Water	SM 2540C	
280-140398-12	MW-5	Total/NA	Water	SM 2540C	
280-140398-13	MW-6	Total/NA	Water	SM 2540C	
280-140398-14	MW-6-DUP	Total/NA	Water	SM 2540C	
280-140398-15	W-3-DUP	Total/NA	Water	SM 2540C	
280-140398-16	W-5-EB	Total/NA	Water	SM 2540C	
MB 280-509149/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-509149/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-140398-8 DU	MW-1	Total/NA	Water	SM 2540C	

Analysis Batch: 509249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	9040B	
280-140398-2	W-2A	Total/NA	Water	9040B	
280-140398-3	W-2B	Total/NA	Water	9040B	
280-140398-4	W-3	Total/NA	Water	9040B	
280-140398-5	W-5	Total/NA	Water	9040B	
280-140398-6	W-6	Total/NA	Water	9040B	
280-140398-7	W-7	Total/NA	Water	9040B	
280-140398-8	MW-1	Total/NA	Water	9040B	
280-140398-11	MW-4	Total/NA	Water	9040B	
280-140398-15	W-3-DUP	Total/NA	Water	9040B	
LCS 280-509249/4	Lab Control Sample	Total/NA	Water	9040B	
280-140398-1 DU	W-1	Total/NA	Water	9040B	

Analysis Batch: 509612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-16	W-5-EB	Total/NA	Water	9040B	
LCS 280-509612/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 509712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-6	W-6	Total/NA	Water	SM 2540C	
MB 280-509712/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-509712/1	Lab Control Sample	Total/NA	Water	SM 2540C	

QC Association Summary

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Analysis Batch: 510442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	9056A	
280-140398-2	W-2A	Total/NA	Water	9056A	
280-140398-3	W-2B	Total/NA	Water	9056A	
280-140398-3	W-2B	Total/NA	Water	9056A	
280-140398-4	W-3	Total/NA	Water	9056A	
280-140398-4	W-3	Total/NA	Water	9056A	
280-140398-5	W-5	Total/NA	Water	9056A	
280-140398-6	W-6	Total/NA	Water	9056A	
280-140398-6	W-6	Total/NA	Water	9056A	
280-140398-7	W-7	Total/NA	Water	9056A	
280-140398-7	W-7	Total/NA	Water	9056A	
280-140398-8	MW-1	Total/NA	Water	9056A	
280-140398-9	MW-2	Total/NA	Water	9056A	
280-140398-10	MW-3	Total/NA	Water	9056A	
280-140398-11	MW-4	Total/NA	Water	9056A	
280-140398-11	MW-4	Total/NA	Water	9056A	
MB 280-510442/6	Method Blank	Total/NA	Water	9056A	
LCS 280-510442/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-510442/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-510442/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 510636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	9056A	
280-140398-8	MW-1	Total/NA	Water	9056A	
280-140398-9	MW-2	Total/NA	Water	9056A	
MB 280-510636/6	Method Blank	Total/NA	Water	9056A	
LCS 280-510636/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-510636/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-510636/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 510668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-12	MW-5	Total/NA	Water	9056A	
280-140398-12	MW-5	Total/NA	Water	9056A	
280-140398-13	MW-6	Total/NA	Water	9056A	
280-140398-13	MW-6	Total/NA	Water	9056A	
280-140398-14	MW-6-DUP	Total/NA	Water	9056A	
280-140398-14	MW-6-DUP	Total/NA	Water	9056A	
280-140398-15	W-3-DUP	Total/NA	Water	9056A	
280-140398-15	W-3-DUP	Total/NA	Water	9056A	
280-140398-16	W-5-EB	Total/NA	Water	9056A	
MB 280-510668/13	Method Blank	Total/NA	Water	9056A	
LCS 280-510668/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-510668/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-510668/10	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 510819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-2	W-2A	Total/NA	Water	9056A	
280-140398-3	W-2B	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 510819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-5	W-5	Total/NA	Water	9056A	
280-140398-7	W-7	Total/NA	Water	9056A	
280-140398-10	MW-3	Total/NA	Water	9056A	
MB 280-510819/6	Method Blank	Total/NA	Water	9056A	
LCS 280-510819/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-510819/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-510819/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 510902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-4	W-3	Total/NA	Water	9056A	
280-140398-13	MW-6	Total/NA	Water	9056A	
280-140398-14	MW-6-DUP	Total/NA	Water	9056A	
280-140398-15	W-3-DUP	Total/NA	Water	9056A	
MB 280-510902/6	Method Blank	Total/NA	Water	9056A	
LCS 280-510902/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-510902/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-510902/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 511072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-16	W-5-EB	Total/NA	Water	9056A	
MB 280-511072/13	Method Blank	Total/NA	Water	9056A	
LCS 280-511072/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-511072/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-511072/10	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 511830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-4	W-3	Total/NA	Water	9056A	
280-140398-13	MW-6	Total/NA	Water	9056A	
280-140398-14	MW-6-DUP	Total/NA	Water	9056A	
280-140398-15	W-3-DUP	Total/NA	Water	9056A	
MB 280-511830/13	Method Blank	Total/NA	Water	9056A	
LCS 280-511830/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-511830/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-511830/10	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-140398-1
Date Collected: 09/09/20 12:25
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 20:39	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:40	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 14:55	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:10	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/25/20 20:01	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	510636	09/28/20 21:41	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-2A
Lab Sample ID: 280-140398-2
Date Collected: 09/09/20 13:50
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 20:04	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:19	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 14:47	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:17	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/25/20 20:34	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	510819	09/30/20 01:46	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-2B
Lab Sample ID: 280-140398-3
Date Collected: 09/10/20 11:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 20:35	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:22	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 14:53	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:21	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/25/20 21:24	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	510442	09/25/20 21:41	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B
Lab Sample ID: 280-140398-3
Date Collected: 09/10/20 11:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1000	5 mL	5 mL	510819	09/30/20 02:03	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-3
Lab Sample ID: 280-140398-4
Date Collected: 09/09/20 12:15
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 20:43	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:43	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 14:57	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:25	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/25/20 23:36	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	510442	09/25/20 23:52	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	510902	10/01/20 02:41	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511830	10/08/20 20:34	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-140398-5
Date Collected: 09/09/20 10:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 20:48	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:45	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 14:59	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:28	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/26/20 00:09	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	510819	09/30/20 02:19	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-6
Lab Sample ID: 280-140398-6

Date Collected: 09/09/20 11:30
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 20:52	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:48	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:06	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:32	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/26/20 00:41	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	510442	09/26/20 00:58	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	509712	09/20/20 15:39	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	20 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-7
Lab Sample ID: 280-140398-7

Date Collected: 09/09/20 10:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 20:57	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:50	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:08	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:35	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/26/20 01:14	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	510442	09/26/20 01:31	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	510819	09/30/20 02:36	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	150 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: MW-1
Lab Sample ID: 280-140398-8

Date Collected: 09/09/20 14:30
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:01	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:53	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:10	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 19:39	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/26/20 01:47	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-1
Lab Sample ID: 280-140398-8
Date Collected: 09/09/20 14:30
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		200	5 mL	5 mL	510636	09/29/20 00:26	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: MW-2
Lab Sample ID: 280-140398-9
Date Collected: 09/10/20 11:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:06	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:56	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:12	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508777	09/11/20 21:38	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/26/20 02:53	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	510636	09/29/20 00:42	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: MW-3
Lab Sample ID: 280-140398-10
Date Collected: 09/09/20 07:40
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:19	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 19:58	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:14	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508777	09/11/20 21:44	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/26/20 03:26	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	510819	09/30/20 02:52	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: MW-4
Lab Sample ID: 280-140398-11
Date Collected: 09/10/20 08:40
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:23	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 20:01	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:16	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 20:00	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510442	09/26/20 03:58	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	510442	09/26/20 04:15	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: MW-5
Lab Sample ID: 280-140398-12
Date Collected: 09/09/20 08:30
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:28	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 20:03	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:18	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508777	09/11/20 21:54	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510668	09/29/20 20:23	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	510668	09/29/20 20:39	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: MW-6
Lab Sample ID: 280-140398-13
Date Collected: 09/09/20 16:15
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:32	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 20:11	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			452139	09/18/20 14:49	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:20	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508777	09/11/20 21:58	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510668	09/29/20 21:29	CJ	TAL DEN

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		200	5 mL	5 mL	510668	09/29/20 21:45	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	510902	10/01/20 03:14	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511830	10/08/20 20:50	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:37	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 20:13	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			452139	09/18/20 14:52	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:22	SLD	TAL CAN
Total/NA	Analysis	9040B		1			508777	09/11/20 22:02	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510668	09/29/20 22:01	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	510668	09/29/20 22:18	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	510902	10/01/20 03:30	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511830	10/08/20 21:06	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:41	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 20:16	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			452139	09/18/20 14:54	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:24	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509249	09/15/20 20:15	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510668	09/29/20 22:34	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	510668	09/29/20 22:51	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-3-DUP
Lab Sample ID: 280-140398-15
Date Collected: 09/09/20 12:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	510902	10/01/20 03:47	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511830	10/08/20 21:23	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Client Sample ID: W-5-EB
Lab Sample ID: 280-140398-16
Date Collected: 09/09/20 10:45
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			451903	09/17/20 21:46	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			451902	09/17/20 20:19	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	451600	09/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			452139	09/18/20 14:57	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	451601	09/16/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			451827	09/17/20 15:30	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509612	09/17/20 17:08	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	510668	09/30/20 00:46	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511072	10/01/20 22:54	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	509149	09/15/20 13:56	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	509002	09/14/20 17:08	SVC	TAL DEN

Laboratory References:

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

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140398-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: EM/TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720 858 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 1 of 2
Company: HDR Inc				Job #:

Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Englewood	TAT Requested (days): Fastest possible		A - Hexane B - NaOH C - AsNaO2 D - Na2O4S E - Na2SO3 F - Na2S2O3 G - H2SO4 H - TSP Dodecahydrate I - Acetone J - DI Water K - EDTA L - EDA M - MCAA N - pH 4-5 O - other (specify)
State, Zip: CO, 80112	PO #: DEN-018	280-140398 Chain of Custody	
Phone: 734-263-7138(Tel)	WO #:		
Email: Molly.Reeves@hdrinc.com			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376		Other:
Site: Colorado	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli++IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226SRa228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
W-1	9/9/20	1225	G	Water			X	X	X	X	X	5	3.375L HNO3, 120mL unpres.
W-2A	9/9/20	1350	G	Water			X	X	X	X	X	6	
W-2B	9/10/20	1120	G	Water			X	X	X	X	X	6	
W-3	9/9/20	1215	G	Water			X	X	X	X	X	6	
W-4				Water									
W-5	9/9/20	1020	G	Water			X	X	X	X	X	6	
W-6	9/9/20	1130	G	Water			X	X	X	X	X	6	
W-7	9/9/20	1020	G	Water			X	X	X	X	X	6	
W-8A				Water									
W-8B				Water									
MW-1	9/9/20	1430	G	Water			X	X	X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: Contact Molly for W-1 Analysis

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

Relinquished by:	Date/Time: 9/11/20 1405	Company: HDR	Received by:	Date/Time: 9-11-20 1405	Company: EHADen
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.6, 6.2, 4.3, 5.3, 4.4 SOO9/11/2020

Ver: 01/16/2019

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: EM/TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720 538 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days):			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCl, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl/HV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315, Ra226, 9320, Ra228, Ra226RSRa228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
MW-2	9/10/20	1120	G	Water			X	X	X	X	X	6	
MW-3	9/9/20	0740	G	Water			X	X	X	X	X	6	
MW-4	9/10/20	0840	G	Water			X	X	X	X	X	6	
MW-5	9/9/20	0830	G	Water			X	X	X	X	X	6	
MW-6	9/9/20	1615	G	Water			X	X	X	X	X	6	
MW-6 -DUP	9/9/20	1620	G	Water			X	X	X	X	X	6	
~~W-5 -EB~~	~~9/9/20~~	~~0830~~	~~G~~	~~Water~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~6~~	~~IS~~
W-3-DUP	9/9/20	1220	G	Water			X	X	X	X	X	6	
W-5-EB	9/9/20	1045	G	Water			X	X	X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 9/11/20 1405	Company: HDR	Received by:	Date/Time: 9-11-20 1405	Company: ETADen
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Sandy, Darlene F	Carrier Tracking No(s)	COC No: 280-538852.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Darlene.Sandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140398-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 10/5/2020	Analysis Requested		Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #			
Phone: 330-497-9396(Tel) 330-497-9772(Fax)	WO #			
Email	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				531

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/6010A 13 Total Metals (w/collision cell) - SUB	6010C/6010A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-1 (280-140398-1)	9/9/20	12:25 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2A (280-140398-2)	9/9/20	13:50 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2B (280-140398-3)	9/10/20	11:20 Mountain		Water			X	X	X	1	Use Collision Cell
MW-3 (280-140398-4)	9/9/20	12:15 Mountain		Water			X	X	X	1	Use Collision Cell
MW-5 (280-140398-5)	9/9/20	10:20 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-140398-6)	9/9/20	11:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-7 (280-140398-7)	9/9/20	10:20 Mountain		Water			X	X	X	1	Use Collision Cell
MW-1 (280-140398-9)	9/9/20	14:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2 (280-140398-9)	9/10/20	11:20 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	Return To Client / Disposal By Lab / Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	9/10/2020 1315		Jeremy Boyer	9-15-20 1045	ETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver: 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-538852.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140398-1
Address: 4101 Shuffel Street NW	Due Date Requested: 10/5/2020	Analysis Requested		Preservation Codes: A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 26014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/6020A 13 Total Metals (w/collision cell) - SUB	6010C/6010A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-3 (280-140398-10)	9/9/20	07:40 Mountain		Water			X	X	X	1	Use Collision Cell
MW-4 (280-140398-11)	9/10/20	06:40 Mountain		Water			X	X	X	1	Use Collision Cell
MW-5 (280-140398-12)	9/9/20	08:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-140398-13)	9/9/20	16:15 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6-DUP (280-140398-14)	9/9/20	16:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-3-DUP (280-140398-15)	9/9/20	12:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-5-EB (280-140398-16)	9/9/20	10:45 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	9/9/2020 1345			9-15-20 1045	ETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # :
Canton Facility

Client ETA Site Name
Cooler Received on 9-15-20 Opened on 9-15-20
Cooler unpacked by:
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other
Packing material used: Bubble Wrap Foam Plastic Bag None Other
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
IR GUN# IR-10 (CF +0.7°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. 13.1 °C Corrected Cooler Temp. 14.0 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LL Hg/Me Hg)? TK 9-15-20		No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ← Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
17. Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140398-1

Login Number: 140398
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-140398-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
10/26/2020 12:50:06 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

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

Glossary

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

Job ID: 280-140398-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140398-2

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

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

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

RECEIPT
The samples were received on 9/11/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 3.4º C, 4.1º C, 4.2º C, 5.0º C, 5.1º C, 5.2º C and 5.5º C.

Please note, the following samples were received with insufficient preservation: W-2B (280-140398-3), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10) and MW-5 (280-140398-12). 6mL of Nitric Acid (HNO3) preservative was added by the laboratory, and the samples pH was adjusted to a pH of less than 2.

RADIUM-226 (GFPC)
Radium-226 was detected in method blank MB 160-482619/24-A at a level exceeding the MDC and RL. All other QC fall within criteria (LCS, LCSD, RER/RPD). Per client request, the data is reported.

Several samples were prepped at a dilution due to discoloration and/or cloud appearances.

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

RADIUM-228
Several samples were prepped at a dilution due to discoloration and/or cloud appearances.

The Ra-228 detection goal was not met for the following samples due to the presence of matrix interferences: W-2A (280-140398-2) and MW-2 (280-140398-9). Analytical results are reported with the detection limit achieved.

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

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

REVISION
Report has been revised to include the intercompany COC for St. Louis as well.

Detection Summary

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1 — Lab Sample ID: 280-140398-1

No Detections.

Client Sample ID: W-2A — Lab Sample ID: 280-140398-2

No Detections.

Client Sample ID: W-2B — Lab Sample ID: 280-140398-3

No Detections.

Client Sample ID: W-3 — Lab Sample ID: 280-140398-4

No Detections.

Client Sample ID: W-5 — Lab Sample ID: 280-140398-5

No Detections.

Client Sample ID: W-6 — Lab Sample ID: 280-140398-6

No Detections.

Client Sample ID: W-7 — Lab Sample ID: 280-140398-7

No Detections.

Client Sample ID: MW-1 — Lab Sample ID: 280-140398-8

No Detections.

Client Sample ID: MW-2 — Lab Sample ID: 280-140398-9

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 280-140398-10

No Detections.

Client Sample ID: MW-4 — Lab Sample ID: 280-140398-11

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 280-140398-12

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 280-140398-13

No Detections.

Client Sample ID: MW-6-DUP — Lab Sample ID: 280-140398-14

No Detections.

Client Sample ID: W-3-DUP — Lab Sample ID: 280-140398-15

No Detections.

Client Sample ID: W-5-EB — Lab Sample ID: 280-140398-16

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Protocol References:

None = None

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

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140398-1	W-1	Water	09/09/20 12:25	09/11/20 14:05	
280-140398-2	W-2A	Water	09/09/20 13:50	09/11/20 14:05	
280-140398-3	W-2B	Water	09/10/20 11:20	09/11/20 14:05	
280-140398-4	W-3	Water	09/09/20 12:15	09/11/20 14:05	
280-140398-5	W-5	Water	09/09/20 10:20	09/11/20 14:05	
280-140398-6	W-6	Water	09/09/20 11:30	09/11/20 14:05	
280-140398-7	W-7	Water	09/09/20 10:20	09/11/20 14:05	
280-140398-8	MW-1	Water	09/09/20 14:30	09/11/20 14:05	
280-140398-9	MW-2	Water	09/10/20 11:20	09/11/20 14:05	
280-140398-10	MW-3	Water	09/09/20 07:40	09/11/20 14:05	
280-140398-11	MW-4	Water	09/10/20 08:40	09/11/20 14:05	
280-140398-12	MW-5	Water	09/09/20 08:30	09/11/20 14:05	
280-140398-13	MW-6	Water	09/09/20 16:15	09/11/20 14:05	
280-140398-14	MW-6-DUP	Water	09/09/20 16:20	09/11/20 14:05	
280-140398-15	W-3-DUP	Water	09/09/20 12:20	09/11/20 14:05	
280-140398-16	W-5-EB	Water	09/09/20 10:45	09/11/20 14:05	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.15		0.425	0.467	1.00	0.252	pCi/L	09/17/20 06:30	10/09/20 10:32	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110	09/17/20 06:30	10/09/20 10:32	1

Client Sample ID: W-2A
Date Collected: 09/09/20 13:50
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.09		0.455	0.493	1.00	0.321	pCi/L	09/17/20 06:30	10/09/20 10:32	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110	09/17/20 06:30	10/09/20 10:32	1

Client Sample ID: W-2B
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.86		0.551	0.652	1.00	0.232	pCi/L	09/17/20 06:30	10/09/20 12:44	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110	09/17/20 06:30	10/09/20 12:44	1

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.812		0.225	0.237	1.00	0.177	pCi/L	09/17/20 06:30	10/09/20 12:44	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110	09/17/20 06:30	10/09/20 12:44	1

Client Sample ID: W-5
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.20		0.273	0.293	1.00	0.192	pCi/L	09/17/20 06:30	10/09/20 12:44	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110	09/17/20 06:30	10/09/20 12:44	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-6
Date Collected: 09/09/20 11:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.41		0.443	0.493	1.00	0.248	pCi/L	09/17/20 06:30	10/09/20 12:44	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.7		40 - 110	09/17/20 06:30	10/09/20 12:44	1

Client Sample ID: W-7
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.36		0.527	0.608	1.00	0.255	pCi/L	09/17/20 06:30	10/09/20 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110	09/17/20 06:30	10/09/20 12:45	1

Client Sample ID: MW-1
Date Collected: 09/09/20 14:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.58		0.381	0.406	1.00	0.291	pCi/L	09/17/20 06:30	10/09/20 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110	09/17/20 06:30	10/09/20 12:45	1

Client Sample ID: MW-2
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.64		0.480	0.536	1.00	0.330	pCi/L	09/17/20 06:30	10/10/20 06:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110	09/17/20 06:30	10/10/20 06:57	1

Client Sample ID: MW-3
Date Collected: 09/09/20 07:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.26		0.433	0.479	1.00	0.253	pCi/L	09/17/20 06:30	10/10/20 06:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110	09/17/20 06:30	10/10/20 06:57	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-4
Date Collected: 09/10/20 08:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.21		0.250	0.273	1.00	0.156	pCi/L	09/17/20 06:30	10/10/20 06:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	90.2		40 - 110	09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: MW-5
Date Collected: 09/09/20 08:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.862		0.213	0.227	1.00	0.143	pCi/L	09/17/20 06:30	10/10/20 06:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		40 - 110	09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.06		0.208	0.229	1.00	0.117	pCi/L	09/17/20 06:30	10/10/20 06:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110	09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.775		0.179	0.192	1.00	0.123	pCi/L	09/17/20 06:30	10/10/20 06:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		40 - 110	09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-15
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.04		0.232	0.251	1.00	0.161	pCi/L	09/17/20 06:30	10/10/20 06:58	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110	09/17/20 06:30	10/10/20 06:58	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-5-EB
Date Collected: 09/09/20 10:45
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-16
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.815		0.182	0.197	1.00	0.121	pCi/L	09/17/20 06:30	10/10/20 06:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.8*		*40 - 110*	*09/17/20 06:30*	*10/10/20 06:58*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.60		0.695	0.735	1.00	0.874	pCi/L	09/17/20 07:02	10/05/20 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.3*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:17*	*1*
Y Carrier	*84.9*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:17*	*1*

Client Sample ID: W-2A
Date Collected: 09/09/20 13:50
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.49	G	0.845	0.904	1.00	1.01	pCi/L	09/17/20 07:02	10/05/20 12:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.8*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:17*	*1*
Y Carrier	*79.6*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:17*	*1*

Client Sample ID: W-2B
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.34		0.735	0.766	1.00	0.983	pCi/L	09/17/20 07:02	10/05/20 12:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:18*	*1*
Y Carrier	*78.1*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:18*	*1*

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.675		0.386	0.391	1.00	0.578	pCi/L	09/17/20 07:02	10/05/20 12:18	1

Method: 9320 - Radium-228 (GFPC)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110	09/17/20 07:02	10/05/20 12:18	1
Y Carrier	80.0		40 - 110	09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: W-5
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.22**		0.487	0.499	1.00	0.687	pCi/L	09/17/20 07:02	10/05/20 12:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110	09/17/20 07:02	10/05/20 12:18	1
Y Carrier	79.3		40 - 110	09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: W-6
Date Collected: 09/09/20 11:30
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.447	U	0.535	0.537	1.00	0.884	pCi/L	09/17/20 07:02	10/05/20 12:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.7		40 - 110	09/17/20 07:02	10/05/20 12:18	1
Y Carrier	84.5		40 - 110	09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: W-7
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.34**		0.652	0.687	1.00	0.784	pCi/L	09/17/20 07:02	10/05/20 12:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110	09/17/20 07:02	10/05/20 12:18	1
Y Carrier	83.4		40 - 110	09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: MW-1
Date Collected: 09/09/20 14:30
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.04**		0.637	0.644	1.00	0.977	pCi/L	09/17/20 07:02	10/05/20 12:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110	09/17/20 07:02	10/05/20 12:18	1
Y Carrier	78.5		40 - 110	09/17/20 07:02	10/05/20 12:18	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-2
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.32	G	0.822	0.877	1.00	1.02	pCi/L	09/17/20 07:02	10/05/20 12:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.5*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:18*	*1*
Y Carrier	*82.6*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:18*	*1*

Client Sample ID: MW-3
Date Collected: 09/09/20 07:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.927		0.596	0.602	1.00	0.917	pCi/L	09/17/20 07:02	10/05/20 12:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.6*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:20*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:20*	*1*

Client Sample ID: MW-4
Date Collected: 09/10/20 08:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.391	U	0.341	0.343	1.00	0.545	pCi/L	09/17/20 07:02	10/05/20 12:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.2*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:20*	*1*
Y Carrier	*84.9*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:20*	*1*

Client Sample ID: MW-5
Date Collected: 09/09/20 08:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.473	U	0.370	0.372	1.00	0.586	pCi/L	09/17/20 07:02	10/05/20 12:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.8*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:20*	*1*
Y Carrier	*87.9*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:20*	*1*

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.06		0.347	0.361	1.00	0.460	pCi/L	09/17/20 07:02	10/05/20 12:20	1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110	09/17/20 07:02	10/05/20 12:20	1
Y Carrier	83.7		40 - 110	09/17/20 07:02	10/05/20 12:20	1

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.229	U	0.269	0.270	1.00	0.444	pCi/L	09/17/20 07:02	10/05/20 12:20	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		40 - 110	09/17/20 07:02	10/05/20 12:20	1
Y Carrier	84.9		40 - 110	09/17/20 07:02	10/05/20 12:20	1

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-15
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.108	U	0.324	0.324	1.00	0.562	pCi/L	09/17/20 07:02	10/05/20 12:21	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110	09/17/20 07:02	10/05/20 12:21	1
Y Carrier	80.4		40 - 110	09/17/20 07:02	10/05/20 12:21	1

Client Sample ID: W-5-EB
Date Collected: 09/09/20 10:45
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-16
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.284	U	0.306	0.307	1.00	0.501	pCi/L	09/17/20 07:02	10/05/20 12:21	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		40 - 110	09/17/20 07:02	10/05/20 12:21	1
Y Carrier	81.1		40 - 110	09/17/20 07:02	10/05/20 12:21	1

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

Client Sample ID: W-1
Date Collected: 09/09/20 12:25
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**4.75**		0.815	0.871	5.00	0.874	pCi/L		10/22/20 10:22	1

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

Client Sample ID: W-2A
Date Collected: 09/09/20 13:50
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.59		0.960	1.03	5.00	1.01	pCi/L		10/22/20 10:22	1

Client Sample ID: W-2B
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.20		0.919	1.01	5.00	0.983	pCi/L		10/22/20 10:22	1

Client Sample ID: W-3
Date Collected: 09/09/20 12:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.49		0.447	0.457	5.00	0.578	pCi/L		10/22/20 10:22	1

Client Sample ID: W-5
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.41		0.558	0.579	5.00	0.687	pCi/L		10/22/20 10:22	1

Client Sample ID: W-6
Date Collected: 09/09/20 11:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.86		0.695	0.729	5.00	0.884	pCi/L		10/22/20 10:22	1

Client Sample ID: W-7
Date Collected: 09/09/20 10:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.70		0.838	0.917	5.00	0.784	pCi/L		10/22/20 10:22	1

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

Client Sample ID: MW-1
Date Collected: 09/09/20 14:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.61		0.742	0.761	5.00	0.977	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-2
Date Collected: 09/10/20 11:20
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.96		0.952	1.03	5.00	1.02	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-3
Date Collected: 09/09/20 07:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.19		0.737	0.769	5.00	0.917	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-4
Date Collected: 09/10/20 08:40
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.60		0.423	0.438	5.00	0.545	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-5
Date Collected: 09/09/20 08:30
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.33		0.427	0.436	5.00	0.586	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-6
Date Collected: 09/09/20 16:15
Date Received: 09/11/20 14:05
Lab Sample ID: 280-140398-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.12		0.405	0.428	5.00	0.460	pCi/L		10/22/20 10:22	1

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

Client Sample ID: MW-6-DUP
Date Collected: 09/09/20 16:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.00		0.323	0.331	5.00	0.444	pCi/L		10/22/20 10:22	1

Client Sample ID: W-3-DUP
Date Collected: 09/09/20 12:20
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-15
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.15		0.398	0.410	5.00	0.562	pCi/L		10/22/20 10:22	1

Client Sample ID: W-5-EB
Date Collected: 09/09/20 10:45
Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-16
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.10		0.356	0.365	5.00	0.501	pCi/L		10/22/20 10:22	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-482619/24-A
Matrix: Water
Analysis Batch: 485231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 482619

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.323		0.320	0.341	1.00	0.225	pCi/L	09/17/20 06:30	10/10/20 06:59	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*09/17/20 06:30*	*10/10/20 06:59*	*1*

Lab Sample ID: LCS 160-482619/1-A
Matrix: Water
Analysis Batch: 485202

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 482619

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			22.7	22.22		2.38	1.00	0.243	pCi/L	98	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.8*		*40 - 110*

Lab Sample ID: LCSD 160-482619/2-A
Matrix: Water
Analysis Batch: 485202

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 482619

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			22.7	20.51		2.25	1.00	0.239	pCi/L	90	75 - 125	0.37	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*85.0*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-482620/24-A
Matrix: Water
Analysis Batch: 484717

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 482620

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3122	U	0.471	0.472	1.00	0.792	pCi/L	09/17/20 07:02	10/05/20 12:21	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:21*	*1*
Y Carrier	*83.4*		*40 - 110*	*09/17/20 07:02*	*10/05/20 12:21*	*1*

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

Lab Sample ID: LCS 160-482620/1-A
Matrix: Water
Analysis Batch: 484543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 482620

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			15.5	15.79		1.96	1.00	0.902	pCi/L	102	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.8*		*40 - 110*
Y Carrier	*80.4*		*40 - 110*

Lab Sample ID: LCSD 160-482620/2-A
Matrix: Water
Analysis Batch: 484543

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 482620

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			15.5	16.36		2.12	1.00	1.07	pCi/L	105	75 - 125	0.14	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*85.0*		*40 - 110*
Y Carrier	*73.3*		*40 - 110*

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Prep Batch: 482619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	PrecSep-21	
280-140398-2	W-2A	Total/NA	Water	PrecSep-21	
280-140398-3	W-2B	Total/NA	Water	PrecSep-21	
280-140398-4	W-3	Total/NA	Water	PrecSep-21	
280-140398-5	W-5	Total/NA	Water	PrecSep-21	
280-140398-6	W-6	Total/NA	Water	PrecSep-21	
280-140398-7	W-7	Total/NA	Water	PrecSep-21	
280-140398-8	MW-1	Total/NA	Water	PrecSep-21	
280-140398-9	MW-2	Total/NA	Water	PrecSep-21	
280-140398-10	MW-3	Total/NA	Water	PrecSep-21	
280-140398-11	MW-4	Total/NA	Water	PrecSep-21	
280-140398-12	MW-5	Total/NA	Water	PrecSep-21	
280-140398-13	MW-6	Total/NA	Water	PrecSep-21	
280-140398-14	MW-6-DUP	Total/NA	Water	PrecSep-21	
280-140398-15	W-3-DUP	Total/NA	Water	PrecSep-21	
280-140398-16	W-5-EB	Total/NA	Water	PrecSep-21	
MB 160-482619/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-482619/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-482619/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 482620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	PrecSep_0	
280-140398-2	W-2A	Total/NA	Water	PrecSep_0	
280-140398-3	W-2B	Total/NA	Water	PrecSep_0	
280-140398-4	W-3	Total/NA	Water	PrecSep_0	
280-140398-5	W-5	Total/NA	Water	PrecSep_0	
280-140398-6	W-6	Total/NA	Water	PrecSep_0	
280-140398-7	W-7	Total/NA	Water	PrecSep_0	
280-140398-8	MW-1	Total/NA	Water	PrecSep_0	
280-140398-9	MW-2	Total/NA	Water	PrecSep_0	
280-140398-10	MW-3	Total/NA	Water	PrecSep_0	
280-140398-11	MW-4	Total/NA	Water	PrecSep_0	
280-140398-12	MW-5	Total/NA	Water	PrecSep_0	
280-140398-13	MW-6	Total/NA	Water	PrecSep_0	
280-140398-14	MW-6-DUP	Total/NA	Water	PrecSep_0	
280-140398-15	W-3-DUP	Total/NA	Water	PrecSep_0	
280-140398-16	W-5-EB	Total/NA	Water	PrecSep_0	
MB 160-482620/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-482620/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-482620/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-140398-1
Date Collected: 09/09/20 12:25
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.47 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 10:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.47 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-2A
Lab Sample ID: 280-140398-2
Date Collected: 09/09/20 13:50
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.98 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 10:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.98 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-2B
Lab Sample ID: 280-140398-3
Date Collected: 09/10/20 11:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.44 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.44 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-3
Lab Sample ID: 280-140398-4
Date Collected: 09/09/20 12:15
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.73 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.73 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-5
Lab Sample ID: 280-140398-5
Date Collected: 09/09/20 10:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.24 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.24 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-6
Lab Sample ID: 280-140398-6
Date Collected: 09/09/20 11:30
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.65 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.65 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-7
Lab Sample ID: 280-140398-7
Date Collected: 09/09/20 10:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.82 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:45	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.82 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-1
Lab Sample ID: 280-140398-8
Date Collected: 09/09/20 14:30
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.15 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:45	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.15 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2
Lab Sample ID: 280-140398-9
Date Collected: 09/10/20 11:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.71 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.71 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-3
Lab Sample ID: 280-140398-10
Date Collected: 09/09/20 07:40
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.02 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.02 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-4
Lab Sample ID: 280-140398-11
Date Collected: 09/10/20 08:40
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.20 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.20 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-5
Lab Sample ID: 280-140398-12
Date Collected: 09/09/20 08:30
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.04 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.04 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6
Lab Sample ID: 280-140398-13
Date Collected: 09/09/20 16:15
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.82 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.82 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-6-DUP
Lab Sample ID: 280-140398-14
Date Collected: 09/09/20 16:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.64 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.64 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-3-DUP
Lab Sample ID: 280-140398-15
Date Collected: 09/09/20 12:20
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.54 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.54 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:21	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-5-EB
Lab Sample ID: 280-140398-16
Date Collected: 09/09/20 10:45
Matrix: Water
Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.29 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.29 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1	1.0 mL	1.0 mL	484717	10/05/20 12:21	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	12-01-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

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

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: EM/TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720 858 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 1 of 2
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes:
City: Englewood	TAT Requested (days): Fastest possible			A - Hexane B - NaOH C - AsNaO2 D - Na2O4S E - Na2SO3 F - Na2S2O3 G - H2SO4 H - TSP Dodecahydrate I - Ascorbic Acid J - Acetone K - EDTA L - EDA M - MCAA N - pH 4-5 O - other (specify)
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com				
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			Other:
Site: Colorado	SSOW#:			

280-140398 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli++IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
W-1	9/9/20	1225	G	Water			X	X	X	X	X	5	3.375L HNO3, 120U unpres
W-2A	9/9/20	1350	G	Water			X	X	X	X	X	6	
W-2B	9/10/20	1120	G	Water			X	X	X	X	X	6	
W-3	9/9/20	1215	G	Water			X	X	X	X	X	6	
W-4				Water									
W-5	9/9/20	1020	G	Water			X	X	X	X	X	6	
W-6	9/9/20	1130	G	Water			X	X	X	X	X	6	
W-7	9/9/20	1020	G	Water			X	X	X	X	X	6	
W-8A				Water									
W-8B				Water									
MW-1	9/9/20	1430	G	Water			X	X	X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: Contact Molly for W-1 Analysis

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 9/11/20 1405	Company: HDR	Received by:	Date/Time: 9-11-20 1405	Company: EHADen
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.6, 6.2, 4.3, 5.3, 4.4 SOO 9/11/2020

Ver: 01/16/2019

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: EM/TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720 538 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days):			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Waste/oil, BioTissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl/HV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315, Ra226, 9320, Ra228, Ra226RSRa228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
MW-2	9/10/20	1120	G	Water			X	X	X	X	X	6	
MW-3	9/9/20	0740	G	Water			X	X	X	X	X	6	
MW-4	9/10/20	0840	G	Water			X	X	X	X	X	6	
MW-5	9/9/20	0830	G	Water			X	X	X	X	X	6	
MW-6	9/9/20	1615	G	Water			X	X	X	X	X	6	
MW-6 -DUP	9/9/20	1620	G	Water			X	X	X	X	X	6	
~~MW-5 -EB~~	~~9/9/20~~	~~0830~~	~~G~~	~~Water~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~6~~	~~15~~
MW-3-DUP	9/9/20	1220	G	Water			X	X	X	X	X	6	
MW-5-EB	9/9/20	1045	G	Water			X	X	X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 9/11/20 1405	Company: HDR	Received by:	Date/Time: 9-11-20 1405	Company: ETADen
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s)	COC No: 280-538653.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140398-1
Address: 13715 Rider Trail North,	Due Date Requested: 10/7/2020			Preservation Codes:
City: Earth City	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-1 (280-140398-1)	9/9/20	12:25 Mountain		Water			X	X	X	2	
W-2A (280-140398-2)	9/9/20	13:50 Mountain		Water			X	X	X	2	
W-2B (280-140398-3)	9/10/20	11:20 Mountain		Water			X	X	X	2	
W-3 (280-140398-4)	9/9/20	12:15 Mountain		Water			X	X	X	2	
W-5 (280-140398-5)	9/9/20	10:20 Mountain		Water			X	X	X	2	
W-6 (280-140398-6)	9/9/20	11:30 Mountain		Water			X	X	X	2	
W-7 (280-140398-7)	9/9/20	10:20 Mountain		Water			X	X	X	2	
MW-1 (280-140398-8)	9/9/20	14:30 Mountain		Water			X	X	X	2	
MW-2 (280-140398-9)	9/10/20	11:20 Mountain		Water			X	X	X	2	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	9/10/20 1250		FED EX		
FED EX			[signature]	SEP 15 2020 09:25	ETA SL

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-538853.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140398-1
Address: 13715 Rider Trail North,	Due Date Requested: 10/7/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-3 (280-140398-10)	9/9/20	07:40 Mountain		Water			X	X	X	2	
MW-4 (280-140398-11)	9/10/20	08:40 Mountain		Water			X	X	X	2	
MW-5 (280-140398-12)	9/9/20	08:30 Mountain		Water			X	X	X	2	
MW-6 (280-140398-13)	9/9/20	16:15 Mountain		Water			X	X	X	2	
MW-6-DUP (280-140398-14)	9/9/20	16:20 Mountain		Water			X	X	X	2	
W-3-DUP (280-140398-15)	9/9/20	12:20 Mountain		Water			X	X	X	2	
W-5-EB (280-140398-16)	9/9/20	10:45 Mountain		Water			X	X	X	2	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 9/14/2020 1250	Company	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Michael Cornthwaite	Date/Time: SEP 15 2020 09:25	Company: ETA SD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140398-2

Login Number: 140398
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140398-2

Login Number: 140398
List Number: 2
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis
List Creation: 09/15/20 06:18 PM

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

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
280-140398-1	W-1	89.3
280-140398-2	W-2A	79.8
280-140398-3	W-2B	89.6
280-140398-4	W-3	85.0
280-140398-5	W-5	82.9
280-140398-6	W-6	92.7
280-140398-7	W-7	87.5
280-140398-8	MW-1	88.7
280-140398-9	MW-2	83.5
280-140398-10	MW-3	82.6
280-140398-11	MW-4	90.2
280-140398-12	MW-5	87.8
280-140398-13	MW-6	82.0
280-140398-14	MW-6-DUP	86.2
280-140398-15	W-3-DUP	93.9
280-140398-16	W-5-EB	87.8
LCS 160-482619/1-A	Lab Control Sample	94.8
LCSD 160-482619/2-A	Lab Control Sample Dup	85.0
MB 160-482619/24-A	Method Blank	93.6

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
280-140398-1	W-1	89.3	84.9
280-140398-2	W-2A	79.8	79.6
280-140398-3	W-2B	89.6	78.1
280-140398-4	W-3	85.0	80.0
280-140398-5	W-5	82.9	79.3
280-140398-6	W-6	92.7	84.5
280-140398-7	W-7	87.5	83.4
280-140398-8	MW-1	88.7	78.5
280-140398-9	MW-2	83.5	82.6
280-140398-10	MW-3	82.6	86.4
280-140398-11	MW-4	90.2	84.9
280-140398-12	MW-5	87.8	87.9
280-140398-13	MW-6	82.0	83.7
280-140398-14	MW-6-DUP	86.2	84.9
280-140398-15	W-3-DUP	93.9	80.4
280-140398-16	W-5-EB	87.8	81.1
LCS 160-482620/1-A	Lab Control Sample	94.8	80.4
LCSD 160-482620/2-A	Lab Control Sample Dup	85.0	73.3
MB 160-482620/24-A	Method Blank	93.6	83.4

Tracer/Carrier Legend

Ba = Ba Carrier

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-140398-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Y = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-140565-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Darlene Bandy

Authorized for release by:
9/28/2020 8:54:24 AM

Darlene Bandy, Project Manager I
(303)736-0188
Darlene.Bandy@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140565-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-140565-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140565-1

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

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

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

RECEIPT
The sample was received on 9/17/2020 2:05 PM; the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.6º C.

Receipt Exceptions

The 500ml Plastic HNO3 preserved bottle for sample W-4 (280-140565-1) arrived about 1/2 full. However, sufficient volume was provided for the requested analysis.

As requested, sample volume was split off to create sample volume in job 280-140601-1.

TOTAL RECOVERABLE METALS
Sample W-4 (280-140565-1) was analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 09/22/2020 and analyzed on 09/23/2020.

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

TOTAL RECOVERABLE METALS (ICPMS)
Sample W-4 (280-140565-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 09/22/2020 and analyzed on 09/23/2020.

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

TOTAL MERCURY
Sample W-4 (280-140565-1) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/23/2020 and analyzed on 09/24/2020.

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

CORROSIVITY (PH)
Sample W-4 (280-140565-1) was analyzed for corrosivity (pH) in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 09/18/2020.

Job ID: 280-140565-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

ANIONS (28 DAYS)

Sample W-4 (280-140565-1) was analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 09/24/2020 and 09/25/2020.

Samples W-4 (280-140565-1)[200X] and W-4 (280-140565-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Detection Summary

Client: HDR Inc
Job ID: 280-140565-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4
Lab Sample ID: 280-140565-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.0		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0028	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.029		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	230		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.014		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0048		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.10		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0033	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00041	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.3		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	440		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	15		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	28000		1000	210	mg/L	200		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140565-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-140565-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140565-1	W-4	Water	09/17/20 10:10	09/17/20 14:05	

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

Client Sample ID: W-4
Date Collected: 09/17/20 10:10
Date Received: 09/17/20 14:05

Lab Sample ID: 280-140565-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.0**		0.10	0.023	mg/L		09/22/20 15:00	09/23/20 14:10	1

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

Client Sample ID: W-4
Date Collected: 09/17/20 10:10
Date Received: 09/17/20 14:05

Lab Sample ID: 280-140565-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/22/20 15:00	09/23/20 13:20	1
Arsenic	**0.0028**	**J**	0.0050	0.00075	mg/L		09/22/20 15:00	09/23/20 13:20	1
Barium	**0.029**		0.0050	0.0022	mg/L		09/22/20 15:00	09/23/20 13:20	1
Beryllium	ND		0.0010	0.00031	mg/L		09/22/20 15:00	09/23/20 13:20	1
Calcium	**230**		1.0	0.58	mg/L		09/22/20 15:00	09/23/20 13:20	1
Cadmium	ND		0.0010	0.00020	mg/L		09/22/20 15:00	09/23/20 13:20	1
Cobalt	**0.014**		0.0010	0.00019	mg/L		09/22/20 15:00	09/23/20 13:20	1
Chromium	**0.0048**		0.0020	0.00098	mg/L		09/22/20 15:00	09/23/20 13:20	1
Molybdenum	**0.10**		0.010	0.0011	mg/L		09/22/20 15:00	09/23/20 13:20	1
Lead	ND		0.0010	0.00045	mg/L		09/22/20 15:00	09/23/20 13:20	1
Selenium	**0.0033**	**J**	0.0050	0.00089	mg/L		09/22/20 15:00	09/23/20 13:20	1
Thallium	**0.00041**	**J**	0.0010	0.00020	mg/L		09/22/20 15:00	09/23/20 13:20	1
Lithium	**1.3**		0.0080	0.0017	mg/L		09/22/20 15:00	09/23/20 13:20	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-4
Date Collected: 09/17/20 10:10
Date Received: 09/17/20 14:05

Lab Sample ID: 280-140565-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/23/20 12:00	09/24/20 13:46	1

General Chemistry

Client Sample ID: W-4
Date Collected: 09/17/20 10:10
Date Received: 09/17/20 14:05

Lab Sample ID: 280-140565-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.4**	**HF**	0.1	0.1	SU			09/18/20 21:11	1
Temperature	**22.0**	**HF**	1.0	1.0	Degrees C			09/18/20 21:11	1
Chloride	**440**		15	5.1	mg/L			09/24/20 03:07	5
Fluoride	**15**		2.5	0.83	mg/L			09/24/20 03:07	5
Sulfate	**28000**		1000	210	mg/L			09/25/20 00:20	200

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-452403/1-A
Matrix: Water
Analysis Batch: 452653

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 452403

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		09/22/20 15:00	09/23/20 14:02	1

Lab Sample ID: LCS 240-452403/2-A
Matrix: Water
Analysis Batch: 452653

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 452403

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.02		mg/L		102	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-452403/1-A
Matrix: Water
Analysis Batch: 452784

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 452403

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/22/20 15:00	09/23/20 12:22	1
Arsenic	ND		0.0050	0.00075	mg/L		09/22/20 15:00	09/23/20 12:22	1
Barium	ND		0.0050	0.0022	mg/L		09/22/20 15:00	09/23/20 12:22	1
Beryllium	ND		0.0010	0.00031	mg/L		09/22/20 15:00	09/23/20 12:22	1
Calcium	ND		1.0	0.58	mg/L		09/22/20 15:00	09/23/20 12:22	1
Cadmium	ND		0.0010	0.00020	mg/L		09/22/20 15:00	09/23/20 12:22	1
Cobalt	ND		0.0010	0.00019	mg/L		09/22/20 15:00	09/23/20 12:22	1
Chromium	ND		0.0020	0.00098	mg/L		09/22/20 15:00	09/23/20 12:22	1
Molybdenum	ND		0.010	0.0011	mg/L		09/22/20 15:00	09/23/20 12:22	1
Lead	ND		0.0010	0.00045	mg/L		09/22/20 15:00	09/23/20 12:22	1
Selenium	ND		0.0050	0.00089	mg/L		09/22/20 15:00	09/23/20 12:22	1
Thallium	ND		0.0010	0.00020	mg/L		09/22/20 15:00	09/23/20 12:22	1
Lithium	ND		0.0080	0.0017	mg/L		09/22/20 15:00	09/23/20 12:22	1

Lab Sample ID: LCS 240-452403/3-A
Matrix: Water
Analysis Batch: 452784

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 452403

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0959		mg/L		96	80 - 120
Arsenic	1.00	1.02		mg/L		102	80 - 120
Barium	1.00	1.04		mg/L		104	80 - 120
Beryllium	0.500	0.526		mg/L		105	80 - 120
Calcium	25.0	25.3		mg/L		101	80 - 120
Cadmium	0.500	0.497		mg/L		99	80 - 120
Cobalt	0.500	0.529		mg/L		106	80 - 120
Chromium	0.500	0.526		mg/L		105	80 - 120
Molybdenum	0.500	0.518		mg/L		104	80 - 120
Lead	0.500	0.531		mg/L		106	80 - 120
Selenium	1.00	0.993		mg/L		99	80 - 120
Thallium	1.00	0.965		mg/L		96	80 - 120
Lithium	0.500	0.500		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-452601/1-A
Matrix: Water
Analysis Batch: 452887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 452601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/23/20 12:00	09/24/20 13:35	1

Lab Sample ID: LCS 240-452601/2-A
Matrix: Water
Analysis Batch: 452887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 452601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00484		mg/L		97	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-509807/4
Matrix: Water
Analysis Batch: 509807

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-510106/6
Matrix: Water
Analysis Batch: 510106

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/23/20 15:03	1
Fluoride	ND		0.50	0.17	mg/L			09/23/20 15:03	1
Sulfate	ND		5.0	1.0	mg/L			09/23/20 15:03	1

Lab Sample ID: LCS 280-510106/4
Matrix: Water
Analysis Batch: 510106

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	92.7		mg/L		93	90 - 110
Fluoride	5.00	5.39		mg/L		108	90 - 110
Sulfate	100	94.3		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-510106/5
Matrix: Water
Analysis Batch: 510106

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	92.8		mg/L		93	90 - 110	0	10
Fluoride	5.00	5.39		mg/L		108	90 - 110	0	10
Sulfate	100	95.0		mg/L		95	90 - 110	1	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-510106/3
Matrix: Water
Analysis Batch: 510106

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.93		mg/L		79	50 - 150
Fluoride	0.500	0.559		mg/L		112	50 - 150
Sulfate	5.00	4.14	J	mg/L		83	50 - 150

Lab Sample ID: MB 280-510289/6
Matrix: Water
Analysis Batch: 510289

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			09/24/20 17:23	1
Sulfate	ND		5.0	1.0	mg/L			09/24/20 17:23	1

Lab Sample ID: LCS 280-510289/4
Matrix: Water
Analysis Batch: 510289

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	99.0		mg/L		99	90 - 110
Sulfate	100	99.5		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-510289/5
Matrix: Water
Analysis Batch: 510289

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	99.4		mg/L		99	90 - 110	0	10
Sulfate	100	100		mg/L		100	90 - 110	1	10

Lab Sample ID: MRL 280-510289/3
Matrix: Water
Analysis Batch: 510289

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.07		mg/L		101	50 - 150
Sulfate	5.00	4.96	J	mg/L		99	50 - 150

QC Association Summary

Client: HDR Inc
Job ID: 280-140565-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Metals

Prep Batch: 452403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total Recoverable	Water	3005A	
MB 240-452403/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-452403/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-452403/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 452601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total/NA	Water	7470A	
MB 240-452601/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-452601/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 452653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total Recoverable	Water	6010C	452403
MB 240-452403/1-A	Method Blank	Total Recoverable	Water	6010C	452403
LCS 240-452403/2-A	Lab Control Sample	Total Recoverable	Water	6010C	452403

Analysis Batch: 452784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total Recoverable	Water	6020A	452403
MB 240-452403/1-A	Method Blank	Total Recoverable	Water	6020A	452403
LCS 240-452403/3-A	Lab Control Sample	Total Recoverable	Water	6020A	452403

Analysis Batch: 452887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total/NA	Water	7470A	452601
MB 240-452601/1-A	Method Blank	Total/NA	Water	7470A	452601
LCS 240-452601/2-A	Lab Control Sample	Total/NA	Water	7470A	452601

General Chemistry

Analysis Batch: 509807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total/NA	Water	9040B	
LCS 280-509807/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 510106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total/NA	Water	9056A	
MB 280-510106/6	Method Blank	Total/NA	Water	9056A	
LCS 280-510106/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-510106/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-510106/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 510289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140565-1	W-4	Total/NA	Water	9056A	
MB 280-510289/6	Method Blank	Total/NA	Water	9056A	
LCS 280-510289/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-510289/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-510289/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140565-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4
Lab Sample ID: 280-140565-1
Date Collected: 09/17/20 10:10
Matrix: Water
Date Received: 09/17/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	452403	09/22/20 15:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			452653	09/23/20 14:10	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	452403	09/22/20 15:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			452784	09/23/20 13:20	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	452601	09/23/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			452887	09/24/20 13:46	SLD	TAL CAN
Total/NA	Analysis	9040B		1			509807	09/18/20 21:11	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	510106	09/24/20 03:07	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	510289	09/25/20 00:20	CJ	TAL DEN

Laboratory References:

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

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140565-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-20 *
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

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THE LEADER IN ENVIRONMENTAL TESTING

HDR 1

TAL-4124-280 (0908)

Client	Project Manager	Date	Chain of Custody Number
HDR, Inc	Matt Rohr	09/17/20	194116
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
9781 S Meridian Blvd Ste 400			
City	**State** / **Zip Code**	**Site Contact**	**Lab Contact**
Englewood	CO / 80112	Emily Munoz	Darlene Brandy
Project Name and Location (State)	**Carrier/Waybill Number**		
Xcel Comanche			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Metals: App III + V	Anions/4pH	Special Instructions/ Conditions of Receipt
W-4	09/17/20	1010		X			1		1				X	X	500 mL 250 mL HNO3 250 mL unpres. Contact Molly Reeves for analytical quality. See COC 2 for add'l metals request

260-140565 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other ASAP/Rush

QC Requirements (Specify)
CS DI2411-02 RP 9/17/20

	Date	Time		Date	Time
1. Relinquished By	09/17/20	1405	1. Received By	9-17-20	1405
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-539805.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140565-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 9/24/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:

530

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-4 (280-140565-1)	9/17/20	10:10 Mountain		Water			X	X	X	4	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Darl Bandy	9/21/2020 1345		B Bidwell	9/22/20 1030	EA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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9/28/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client TA Denver Site Name _____ Cooler unpacked by: DBradwell

Cooler Received on 9/22/20 Opened on 9/22/20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA ~~Foam~~ Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. 2.7 °C Corrected Cooler Temp. 3.2 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⇐ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140565-1

Login Number: 140565
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-140876-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
10/26/2020 1:13:49 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-140876-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140876-1

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

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

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

RECEIPT
The samples were received on 9/25/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 1.0º C, 1.5º C, 2.1º C, 3.1º C, 3.1º C, 4.3º C and 4.4º C.

Please note, the RAD-226 and RAD-228 are being reported under job 280-140876-2.

TOTAL RECOVERABLE METALS-Method 6010C/6020A/7470A
Samples MW-4 (280-140876-9) and MW-5 (280-140876-10) required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following samples were received with insufficient preservation: MW-1 (280-140876-6), MW-2 (280-140876-7) and MW-5 (280-140876-10). The laboratory added 6mL of nitric preservative, and the samples pH was adjusted to <2 SU.

The continuing calibration low (CCVL) exceeded acceptance criteria for lithium. All of the following samples were accepted due to value of Lithium was greater than the continuing calibration level (CCV) which was within 90%-110%.

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

GENERAL CHEMISTRY
Several samples required dilution prior to analysis for Method 9056 due to high analyte concentration. The reporting limits have been adjusted accordingly.

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

REVISION
The report has been revised to include the Canton COC in the report.

Detection Summary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-140876-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.018		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.025		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	280		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0029		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0070		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0077		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0031	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0024		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.5		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0038		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.7	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Mercury	0.00019	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	770		30	10	mg/L	10		9056A	Total/NA
Fluoride	86		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	42000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	81000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	140		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3
Lab Sample ID: 280-140876-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0024	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.031		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	490		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00046	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.042		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.015		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.12	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	45		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.59		0.50	0.17	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Client Sample ID: W-3 (Continued) — Lab Sample ID: 280-140876-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	4700		50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	6.4		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5 — Lab Sample ID: 280-140876-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00059	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0020	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.040		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00022	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0051		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0051		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.040		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00083	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.022		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.40	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	420		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	7.3		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	5700		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	11000		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	66		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-140876-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	8.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0011	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0060		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.098		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	470		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00059	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0017		0.0010	0.00019	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-6 (Continued) — Lab Sample ID: 280-140876-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0046		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.50		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0030		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.024		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00021	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.080	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	120		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	2.7		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3100		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6500		50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	140		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-140876-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0090		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.015		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	140		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0051		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.015		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0015	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0050	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00075	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.0		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0045		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.4	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Mercury	0.00019	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	670		30	10	mg/L	10		9056A	Total/NA
Fluoride	130	J	250	83	mg/L	500		9056A	Total/NA
Sulfate	47000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	75000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	25		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-1
Lab Sample ID: 280-140876-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.8		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0012	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0062		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.014		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0021		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.028		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0010	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0052	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.67		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0036		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.7	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Mercury	0.00018	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	370		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	38		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	19000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	33000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	6.0		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2
Lab Sample ID: 280-140876-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.016		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	240		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.019		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0070	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.5		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0099		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.9	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Mercury	0.00013	J	0.00020	0.00013	mg/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-2 (Continued) — Lab Sample ID: 280-140876-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	540		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	66		50	17	mg/L	100		9056A	Total/NA
Sulfate	28000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	50000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	15		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 280-140876-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0097		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.016		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	260		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.019		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.034		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0018	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0049	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00088	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.94		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0045		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.9	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Mercury	0.00018	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	310		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	47		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	35000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	59000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	80		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 280-140876-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.52		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.019		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.018		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	540		1.0	0.58	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-4 (Continued) — Lab Sample ID: 280-140876-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00020	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0016		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.014		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.6		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00023	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.41		0.016	0.0033	mg/L	2		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	190		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	6.5		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2500		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6700		67	31	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.6		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-140876-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.6		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00091	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0030	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.033		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	240		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00052	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0033		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0017	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0078	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.19		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.0		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1400		60	20	mg/L	20		9056A	Total/NA
Fluoride	37		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	18000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	40000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	49		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6 — Lab Sample ID: 280-140876-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0082		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0071		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	440		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00059	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0098	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.21		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	190		30	10	mg/L	10		9056A	Total/NA
Fluoride	7.8		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3500		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	7100		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	8.0		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3D — Lab Sample ID: 280-140876-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0026	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.032		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	500		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00052	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.043		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.015		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.11		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	45		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.59		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2300		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	4600		50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2AEB — Lab Sample ID: 280-140876-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2AEB (Continued) — Lab Sample ID: 280-140876-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids (TDS)	21		10	4.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-6D — Lab Sample ID: 280-140876-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0077		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0069		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	430		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00057	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0013	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0097	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.22		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	180		60	20	mg/L	20		9056A	Total/NA
Fluoride	7.6		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3900		250	52	mg/L	50		9056A	Total/NA
Total Dissolved Solids (TDS)	7100		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	5.6		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140876-1	W-2A	Water	09/24/20 13:45	09/25/20 16:35	
280-140876-2	W-3	Water	09/25/20 11:10	09/25/20 16:35	
280-140876-3	W-5	Water	09/23/20 12:00	09/25/20 16:35	
280-140876-4	W-6	Water	09/23/20 12:30	09/25/20 16:35	
280-140876-5	W-7	Water	09/25/20 12:00	09/25/20 16:35	
280-140876-6	MW-1	Water	09/24/20 16:00	09/25/20 16:35	
280-140876-7	MW-2	Water	09/25/20 08:45	09/25/20 16:35	
280-140876-8	MW-3	Water	09/23/20 11:05	09/25/20 16:35	
280-140876-9	MW-4	Water	09/23/20 16:00	09/25/20 16:35	
280-140876-10	MW-5	Water	09/23/20 11:25	09/25/20 16:35	
280-140876-11	MW-6	Water	09/24/20 09:50	09/25/20 16:35	
280-140876-12	W-3D	Water	09/25/20 11:20	09/25/20 16:35	
280-140876-13	W-2AEB	Water	09/24/20 14:25	09/25/20 16:35	
280-140876-14	MW-6D	Water	09/24/20 10:00	09/25/20 16:35	

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

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.4		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 22:53	1

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.1		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 22:58	1

Client Sample ID: W-5
Date Collected: 09/23/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.5		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:02	1

Client Sample ID: W-6
Date Collected: 09/23/20 12:30
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.7		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:07	1

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.1		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:11	1

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:24	1

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.2		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:29	1

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.7		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:33	1

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.52		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:38	1

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

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.6**		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:42	1

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.2**		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:47	1

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.2**		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:51	1

Client Sample ID: W-2AEB
Date Collected: 09/24/20 14:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 23:56	1

Client Sample ID: MW-6D
Date Collected: 09/24/20 10:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.2**		0.10	0.023	mg/L		09/30/20 14:00	10/02/20 00:00	1

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

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:26	1
Arsenic	**0.018**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:26	1
Barium	**0.025**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:26	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:26	1
Calcium	**280**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:26	1
Cadmium	**0.0029**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:26	1
Cobalt	**0.0070**		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:26	1
Chromium	**0.0077**		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:26	1
Molybdenum	**0.0031**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:26	1
Lead	**0.0024**		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:26	1
Selenium	**2.5**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:26	1
Thallium	**0.0038**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:26	1
Lithium	**3.7**	**^**	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:26	1

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:28	1

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

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0024	J	0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:28	1
Barium	0.031		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:28	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:28	1
Calcium	490		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:28	1
Cadmium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:28	1
Cobalt	0.00046	J	0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:28	1
Chromium	ND		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:28	1
Molybdenum	0.042		0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:28	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:28	1
Selenium	0.015		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:28	1
Thallium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:28	1
Lithium	0.12	^	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:28	1

Client Sample ID: W-5
Date Collected: 09/23/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00059	J	0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:31	1
Arsenic	0.0020	J	0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:31	1
Barium	0.040		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:31	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:31	1
Calcium	400		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:31	1
Cadmium	0.00022	J	0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:31	1
Cobalt	0.0051		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:31	1
Chromium	0.0051		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:31	1
Molybdenum	0.040		0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:31	1
Lead	0.00083	J	0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:31	1
Selenium	0.022		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:31	1
Thallium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:31	1
Lithium	0.40	^	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:31	1

Client Sample ID: W-6
Date Collected: 09/23/20 12:30
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:33	1
Arsenic	0.0060		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:33	1
Barium	0.098		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:33	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:33	1
Calcium	470		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:33	1
Cadmium	0.00059	J	0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:33	1
Cobalt	0.0017		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:33	1
Chromium	0.0046		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:33	1
Molybdenum	0.50		0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:33	1
Lead	0.0030		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:33	1
Selenium	0.024		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:33	1
Thallium	0.00021	J	0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:33	1
Lithium	0.080	^	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:33	1

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

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:36	1
Arsenic	**0.0090**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:36	1
Barium	**0.015**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:36	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:36	1
Calcium	**140**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:36	1
Cadmium	**0.0051**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:36	1
Cobalt	**0.015**		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:36	1
Chromium	**0.0015**	**J**	0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:36	1
Molybdenum	**0.0050**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:36	1
Lead	**0.00075**	**J**	0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:36	1
Selenium	**2.0**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:36	1
Thallium	**0.0045**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:36	1
Lithium	**3.4**	**^**	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:36	1

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0012**	**J**	0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:39	1
Arsenic	**0.0062**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:39	1
Barium	**0.014**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:39	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:39	1
Calcium	**400**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:39	1
Cadmium	**0.0021**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:39	1
Cobalt	**0.028**		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:39	1
Chromium	**0.0010**	**J**	0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:39	1
Molybdenum	**0.0052**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:39	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:39	1
Selenium	**0.67**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:39	1
Thallium	**0.0036**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:39	1
Lithium	**2.7**	**^**	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:39	1

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:41	1
Arsenic	**0.016**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:41	1
Barium	**0.017**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:41	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:41	1
Calcium	**240**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:41	1
Cadmium	**0.0011**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:41	1
Cobalt	**0.019**		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:41	1
Chromium	ND		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:41	1
Molybdenum	**0.0070**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:41	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:41	1
Selenium	**2.5**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:41	1
Thallium	**0.0099**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:41	1
Lithium	**3.9**	**^**	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:41	1

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

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:44	1
Arsenic	**0.0097**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:44	1
Barium	**0.016**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:44	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:44	1
Calcium	**260**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:44	1
Cadmium	**0.019**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:44	1
Cobalt	**0.034**		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:44	1
Chromium	**0.0018**	**J**	0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:44	1
Molybdenum	**0.0049**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:44	1
Lead	**0.00088**	**J**	0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:44	1
Selenium	**0.94**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:44	1
Thallium	**0.0045**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:44	1
Lithium	**1.9**	**^**	0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 15:44	1

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:51	1
Arsenic	**0.019**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:51	1
Barium	**0.018**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:51	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:51	1
Calcium	**540**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:51	1
Cadmium	**0.00020**	**J**	0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:51	1
Cobalt	**0.0016**		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:51	1
Chromium	ND		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:51	1
Molybdenum	**0.014**		0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:51	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:51	1
Selenium	**2.6**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:51	1
Thallium	**0.00023**	**J**	0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:51	1
Lithium	**0.41**		0.016	0.0033	mg/L		09/30/20 14:00	10/02/20 14:52	2

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00091**	**J**	0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:54	1
Arsenic	**0.0030**	**J**	0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:54	1
Barium	**0.033**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:54	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:54	1
Calcium	**240**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:54	1
Cadmium	**0.00052**	**J**	0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:54	1
Cobalt	**0.0033**		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:54	1
Chromium	**0.0017**	**J**	0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:54	1
Molybdenum	**0.0078**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:54	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:54	1
Selenium	**0.19**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:54	1
Thallium	**0.0011**		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:54	1
Lithium	**3.0**		0.080	0.017	mg/L		09/30/20 14:00	10/02/20 14:55	10

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

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:56	1
Arsenic	**0.0082**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:56	1
Barium	**0.0071**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:56	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:56	1
Calcium	**440**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:56	1
Cadmium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:56	1
Cobalt	**0.00059**	**J**	0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:56	1
Chromium	ND		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:56	1
Molybdenum	**0.0098**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:56	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:56	1
Selenium	**1.1**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:56	1
Thallium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:56	1
Lithium	**0.21**		0.0080	0.0017	mg/L		09/30/20 14:00	10/02/20 14:57	1

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 15:59	1
Arsenic	**0.0026**	**J**	0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 15:59	1
Barium	**0.032**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 15:59	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 15:59	1
Calcium	**500**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 15:59	1
Cadmium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:59	1
Cobalt	**0.00052**	**J**	0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 15:59	1
Chromium	ND		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 15:59	1
Molybdenum	**0.043**		0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 15:59	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 15:59	1
Selenium	**0.015**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 15:59	1
Thallium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 15:59	1
Lithium	**0.11**		0.0080	0.0017	mg/L		09/30/20 14:00	10/02/20 15:00	1

Client Sample ID: W-2AEB
Date Collected: 09/24/20 14:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 16:01	1
Arsenic	ND		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 16:01	1
Barium	ND		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 16:01	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 16:01	1
Calcium	ND		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 16:01	1
Cadmium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 16:01	1
Cobalt	ND		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 16:01	1
Chromium	ND		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 16:01	1
Molybdenum	ND		0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 16:01	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 16:01	1
Selenium	ND		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 16:01	1
Thallium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 16:01	1
Lithium	ND		0.0080	0.0017	mg/L		09/30/20 14:00	10/02/20 15:02	1

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

Client Sample ID: MW-6D
Date Collected: 09/24/20 10:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 16:04	1
Arsenic	**0.0077**		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 16:04	1
Barium	**0.0069**		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 16:04	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 16:04	1
Calcium	**430**		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 16:04	1
Cadmium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 16:04	1
Cobalt	**0.00057**	**J**	0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 16:04	1
Chromium	**0.0013**	**J**	0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 16:04	1
Molybdenum	**0.0097**	**J**	0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 16:04	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 16:04	1
Selenium	**1.1**		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 16:04	1
Thallium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 16:04	1
Lithium	**0.22**		0.0080	0.0017	mg/L		09/30/20 14:00	10/02/20 15:05	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00019**	**J**	0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:18	1

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:25	1

Client Sample ID: W-5
Date Collected: 09/23/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:27	1

Client Sample ID: W-6
Date Collected: 09/23/20 12:30
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:29	1

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00019**	**J**	0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:31	1

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00018**	**J**	0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:33	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J**	0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:35	1

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00018**	**J**	0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:37	1

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:39	1

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:41	1

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:43	1

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:50	1

Client Sample ID: W-2AEB
Date Collected: 09/24/20 14:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:52	1

Client Sample ID: MW-6D
Date Collected: 09/24/20 10:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 16:54	1

General Chemistry

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.8**	**HF**	0.1	0.1	SU			09/29/20 20:29	1
Temperature	**20.7**	**HF**	1.0	1.0	Degrees C			09/29/20 20:29	1

General Chemistry (Continued)

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	770		30	10	mg/L			10/05/20 20:45	10
Fluoride	86		5.0	1.7	mg/L			10/09/20 18:27	10
Sulfate	42000		5000	1000	mg/L			10/14/20 16:23	1000
Total Dissolved Solids (TDS)	81000		1000	470	mg/L			09/29/20 18:21	1
Total Suspended Solids	140		4.0	1.1	mg/L			09/28/20 09:56	1

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			09/29/20 20:37	1
Temperature	19.7	HF	1.0	1.0	Degrees C			09/29/20 20:37	1
Chloride	45		3.0	1.0	mg/L			10/05/20 21:17	1
Fluoride	0.59		0.50	0.17	mg/L			10/09/20 18:44	1
Sulfate	2000		1000	210	mg/L			10/14/20 16:39	200
Total Dissolved Solids (TDS)	4700		50	24	mg/L			09/29/20 18:21	1
Total Suspended Solids	6.4		4.0	1.1	mg/L			09/28/20 09:56	1

Client Sample ID: W-5
Date Collected: 09/23/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			09/29/20 20:41	1
Temperature	19.2	HF	1.0	1.0	Degrees C			09/29/20 20:41	1
Chloride	420		15	5.1	mg/L			10/05/20 21:50	5
Fluoride	7.3		0.50	0.17	mg/L			10/09/20 19:00	1
Sulfate	5700		1000	210	mg/L			10/14/20 16:56	200
Total Dissolved Solids (TDS)	11000		100	47	mg/L			09/29/20 18:21	1
Total Suspended Solids	66		4.0	1.1	mg/L			09/28/20 08:11	1

Client Sample ID: W-6
Date Collected: 09/23/20 12:30
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			09/29/20 20:45	1
Temperature	19.6	HF	1.0	1.0	Degrees C			09/29/20 20:45	1
Chloride	120		3.0	1.0	mg/L			10/05/20 22:23	1
Fluoride	2.7		0.50	0.17	mg/L			10/14/20 17:12	1
Sulfate	3100		500	100	mg/L			10/14/20 17:28	100
Total Dissolved Solids (TDS)	6500		50	24	mg/L			09/29/20 18:21	1
Total Suspended Solids	140		4.0	1.1	mg/L			09/28/20 08:11	1

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU			09/29/20 20:49	1
Temperature	20.4	HF	1.0	1.0	Degrees C			09/29/20 20:49	1
Chloride	670		30	10	mg/L			10/06/20 01:07	10
Fluoride	130	J	250	83	mg/L			10/14/20 19:40	500

General Chemistry (Continued)

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	47000		2500	520	mg/L			10/14/20 19:40	500
Total Dissolved Solids (TDS)	75000		1000	470	mg/L			09/29/20 18:21	1
Total Suspended Solids	25		4.0	1.1	mg/L			09/28/20 09:56	1

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			09/29/20 20:53	1
Temperature	19.7	HF	1.0	1.0	Degrees C			09/29/20 20:53	1
Chloride	370		15	5.1	mg/L			10/06/20 01:40	5
Fluoride	38		2.5	0.83	mg/L			10/14/20 20:45	5
Sulfate	19000		2500	520	mg/L			10/14/20 21:02	500
Total Dissolved Solids (TDS)	33000		200	94	mg/L			09/29/20 18:21	1
Total Suspended Solids	6.0		4.0	1.1	mg/L			09/28/20 09:56	1

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			09/29/20 20:56	1
Temperature	19.2	HF	1.0	1.0	Degrees C			09/29/20 20:56	1
Chloride	540		15	5.1	mg/L			10/06/20 02:12	5
Fluoride	66		50	17	mg/L			10/15/20 22:34	100
Sulfate	28000		5000	1000	mg/L			10/14/20 21:35	1000
Total Dissolved Solids (TDS)	50000		1000	470	mg/L			09/29/20 18:21	1
Total Suspended Solids	15		4.0	1.1	mg/L			09/28/20 09:56	1

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU			09/29/20 21:00	1
Temperature	19.4	HF	1.0	1.0	Degrees C			09/29/20 21:00	1
Chloride	310		15	5.1	mg/L			10/06/20 03:18	5
Fluoride	47		2.5	0.83	mg/L			10/14/20 21:51	5
Sulfate	35000		2500	520	mg/L			10/15/20 22:50	500
Total Dissolved Solids (TDS)	59000		1000	470	mg/L			09/29/20 18:21	1
Total Suspended Solids	80		4.0	1.1	mg/L			09/28/20 08:11	1

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			09/29/20 21:03	1
Temperature	19.8	HF	1.0	1.0	Degrees C			09/29/20 21:03	1
Chloride	190		3.0	1.0	mg/L			10/06/20 03:51	1
Fluoride	6.5		0.50	0.17	mg/L			10/14/20 22:57	1
Sulfate	2500		500	100	mg/L			10/14/20 23:13	100
Total Dissolved Solids (TDS)	6700		67	31	mg/L			09/29/20 18:21	1

General Chemistry (Continued)

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**9.6**		4.0	1.1	mg/L			09/28/20 08:11	1

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.3**	**HF**	0.1	0.1	SU			09/29/20 21:18	1
Temperature	**21.7**	**HF**	1.0	1.0	Degrees C			09/29/20 21:18	1
Chloride	**1400**		60	20	mg/L			10/06/20 04:24	20
Fluoride	**37**		5.0	1.7	mg/L			10/14/20 17:45	10
Sulfate	**18000**		500	100	mg/L			10/06/20 04:40	100
Total Dissolved Solids (TDS)	**40000**		1000	470	mg/L			09/29/20 18:21	1
Total Suspended Solids	**49**		4.0	1.1	mg/L			09/28/20 08:11	1

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.5**	**HF**	0.1	0.1	SU			09/29/20 21:22	1
Temperature	**21.2**	**HF**	1.0	1.0	Degrees C			09/29/20 21:22	1
Chloride	**190**		30	10	mg/L			10/06/20 04:57	10
Fluoride	**7.8**		0.50	0.17	mg/L			10/14/20 23:30	1
Sulfate	**3500**		500	100	mg/L			10/06/20 06:35	100
Total Dissolved Solids (TDS)	**7100**		100	47	mg/L			09/29/20 18:21	1
Total Suspended Solids	**8.0**		4.0	1.1	mg/L			09/28/20 09:56	1

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.6**	**HF**	0.1	0.1	SU			09/29/20 21:26	1
Temperature	**20.8**	**HF**	1.0	1.0	Degrees C			09/29/20 21:26	1
Chloride	**45**		3.0	1.0	mg/L			10/06/20 07:41	1
Fluoride	**0.59**		0.50	0.17	mg/L			10/14/20 23:46	1
Sulfate	**2300**		500	100	mg/L			10/15/20 00:02	100
Total Dissolved Solids (TDS)	**4600**		50	24	mg/L			09/29/20 18:21	1
Total Suspended Solids	**9.2**		4.0	1.1	mg/L			09/28/20 09:56	1

Client Sample ID: W-2AEB
Date Collected: 09/24/20 14:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**8.3**	**HF**	0.1	0.1	SU			10/02/20 14:21	1
Temperature	**19.8**	**HF**	1.0	1.0	Degrees C			10/02/20 14:21	1
Chloride	ND		3.0	1.0	mg/L			10/06/20 08:13	1
Fluoride	ND		0.50	0.17	mg/L			10/15/20 00:19	1
Sulfate	ND		5.0	1.0	mg/L			10/15/20 00:19	1
Total Dissolved Solids (TDS)	**21**		10	4.7	mg/L			09/29/20 18:21	1
Total Suspended Solids	ND		4.0	1.1	mg/L			09/28/20 09:56	1

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: MW-6D
Date Collected: 09/24/20 10:00
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			09/29/20 21:38	1
Temperature	21.3	HF	1.0	1.0	Degrees C			09/29/20 21:38	1
Chloride	180		60	20	mg/L			10/06/20 09:03	20
Fluoride	7.6		0.50	0.17	mg/L			10/15/20 02:14	1
Sulfate	3900		250	52	mg/L			10/15/20 02:30	50
Total Dissolved Solids (TDS)	7100		100	47	mg/L			09/29/20 18:21	1
Total Suspended Solids	5.6		4.0	1.1	mg/L			09/28/20 09:56	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-453693/1-A
Matrix: Water
Analysis Batch: 453929

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 453693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		09/30/20 14:00	10/01/20 21:58	1

Lab Sample ID: LCS 240-453693/2-A
Matrix: Water
Analysis Batch: 453929

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 453693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.956		mg/L		96	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-453693/1-A
Matrix: Water
Analysis Batch: 454089

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 453693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		09/30/20 14:00	10/01/20 14:54	1
Arsenic	ND		0.0050	0.00075	mg/L		09/30/20 14:00	10/01/20 14:54	1
Barium	ND		0.0050	0.0022	mg/L		09/30/20 14:00	10/01/20 14:54	1
Beryllium	ND		0.0010	0.00031	mg/L		09/30/20 14:00	10/01/20 14:54	1
Calcium	ND		1.0	0.58	mg/L		09/30/20 14:00	10/01/20 14:54	1
Cadmium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 14:54	1
Cobalt	ND		0.0010	0.00019	mg/L		09/30/20 14:00	10/01/20 14:54	1
Chromium	ND		0.0020	0.00098	mg/L		09/30/20 14:00	10/01/20 14:54	1
Molybdenum	ND		0.010	0.0011	mg/L		09/30/20 14:00	10/01/20 14:54	1
Lead	ND		0.0010	0.00045	mg/L		09/30/20 14:00	10/01/20 14:54	1
Selenium	ND		0.0050	0.00089	mg/L		09/30/20 14:00	10/01/20 14:54	1
Thallium	ND		0.0010	0.00020	mg/L		09/30/20 14:00	10/01/20 14:54	1
Lithium	ND		0.0080	0.0017	mg/L		09/30/20 14:00	10/01/20 14:54	1

Lab Sample ID: LCS 240-453693/3-A
Matrix: Water
Analysis Batch: 454089

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 453693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0906		mg/L		91	80 - 120
Arsenic	1.00	0.949		mg/L		95	80 - 120
Barium	1.00	0.935		mg/L		94	80 - 120
Beryllium	0.500	0.490		mg/L		98	80 - 120
Calcium	25.0	23.8		mg/L		95	80 - 120
Cadmium	0.500	0.463		mg/L		93	80 - 120
Cobalt	0.500	0.489		mg/L		98	80 - 120
Chromium	0.500	0.491		mg/L		98	80 - 120
Molybdenum	0.500	0.468		mg/L		94	80 - 120
Lead	0.500	0.501		mg/L		100	80 - 120
Selenium	1.00	0.946		mg/L		95	80 - 120
Thallium	1.00	0.949		mg/L		95	80 - 120
Lithium	0.500	0.479		mg/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-453694/1-A
Matrix: Water
Analysis Batch: 454063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 453694

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/30/20 12:00	10/01/20 15:58	1

Lab Sample ID: LCS 240-453694/2-A
Matrix: Water
Analysis Batch: 454063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 453694

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00512		mg/L		102	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-510876/4
Matrix: Water
Analysis Batch: 510876

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Lab Sample ID: 280-140876-1 DU
Matrix: Water
Analysis Batch: 510876

Client Sample ID: W-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	6.8	HF	6.7		SU		1	5
Temperature	20.7	HF	19.5		Degrees C		6	10

Lab Sample ID: LCS 280-511220/4
Matrix: Water
Analysis Batch: 511220

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-511361/13
Matrix: Water
Analysis Batch: 511361

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/05/20 18:22	1
Sulfate	ND	^	5.0	1.0	mg/L			10/05/20 18:22	1

Lab Sample ID: LCS 280-511361/11
Matrix: Water
Analysis Batch: 511361

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	91.9		mg/L		92	90 - 110
Sulfate	100	91.2	^	mg/L		91	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-511361/12
Matrix: Water
Analysis Batch: 511361

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	93.7		mg/L		94	90 - 110	2	10
Sulfate			100	91.5	^	mg/L		91	90 - 110	0	10

Lab Sample ID: MRL 280-511361/10
Matrix: Water
Analysis Batch: 511361

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	3.99		mg/L		80	50 - 150		
Sulfate			5.00	4.33	J	mg/L		87	50 - 150		

Lab Sample ID: 280-140876-4 MS
Matrix: Water
Analysis Batch: 511361

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	120		50.0	169		mg/L		97	80 - 120		

Lab Sample ID: 280-140876-4 MSD
Matrix: Water
Analysis Batch: 511361

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	120		50.0	169		mg/L		99	80 - 120	0	20

Lab Sample ID: 280-140876-11 MS
Matrix: Water
Analysis Batch: 511361

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	190		500	707		mg/L		103	80 - 120		

Lab Sample ID: 280-140876-11 MS
Matrix: Water
Analysis Batch: 511361

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	3500		5000	8730		mg/L		105	80 - 120		

Lab Sample ID: 280-140876-11 MSD
Matrix: Water
Analysis Batch: 511361

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	190		500	726		mg/L		106	80 - 120	3	20

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-140876-11 MSD
Matrix: Water
Analysis Batch: 511361

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3500		5000	8520		mg/L		101	80 - 120	2	20

Lab Sample ID: 280-140876-4 DU
Matrix: Water
Analysis Batch: 511361

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	120		114		mg/L		5	15

Lab Sample ID: 280-140876-11 DU
Matrix: Water
Analysis Batch: 511361

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	190		201		mg/L		3	15

Lab Sample ID: 280-140876-11 DU
Matrix: Water
Analysis Batch: 511361

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	3500		3630		mg/L		5	15

Lab Sample ID: MB 280-511967/6
Matrix: Water
Analysis Batch: 511967

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/09/20 14:10	1
Fluoride	ND		0.50	0.17	mg/L			10/09/20 14:10	1
Sulfate	ND		5.0	1.0	mg/L			10/09/20 14:10	1

Lab Sample ID: LCS 280-511967/4
Matrix: Water
Analysis Batch: 511967

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.0		mg/L		95	90 - 110
Fluoride	5.00	4.86		mg/L		97	90 - 110
Sulfate	100	93.0		mg/L		93	90 - 110

Lab Sample ID: LCSD 280-511967/5
Matrix: Water
Analysis Batch: 511967

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.0		mg/L		95	90 - 110	0	10
Fluoride	5.00	4.86		mg/L		97	90 - 110	0	10
Sulfate	100	93.0		mg/L		93	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-511967/3
Matrix: Water
Analysis Batch: 511967

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	3.98		mg/L		80	50 - 150		
Fluoride			0.500	0.487	J	mg/L		97	50 - 150		
Sulfate			5.00	4.23	J	mg/L		85	50 - 150		

Lab Sample ID: MB 280-512544/6
Matrix: Water
Analysis Batch: 512544

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/14/20 15:32	1
Fluoride	ND		0.50	0.17	mg/L			10/14/20 15:32	1
Sulfate	ND		5.0	1.0	mg/L			10/14/20 15:32	1

Lab Sample ID: LCS 280-512544/4
Matrix: Water
Analysis Batch: 512544

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	101		mg/L		101	90 - 110		
Fluoride			5.00	4.80		mg/L		96	90 - 110		
Sulfate			100	99.2		mg/L		99	90 - 110		

Lab Sample ID: LCSD 280-512544/5
Matrix: Water
Analysis Batch: 512544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	101		mg/L		101	90 - 110	0	10
Fluoride			5.00	4.82		mg/L		96	90 - 110	0	10
Sulfate			100	99.3		mg/L		99	90 - 110	0	10

Lab Sample ID: MRL 280-512544/3
Matrix: Water
Analysis Batch: 512544

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.08		mg/L		82	50 - 150		
Fluoride			0.500	0.517		mg/L		103	50 - 150		
Sulfate			5.00	4.35	J	mg/L		87	50 - 150		

Lab Sample ID: 280-140876-5 MS
Matrix: Water
Analysis Batch: 512544

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	130	J	2500	2540		mg/L		96	80 - 120		
Sulfate	47000		25000	76000		mg/L		115	80 - 120		

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-140876-5 MSD
Matrix: Water
Analysis Batch: 512544

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	130	J	2500	2570		mg/L		97	80 - 120	1	20
Sulfate	47000		25000	76400		mg/L		116	80 - 120	0	20

Lab Sample ID: 280-140876-5 DU
Matrix: Water
Analysis Batch: 512544

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	130	J	131	J	mg/L		2	15
Sulfate	47000		47400		mg/L		0	15

Lab Sample ID: MB 280-512794/6
Matrix: Water
Analysis Batch: 512794

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.17	mg/L			10/15/20 22:11	1
Sulfate	ND		5.0	1.0	mg/L			10/15/20 22:11	1

Lab Sample ID: LCS 280-512794/4
Matrix: Water
Analysis Batch: 512794

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	5.00	4.87		mg/L		97	90 - 110
Sulfate	100	96.2		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-512794/5
Matrix: Water
Analysis Batch: 512794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	5.00	4.91		mg/L		98	90 - 110	1	10
Sulfate	100	96.1		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 280-512794/3
Matrix: Water
Analysis Batch: 512794

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.500	0.498	J	mg/L		100	50 - 150
Sulfate	5.00	4.55	J	mg/L		91	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-510833/2
Matrix: Water
Analysis Batch: 510833

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			09/29/20 18:21	1

Lab Sample ID: LCS 280-510833/1
Matrix: Water
Analysis Batch: 510833

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	522		mg/L		104	93 - 110

Lab Sample ID: 280-140876-14 DU
Matrix: Water
Analysis Batch: 510833

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	7100		7010		mg/L		2	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-510561/1
Matrix: Water
Analysis Batch: 510561

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			09/28/20 08:11	1

Lab Sample ID: LCS 280-510561/2
Matrix: Water
Analysis Batch: 510561

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	107		mg/L		107	79 - 114

Lab Sample ID: MB 280-510581/1
Matrix: Water
Analysis Batch: 510581

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			09/28/20 09:56	1

Lab Sample ID: LCS 280-510581/2
Matrix: Water
Analysis Batch: 510581

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	94.8		mg/L		95	79 - 114

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 280-510581/3
Matrix: Water
Analysis Batch: 510581

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids			100	98.4		mg/L		98	79 - 114	4	20

Metals

Prep Batch: 453693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total Recoverable	Water	3005A	
280-140876-2	W-3	Total Recoverable	Water	3005A	
280-140876-3	W-5	Total Recoverable	Water	3005A	
280-140876-4	W-6	Total Recoverable	Water	3005A	
280-140876-5	W-7	Total Recoverable	Water	3005A	
280-140876-6	MW-1	Total Recoverable	Water	3005A	
280-140876-7	MW-2	Total Recoverable	Water	3005A	
280-140876-8	MW-3	Total Recoverable	Water	3005A	
280-140876-9	MW-4	Total Recoverable	Water	3005A	
280-140876-10	MW-5	Total Recoverable	Water	3005A	
280-140876-11	MW-6	Total Recoverable	Water	3005A	
280-140876-12	W-3D	Total Recoverable	Water	3005A	
280-140876-13	W-2AEB	Total Recoverable	Water	3005A	
280-140876-14	MW-6D	Total Recoverable	Water	3005A	
MB 240-453693/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-453693/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-453693/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 453694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	7470A	
280-140876-2	W-3	Total/NA	Water	7470A	
280-140876-3	W-5	Total/NA	Water	7470A	
280-140876-4	W-6	Total/NA	Water	7470A	
280-140876-5	W-7	Total/NA	Water	7470A	
280-140876-6	MW-1	Total/NA	Water	7470A	
280-140876-7	MW-2	Total/NA	Water	7470A	
280-140876-8	MW-3	Total/NA	Water	7470A	
280-140876-9	MW-4	Total/NA	Water	7470A	
280-140876-10	MW-5	Total/NA	Water	7470A	
280-140876-11	MW-6	Total/NA	Water	7470A	
280-140876-12	W-3D	Total/NA	Water	7470A	
280-140876-13	W-2AEB	Total/NA	Water	7470A	
280-140876-14	MW-6D	Total/NA	Water	7470A	
MB 240-453694/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-453694/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 453929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total Recoverable	Water	6010C	453693
280-140876-2	W-3	Total Recoverable	Water	6010C	453693
280-140876-3	W-5	Total Recoverable	Water	6010C	453693
280-140876-4	W-6	Total Recoverable	Water	6010C	453693
280-140876-5	W-7	Total Recoverable	Water	6010C	453693
280-140876-6	MW-1	Total Recoverable	Water	6010C	453693
280-140876-7	MW-2	Total Recoverable	Water	6010C	453693
280-140876-8	MW-3	Total Recoverable	Water	6010C	453693
280-140876-9	MW-4	Total Recoverable	Water	6010C	453693
280-140876-10	MW-5	Total Recoverable	Water	6010C	453693
280-140876-11	MW-6	Total Recoverable	Water	6010C	453693
280-140876-12	W-3D	Total Recoverable	Water	6010C	453693

Metals (Continued)

Analysis Batch: 453929 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-13	W-2AEB	Total Recoverable	Water	6010C	453693
280-140876-14	MW-6D	Total Recoverable	Water	6010C	453693
MB 240-453693/1-A	Method Blank	Total Recoverable	Water	6010C	453693
LCS 240-453693/2-A	Lab Control Sample	Total Recoverable	Water	6010C	453693

Analysis Batch: 454063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	7470A	453694
280-140876-2	W-3	Total/NA	Water	7470A	453694
280-140876-3	W-5	Total/NA	Water	7470A	453694
280-140876-4	W-6	Total/NA	Water	7470A	453694
280-140876-5	W-7	Total/NA	Water	7470A	453694
280-140876-6	MW-1	Total/NA	Water	7470A	453694
280-140876-7	MW-2	Total/NA	Water	7470A	453694
280-140876-8	MW-3	Total/NA	Water	7470A	453694
280-140876-9	MW-4	Total/NA	Water	7470A	453694
280-140876-10	MW-5	Total/NA	Water	7470A	453694
280-140876-11	MW-6	Total/NA	Water	7470A	453694
280-140876-12	W-3D	Total/NA	Water	7470A	453694
280-140876-13	W-2AEB	Total/NA	Water	7470A	453694
280-140876-14	MW-6D	Total/NA	Water	7470A	453694
MB 240-453694/1-A	Method Blank	Total/NA	Water	7470A	453694
LCS 240-453694/2-A	Lab Control Sample	Total/NA	Water	7470A	453694

Analysis Batch: 454089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total Recoverable	Water	6020A	453693
280-140876-2	W-3	Total Recoverable	Water	6020A	453693
280-140876-3	W-5	Total Recoverable	Water	6020A	453693
280-140876-4	W-6	Total Recoverable	Water	6020A	453693
280-140876-5	W-7	Total Recoverable	Water	6020A	453693
280-140876-6	MW-1	Total Recoverable	Water	6020A	453693
280-140876-7	MW-2	Total Recoverable	Water	6020A	453693
280-140876-8	MW-3	Total Recoverable	Water	6020A	453693
280-140876-9	MW-4	Total Recoverable	Water	6020A	453693
280-140876-10	MW-5	Total Recoverable	Water	6020A	453693
280-140876-11	MW-6	Total Recoverable	Water	6020A	453693
280-140876-12	W-3D	Total Recoverable	Water	6020A	453693
280-140876-13	W-2AEB	Total Recoverable	Water	6020A	453693
280-140876-14	MW-6D	Total Recoverable	Water	6020A	453693
MB 240-453693/1-A	Method Blank	Total Recoverable	Water	6020A	453693
LCS 240-453693/3-A	Lab Control Sample	Total Recoverable	Water	6020A	453693

Analysis Batch: 454334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-9	MW-4	Total Recoverable	Water	6020A	453693
280-140876-10	MW-5	Total Recoverable	Water	6020A	453693
280-140876-11	MW-6	Total Recoverable	Water	6020A	453693
280-140876-12	W-3D	Total Recoverable	Water	6020A	453693
280-140876-13	W-2AEB	Total Recoverable	Water	6020A	453693
280-140876-14	MW-6D	Total Recoverable	Water	6020A	453693

General Chemistry

Analysis Batch: 510561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-3	W-5	Total/NA	Water	SM 2540D	
280-140876-4	W-6	Total/NA	Water	SM 2540D	
280-140876-8	MW-3	Total/NA	Water	SM 2540D	
280-140876-9	MW-4	Total/NA	Water	SM 2540D	
280-140876-10	MW-5	Total/NA	Water	SM 2540D	
MB 280-510561/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-510561/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 510581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	SM 2540D	
280-140876-2	W-3	Total/NA	Water	SM 2540D	
280-140876-5	W-7	Total/NA	Water	SM 2540D	
280-140876-6	MW-1	Total/NA	Water	SM 2540D	
280-140876-7	MW-2	Total/NA	Water	SM 2540D	
280-140876-11	MW-6	Total/NA	Water	SM 2540D	
280-140876-12	W-3D	Total/NA	Water	SM 2540D	
280-140876-13	W-2AEB	Total/NA	Water	SM 2540D	
280-140876-14	MW-6D	Total/NA	Water	SM 2540D	
MB 280-510581/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-510581/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-510581/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 510833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	SM 2540C	
280-140876-2	W-3	Total/NA	Water	SM 2540C	
280-140876-3	W-5	Total/NA	Water	SM 2540C	
280-140876-4	W-6	Total/NA	Water	SM 2540C	
280-140876-5	W-7	Total/NA	Water	SM 2540C	
280-140876-6	MW-1	Total/NA	Water	SM 2540C	
280-140876-7	MW-2	Total/NA	Water	SM 2540C	
280-140876-8	MW-3	Total/NA	Water	SM 2540C	
280-140876-9	MW-4	Total/NA	Water	SM 2540C	
280-140876-10	MW-5	Total/NA	Water	SM 2540C	
280-140876-11	MW-6	Total/NA	Water	SM 2540C	
280-140876-12	W-3D	Total/NA	Water	SM 2540C	
280-140876-13	W-2AEB	Total/NA	Water	SM 2540C	
280-140876-14	MW-6D	Total/NA	Water	SM 2540C	
MB 280-510833/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-510833/1	Lab Control Sample	Total/NA	Water	SM 2540C	
280-140876-14 DU	MW-6D	Total/NA	Water	SM 2540C	

Analysis Batch: 510876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	9040B	
280-140876-2	W-3	Total/NA	Water	9040B	
280-140876-3	W-5	Total/NA	Water	9040B	
280-140876-4	W-6	Total/NA	Water	9040B	
280-140876-5	W-7	Total/NA	Water	9040B	
280-140876-6	MW-1	Total/NA	Water	9040B	

General Chemistry (Continued)

Analysis Batch: 510876 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-7	MW-2	Total/NA	Water	9040B	
280-140876-8	MW-3	Total/NA	Water	9040B	
280-140876-9	MW-4	Total/NA	Water	9040B	
280-140876-10	MW-5	Total/NA	Water	9040B	
280-140876-11	MW-6	Total/NA	Water	9040B	
280-140876-12	W-3D	Total/NA	Water	9040B	
280-140876-14	MW-6D	Total/NA	Water	9040B	
LCS 280-510876/4	Lab Control Sample	Total/NA	Water	9040B	
280-140876-1 DU	W-2A	Total/NA	Water	9040B	

Analysis Batch: 511220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-13	W-2AEB	Total/NA	Water	9040B	
LCS 280-511220/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 511361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	9056A	
280-140876-2	W-3	Total/NA	Water	9056A	
280-140876-3	W-5	Total/NA	Water	9056A	
280-140876-4	W-6	Total/NA	Water	9056A	
280-140876-5	W-7	Total/NA	Water	9056A	
280-140876-6	MW-1	Total/NA	Water	9056A	
280-140876-7	MW-2	Total/NA	Water	9056A	
280-140876-8	MW-3	Total/NA	Water	9056A	
280-140876-9	MW-4	Total/NA	Water	9056A	
280-140876-10	MW-5	Total/NA	Water	9056A	
280-140876-10	MW-5	Total/NA	Water	9056A	
280-140876-11	MW-6	Total/NA	Water	9056A	
280-140876-11	MW-6	Total/NA	Water	9056A	
280-140876-12	W-3D	Total/NA	Water	9056A	
280-140876-13	W-2AEB	Total/NA	Water	9056A	
280-140876-14	MW-6D	Total/NA	Water	9056A	
MB 280-511361/13	Method Blank	Total/NA	Water	9056A	
LCS 280-511361/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-511361/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-511361/10	Lab Control Sample	Total/NA	Water	9056A	
280-140876-4 MS	W-6	Total/NA	Water	9056A	
280-140876-4 MSD	W-6	Total/NA	Water	9056A	
280-140876-11 MS	MW-6	Total/NA	Water	9056A	
280-140876-11 MS	MW-6	Total/NA	Water	9056A	
280-140876-11 MSD	MW-6	Total/NA	Water	9056A	
280-140876-11 MSD	MW-6	Total/NA	Water	9056A	
280-140876-4 DU	W-6	Total/NA	Water	9056A	
280-140876-11 DU	MW-6	Total/NA	Water	9056A	
280-140876-11 DU	MW-6	Total/NA	Water	9056A	

Analysis Batch: 511967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	9056A	
280-140876-2	W-3	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 511967 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-3	W-5	Total/NA	Water	9056A	
MB 280-511967/6	Method Blank	Total/NA	Water	9056A	
LCS 280-511967/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-511967/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-511967/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 512544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	9056A	
280-140876-2	W-3	Total/NA	Water	9056A	
280-140876-3	W-5	Total/NA	Water	9056A	
280-140876-4	W-6	Total/NA	Water	9056A	
280-140876-4	W-6	Total/NA	Water	9056A	
280-140876-5	W-7	Total/NA	Water	9056A	
280-140876-6	MW-1	Total/NA	Water	9056A	
280-140876-6	MW-1	Total/NA	Water	9056A	
280-140876-7	MW-2	Total/NA	Water	9056A	
280-140876-8	MW-3	Total/NA	Water	9056A	
280-140876-9	MW-4	Total/NA	Water	9056A	
280-140876-9	MW-4	Total/NA	Water	9056A	
280-140876-10	MW-5	Total/NA	Water	9056A	
280-140876-11	MW-6	Total/NA	Water	9056A	
280-140876-12	W-3D	Total/NA	Water	9056A	
280-140876-12	W-3D	Total/NA	Water	9056A	
280-140876-13	W-2AEB	Total/NA	Water	9056A	
280-140876-14	MW-6D	Total/NA	Water	9056A	
280-140876-14	MW-6D	Total/NA	Water	9056A	
MB 280-512544/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512544/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512544/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512544/3	Lab Control Sample	Total/NA	Water	9056A	
280-140876-5 MS	W-7	Total/NA	Water	9056A	
280-140876-5 MSD	W-7	Total/NA	Water	9056A	
280-140876-5 DU	W-7	Total/NA	Water	9056A	

Analysis Batch: 512794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-7	MW-2	Total/NA	Water	9056A	
280-140876-8	MW-3	Total/NA	Water	9056A	
MB 280-512794/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512794/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512794/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512794/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-140876-1
Date Collected: 09/24/20 13:45
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 22:53	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:26	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:18	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 20:29	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	511361	10/05/20 20:45	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	511967	10/09/20 18:27	BWH	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	512544	10/14/20 16:23	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Client Sample ID: W-3
Lab Sample ID: 280-140876-2
Date Collected: 09/25/20 11:10
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 22:58	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:28	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:25	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 20:37	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511361	10/05/20 21:17	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511967	10/09/20 18:44	BWH	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	512544	10/14/20 16:39	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-140876-3
Date Collected: 09/23/20 12:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:02	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:31	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:27	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 20:41	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-5
Lab Sample ID: 280-140876-3
Date Collected: 09/23/20 12:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	511361	10/05/20 21:50	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511967	10/09/20 19:00	BWH	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	512544	10/14/20 16:56	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510561	09/28/20 08:11	LEB	TAL DEN

Client Sample ID: W-6
Lab Sample ID: 280-140876-4
Date Collected: 09/23/20 12:30
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:07	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:33	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:29	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 20:45	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511361	10/05/20 22:23	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/14/20 17:12	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512544	10/14/20 17:28	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510561	09/28/20 08:11	LEB	TAL DEN

Client Sample ID: W-7
Lab Sample ID: 280-140876-5
Date Collected: 09/25/20 12:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:11	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:36	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:31	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 20:49	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	511361	10/06/20 01:07	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	512544	10/14/20 19:40	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:24	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:39	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:33	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 20:53	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	511361	10/06/20 01:40	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/14/20 20:45	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	512544	10/14/20 21:02	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:29	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:41	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:35	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 20:56	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	511361	10/06/20 02:12	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	512544	10/14/20 21:35	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512794	10/15/20 22:34	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:33	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:44	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:37	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 21:00	CJ	TAL DEN

Client Sample ID: MW-3
Lab Sample ID: 280-140876-8
Date Collected: 09/23/20 11:05
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	511361	10/06/20 03:18	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/14/20 21:51	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	512794	10/15/20 22:50	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510561	09/28/20 08:11	LEB	TAL DEN

Client Sample ID: MW-4
Lab Sample ID: 280-140876-9
Date Collected: 09/23/20 16:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:38	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:51	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			454334	10/02/20 14:52	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:39	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 21:03	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511361	10/06/20 03:51	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/14/20 22:57	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512544	10/14/20 23:13	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	15 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510561	09/28/20 08:11	LEB	TAL DEN

Client Sample ID: MW-5
Lab Sample ID: 280-140876-10
Date Collected: 09/23/20 11:25
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:42	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:54	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			454334	10/02/20 14:55	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:41	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 21:18	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	511361	10/06/20 04:24	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	511361	10/06/20 04:40	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	512544	10/14/20 17:45	CJ	TAL DEN

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510561	09/28/20 08:11	LEB	TAL DEN

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:47	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:56	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454334	10/02/20 14:57	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:43	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 21:22	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	511361	10/06/20 04:57	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	511361	10/06/20 06:35	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/14/20 23:30	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:51	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 15:59	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454334	10/02/20 15:00	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:50	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 21:26	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511361	10/06/20 07:41	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/14/20 23:46	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512544	10/15/20 00:02	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2AEB
Lab Sample ID: 280-140876-13
Date Collected: 09/24/20 14:25
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/01/20 23:56	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 16:01	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454334	10/02/20 15:02	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:52	SLD	TAL CAN
Total/NA	Analysis	9040B		1			511220	10/02/20 14:21	SPG	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	511361	10/06/20 08:13	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/15/20 00:19	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Client Sample ID: MW-6D
Lab Sample ID: 280-140876-14
Date Collected: 09/24/20 10:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			453929	10/02/20 00:00	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454089	10/01/20 16:04	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	453693	09/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			454334	10/02/20 15:05	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	453694	09/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			454063	10/01/20 16:54	SLD	TAL CAN
Total/NA	Analysis	9040B		1			510876	09/29/20 21:38	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	511361	10/06/20 09:03	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/15/20 02:14	CJ	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	512544	10/15/20 02:30	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	510833	09/29/20 18:21	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	510581	09/28/20 09:56	LEB	TAL DEN

Laboratory References:

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

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140876-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

Chain of Custody Record

Denver #280

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Client Information	Sampler: Emily Lower	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 92520-HDR-1
Client Contact: Molly Reeves	Phone: 720 273 3136	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 1 of 2
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): RUSH			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

280-140676 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sludge, Groundwater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226SRa228 combined	Total Number of	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
~~W-1~~				Water									
W-2A	09/24/20	1345	G	Water	N	N	1	1	1	1	2	6	
~~W-2B~~				Water									
W-3	09/25/20	1110	G	Water	N	N	1	1	1	1	2	6	
~~W-4~~				Water									
W-5	09/23/20	1200	G	Water	N	N	1	1	1	1	2	6	
W-6	09/23/20	1230	G	Water	N	N	1	1	1	1	2	6	
W-7	09/25/20	1200	G	Water	N	N	1	1	1	1	2	6	
~~W-8A~~				Water									
~~W-8B~~				Water									
MW-1	09/24/20	1600	G	Water	N	N	1	1	1	1	2	6	

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	09/25/20 1635	HDR	[signature]	9/25/20 1635	Eurofins Den
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.6, 1.2, 2.3, 2.2, 2.2, 1.7, U.5

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

Chain of Custody Record

Denver #280

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Client Information	Sampler: Emily Munoz	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 692520 HDR-1
Client Contact: Molly Reeves	Phone: 720 2333436	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes:
City: Englewood	TAT Requested (days): RUSH			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112	PO #: DEN-016			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl#HW, 7470A Hg	9040B pH, 9056A_280 Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra226, Ra226RSRa228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2	09/25/20	0845	G	Water	N	N	1	1	1	1	2	6	
MW-3	09/23/20	1105	G	Water	N	N	1	1	1	1	2	6	
MW-4	09/23/20	1000	G	Water	N	N	1	1	1	1	2	6	
MW-5	09/23/20	1125	G	Water	N	N	1	1	1	1	2	6	
MW-6	09/24/20	0950	G	Water	N	N	1	1	1	1	2	6	
~~W-5D~~ DUP	09/25/20	1120	G	Water	N	N	1	1	1	1	2	6	
W-2AEB ~~EB~~	09/24/20	1425	G	Water	N	N	1	1	1	1	2	6	
MW-6D	09/24/20	1000	G	Water	N	N	1	1	1	1	2	6	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 09/25/20 1635	Company: HDR	Received by:	Date/Time: 9/25/20 1635	Company: ETA Den
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-540751.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140876-1
Address: 4101 Shuffel Street NW.	Due Date Requested: 10/5/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

S92

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wastewater, Sample, Groundwater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-140876-1)	9/24/20	13:45 Mountain		Water			X	X	X	1	Use Collision Cell
W-3 (280-140876-2)	9/25/20	11:10 Mountain		Water			X	X	X	1	Use Collision Cell
W-5 (280-140876-3)	9/23/20	12:00 Mountain		Water			X	X	X	1	Use Collision Cell
W-6 (280-140876-4)	9/23/20	12:30 Mountain		Water			X	X	X	1	Use Collision Cell
W-7 (280-140876-5)	9/25/20	12:00 Mountain		Water			X	X	X	1	Use Collision Cell
MW-1 (280-140876-6)	9/24/20	16:00 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2 (280-140876-7)	9/25/20	08:45 Mountain		Water			X	X	X	1	Use Collision Cell
MW-3 (280-140876-8)	9/23/20	11:05 Mountain		Water			X	X	X	1	Use Collision Cell
MW-4 (280-140876-9)	9/23/20	16:00 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9/25/2020 1345		[signature]	9-29-20 1124	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-540751.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140876-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 10/5/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A_13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-5 (280-140876-10)	9/23/20	11:25 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-140876-11)	9/24/20	09:50 Mountain		Water			X	X	X	1	Use Collision Cell
W-3D (280-140876-12)	9/25/20	11:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-2AEB (280-140876-13)	9/24/20	14:25 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6D (280-140876-14)	9/24/20	10:00 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9/28/2020 1345		[signature]	9-29-20 1127	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Site Name _____ Cooler unpacked by: Tony Hoyer

Cooler Received on 9-29-20 Opened on 9-29-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. 11.8 °C Corrected Cooler Temp. 12.7 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● = Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page — Samples processed by: _____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140876-1

Login Number: 140876
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-140876-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/3/2020 10:59:13 AM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

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

Glossary

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

Job ID: 280-140876-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140876-2

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

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

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

RECEIPT

The samples were received on 9/25/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 1.0º C, 1.5º C, 2.1º C, 3.1º C, 3.1º C, 4.3º C and 4.4º C.

Please note, the following samples were received with insufficient preservation: MW-1 (280-140876-6), MW-2 (280-140876-7) and MW-5 (280-140876-10). The laboratory added 6mL of nitric preservative, and the samples pH was adjusted to <2 SU.

This report only contains results of the radioactivity analysis. All other results are reported on job 280-140876-1.

RADIUM-226 (GFPC)

Low levels of Radium-226 are present in the method blank associated with QC batch 160-484472. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

Please note, all of the samples except MW-6, were prepared a reduced aliquot due discoloration and cloudy appearance.

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

RADIUM-228

Please note, all of the samples except MW-6, were prepared a reduced aliquot due discoloration and cloudy appearance.

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

RADIUM-226/RADIUM-228 (GFPC)

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

Detection Summary

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A — Lab Sample ID: 280-140876-1

No Detections.

Client Sample ID: W-3 — Lab Sample ID: 280-140876-2

No Detections.

Client Sample ID: W-5 — Lab Sample ID: 280-140876-3

No Detections.

Client Sample ID: W-6 — Lab Sample ID: 280-140876-4

No Detections.

Client Sample ID: W-7 — Lab Sample ID: 280-140876-5

No Detections.

Client Sample ID: MW-1 — Lab Sample ID: 280-140876-6

No Detections.

Client Sample ID: MW-2 — Lab Sample ID: 280-140876-7

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 280-140876-8

No Detections.

Client Sample ID: MW-4 — Lab Sample ID: 280-140876-9

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 280-140876-10

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 280-140876-11

No Detections.

Client Sample ID: W-3D — Lab Sample ID: 280-140876-12

No Detections.

Client Sample ID: W-2AEB — Lab Sample ID: 280-140876-13

No Detections.

Client Sample ID: MW-6D — Lab Sample ID: 280-140876-14

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Protocol References:

None = None

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

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140876-1	W-2A	Water	09/24/20 13:45	09/25/20 16:35	
280-140876-2	W-3	Water	09/25/20 11:10	09/25/20 16:35	
280-140876-3	W-5	Water	09/23/20 12:00	09/25/20 16:35	
280-140876-4	W-6	Water	09/23/20 12:30	09/25/20 16:35	
280-140876-5	W-7	Water	09/25/20 12:00	09/25/20 16:35	
280-140876-6	MW-1	Water	09/24/20 16:00	09/25/20 16:35	
280-140876-7	MW-2	Water	09/25/20 08:45	09/25/20 16:35	
280-140876-8	MW-3	Water	09/23/20 11:05	09/25/20 16:35	
280-140876-9	MW-4	Water	09/23/20 16:00	09/25/20 16:35	
280-140876-10	MW-5	Water	09/23/20 11:25	09/25/20 16:35	
280-140876-11	MW-6	Water	09/24/20 09:50	09/25/20 16:35	
280-140876-12	W-3D	Water	09/25/20 11:20	09/25/20 16:35	
280-140876-13	W-2AEB	Water	09/24/20 14:25	09/25/20 16:35	
280-140876-14	MW-6D	Water	09/24/20 10:00	09/25/20 16:35	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.84		0.731	0.749	1.00	0.727	pCi/L	10/02/20 11:37	10/29/20 10:01	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	50.0		40 - 110	10/02/20 11:37	10/29/20 10:01	1

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.113	U	0.196	0.197	1.00	0.347	pCi/L	10/02/20 11:37	10/29/20 10:01	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	75.4		40 - 110	10/02/20 11:37	10/29/20 10:01	1

Client Sample ID: W-5
Date Collected: 09/23/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.67		0.528	0.549	1.00	0.474	pCi/L	10/02/20 11:37	10/29/20 10:01	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110	10/02/20 11:37	10/29/20 10:01	1

Client Sample ID: W-6
Date Collected: 09/23/20 12:30
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.33		0.473	0.488	1.00	0.444	pCi/L	10/02/20 11:37	10/29/20 10:01	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110	10/02/20 11:37	10/29/20 10:01	1

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.78		0.435	0.463	1.00	0.303	pCi/L	10/02/20 11:37	10/29/20 10:02	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110	10/02/20 11:37	10/29/20 10:02	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.686		0.329	0.335	1.00	0.385	pCi/L	10/02/20 11:37	10/29/20 10:02	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	75.1		40 - 110	10/02/20 11:37	10/29/20 10:02	1

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.21		0.400	0.415	1.00	0.381	pCi/L	10/02/20 11:37	10/29/20 10:02	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.1		40 - 110	10/02/20 11:37	10/29/20 10:02	1

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.56		0.556	0.573	1.00	0.546	pCi/L	10/02/20 11:37	10/29/20 10:03	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	80.2		40 - 110	10/02/20 11:37	10/29/20 10:03	1

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.971		0.326	0.337	1.00	0.285	pCi/L	10/02/20 11:37	10/29/20 12:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.1		40 - 110	10/02/20 11:37	10/29/20 12:18	1

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.146	U	0.184	0.184	1.00	0.303	pCi/L	10/02/20 11:37	10/29/20 12:18	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.5		40 - 110	10/02/20 11:37	10/29/20 12:18	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.343		0.211	0.213	1.00	0.291	pCi/L	10/02/20 11:37	10/29/20 12:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.9*		*40 - 110*	*10/02/20 11:37*	*10/29/20 12:18*	*1*

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.408		0.246	0.249	1.00	0.314	pCi/L	10/02/20 11:37	10/29/20 12:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.7*		*40 - 110*	*10/02/20 11:37*	*10/29/20 12:18*	*1*

Client Sample ID: W-2AEB
Date Collected: 09/24/20 14:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.212	U	0.194	0.195	1.00	0.302	pCi/L	10/02/20 11:37	10/29/20 12:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.6*		*40 - 110*	*10/02/20 11:37*	*10/29/20 12:18*	*1*

Client Sample ID: MW-6D
Date Collected: 09/24/20 10:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.342		0.179	0.181	1.00	0.212	pCi/L	10/02/20 11:37	10/29/20 12:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*40 - 110*	*10/02/20 11:37*	*10/29/20 12:19*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.70	U G	1.13	1.14	1.00	1.75	pCi/L	10/02/20 12:02	10/28/20 12:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*50.0*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:27*	*1*

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

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	72.1		40 - 110	10/02/20 12:02	10/28/20 12:27	1

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.826		0.525	0.531	1.00	0.814	pCi/L	10/02/20 12:02	10/28/20 12:27	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	75.4		40 - 110	10/02/20 12:02	10/28/20 12:27	1
Y Carrier	80.4		40 - 110	10/02/20 12:02	10/28/20 12:27	1

Client Sample ID: W-5
Date Collected: 09/23/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.74		0.782	0.854	1.00	0.886	pCi/L	10/02/20 12:02	10/28/20 12:27	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110	10/02/20 12:02	10/28/20 12:27	1
Y Carrier	80.0		40 - 110	10/02/20 12:02	10/28/20 12:27	1

Client Sample ID: W-6
Date Collected: 09/23/20 12:30
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.33		0.663	0.675	1.00	0.987	pCi/L	10/02/20 12:02	10/28/20 12:27	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110	10/02/20 12:02	10/28/20 12:27	1
Y Carrier	78.1		40 - 110	10/02/20 12:02	10/28/20 12:27	1

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.26		0.513	0.554	1.00	0.599	pCi/L	10/02/20 12:02	10/28/20 12:27	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110	10/02/20 12:02	10/28/20 12:27	1
Y Carrier	81.9		40 - 110	10/02/20 12:02	10/28/20 12:27	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.62		0.542	0.563	1.00	0.720	pCi/L	10/02/20 12:02	10/28/20 12:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*75.1*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:32*	*1*
Y Carrier	*75.9*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:32*	*1*

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.64		0.581	0.630	1.00	0.662	pCi/L	10/02/20 12:02	10/28/20 12:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.1*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:33*	*1*
Y Carrier	*78.5*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:33*	*1*

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.493	U	0.550	0.552	1.00	0.902	pCi/L	10/02/20 12:02	10/28/20 12:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.2*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:33*	*1*
Y Carrier	*80.0*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:33*	*1*

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.707		0.390	0.395	1.00	0.583	pCi/L	10/02/20 12:02	10/28/20 12:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.1*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:33*	*1*
Y Carrier	*82.2*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:33*	*1*

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.115	U	0.354	0.355	1.00	0.619	pCi/L	10/02/20 12:02	10/28/20 12:33	1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.5		40 - 110	10/02/20 12:02	10/28/20 12:33	1
Y Carrier	77.0		40 - 110	10/02/20 12:02	10/28/20 12:33	1

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.305	U	0.263	0.264	1.00	0.419	pCi/L	10/02/20 12:02	10/28/20 12:33	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110	10/02/20 12:02	10/28/20 12:33	1
Y Carrier	79.6		40 - 110	10/02/20 12:02	10/28/20 12:33	1

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.222	U	0.406	0.406	1.00	0.689	pCi/L	10/02/20 12:02	10/28/20 12:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.7		40 - 110	10/02/20 12:02	10/28/20 12:34	1
Y Carrier	79.3		40 - 110	10/02/20 12:02	10/28/20 12:34	1

Client Sample ID: W-2AEB
Date Collected: 09/24/20 14:25
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.387	U	0.270	0.272	1.00	0.417	pCi/L	10/02/20 12:02	10/28/20 12:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110	10/02/20 12:02	10/28/20 12:34	1
Y Carrier	83.7		40 - 110	10/02/20 12:02	10/28/20 12:34	1

Client Sample ID: MW-6D
Date Collected: 09/24/20 10:00
Date Received: 09/25/20 16:35

Lab Sample ID: 280-140876-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.446	U	0.291	0.294	1.00	0.451	pCi/L	10/02/20 12:02	10/28/20 12:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110	10/02/20 12:02	10/28/20 12:34	1
Y Carrier	80.7		40 - 110	10/02/20 12:02	10/28/20 12:34	1

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

Client Sample ID: W-2A
Date Collected: 09/24/20 13:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.54		1.35	1.36	5.00	1.75	pCi/L		11/02/20 22:22	1

Client Sample ID: W-3
Date Collected: 09/25/20 11:10
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.940		0.560	0.566	5.00	0.814	pCi/L		11/02/20 22:22	1

Client Sample ID: W-5
Date Collected: 09/23/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.41		0.944	1.02	5.00	0.886	pCi/L		11/02/20 22:22	1

Client Sample ID: W-6
Date Collected: 09/23/20 12:30
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.66		0.814	0.833	5.00	0.987	pCi/L		11/02/20 22:22	1

Client Sample ID: W-7
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.05		0.673	0.722	5.00	0.599	pCi/L		11/02/20 22:22	1

Client Sample ID: MW-1
Date Collected: 09/24/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.31		0.634	0.655	5.00	0.720	pCi/L		11/02/20 22:22	1

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

Client Sample ID: MW-2
Date Collected: 09/25/20 08:45
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.85		0.705	0.754	5.00	0.662	pCi/L		11/02/20 22:22	1

Client Sample ID: MW-3
Date Collected: 09/23/20 11:05
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.05		0.782	0.796	5.00	0.902	pCi/L		11/02/20 22:22	1

Client Sample ID: MW-4
Date Collected: 09/23/20 16:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.68		0.508	0.519	5.00	0.583	pCi/L		11/02/20 22:22	1

Client Sample ID: MW-5
Date Collected: 09/23/20 11:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.261	U	0.399	0.400	5.00	0.619	pCi/L		11/02/20 22:22	1

Client Sample ID: MW-6
Date Collected: 09/24/20 09:50
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.648		0.337	0.339	5.00	0.419	pCi/L		11/02/20 22:22	1

Client Sample ID: W-3D
Date Collected: 09/25/20 11:20
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.630	U	0.475	0.476	5.00	0.689	pCi/L		11/02/20 22:22	1

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Client Sample ID: W-2AEB
Date Collected: 09/24/20 14:25
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.598		0.332	0.335	5.00	0.417	pCi/L		11/02/20 22:22	1

Client Sample ID: MW-6D
Date Collected: 09/24/20 10:00
Date Received: 09/25/20 16:35
Lab Sample ID: 280-140876-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.788		0.342	0.345	5.00	0.451	pCi/L		11/02/20 22:22	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-484472/23-A
Matrix: Water
Analysis Batch: 487277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484472

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2137		0.155	0.157	1.00	0.210	pCi/L	10/02/20 11:37	10/29/20 12:19	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.7*		*40 - 110*	*10/02/20 11:37*	*10/29/20 12:19*	*1*

Lab Sample ID: LCS 160-484472/1-A
Matrix: Water
Analysis Batch: 487277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484472

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	9.812		1.22	1.00	0.225	pCi/L	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*83.7*		*40 - 110*

Lab Sample ID: LCSD 160-484472/2-A
Matrix: Water
Analysis Batch: 487277

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 484472

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	10.27		1.26	1.00	0.221	pCi/L	91	75 - 125	0.18	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*88.8*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-484475/23-A
Matrix: Water
Analysis Batch: 486990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484475

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.2854	U	0.274	0.275	1.00	0.535	pCi/L	10/02/20 12:02	10/28/20 12:34	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.7*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:34*	*1*
Y Carrier	*79.6*		*40 - 110*	*10/02/20 12:02*	*10/28/20 12:34*	*1*

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

Lab Sample ID: LCS 160-484475/1-A
Matrix: Water
Analysis Batch: 487056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484475

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.70	7.265		0.948	1.00	0.468	pCi/L	94	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*83.7*		*40 - 110*
Y Carrier	*78.9*		*40 - 110*

Lab Sample ID: LCSD 160-484475/2-A
Matrix: Water
Analysis Batch: 487056

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 484475

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			7.70	7.152		0.957	1.00	0.477	pCi/L	93	75 - 125	0.06	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*88.8*		*40 - 110*
Y Carrier	*68.4*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 484472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	PrecSep-21	
280-140876-2	W-3	Total/NA	Water	PrecSep-21	
280-140876-3	W-5	Total/NA	Water	PrecSep-21	
280-140876-4	W-6	Total/NA	Water	PrecSep-21	
280-140876-5	W-7	Total/NA	Water	PrecSep-21	
280-140876-6	MW-1	Total/NA	Water	PrecSep-21	
280-140876-7	MW-2	Total/NA	Water	PrecSep-21	
280-140876-8	MW-3	Total/NA	Water	PrecSep-21	
280-140876-9	MW-4	Total/NA	Water	PrecSep-21	
280-140876-10	MW-5	Total/NA	Water	PrecSep-21	
280-140876-11	MW-6	Total/NA	Water	PrecSep-21	
280-140876-12	W-3D	Total/NA	Water	PrecSep-21	
280-140876-13	W-2AEB	Total/NA	Water	PrecSep-21	
280-140876-14	MW-6D	Total/NA	Water	PrecSep-21	
MB 160-484472/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-484472/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-484472/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 484475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140876-1	W-2A	Total/NA	Water	PrecSep_0	
280-140876-2	W-3	Total/NA	Water	PrecSep_0	
280-140876-3	W-5	Total/NA	Water	PrecSep_0	
280-140876-4	W-6	Total/NA	Water	PrecSep_0	
280-140876-5	W-7	Total/NA	Water	PrecSep_0	
280-140876-6	MW-1	Total/NA	Water	PrecSep_0	
280-140876-7	MW-2	Total/NA	Water	PrecSep_0	
280-140876-8	MW-3	Total/NA	Water	PrecSep_0	
280-140876-9	MW-4	Total/NA	Water	PrecSep_0	
280-140876-10	MW-5	Total/NA	Water	PrecSep_0	
280-140876-11	MW-6	Total/NA	Water	PrecSep_0	
280-140876-12	W-3D	Total/NA	Water	PrecSep_0	
280-140876-13	W-2AEB	Total/NA	Water	PrecSep_0	
280-140876-14	MW-6D	Total/NA	Water	PrecSep_0	
MB 160-484475/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-484475/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-484475/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-140876-1
Date Collected: 09/24/20 13:45
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.24 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:01	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.24 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			487056	10/28/20 12:27	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: W-3
Lab Sample ID: 280-140876-2
Date Collected: 09/25/20 11:10
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.20 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:01	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.20 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			487056	10/28/20 12:27	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: W-5
Lab Sample ID: 280-140876-3
Date Collected: 09/23/20 12:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.81 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:01	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.81 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			487056	10/28/20 12:27	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: W-6
Lab Sample ID: 280-140876-4
Date Collected: 09/23/20 12:30
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.30 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:01	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.30 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			487056	10/28/20 12:27	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-7
Lab Sample ID: 280-140876-5
Date Collected: 09/25/20 12:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.59 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:02	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.59 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			487056	10/28/20 12:27	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: MW-1
Lab Sample ID: 280-140876-6
Date Collected: 09/24/20 16:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.83 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:02	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.83 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:32	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: MW-2
Lab Sample ID: 280-140876-7
Date Collected: 09/25/20 08:45
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.34 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:02	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.34 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:33	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: MW-3
Lab Sample ID: 280-140876-8
Date Collected: 09/23/20 11:05
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.92 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 10:03	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.92 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:33	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-4
Lab Sample ID: 280-140876-9
Date Collected: 09/23/20 16:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.36 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 12:18	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.36 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:33	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: MW-5
Lab Sample ID: 280-140876-10
Date Collected: 09/23/20 11:25
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.34 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 12:18	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.34 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:33	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: MW-6
Lab Sample ID: 280-140876-11
Date Collected: 09/24/20 09:50
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.64 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 12:18	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.64 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:33	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: W-3D
Lab Sample ID: 280-140876-12
Date Collected: 09/25/20 11:20
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.44 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 12:18	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.44 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:34	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2AEB
Lab Sample ID: 280-140876-13
Date Collected: 09/24/20 14:25
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.00 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 12:18	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.00 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:34	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Client Sample ID: MW-6D
Lab Sample ID: 280-140876-14
Date Collected: 09/24/20 10:00
Matrix: Water
Date Received: 09/25/20 16:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.84 mL	1.0 g	484472	10/02/20 11:37	AVB	TAL SL
Total/NA	Analysis	9315		1			487277	10/29/20 12:19	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.84 mL	1.0 g	484475	10/02/20 12:02	AVB	TAL SL
Total/NA	Analysis	9320		1			486990	10/28/20 12:34	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			487756	11/02/20 22:22	SCB	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

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

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

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: Emily Miller	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 92520 HDR-1
Client Contact: Molly Reeves	Phone: 720 273 3136	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 1 of 2
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): RUSH			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

280-140676 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226SRa228 combined	Total Number of	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
~~W-1~~				Water									
W-2A	09/24/20	1345	G	Water	N	N	1	1	1	1	2	6	
~~W-2B~~				Water									
W-3	09/25/20	1110	G	Water	N	N	1	1	1	1	2	6	
~~W-4~~				Water									
W-5	09/23/20	1200	G	Water	N	N	1	1	1	1	2	6	
W-6	09/23/20	1230	G	Water	N	N	1	1	1	1	2	6	
W-7	09/25/20	1200	G	Water	N	N	1	1	1	1	2	6	
~~W-8A~~				Water									
~~W-8B~~				Water									
MW-1	09/24/20	1600	G	Water	N	N	1	1	1	1	2	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 09/25/20 1635	Company: HDR	Received by:	Date/Time: 9/25/20 1635	Company: Eurofins Den
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.6, 1.2, 2.3, 2.2, 2.2, 1.7, U.S

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: Emily Munoz	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 6925-20 HDR-1
Client Contact: Molly Reeves	Phone: 720 2333436	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes:
City: Englewood	TAT Requested (days): RUSH			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112	PO #: DEN-016			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl#HW, 7470A Hg	9040B pH, 9056A_280 Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra226, Ra226RSRa228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2	09/25/20	0845	G	Water	N	N	1	1	1	1	2	6	
MW-3	09/23/20	1105	G	Water	N	N	1	1	1	1	2	6	
MW-4	09/23/20	1000	G	Water	N	N	1	1	1	1	2	6	
MW-5	09/23/20	1125	G	Water	N	N	1	1	1	1	2	6	
MW-6	09/24/20	0950	G	Water	N	N	1	1	1	1	2	6	
W-5D ~~DUP~~	09/25/20	1120	G	Water	N	N	1	1	1	1	2	6	
W-2AEB ~~EB~~	09/24/20	1425	G	Water	N	N	1	1	1	1	2	6	
MW-6D	09/24/20	1000	G	Water	N	N	1	1	1	1	2	6	

Page 26 of 31

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify):

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	09/25/20 1635	HDR		9/25/20 1635	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

11/3/2020

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-540752.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140876-2
Address: 13715 Rider Trail North,	Due Date Requested: 10/26/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCl, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X				X	
W-2A (280-140876-1)	9/24/20	13:45 Mountain		Water			X	X	X	2	
W-3 (280-140876-2)	9/25/20	11:10 Mountain		Water			X	X	X	2	
W-5 (280-140876-3)	9/23/20	12:00 Mountain		Water			X	X	X	2	
W-6 (280-140876-4)	9/23/20	12:30 Mountain		Water			X	X	X	2	
W-7 (280-140876-5)	9/25/20	12:00 Mountain		Water			X	X	X	2	
MW-1 (280-140876-6)	9/24/20	16:00 Mountain		Water			X	X	X	2	
MW-2 (280-140876-7)	9/25/20	08:45 Mountain		Water			X	X	X	2	
MW-3 (280-140876-8)	9/23/20	11:05 Mountain		Water			X	X	X	2	
MW-4 (280-140876-9)	9/23/20	16:00 Mountain		Water			X	X	X	2	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: FED EX	Date/Time: 9/25/2020 1305	Company	Received by: FED EX
Relinquished by:	Date/Time:	Company	Received by: Micha Koninginger
Relinquished by:	Date/Time:	Company	Received by:

Date/Time:	Company
Date/Time: SEP 29 2020 09:30	Company EDA SR
Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-540752.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-140876-2
Address: 13715 Rider Trail North,	Due Date Requested: 10/26/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-5 (280-140876-10)	9/23/20	11:25 Mountain		Water			X	X	X	2	
MW-6 (280-140876-11)	9/24/20	09:50 Mountain		Water			X	X	X	2	
W-3D (280-140876-12)	9/25/20	11:20 Mountain		Water			X	X	X	2	
W-2AEB (280-140876-13)	9/24/20	14:25 Mountain		Water			X	X	X	2	
MW-6D (280-140876-14)	9/24/20	10:00 Mountain		Water			X	X	X	2	

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

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 9/28/2020 1705	Company	Received by: FED EX
Relinquished by: FED EX	Date/Time:	Company	Received by: Melissa Vanvleet
Relinquished by:	Date/Time:	Company	Received by:

Date/Time:	Company
Date/Time: SEP 29 2020 0930	Company: EDA SR
Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140876-2

Login Number: 140876
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140876-2

Login Number: 140876
List Number: 3
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis
List Creation: 09/30/20 03:01 PM

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

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-140876-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
280-140876-1	W-2A	50.0
280-140876-2	W-3	75.4
280-140876-3	W-5	89.9
280-140876-4	W-6	91.4
280-140876-5	W-7	85.5
280-140876-6	MW-1	75.1
280-140876-7	MW-2	78.1
280-140876-8	MW-3	80.2
280-140876-9	MW-4	86.1
280-140876-10	MW-5	82.5
280-140876-11	MW-6	87.9
280-140876-12	W-3D	81.7
280-140876-13	W-2AEB	84.6
280-140876-14	MW-6D	92.0
LCS 160-484472/1-A	Lab Control Sample	83.7
LCSD 160-484472/2-A	Lab Control Sample Dup	88.8
MB 160-484472/23-A	Method Blank	81.7

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
280-140876-1	W-2A	50.0	72.1
280-140876-2	W-3	75.4	80.4
280-140876-3	W-5	89.9	80.0
280-140876-4	W-6	91.4	78.1
280-140876-5	W-7	85.5	81.9
280-140876-6	MW-1	75.1	75.9
280-140876-7	MW-2	78.1	78.5
280-140876-8	MW-3	80.2	80.0
280-140876-9	MW-4	86.1	82.2
280-140876-10	MW-5	82.5	77.0
280-140876-11	MW-6	87.9	79.6
280-140876-12	W-3D	81.7	79.3
280-140876-13	W-2AEB	84.6	83.7
280-140876-14	MW-6D	92.0	80.7
LCS 160-484475/1-A	Lab Control Sample	83.7	78.9
LCSD 160-484475/2-A	Lab Control Sample Dup	88.8	68.4
MB 160-484475/23-A	Method Blank	81.7	79.6

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 280-141101-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
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Authorized for release by:
10/27/2020 11:28:04 AM

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141101-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-141101-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141101-1

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

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

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

RECEIPT
The samples were received on 10/02/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 13.1 C, which is above the EPA's recommended temperature of 6C. However, the temperature is considered acceptable as it was received the same day as collection and didn't have enough time to cool to the recommended temperature

TOTAL RECOVERABLE METALS- 6010C/6020A
Samples W-1 (280-141101-1) and W-4 (280-141101-2) required dilution prior to analysis for Method 6020A. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) associated with batch 240-455175 recovered above the upper control limit for beryllium. The samples associated with this CCV were below the requested reporting limit for the affected analytes; therefore, corrective action is deemed unnecessary.

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

TOTAL MERCURY
Sample W-4 (280-141101-2) required dilution prior to analysis for Method 7470A due to limited volume received. The reporting limits have been adjusted accordingly.

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

GENERAL CHEMISTRY - Various Methods
Samples W-1 (280-141101-1) and W-4 (280-141101-2) required dilution prior to analysis for Method 9056A. The reporting limits have been adjusted accordingly.

The Total Suspended Solids sample duplicate analysis data performed on sample W-1 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Please note, the Fluoride result for sample W-4 was re-analyzed and confirmed the original result.

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

Detection Summary

Client: HDR Inc
Job ID: 280-141101-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-141101-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00071	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.010		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.030		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00058	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0017		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0034		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.027		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0018		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.95		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00087	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.2		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	780		30	10	mg/L	10		9056A	Total/NA
Fluoride	18		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	12000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	9000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	54		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-4
Lab Sample ID: 280-141101-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.5		0.20	0.046	mg/L	1		6010C	Total Recoverable
Arsenic	0.0023	J	0.010	0.0015	mg/L	1		6020A	Total Recoverable
Barium	0.040		0.010	0.0045	mg/L	1		6020A	Total Recoverable
Calcium	390		2.0	1.2	mg/L	1		6020A	Total Recoverable
Cobalt	0.0090		0.0020	0.00038	mg/L	1		6020A	Total Recoverable
Chromium	0.0052		0.0040	0.0020	mg/L	1		6020A	Total Recoverable
Molybdenum	0.10		0.020	0.0022	mg/L	1		6020A	Total Recoverable
Selenium	0.0031	J	0.010	0.0018	mg/L	1		6020A	Total Recoverable
Thallium	0.00047	J	0.0020	0.00040	mg/L	1		6020A	Total Recoverable
Lithium	1.6		0.16	0.033	mg/L	10		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-4 (Continued)
Lab Sample ID: 280-141101-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	690	J	1500	510	mg/L	500		9056A	Total/NA
Fluoride	24		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	31000		2500	520	mg/L	500		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-141101-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-141101-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141101-1	W-1	Water	10/02/20 10:20	10/02/20 15:22	
280-141101-2	W-4	Water	10/02/20 11:15	10/02/20 15:22	

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

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.3**		0.10	0.023	mg/L		10/07/20 15:00	10/08/20 12:34	1

Client Sample ID: W-4
Date Collected: 10/02/20 11:15
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.5**		0.20	0.046	mg/L		10/07/20 15:00	10/08/20 12:38	1

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

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00071**	**J**	0.0020	0.00057	mg/L		10/07/20 15:00	10/08/20 12:50	1
Arsenic	**0.010**		0.0050	0.00075	mg/L		10/07/20 15:00	10/08/20 12:50	1
Barium	**0.030**		0.0050	0.0022	mg/L		10/07/20 15:00	10/08/20 12:50	1
Beryllium	ND		0.0010	0.00031	mg/L		10/07/20 15:00	10/08/20 12:50	1
Calcium	**390**		1.0	0.58	mg/L		10/07/20 15:00	10/08/20 12:50	1
Cadmium	**0.00058**	**J**	0.0010	0.00020	mg/L		10/07/20 15:00	10/08/20 12:50	1
Cobalt	**0.0017**		0.0010	0.00019	mg/L		10/07/20 15:00	10/08/20 12:50	1
Chromium	**0.0034**		0.0020	0.00098	mg/L		10/07/20 15:00	10/08/20 12:50	1
Molybdenum	**0.027**		0.010	0.0011	mg/L		10/07/20 15:00	10/08/20 12:50	1
Lead	**0.0018**		0.0010	0.00045	mg/L		10/07/20 15:00	10/08/20 12:50	1
Selenium	**0.95**		0.0050	0.00089	mg/L		10/07/20 15:00	10/08/20 12:50	1
Thallium	**0.00087**	**J**	0.0010	0.00020	mg/L		10/07/20 15:00	10/08/20 12:50	1
Lithium	**2.2**		0.080	0.017	mg/L		10/07/20 15:00	10/09/20 11:08	10

Client Sample ID: W-4
Date Collected: 10/02/20 11:15
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		10/07/20 15:00	10/08/20 12:58	1
Arsenic	**0.0023**	**J**	0.010	0.0015	mg/L		10/07/20 15:00	10/08/20 12:58	1
Barium	**0.040**		0.010	0.0045	mg/L		10/07/20 15:00	10/08/20 12:58	1
Beryllium	ND	^	0.0020	0.00061	mg/L		10/07/20 15:00	10/08/20 12:58	1
Calcium	**390**		2.0	1.2	mg/L		10/07/20 15:00	10/08/20 12:58	1
Cadmium	ND		0.0020	0.00039	mg/L		10/07/20 15:00	10/08/20 12:58	1
Cobalt	**0.0090**		0.0020	0.00038	mg/L		10/07/20 15:00	10/08/20 12:58	1
Chromium	**0.0052**		0.0040	0.0020	mg/L		10/07/20 15:00	10/08/20 12:58	1
Molybdenum	**0.10**		0.020	0.0022	mg/L		10/07/20 15:00	10/08/20 12:58	1
Lead	ND		0.0020	0.00090	mg/L		10/07/20 15:00	10/08/20 12:58	1
Selenium	**0.0031**	**J**	0.010	0.0018	mg/L		10/07/20 15:00	10/08/20 12:58	1
Thallium	**0.00047**	**J**	0.0020	0.00040	mg/L		10/07/20 15:00	10/08/20 12:58	1
Lithium	**1.6**		0.16	0.033	mg/L		10/07/20 15:00	10/09/20 11:10	10

Client: HDR Inc
Job ID: 280-141101-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/07/20 14:00	10/08/20 11:44	1

Client Sample ID: W-4
Date Collected: 10/02/20 11:15
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00040	0.00026	mg/L		10/07/20 14:00	10/08/20 11:46	1

General Chemistry

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			10/06/20 18:48	1
Temperature	22.1	HF	1.0	1.0	Degrees C			10/06/20 18:48	1
Chloride	780		30	10	mg/L			10/15/20 05:31	10
Fluoride	18		5.0	1.7	mg/L			10/15/20 05:31	10
Sulfate	12000		2500	520	mg/L			10/15/20 08:52	500
Total Dissolved Solids (TDS)	9000		1000	470	mg/L			10/07/20 16:30	1
Total Suspended Solids	54		4.0	1.1	mg/L			10/06/20 11:05	1

Client Sample ID: W-4
Date Collected: 10/02/20 11:15
Date Received: 10/02/20 15:22
Lab Sample ID: 280-141101-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			10/06/20 18:51	1
Temperature	22.4	HF	1.0	1.0	Degrees C			10/06/20 18:51	1
Chloride	690	J	1500	510	mg/L			10/15/20 09:08	500
Fluoride	24		2.5	0.83	mg/L			10/13/20 22:16	5
Sulfate	31000		2500	520	mg/L			10/15/20 09:08	500

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-454827/1-A
Matrix: Water
Analysis Batch: 455073

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 454827

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		10/07/20 15:00	10/08/20 11:09	1

Lab Sample ID: LCS 240-454827/2-A
Matrix: Water
Analysis Batch: 455073

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 454827

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.10		mg/L		110	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-454827/1-A
Matrix: Water
Analysis Batch: 455175

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 454827

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/07/20 15:00	10/08/20 12:31	1
Arsenic	ND		0.0050	0.00075	mg/L		10/07/20 15:00	10/08/20 12:31	1
Barium	ND		0.0050	0.0022	mg/L		10/07/20 15:00	10/08/20 12:31	1
Beryllium	ND		0.0010	0.00031	mg/L		10/07/20 15:00	10/08/20 12:31	1
Calcium	ND		1.0	0.58	mg/L		10/07/20 15:00	10/08/20 12:31	1
Cadmium	ND		0.0010	0.00020	mg/L		10/07/20 15:00	10/08/20 12:31	1
Cobalt	ND		0.0010	0.00019	mg/L		10/07/20 15:00	10/08/20 12:31	1
Chromium	ND		0.0020	0.00098	mg/L		10/07/20 15:00	10/08/20 12:31	1
Molybdenum	ND		0.010	0.0011	mg/L		10/07/20 15:00	10/08/20 12:31	1
Lead	ND		0.0010	0.00045	mg/L		10/07/20 15:00	10/08/20 12:31	1
Selenium	ND		0.0050	0.00089	mg/L		10/07/20 15:00	10/08/20 12:31	1
Thallium	ND		0.0010	0.00020	mg/L		10/07/20 15:00	10/08/20 12:31	1
Lithium	ND	^	0.0080	0.0017	mg/L		10/07/20 15:00	10/08/20 12:31	1

Lab Sample ID: LCS 240-454827/3-A
Matrix: Water
Analysis Batch: 455175

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 454827

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.102		mg/L		102	80 - 120
Arsenic	1.00	0.998		mg/L		100	80 - 120
Barium	1.00	1.02		mg/L		102	80 - 120
Beryllium	0.500	0.500		mg/L		100	80 - 120
Calcium	25.0	25.3		mg/L		101	80 - 120
Cadmium	0.500	0.502		mg/L		100	80 - 120
Cobalt	0.500	0.520		mg/L		104	80 - 120
Chromium	0.500	0.515		mg/L		103	80 - 120
Molybdenum	0.500	0.494		mg/L		99	80 - 120
Lead	0.500	0.526		mg/L		105	80 - 120
Selenium	1.00	0.964		mg/L		96	80 - 120
Thallium	1.00	1.00		mg/L		100	80 - 120
Lithium	0.500	0.514	^	mg/L		103	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-454828/1-A
Matrix: Water
Analysis Batch: 455216

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 454828

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/07/20 14:00	10/08/20 11:07	1

Lab Sample ID: LCS 240-454828/2-A
Matrix: Water
Analysis Batch: 455216

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 454828

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00439		mg/L		88	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-511620/4
Matrix: Water
Analysis Batch: 511620

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-512367/6
Matrix: Water
Analysis Batch: 512367

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/13/20 13:38	1
Fluoride	ND		0.50	0.17	mg/L			10/13/20 13:38	1
Sulfate	ND		5.0	1.0	mg/L			10/13/20 13:38	1

Lab Sample ID: LCS 280-512367/4
Matrix: Water
Analysis Batch: 512367

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.8		mg/L		96	90 - 110
Fluoride	5.00	4.79		mg/L		96	90 - 110
Sulfate	100	102		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-512367/5
Matrix: Water
Analysis Batch: 512367

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.7		mg/L		96	90 - 110	0	10
Fluoride	5.00	4.79		mg/L		96	90 - 110	0	10
Sulfate	100	96.7		mg/L		97	90 - 110	6	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-512367/3
Matrix: Water
Analysis Batch: 512367

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.04		mg/L		81	50 - 150
Fluoride	0.500	0.491	J	mg/L		98	50 - 150
Sulfate	5.00	4.28	J	mg/L		86	50 - 150

Lab Sample ID: MB 280-512544/6
Matrix: Water
Analysis Batch: 512544

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/14/20 15:32	1
Fluoride	ND		0.50	0.17	mg/L			10/14/20 15:32	1
Sulfate	ND		5.0	1.0	mg/L			10/14/20 15:32	1

Lab Sample ID: LCS 280-512544/4
Matrix: Water
Analysis Batch: 512544

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	101		mg/L		101	90 - 110
Fluoride	5.00	4.80		mg/L		96	90 - 110
Sulfate	100	99.2		mg/L		99	90 - 110

Lab Sample ID: LCSD 280-512544/5
Matrix: Water
Analysis Batch: 512544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	101		mg/L		101	90 - 110	0	10
Fluoride	5.00	4.82		mg/L		96	90 - 110	0	10
Sulfate	100	99.3		mg/L		99	90 - 110	0	10

Lab Sample ID: MRL 280-512544/3
Matrix: Water
Analysis Batch: 512544

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.08		mg/L		82	50 - 150
Fluoride	0.500	0.517		mg/L		103	50 - 150
Sulfate	5.00	4.35	J	mg/L		87	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-511704/1
Matrix: Water
Analysis Batch: 511704

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/07/20 16:30	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 280-511704/2
Matrix: Water
Analysis Batch: 511704

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			501	485		mg/L		97	93 - 110		

Lab Sample ID: 280-141101-1 DU
Matrix: Water
Analysis Batch: 511704

Client Sample ID: W-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids (TDS)	9000			8700		mg/L				3	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-511497/1
Matrix: Water
Analysis Batch: 511497

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			10/06/20 11:05	1

Lab Sample ID: LCS 280-511497/2
Matrix: Water
Analysis Batch: 511497

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	96.8		mg/L		97	79 - 114		

Lab Sample ID: 280-141101-1 DU
Matrix: Water
Analysis Batch: 511497

Client Sample ID: W-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	54			69.6	F3	mg/L				25	10

Metals

Prep Batch: 454827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total Recoverable	Water	3005A	
280-141101-2	W-4	Total Recoverable	Water	3005A	
MB 240-454827/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-454827/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-454827/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 454828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	7470A	
280-141101-2	W-4	Total/NA	Water	7470A	
MB 240-454828/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-454828/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 455073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total Recoverable	Water	6010C	454827
280-141101-2	W-4	Total Recoverable	Water	6010C	454827
MB 240-454827/1-A	Method Blank	Total Recoverable	Water	6010C	454827
LCS 240-454827/2-A	Lab Control Sample	Total Recoverable	Water	6010C	454827

Analysis Batch: 455175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total Recoverable	Water	6020A	454827
280-141101-2	W-4	Total Recoverable	Water	6020A	454827
MB 240-454827/1-A	Method Blank	Total Recoverable	Water	6020A	454827
LCS 240-454827/3-A	Lab Control Sample	Total Recoverable	Water	6020A	454827

Analysis Batch: 455216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	7470A	454828
280-141101-2	W-4	Total/NA	Water	7470A	454828
MB 240-454828/1-A	Method Blank	Total/NA	Water	7470A	454828
LCS 240-454828/2-A	Lab Control Sample	Total/NA	Water	7470A	454828

Analysis Batch: 455249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total Recoverable	Water	6020A	454827
280-141101-2	W-4	Total Recoverable	Water	6020A	454827

General Chemistry

Analysis Batch: 511497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	SM 2540D	
MB 280-511497/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-511497/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-141101-1 DU	W-1	Total/NA	Water	SM 2540D	

Analysis Batch: 511620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	9040B	

General Chemistry (Continued)

Analysis Batch: 511620 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-2	W-4	Total/NA	Water	9040B	
LCS 280-511620/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 511704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	SM 2540C	
MB 280-511704/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-511704/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-141101-1 DU	W-1	Total/NA	Water	SM 2540C	

Analysis Batch: 512367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-2	W-4	Total/NA	Water	9056A	
MB 280-512367/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512367/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512367/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512367/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 512544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	9056A	
280-141101-1	W-1	Total/NA	Water	9056A	
280-141101-2	W-4	Total/NA	Water	9056A	
MB 280-512544/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512544/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512544/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512544/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-141101-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-141101-1
Date Collected: 10/02/20 10:20
Matrix: Water
Date Received: 10/02/20 15:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	454827	10/07/20 15:00	SLD	TAL CAN
Total Recoverable	Analysis	6010C		1			455073	10/08/20 12:34	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	454827	10/07/20 15:00	SLD	TAL CAN
Total Recoverable	Analysis	6020A		1			455175	10/08/20 12:50	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	454827	10/07/20 15:00	SLD	TAL CAN
Total Recoverable	Analysis	6020A		10			455249	10/09/20 11:08	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	454828	10/07/20 14:00	SLD	TAL CAN
Total/NA	Analysis	7470A		1			455216	10/08/20 11:44	SLD	TAL CAN
Total/NA	Analysis	9040B		1			511620	10/06/20 18:48	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	512544	10/15/20 05:31	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	512544	10/15/20 08:52	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	511704	10/07/20 16:30	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	511497	10/06/20 11:05	LEB	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-141101-2
Date Collected: 10/02/20 11:15
Matrix: Water
Date Received: 10/02/20 15:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	50 mL	454827	10/07/20 15:00	SLD	TAL CAN
Total Recoverable	Analysis	6010C		1			455073	10/08/20 12:38	RKT	TAL CAN
Total Recoverable	Prep	3005A			25 mL	50 mL	454827	10/07/20 15:00	SLD	TAL CAN
Total Recoverable	Analysis	6020A		1			455175	10/08/20 12:58	DSH	TAL CAN
Total Recoverable	Prep	3005A			25 mL	50 mL	454827	10/07/20 15:00	SLD	TAL CAN
Total Recoverable	Analysis	6020A		10			455249	10/09/20 11:10	DSH	TAL CAN
Total/NA	Prep	7470A			25 mL	50 mL	454828	10/07/20 14:00	SLD	TAL CAN
Total/NA	Analysis	7470A		1			455216	10/08/20 11:46	SLD	TAL CAN
Total/NA	Analysis	9040B		1			511620	10/06/20 18:51	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512367	10/13/20 22:16	BWH	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	512544	10/15/20 09:08	CJ	TAL DEN

Laboratory References:

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

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141101-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAm
THE LEADER IN ENVIRO

280-141101 Chain of Custody

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
HDR, INC.	MAT ROHE	10/02/20	194117

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page / of
9781 S MERIDIAN BLVD STE 400			Page 1 of 1

City	State	Zip Code	Site Contact	Lab Contact
ENGLEWOOD	CO	80112	JACOB MOORMAN	DARLENE BANDY

Project Name and Location (State)	Carrier/Waybill Number
XCEL - COMANCHE	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Solid	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Metals, Appendix IV	Anions/pH	Ra 226/228	TDS	TSS	Special Instructions/ Conditions of Receipt
IW-1	10/2/20	1020		X			3		3				X	X	X	X	X	
IW-4	10/2/20	1115		X			1		1				X	X				

CCR List
Contact Molly Reeves for priority on low volume samples

10/2

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other RUSH

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: J. Moorman	10/2/20	1522	1. Received By: Keith Hall	10/6/20	1522
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments

13.4 IcH11-03 RP 10/2/20

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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

12/21

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-541687.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141101-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 10/9/2020	Analysis Requested		Preservation Codes:
City: North Canton	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			549
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Organic/Oil, BT=Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X			X	
W-1 (280-141101-1)	10/2/20	10:20 Mountain		Water			X	X	1	Use Collision Cell
W-4 (280-141101-2)	10/2/20	11:15 Mountain		Water			X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	Return To Client; Disposal By Lab; Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11-05-20 1415	TEKTA	[signature]	10-6-20 1000	TEKTA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

10/27/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: Mathsmon

Cooler Received on 10-6-20 Opened on 10-6-20

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 7A Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp 2.1 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N) # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? (Yes) No
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? ● Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
17. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141101-1

Login Number: 141101
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-141101-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/23/2020 3:08:25 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

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

Glossary

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

Job ID: 280-141101-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141101-2

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

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

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

RECEIPT
The samples were received on 10/02/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 13.1 C, which is above the EPA's recommended temperature of 6C.

RADIUM-226 (GFPC)
Sample W-1 was prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance:

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

RADIUM-228
Sample W-1 was prepared at a reduced aliquot due to yellow discoloration and a cloudy appearance:

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

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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

Detection Summary

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-141101-1

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

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

Protocol References:

None = None

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

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

Laboratory References:

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

Sample Summary

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141101-1	W-1	Water	10/02/20 10:20	10/02/20 15:22	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22

Lab Sample ID: 280-141101-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.519		0.359	0.362	1.00	0.479	pCi/L	10/09/20 06:42	11/18/20 17:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.7*		*40 - 110*	*10/09/20 06:42*	*11/18/20 17:53*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22

Lab Sample ID: 280-141101-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.28	G	0.815	0.842	1.00	1.10	pCi/L	10/09/20 07:07	11/17/20 13:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.7*		*40 - 110*	*10/09/20 07:07*	*11/17/20 13:02*	*1*
Y Carrier	*80.4*		*40 - 110*	*10/09/20 07:07*	*11/17/20 13:02*	*1*

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

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22

Lab Sample ID: 280-141101-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.80		0.891	0.917	5.00	1.10	pCi/L		11/23/20 15:25	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-485171/23-A
Matrix: Water
Analysis Batch: 489824

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485171

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.1405	U	0.0964	0.0973	1.00	0.262	pCi/L	10/09/20 06:42	11/19/20 16:39	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.4*		*40 - 110*	*10/09/20 06:42*	*11/19/20 16:39*	*1*

Lab Sample ID: LCS 160-485171/1-A
Matrix: Water
Analysis Batch: 489452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 485171

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	10.92		1.30	1.00	0.196	pCi/L	96	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*83.4*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-485172/23-A
Matrix: Water
Analysis Batch: 489415

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485172

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3351	U	0.291	0.292	1.00	0.465	pCi/L	10/09/20 07:07	11/17/20 13:14	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.4*		*40 - 110*	*10/09/20 07:07*	*11/17/20 13:14*	*1*
Y Carrier	*85.2*		*40 - 110*	*10/09/20 07:07*	*11/17/20 13:14*	*1*

Lab Sample ID: LCS 160-485172/1-A
Matrix: Water
Analysis Batch: 489416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 485172

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.65	7.527		0.970	1.00	0.465	pCi/L	98	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*83.4*		*40 - 110*
Y Carrier	*83.0*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 485171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	PrecSep-21	
MB 160-485171/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-485171/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 485172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141101-1	W-1	Total/NA	Water	PrecSep_0	
MB 160-485172/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-485172/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Date Collected: 10/02/20 10:20
Date Received: 10/02/20 15:22

Lab Sample ID: 280-141101-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.29 mL	1.0 g	485171	10/09/20 06:42	AVB	TAL SL
Total/NA	Analysis	9315		1			489452	11/18/20 17:53	CMM	TAL SL
Total/NA	Prep	PrecSep_0			499.29 mL	1.0 g	485172	10/09/20 07:07	AVB	TAL SL
Total/NA	Analysis	9320		1			489416	11/17/20 13:02	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			489998	11/23/20 15:25	SCB	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

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

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

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAm

THE LEADER IN ENVIRO

280-141101 Chain of Custody

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
HDR, INC.	MAT ROHE	10/02/20	194117
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
9781 S MERIDIAN BLVD STE 400			
City	**State** / **Zip Code**	**Site Contact**	**Lab Contact**
ENGLEWOOD	CO / 80112	JACOB MOORMAN	DARLENE BANDY
Project Name and Location (State)	**Carrier/Waybill Number**		
XCEL - COMANCHE			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Solid	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Metals, Appendix IV	Anions/pH	Ra 226 / 228	TDS	1335
MW-1	10/2/20	1020		X			3		3				X	X	X	X	X
MW-4	10/2/20	1115		X			1		1				X	X			

Special Instructions/ Conditions of Receipt

CCR LIST
CONTACT MOLLY REEVES FOR PRIORITY ON LOW VOLUME SAMPLES

10/2

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other RUSH

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.	J. Moorman	10/2/20	1522	Keith Hall	10/6/20	1522
2.						
3.						

Comments

13.4 IDW11-03 RP 10/2/20

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-541689.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141101-2
Address: 13715 Rider Trail North,	Due Date Requested: 10/21/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 26014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-1 (280-141101-1)	10/2/20	10:20 Mountain		Water			X	X	X	2	

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	10-05-20 1355	DENVER	FED EX		
2	FED EX			[signature]	10/6/2020 09:45	EA-STL
3						

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141101-2

Login Number: 141101
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

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

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141101-2

Login Number: 141101
List Number: 3
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis
List Creation: 10/06/20 03:26 PM

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

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-141101-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
280-141101-1	W-1	70.7
LCS 160-485171/1-A	Lab Control Sample	83.4
MB 160-485171/23-A	Method Blank	83.4

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
280-141101-1	W-1	70.7	80.4
LCS 160-485172/1-A	Lab Control Sample	83.4	83.0
MB 160-485172/23-A	Method Blank	83.4	85.2

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 280-141388-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
10/26/2020 1:31:46 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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

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

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-141388-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141388-1

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

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

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

RECEIPT
The samples were received on 10/9/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 1.5º C, 1.7º C, 2.0º C, 2.3º C, 2.5º C and 3.3º C.

TOTAL RECOVERABLE METALS- 6010C/6020A/7470A
Samples W-7 (280-141388-5), MW-1B (280-141388-6), MW-2B (280-141388-7), and MW-3 (280-141388-8) required dilution prior to analysis due to high analyte concentrations or matrix interferences. The reporting limits have been adjusted accordingly.

MS/MSD analyses were performed on sample W-2A. The MS/MSD for method 6020A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The accuracy and precision of the Calcium and Lithium MS/MSD performed on a sample W-2A could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

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

GENERAL CHEMISTRY
Several samples required dilution prior to analysis for Method 9056A due to high analyte concentration or matrix interferences. The reporting limits have been adjusted accordingly.

MS/MSD analyses were performed on sample W-3. The Sulfate MS/MSD for method 9056A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

MS/MSD analyses were performed on sample W-7. The Fluoride MS/MSD for method 9056A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The Total Suspended Solids sample duplicate analysis data performed on sample W-3 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed

Job ID: 280-141388-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

unnecessary.

The Fluoride sample duplicate analysis data performed on sample W-7 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

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

REVISION

The report has been revised to include the ETA Canton chain of custody.

Detection Summary

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-141388-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.6		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.020		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.012	F1	0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0034		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0059		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0027	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00045	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.8		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0043		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.3		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	6.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	840		300	100	mg/L	100		9056A	Total/NA
Fluoride	42		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	53000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	72000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	22		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3
Lab Sample ID: 280-141388-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0022	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.029		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	470		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00048	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.040		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.013		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.11		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	52		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.88	J	2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	2400	F1 F2	500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	4300		50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-5 — Lab Sample ID: 280-141388-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00062	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0016	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.038		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00026	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0094		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0018	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.044		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00061	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.021		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.65		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	480		300	100	mg/L	100		9056A	Total/NA
Fluoride	3.7		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	13000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	20000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	18		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-141388-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	9.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0011	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0059		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.11		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	460		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00048	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0016		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0031		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.49		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0023		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.017		0.0050	0.00089	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-6 (Continued) — Lab Sample ID: 280-141388-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.069		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	130	J	300	100	mg/L	100		9056A	Total/NA
Sulfate	3100		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6000		67	31	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	89		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-141388-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.012		0.010	0.0015	mg/L	2		6020A	Total Recoverable
Barium	0.012		0.010	0.0045	mg/L	2		6020A	Total Recoverable
Calcium	400		2.0	1.2	mg/L	2		6020A	Total Recoverable
Cadmium	0.0052		0.0020	0.00039	mg/L	2		6020A	Total Recoverable
Cobalt	0.015		0.0020	0.00038	mg/L	2		6020A	Total Recoverable
Molybdenum	0.0049	J	0.020	0.0022	mg/L	2		6020A	Total Recoverable
Selenium	1.7		0.010	0.0018	mg/L	2		6020A	Total Recoverable
Thallium	0.0046		0.0020	0.00040	mg/L	2		6020A	Total Recoverable
Lithium	3.4		0.016	0.0033	mg/L	2		6020A	Total Recoverable
Mercury	0.00013	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	730		300	100	mg/L	100		9056A	Total/NA
Fluoride	42	F2 F1	2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	55000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	72000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	14		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-1B — Lab Sample ID: 280-141388-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0033	J	0.010	0.0015	mg/L	2		6020A	Total Recoverable
Barium	0.011		0.010	0.0045	mg/L	2		6020A	Total Recoverable
Calcium	370		2.0	1.2	mg/L	2		6020A	Total Recoverable
Cadmium	0.0026		0.0020	0.00039	mg/L	2		6020A	Total Recoverable
Cobalt	0.021		0.0020	0.00038	mg/L	2		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1B (Continued) — Lab Sample ID: 280-141388-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0041	J	0.020	0.0022	mg/L	2		6020A	Total Recoverable
Selenium	0.51		0.010	0.0018	mg/L	2		6020A	Total Recoverable
Thallium	0.0030		0.0020	0.00040	mg/L	2		6020A	Total Recoverable
Lithium	2.2		0.016	0.0033	mg/L	2		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	330		300	100	mg/L	100		9056A	Total/NA
Fluoride	28		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	16000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	27000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	45		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2B — Lab Sample ID: 280-141388-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.020		0.010	0.0015	mg/L	2		6020A	Total Recoverable
Barium	0.014		0.010	0.0045	mg/L	2		6020A	Total Recoverable
Calcium	390		2.0	1.2	mg/L	2		6020A	Total Recoverable
Cadmium	0.0011	J	0.0020	0.00039	mg/L	2		6020A	Total Recoverable
Cobalt	0.021		0.0020	0.00038	mg/L	2		6020A	Total Recoverable
Molybdenum	0.0065	J	0.020	0.0022	mg/L	2		6020A	Total Recoverable
Selenium	1.8		0.010	0.0018	mg/L	2		6020A	Total Recoverable
Thallium	0.0091		0.0020	0.00040	mg/L	2		6020A	Total Recoverable
Lithium	4.0		0.016	0.0033	mg/L	2		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	500		300	100	mg/L	100		9056A	Total/NA
Fluoride	39		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	29000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	46000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	55		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 280-141388-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.8		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0058	J	0.010	0.0015	mg/L	2		6020A	Total Recoverable
Barium	0.020		0.010	0.0045	mg/L	2		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3 (Continued) — Lab Sample ID: 280-141388-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	390		2.0	1.2	mg/L	2		6020A	Total Recoverable
Cadmium	0.017		0.0020	0.00039	mg/L	2		6020A	Total Recoverable
Cobalt	0.035		0.0020	0.00038	mg/L	2		6020A	Total Recoverable
Molybdenum	0.0042	J	0.020	0.0022	mg/L	2		6020A	Total Recoverable
Selenium	0.63		0.010	0.0018	mg/L	2		6020A	Total Recoverable
Thallium	0.0044		0.0020	0.00040	mg/L	2		6020A	Total Recoverable
Lithium	2.0		0.016	0.0033	mg/L	2		6020A	Total Recoverable
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	380		300	100	mg/L	100		9056A	Total/NA
Fluoride	53		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	42000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	57000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	48		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4B — Lab Sample ID: 280-141388-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.59		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.018		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.025		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	530		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0024		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.017		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.6		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.37		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	190	J	300	100	mg/L	100		9056A	Total/NA
Fluoride	5.2		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	2700		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6300		67	31	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	10		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-141388-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00076	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 280-141388-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0012	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.039		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	370		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00059	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0033		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0015	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0081	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.16		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.6		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1500		300	100	mg/L	100		9056A	Total/NA
Fluoride	38		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	18000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	31000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	39		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-141388-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.011		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0062		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00048	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0011	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0090	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.0		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.19		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	230	J	300	100	mg/L	100		9056A	Total/NA
Fluoride	6.3		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3800		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6500		67	31	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	7.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6-D — Lab Sample ID: 280-141388-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.012		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0064		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	410		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00051	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0012	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0093	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.0		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.20		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	240	J	300	100	mg/L	100		9056A	Total/NA
Fluoride	6.3		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	4000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6900		67	31	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	4.8		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4B-EB — Lab Sample ID: 280-141388-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	7.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Dissolved Solids (TDS)	12		10	4.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: W-3D — Lab Sample ID: 280-141388-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0024	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.027		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	470		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00045	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.040		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.013		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.10		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	46		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	0.49	J	0.50	0.17	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-3D (Continued)
Lab Sample ID: 280-141388-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2500		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	4500		50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	7.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141388-1	W-2A	Water	10/08/20 10:30	10/09/20 11:10	
280-141388-2	W-3	Water	10/07/20 15:15	10/09/20 11:10	
280-141388-3	W-5	Water	10/07/20 09:00	10/09/20 11:10	
280-141388-4	W-6	Water	10/07/20 08:25	10/09/20 11:10	
280-141388-5	W-7	Water	10/07/20 13:50	10/09/20 11:10	
280-141388-6	MW-1B	Water	10/08/20 11:20	10/09/20 11:10	
280-141388-7	MW-2B	Water	10/08/20 13:25	10/09/20 11:10	
280-141388-8	MW-3	Water	10/07/20 09:30	10/09/20 11:10	
280-141388-9	MW-4B	Water	10/07/20 12:55	10/09/20 11:10	
280-141388-10	MW-5	Water	10/07/20 11:30	10/09/20 11:10	
280-141388-11	MW-6	Water	10/07/20 14:55	10/09/20 11:10	
280-141388-12	MW-6-D	Water	10/07/20 15:00	10/09/20 11:10	
280-141388-13	MW-4B-EB	Water	10/07/20 13:30	10/09/20 11:10	
280-141388-14	W-3D	Water	10/07/20 15:15	10/09/20 11:10	

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

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:01	1

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.2		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:05	1

Client Sample ID: W-5
Date Collected: 10/07/20 09:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.2		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:10	1

Client Sample ID: W-6
Date Collected: 10/07/20 08:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.1		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:14	1

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.5		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:19	1

Client Sample ID: MW-1B
Date Collected: 10/08/20 11:20
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.5		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:23	1

Client Sample ID: MW-2B
Date Collected: 10/08/20 13:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.3		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:28	1

Client Sample ID: MW-3
Date Collected: 10/07/20 09:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.8		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:41	1

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.59		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:45	1

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

Client Sample ID: MW-5
Date Collected: 10/07/20 11:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.7**		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:50	1

Client Sample ID: MW-6
Date Collected: 10/07/20 14:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.2**		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:54	1

Client Sample ID: MW-6-D
Date Collected: 10/07/20 15:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.3**		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 17:59	1

Client Sample ID: MW-4B-EB
Date Collected: 10/07/20 13:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 18:03	1

Client Sample ID: W-3D
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.1**		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 18:08	1

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

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 15:23	1
Arsenic	**0.020**		0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 15:23	1
Barium	**0.012**	**F1**	0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 15:23	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 15:23	1
Calcium	**390**		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 15:23	1
Cadmium	**0.0034**		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 15:23	1
Cobalt	**0.0059**		0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 15:23	1
Chromium	ND		0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 15:23	1
Molybdenum	**0.0027**	**J**	0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 15:23	1
Lead	**0.00045**	**J**	0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 15:23	1
Selenium	**2.8**		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 15:23	1
Thallium	**0.0043**		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 15:23	1
Lithium	**3.3**		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 15:23	1

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 14:04	1

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

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0022	J	0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 14:04	1
Barium	0.029		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 14:04	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 14:04	1
Calcium	470		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 14:04	1
Cadmium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:04	1
Cobalt	0.00048	J	0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 14:04	1
Chromium	ND		0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 14:04	1
Molybdenum	0.040		0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 14:04	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 14:04	1
Selenium	0.013		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 14:04	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:04	1
Lithium	0.11		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 14:04	1

Client Sample ID: W-5
Date Collected: 10/07/20 09:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00062	J	0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 16:01	1
Arsenic	0.0016	J	0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 16:01	1
Barium	0.038		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 16:01	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 16:01	1
Calcium	390		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 16:01	1
Cadmium	0.00026	J	0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 16:01	1
Cobalt	0.0094		0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 16:01	1
Chromium	0.0018	J	0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 16:01	1
Molybdenum	0.044		0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 16:01	1
Lead	0.00061	J	0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 16:01	1
Selenium	0.021		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 16:01	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 16:01	1
Lithium	0.65		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 16:01	1

Client Sample ID: W-6
Date Collected: 10/07/20 08:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 14:14	1
Arsenic	0.0059		0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 14:14	1
Barium	0.11		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 14:14	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 14:14	1
Calcium	460		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 14:14	1
Cadmium	0.00048	J	0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:14	1
Cobalt	0.0016		0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 14:14	1
Chromium	0.0031		0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 14:14	1
Molybdenum	0.49		0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 14:14	1
Lead	0.0023		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 14:14	1
Selenium	0.017		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 14:14	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:14	1
Lithium	0.069		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 14:14	1

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

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		10/14/20 14:00	10/15/20 16:06	2
Arsenic	**0.012**		0.010	0.0015	mg/L		10/14/20 14:00	10/15/20 16:06	2
Barium	**0.012**		0.010	0.0045	mg/L		10/14/20 14:00	10/15/20 16:06	2
Beryllium	ND		0.0020	0.00061	mg/L		10/14/20 14:00	10/15/20 16:06	2
Calcium	**400**		2.0	1.2	mg/L		10/14/20 14:00	10/15/20 16:06	2
Cadmium	**0.0052**		0.0020	0.00039	mg/L		10/14/20 14:00	10/15/20 16:06	2
Cobalt	**0.015**		0.0020	0.00038	mg/L		10/14/20 14:00	10/15/20 16:06	2
Chromium	ND		0.0040	0.0020	mg/L		10/14/20 14:00	10/15/20 16:06	2
Molybdenum	**0.0049**	**J**	0.020	0.0022	mg/L		10/14/20 14:00	10/15/20 16:06	2
Lead	ND		0.0020	0.00090	mg/L		10/14/20 14:00	10/15/20 16:06	2
Selenium	**1.7**		0.010	0.0018	mg/L		10/14/20 14:00	10/15/20 16:06	2
Thallium	**0.0046**		0.0020	0.00040	mg/L		10/14/20 14:00	10/15/20 16:06	2
Lithium	**3.4**		0.016	0.0033	mg/L		10/14/20 14:00	10/15/20 16:06	2

Client Sample ID: MW-1B
Date Collected: 10/08/20 11:20
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		10/14/20 14:00	10/15/20 16:11	2
Arsenic	**0.0033**	**J**	0.010	0.0015	mg/L		10/14/20 14:00	10/15/20 16:11	2
Barium	**0.011**		0.010	0.0045	mg/L		10/14/20 14:00	10/15/20 16:11	2
Beryllium	ND		0.0020	0.00061	mg/L		10/14/20 14:00	10/15/20 16:11	2
Calcium	**370**		2.0	1.2	mg/L		10/14/20 14:00	10/15/20 16:11	2
Cadmium	**0.0026**		0.0020	0.00039	mg/L		10/14/20 14:00	10/15/20 16:11	2
Cobalt	**0.021**		0.0020	0.00038	mg/L		10/14/20 14:00	10/15/20 16:11	2
Chromium	ND		0.0040	0.0020	mg/L		10/14/20 14:00	10/15/20 16:11	2
Molybdenum	**0.0041**	**J**	0.020	0.0022	mg/L		10/14/20 14:00	10/15/20 16:11	2
Lead	ND		0.0020	0.00090	mg/L		10/14/20 14:00	10/15/20 16:11	2
Selenium	**0.51**		0.010	0.0018	mg/L		10/14/20 14:00	10/15/20 16:11	2
Thallium	**0.0030**		0.0020	0.00040	mg/L		10/14/20 14:00	10/15/20 16:11	2
Lithium	**2.2**		0.016	0.0033	mg/L		10/14/20 14:00	10/15/20 16:11	2

Client Sample ID: MW-2B
Date Collected: 10/08/20 13:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		10/14/20 14:00	10/15/20 16:23	2
Arsenic	**0.020**		0.010	0.0015	mg/L		10/14/20 14:00	10/15/20 16:23	2
Barium	**0.014**		0.010	0.0045	mg/L		10/14/20 14:00	10/15/20 16:23	2
Beryllium	ND		0.0020	0.00061	mg/L		10/14/20 14:00	10/15/20 16:23	2
Calcium	**390**		2.0	1.2	mg/L		10/14/20 14:00	10/15/20 16:23	2
Cadmium	**0.0011**	**J**	0.0020	0.00039	mg/L		10/14/20 14:00	10/15/20 16:23	2
Cobalt	**0.021**		0.0020	0.00038	mg/L		10/14/20 14:00	10/15/20 16:23	2
Chromium	ND		0.0040	0.0020	mg/L		10/14/20 14:00	10/15/20 16:23	2
Molybdenum	**0.0065**	**J**	0.020	0.0022	mg/L		10/14/20 14:00	10/15/20 16:23	2
Lead	ND		0.0020	0.00090	mg/L		10/14/20 14:00	10/15/20 16:23	2
Selenium	**1.8**		0.010	0.0018	mg/L		10/14/20 14:00	10/15/20 16:23	2
Thallium	**0.0091**		0.0020	0.00040	mg/L		10/14/20 14:00	10/15/20 16:23	2
Lithium	**4.0**		0.016	0.0033	mg/L		10/14/20 14:00	10/15/20 16:23	2

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

Client Sample ID: MW-3
Date Collected: 10/07/20 09:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		10/14/20 14:00	10/15/20 16:31	2
Arsenic	**0.0058**	**J**	0.010	0.0015	mg/L		10/14/20 14:00	10/15/20 16:31	2
Barium	**0.020**		0.010	0.0045	mg/L		10/14/20 14:00	10/15/20 16:31	2
Beryllium	ND		0.0020	0.00061	mg/L		10/14/20 14:00	10/15/20 16:31	2
Calcium	**390**		2.0	1.2	mg/L		10/14/20 14:00	10/15/20 16:31	2
Cadmium	**0.017**		0.0020	0.00039	mg/L		10/14/20 14:00	10/15/20 16:31	2
Cobalt	**0.035**		0.0020	0.00038	mg/L		10/14/20 14:00	10/15/20 16:31	2
Chromium	ND		0.0040	0.0020	mg/L		10/14/20 14:00	10/15/20 16:31	2
Molybdenum	**0.0042**	**J**	0.020	0.0022	mg/L		10/14/20 14:00	10/15/20 16:31	2
Lead	ND		0.0020	0.00090	mg/L		10/14/20 14:00	10/15/20 16:31	2
Selenium	**0.63**		0.010	0.0018	mg/L		10/14/20 14:00	10/15/20 16:31	2
Thallium	**0.0044**		0.0020	0.00040	mg/L		10/14/20 14:00	10/15/20 16:31	2
Lithium	**2.0**		0.016	0.0033	mg/L		10/14/20 14:00	10/15/20 16:31	2

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 14:26	1
Arsenic	**0.018**		0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 14:26	1
Barium	**0.025**		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 14:26	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 14:26	1
Calcium	**530**		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 14:26	1
Cadmium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:26	1
Cobalt	**0.0024**		0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 14:26	1
Chromium	ND		0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 14:26	1
Molybdenum	**0.017**		0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 14:26	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 14:26	1
Selenium	**2.6**		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 14:26	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:26	1
Lithium	**0.37**		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 14:26	1

Client Sample ID: MW-5
Date Collected: 10/07/20 11:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00076**	**J**	0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 16:36	1
Arsenic	**0.0012**	**J**	0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 16:36	1
Barium	**0.039**		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 16:36	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 16:36	1
Calcium	**370**		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 16:36	1
Cadmium	**0.00059**	**J**	0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 16:36	1
Cobalt	**0.0033**		0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 16:36	1
Chromium	**0.0015**	**J**	0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 16:36	1
Molybdenum	**0.0081**	**J**	0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 16:36	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 16:36	1
Selenium	**0.16**		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 16:36	1
Thallium	**0.0011**		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 16:36	1
Lithium	**2.6**		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 16:36	1

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

Client Sample ID: MW-6
Date Collected: 10/07/20 14:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 14:32	1
Arsenic	**0.011**		0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 14:32	1
Barium	**0.0062**		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 14:32	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 14:32	1
Calcium	**390**		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 14:32	1
Cadmium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:32	1
Cobalt	**0.00048**	**J**	0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 14:32	1
Chromium	**0.0011**	**J**	0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 14:32	1
Molybdenum	**0.0090**	**J**	0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 14:32	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 14:32	1
Selenium	**1.0**		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 14:32	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:32	1
Lithium	**0.19**		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 14:32	1

Client Sample ID: MW-6-D
Date Collected: 10/07/20 15:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 14:34	1
Arsenic	**0.012**		0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 14:34	1
Barium	**0.0064**		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 14:34	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 14:34	1
Calcium	**410**		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 14:34	1
Cadmium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:34	1
Cobalt	**0.00051**	**J**	0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 14:34	1
Chromium	**0.0012**	**J**	0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 14:34	1
Molybdenum	**0.0093**	**J**	0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 14:34	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 14:34	1
Selenium	**1.0**		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 14:34	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:34	1
Lithium	**0.20**		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 14:34	1

Client Sample ID: MW-4B-EB
Date Collected: 10/07/20 13:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 14:37	1
Arsenic	ND		0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 14:37	1
Barium	ND		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 14:37	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 14:37	1
Calcium	ND		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 14:37	1
Cadmium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:37	1
Cobalt	ND		0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 14:37	1
Chromium	ND		0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 14:37	1
Molybdenum	ND		0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 14:37	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 14:37	1
Selenium	ND		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 14:37	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:37	1
Lithium	ND		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 14:37	1

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

Client Sample ID: W-3D
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 14:44	1
Arsenic	**0.0024**	**J**	0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 14:44	1
Barium	**0.027**		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 14:44	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 14:44	1
Calcium	**470**		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 14:44	1
Cadmium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:44	1
Cobalt	**0.00045**	**J**	0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 14:44	1
Chromium	ND		0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 14:44	1
Molybdenum	**0.040**		0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 14:44	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 14:44	1
Selenium	**0.013**		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 14:44	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 14:44	1
Lithium	**0.10**		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 14:44	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 19:46	1

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 19:49	1

Client Sample ID: W-5
Date Collected: 10/07/20 09:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 19:51	1

Client Sample ID: W-6
Date Collected: 10/07/20 08:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 19:53	1

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J**	0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 19:55	1

Client Sample ID: MW-1B
Date Collected: 10/08/20 11:20
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:01	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-2B
Date Collected: 10/08/20 13:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:03	1

Client Sample ID: MW-3
Date Collected: 10/07/20 09:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:05	1

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:07	1

Client Sample ID: MW-5
Date Collected: 10/07/20 11:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:09	1

Client Sample ID: MW-6
Date Collected: 10/07/20 14:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:11	1

Client Sample ID: MW-6-D
Date Collected: 10/07/20 15:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:13	1

Client Sample ID: MW-4B-EB
Date Collected: 10/07/20 13:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:15	1

Client Sample ID: W-3D
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 20:17	1

General Chemistry

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.7**	**HF**	0.1	0.1	SU			10/12/20 20:57	1
Temperature	**19.0**	**HF**	1.0	1.0	Degrees C			10/12/20 20:57	1

General Chemistry (Continued)

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	840		300	100	mg/L			10/14/20 02:21	100
Fluoride	42		2.5	0.83	mg/L			10/15/20 11:19	5
Sulfate	53000		2500	520	mg/L			10/16/20 02:43	500
Total Dissolved Solids (TDS)	72000		1000	470	mg/L			10/13/20 18:53	1
Total Suspended Solids	22		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			10/12/20 21:02	1
Temperature	19.6	HF	1.0	1.0	Degrees C			10/12/20 21:02	1
Chloride	52		30	10	mg/L			10/14/20 02:39	10
Fluoride	0.88	J	2.5	0.83	mg/L			10/15/20 11:36	5
Sulfate	2400	F1 F2	500	100	mg/L			10/14/20 02:56	100
Total Dissolved Solids (TDS)	4300		50	24	mg/L			10/13/20 18:53	1
Total Suspended Solids	9.2		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: W-5
Date Collected: 10/07/20 09:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			10/12/20 21:38	1
Temperature	21.5	HF	1.0	1.0	Degrees C			10/12/20 21:38	1
Chloride	480		300	100	mg/L			10/14/20 04:41	100
Fluoride	3.7		2.5	0.83	mg/L			10/15/20 11:52	5
Sulfate	13000		500	100	mg/L			10/14/20 04:41	100
Total Dissolved Solids (TDS)	20000		200	94	mg/L			10/13/20 18:53	1
Total Suspended Solids	18		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: W-6
Date Collected: 10/07/20 08:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU			10/12/20 21:24	1
Temperature	19.5	HF	1.0	1.0	Degrees C			10/12/20 21:24	1
Chloride	130	J	300	100	mg/L			10/14/20 04:59	100
Fluoride	ND		0.50	0.17	mg/L			10/19/20 20:41	1
Sulfate	3100		500	100	mg/L			10/14/20 04:59	100
Total Dissolved Solids (TDS)	6000		67	31	mg/L			10/13/20 18:53	1
Total Suspended Solids	89		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU			10/12/20 21:46	1
Temperature	20.4	HF	1.0	1.0	Degrees C			10/12/20 21:46	1
Chloride	730		300	100	mg/L			10/14/20 05:16	100
Fluoride	42	F2 F1	2.5	0.83	mg/L			10/15/20 12:25	5

General Chemistry (Continued)

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	55000		2500	520	mg/L			10/16/20 03:00	500
Total Dissolved Solids (TDS)	72000		1000	470	mg/L			10/13/20 18:53	1
Total Suspended Solids	14		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-1B
Date Collected: 10/08/20 11:20
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			10/12/20 21:10	1
Temperature	20.0	HF	1.0	1.0	Degrees C			10/12/20 21:10	1
Chloride	330		300	100	mg/L			10/14/20 05:34	100
Fluoride	28		2.5	0.83	mg/L			10/15/20 14:04	5
Sulfate	16000		500	100	mg/L			10/14/20 05:34	100
Total Dissolved Solids (TDS)	27000		1000	470	mg/L			10/13/20 18:53	1
Total Suspended Solids	45		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-2B
Date Collected: 10/08/20 13:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			10/12/20 21:13	1
Temperature	19.4	HF	1.0	1.0	Degrees C			10/12/20 21:13	1
Chloride	500		300	100	mg/L			10/14/20 05:51	100
Fluoride	39		5.0	1.7	mg/L			10/19/20 20:57	10
Sulfate	29000		1000	210	mg/L			10/16/20 03:18	200
Total Dissolved Solids (TDS)	46000		1000	470	mg/L			10/13/20 18:53	1
Total Suspended Solids	55		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-3
Date Collected: 10/07/20 09:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU			10/12/20 21:17	1
Temperature	19.1	HF	1.0	1.0	Degrees C			10/12/20 21:17	1
Chloride	380		300	100	mg/L			10/14/20 06:09	100
Fluoride	53		5.0	1.7	mg/L			10/19/20 21:14	10
Sulfate	42000		2500	520	mg/L			10/16/20 03:35	500
Total Dissolved Solids (TDS)	57000		1000	470	mg/L			10/13/20 18:53	1
Total Suspended Solids	48		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			10/12/20 21:20	1
Temperature	18.6	HF	1.0	1.0	Degrees C			10/12/20 21:20	1
Chloride	190	J	300	100	mg/L			10/14/20 06:26	100
Fluoride	5.2		2.5	0.83	mg/L			10/15/20 14:53	5
Sulfate	2700		500	100	mg/L			10/14/20 06:26	100
Total Dissolved Solids (TDS)	6300		67	31	mg/L			10/13/20 18:53	1

General Chemistry (Continued)

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	10		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-5
Date Collected: 10/07/20 11:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			10/12/20 21:06	1
Temperature	19.4	HF	1.0	1.0	Degrees C			10/12/20 21:06	1
Chloride	1500		300	100	mg/L			10/14/20 09:04	100
Fluoride	38		2.5	0.83	mg/L			10/15/20 15:09	5
Sulfate	18000		500	100	mg/L			10/14/20 09:04	100
Total Dissolved Solids (TDS)	31000		1000	470	mg/L			10/13/20 18:53	1
Total Suspended Solids	39		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-6
Date Collected: 10/07/20 14:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			10/12/20 21:42	1
Temperature	20.7	HF	1.0	1.0	Degrees C			10/12/20 21:42	1
Chloride	230	J	300	100	mg/L			10/14/20 09:21	100
Fluoride	6.3		0.50	0.17	mg/L			10/19/20 21:47	1
Sulfate	3800		500	100	mg/L			10/14/20 09:21	100
Total Dissolved Solids (TDS)	6500		67	31	mg/L			10/13/20 18:53	1
Total Suspended Solids	7.2		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-6-D
Date Collected: 10/07/20 15:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			10/13/20 15:39	1
Temperature	20.5	HF	1.0	1.0	Degrees C			10/13/20 15:39	1
Chloride	240	J	300	100	mg/L			10/14/20 09:38	100
Fluoride	6.3		0.50	0.17	mg/L			10/19/20 21:30	1
Sulfate	4000		500	100	mg/L			10/14/20 09:38	100
Total Dissolved Solids (TDS)	6900		67	31	mg/L			10/13/20 18:53	1
Total Suspended Solids	4.8		4.0	1.1	mg/L			10/14/20 06:44	1

Client Sample ID: MW-4B-EB
Date Collected: 10/07/20 13:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.9	HF	0.1	0.1	SU			10/14/20 00:45	1
Temperature	21.5	HF	1.0	1.0	Degrees C			10/14/20 00:45	1
Chloride	ND		3.0	1.0	mg/L			10/15/20 17:21	1
Fluoride	ND		0.50	0.17	mg/L			10/15/20 17:21	1
Sulfate	ND		5.0	1.0	mg/L			10/15/20 17:21	1
Total Dissolved Solids (TDS)	12		10	4.7	mg/L			10/13/20 18:53	1
Total Suspended Solids	ND		4.0	1.1	mg/L			10/12/20 13:38	1

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: W-3D
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			10/13/20 15:51	1
Temperature	22.0	HF	1.0	1.0	Degrees C			10/13/20 15:51	1
Chloride	46		15	5.1	mg/L			10/16/20 17:46	5
Fluoride	0.49	J	0.50	0.17	mg/L			10/15/20 17:37	1
Sulfate	2500		500	100	mg/L			10/14/20 10:13	100
Total Dissolved Solids (TDS)	4500		50	24	mg/L			10/13/20 18:53	1
Total Suspended Solids	7.2		4.0	1.1	mg/L			10/12/20 13:38	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-455957/1-A
Matrix: Water
Analysis Batch: 456237

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 455957

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		10/14/20 14:00	10/15/20 16:23	1

Lab Sample ID: LCS 240-455957/2-A
Matrix: Water
Analysis Batch: 456237

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 455957

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.00		mg/L		100	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-455957/1-A
Matrix: Water
Analysis Batch: 456232

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 455957

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/14/20 14:00	10/15/20 13:46	1
Arsenic	ND		0.0050	0.00075	mg/L		10/14/20 14:00	10/15/20 13:46	1
Barium	ND		0.0050	0.0022	mg/L		10/14/20 14:00	10/15/20 13:46	1
Beryllium	ND		0.0010	0.00031	mg/L		10/14/20 14:00	10/15/20 13:46	1
Calcium	ND		1.0	0.58	mg/L		10/14/20 14:00	10/15/20 13:46	1
Cadmium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 13:46	1
Cobalt	ND		0.0010	0.00019	mg/L		10/14/20 14:00	10/15/20 13:46	1
Chromium	ND		0.0020	0.00098	mg/L		10/14/20 14:00	10/15/20 13:46	1
Molybdenum	ND		0.010	0.0011	mg/L		10/14/20 14:00	10/15/20 13:46	1
Lead	ND		0.0010	0.00045	mg/L		10/14/20 14:00	10/15/20 13:46	1
Selenium	ND		0.0050	0.00089	mg/L		10/14/20 14:00	10/15/20 13:46	1
Thallium	ND		0.0010	0.00020	mg/L		10/14/20 14:00	10/15/20 13:46	1
Lithium	ND		0.0080	0.0017	mg/L		10/14/20 14:00	10/15/20 13:46	1

Lab Sample ID: LCS 240-455957/27-A
Matrix: Water
Analysis Batch: 456232

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 455957

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0905		mg/L		90	80 - 120
Arsenic	1.00	0.944		mg/L		94	80 - 120
Barium	1.00	0.912		mg/L		91	80 - 120
Beryllium	0.500	0.448		mg/L		90	80 - 120
Calcium	25.0	23.2		mg/L		93	80 - 120
Cadmium	0.500	0.455		mg/L		91	80 - 120
Cobalt	0.500	0.486		mg/L		97	80 - 120
Chromium	0.500	0.472		mg/L		94	80 - 120
Molybdenum	0.500	0.457		mg/L		91	80 - 120
Lead	0.500	0.478		mg/L		96	80 - 120
Selenium	1.00	0.920		mg/L		92	80 - 120
Thallium	1.00	0.912		mg/L		91	80 - 120
Lithium	0.500	0.461		mg/L		92	80 - 120

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

Lab Sample ID: 280-141388-1 MS
Matrix: Water
Analysis Batch: 456232

Client Sample ID: W-2A
Prep Type: Total Recoverable
Prep Batch: 455957

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.100	0.0829		mg/L		83	75 - 125
Arsenic	0.020		1.00	1.14		mg/L		112	75 - 125
Barium	0.012	F1	1.00	0.523	F1	mg/L		51	75 - 125
Beryllium	ND		0.500	0.387		mg/L		77	75 - 125
Calcium	390		25.0	409	4	mg/L		68	75 - 125
Cadmium	0.0034		0.500	0.388		mg/L		77	75 - 125
Cobalt	0.0059		0.500	0.519		mg/L		103	75 - 125
Chromium	ND		0.500	0.407		mg/L		81	75 - 125
Molybdenum	0.0027	J	0.500	0.467		mg/L		93	75 - 125
Lead	0.00045	J	0.500	0.390		mg/L		78	75 - 125
Selenium	2.8		1.00	4.01		mg/L		122	75 - 125
Thallium	0.0043		1.00	0.776		mg/L		77	75 - 125
Lithium	3.3		0.500	3.87	4	mg/L		111	75 - 125

Lab Sample ID: 280-141388-1 MSD
Matrix: Water
Analysis Batch: 456232

Client Sample ID: W-2A
Prep Type: Total Recoverable
Prep Batch: 455957

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.100	0.0829		mg/L		83	75 - 125	0	20
Arsenic	0.020		1.00	1.15		mg/L		113	75 - 125	0	20
Barium	0.012	F1	1.00	0.572	F1	mg/L		56	75 - 125	9	20
Beryllium	ND		0.500	0.385		mg/L		77	75 - 125	0	20
Calcium	390		25.0	402	4	mg/L		40	75 - 125	2	20
Cadmium	0.0034		0.500	0.390		mg/L		77	75 - 125	1	20
Cobalt	0.0059		0.500	0.530		mg/L		105	75 - 125	2	20
Chromium	ND		0.500	0.410		mg/L		82	75 - 125	1	20
Molybdenum	0.0027	J	0.500	0.469		mg/L		93	75 - 125	0	20
Lead	0.00045	J	0.500	0.391		mg/L		78	75 - 125	0	20
Selenium	2.8		1.00	3.91		mg/L		111	75 - 125	3	20
Thallium	0.0043		1.00	0.781		mg/L		78	75 - 125	1	20
Lithium	3.3		0.500	3.78	4	mg/L		94	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-455960/1-A
Matrix: Water
Analysis Batch: 456142

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 455960

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/14/20 14:00	10/14/20 19:35	1

Lab Sample ID: LCS 240-455960/2-A
Matrix: Water
Analysis Batch: 456142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 455960

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00501		mg/L		100	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-512339/4
Matrix: Water
Analysis Batch: 512339

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		101	99 - 101

Lab Sample ID: LCS 280-512443/4
Matrix: Water
Analysis Batch: 512443

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 280-512583/30
Matrix: Water
Analysis Batch: 512583

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-512437/43
Matrix: Water
Analysis Batch: 512437

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/14/20 08:11	1
Sulfate	ND		5.0	1.0	mg/L			10/14/20 08:11	1

Lab Sample ID: MB 280-512437/6
Matrix: Water
Analysis Batch: 512437

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/13/20 21:24	1
Sulfate	ND		5.0	1.0	mg/L			10/13/20 21:24	1

Lab Sample ID: LCS 280-512437/4
Matrix: Water
Analysis Batch: 512437

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	97.8		mg/L		98	90 - 110
Sulfate	100	98.0		mg/L		98	90 - 110

Lab Sample ID: LCS 280-512437/41
Matrix: Water
Analysis Batch: 512437

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	99.6		mg/L		100	90 - 110
Sulfate	100	99.5		mg/L		99	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-512437/42
Matrix: Water
Analysis Batch: 512437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	99.5		mg/L		100	90 - 110	0	10
Sulfate			100	99.3		mg/L		99	90 - 110	0	10

Lab Sample ID: LCSD 280-512437/5
Matrix: Water
Analysis Batch: 512437

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	98.0		mg/L		98	90 - 110	0	10
Sulfate			100	97.4		mg/L		97	90 - 110	1	10

Lab Sample ID: MRL 280-512437/3
Matrix: Water
Analysis Batch: 512437

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			6.00	4.43		mg/L		74	50 - 150		
Sulfate			6.00	4.33	J	mg/L		72	50 - 150		

Lab Sample ID: 280-141388-2 MS
Matrix: Water
Analysis Batch: 512437

Client Sample ID: W-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	ND		5000	5030		mg/L		101	80 - 120		
Sulfate	2400	F1 F2	5000	5030	F1	mg/L		53	80 - 120		

Lab Sample ID: 280-141388-2 MSD
Matrix: Water
Analysis Batch: 512437

Client Sample ID: W-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		5000	4720		mg/L		94	80 - 120	6	20
Sulfate	2400	F1 F2	5000	7310	F2	mg/L		99	80 - 120	37	20

Lab Sample ID: 280-141388-9 MS
Matrix: Water
Analysis Batch: 512437

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	190	J	5000	5180		mg/L		100	80 - 120		
Sulfate	2700		5000	7860		mg/L		104	80 - 120		

Lab Sample ID: 280-141388-9 MSD
Matrix: Water
Analysis Batch: 512437

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	190	J	5000	4930		mg/L		95	80 - 120	5	20
Sulfate	2700		5000	7590		mg/L		99	80 - 120	3	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 280-141388-2 DU
Matrix: Water
Analysis Batch: 512437

Client Sample ID: W-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	ND		ND		mg/L		NC	15
Sulfate	2400	F1 F2	2350		mg/L		1	15

Lab Sample ID: 280-141388-9 DU
Matrix: Water
Analysis Batch: 512437

Client Sample ID: MW-4B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	190	J	186	J	mg/L		2	15
Sulfate	2700		2580		mg/L		3	15

Lab Sample ID: MB 280-512544/60
Matrix: Water
Analysis Batch: 512544

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/15/20 09:57	1
Fluoride	ND		0.50	0.17	mg/L			10/15/20 09:57	1
Sulfate	ND		5.0	1.0	mg/L			10/15/20 09:57	1

Lab Sample ID: LCS 280-512544/58
Matrix: Water
Analysis Batch: 512544

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.6		mg/L		95	90 - 110
Fluoride	5.00	4.78		mg/L		96	90 - 110
Sulfate	100	95.1		mg/L		95	90 - 110

Lab Sample ID: LCSD 280-512544/59
Matrix: Water
Analysis Batch: 512544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.6		mg/L		96	90 - 110	1	10
Fluoride	5.00	4.81		mg/L		96	90 - 110	1	10
Sulfate	100	95.8		mg/L		96	90 - 110	1	10

Lab Sample ID: MRL 280-512544/3
Matrix: Water
Analysis Batch: 512544

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.08		mg/L		82	50 - 150
Fluoride	0.500	0.517		mg/L		103	50 - 150
Sulfate	5.00	4.35	J	mg/L		87	50 - 150

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-141388-5 MS
Matrix: Water
Analysis Batch: 512544

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	760		250	1040	E	mg/L		111	80 - 120		
Fluoride	42	F2 F1	25.0	28.7	F1	mg/L		-54	80 - 120		

Lab Sample ID: 280-141388-5 MSD
Matrix: Water
Analysis Batch: 512544

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	760		250	1050	E	mg/L		118	80 - 120	2	20
Fluoride	42	F2 F1	25.0	64.7	E F2	mg/L		90	80 - 120	77	20

Lab Sample ID: 280-141388-11 MS
Matrix: Water
Analysis Batch: 512544

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	230		250	503		mg/L		110	80 - 120		
Fluoride	ND		25.0	22.3		mg/L		89	80 - 120		

Lab Sample ID: 280-141388-11 MSD
Matrix: Water
Analysis Batch: 512544

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	230		250	506		mg/L		112	80 - 120	1	20
Fluoride	ND		25.0	22.7		mg/L		91	80 - 120	2	20

Lab Sample ID: 280-141388-5 DU
Matrix: Water
Analysis Batch: 512544

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	760			767		mg/L				1	15
Fluoride	42	F2 F1		53.6	E F3	mg/L				24	15

Lab Sample ID: 280-141388-11 DU
Matrix: Water
Analysis Batch: 512544

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

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	230			221		mg/L				3	15

Lab Sample ID: MB 280-512780/6
Matrix: Water
Analysis Batch: 512780

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/15/20 17:18	1
Sulfate	ND		5.0	1.0	mg/L			10/15/20 17:18	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-512780/4
Matrix: Water
Analysis Batch: 512780

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.2		mg/L		94	90 - 110
Sulfate	100	93.0		mg/L		93	90 - 110

Lab Sample ID: LCSD 280-512780/5
Matrix: Water
Analysis Batch: 512780

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.0		mg/L		94	90 - 110	0	10
Sulfate	100	92.3		mg/L		92	90 - 110	1	10

Lab Sample ID: MRL 280-512780/3
Matrix: Water
Analysis Batch: 512780

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.00	4.72		mg/L		79	50 - 150
Sulfate	6.00	4.66	J	mg/L		78	50 - 150

Lab Sample ID: MB 280-512941/6
Matrix: Water
Analysis Batch: 512941

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/16/20 15:22	1

Lab Sample ID: LCS 280-512941/4
Matrix: Water
Analysis Batch: 512941

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.9		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-512941/5
Matrix: Water
Analysis Batch: 512941

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.9		mg/L		95	90 - 110	1	10

Lab Sample ID: MRL 280-512941/3
Matrix: Water
Analysis Batch: 512941

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.77		mg/L		95	50 - 150

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-513157/13
Matrix: Water
Analysis Batch: 513157

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.17	mg/L			10/19/20 19:19	1

Lab Sample ID: LCS 280-513157/11
Matrix: Water
Analysis Batch: 513157

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			5.00	4.85		mg/L		97	90 - 110		

Lab Sample ID: LCSD 280-513157/12
Matrix: Water
Analysis Batch: 513157

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride			5.00	4.85		mg/L		97	90 - 110	0	10

Lab Sample ID: MRL 280-513157/10
Matrix: Water
Analysis Batch: 513157

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			0.500	0.517		mg/L		103	50 - 150		

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-512445/2
Matrix: Water
Analysis Batch: 512445

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/13/20 18:53	1

Lab Sample ID: LCS 280-512445/1
Matrix: Water
Analysis Batch: 512445

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			501	505		mg/L		101	93 - 110		

Lab Sample ID: 280-141388-14 DU
Matrix: Water
Analysis Batch: 512445

Client Sample ID: W-3D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids (TDS)	4500			4390		mg/L				2	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-512221/1
Matrix: Water
Analysis Batch: 512221

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			10/12/20 13:38	1

Lab Sample ID: LCS 280-512221/2
Matrix: Water
Analysis Batch: 512221

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	98.0		mg/L		98	79 - 114		

Lab Sample ID: 280-141388-13 DU
Matrix: Water
Analysis Batch: 512221

Client Sample ID: MW-4B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	ND			1.20	J	mg/L				NC	10

Lab Sample ID: MB 280-512479/1
Matrix: Water
Analysis Batch: 512479

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			10/14/20 06:44	1

Lab Sample ID: LCS 280-512479/2
Matrix: Water
Analysis Batch: 512479

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	104		mg/L		104	79 - 114		

Lab Sample ID: 280-141388-2 DU
Matrix: Water
Analysis Batch: 512479

Client Sample ID: W-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	9.2			5.20	F5	mg/L				56	10

Metals

Prep Batch: 455957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total Recoverable	Water	3005A	
280-141388-2	W-3	Total Recoverable	Water	3005A	
280-141388-3	W-5	Total Recoverable	Water	3005A	
280-141388-4	W-6	Total Recoverable	Water	3005A	
280-141388-5	W-7	Total Recoverable	Water	3005A	
280-141388-6	MW-1B	Total Recoverable	Water	3005A	
280-141388-7	MW-2B	Total Recoverable	Water	3005A	
280-141388-8	MW-3	Total Recoverable	Water	3005A	
280-141388-9	MW-4B	Total Recoverable	Water	3005A	
280-141388-10	MW-5	Total Recoverable	Water	3005A	
280-141388-11	MW-6	Total Recoverable	Water	3005A	
280-141388-12	MW-6-D	Total Recoverable	Water	3005A	
280-141388-13	MW-4B-EB	Total Recoverable	Water	3005A	
280-141388-14	W-3D	Total Recoverable	Water	3005A	
MB 240-455957/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-455957/27-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-455957/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-141388-1 MS	W-2A	Total Recoverable	Water	3005A	
280-141388-1 MSD	W-2A	Total Recoverable	Water	3005A	

Prep Batch: 455960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	7470A	
280-141388-2	W-3	Total/NA	Water	7470A	
280-141388-3	W-5	Total/NA	Water	7470A	
280-141388-4	W-6	Total/NA	Water	7470A	
280-141388-5	W-7	Total/NA	Water	7470A	
280-141388-6	MW-1B	Total/NA	Water	7470A	
280-141388-7	MW-2B	Total/NA	Water	7470A	
280-141388-8	MW-3	Total/NA	Water	7470A	
280-141388-9	MW-4B	Total/NA	Water	7470A	
280-141388-10	MW-5	Total/NA	Water	7470A	
280-141388-11	MW-6	Total/NA	Water	7470A	
280-141388-12	MW-6-D	Total/NA	Water	7470A	
280-141388-13	MW-4B-EB	Total/NA	Water	7470A	
280-141388-14	W-3D	Total/NA	Water	7470A	
MB 240-455960/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-455960/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 456142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	7470A	455960
280-141388-2	W-3	Total/NA	Water	7470A	455960
280-141388-3	W-5	Total/NA	Water	7470A	455960
280-141388-4	W-6	Total/NA	Water	7470A	455960
280-141388-5	W-7	Total/NA	Water	7470A	455960
280-141388-6	MW-1B	Total/NA	Water	7470A	455960
280-141388-7	MW-2B	Total/NA	Water	7470A	455960
280-141388-8	MW-3	Total/NA	Water	7470A	455960
280-141388-9	MW-4B	Total/NA	Water	7470A	455960
280-141388-10	MW-5	Total/NA	Water	7470A	455960

Metals (Continued)

Analysis Batch: 456142 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-11	MW-6	Total/NA	Water	7470A	455960
280-141388-12	MW-6-D	Total/NA	Water	7470A	455960
280-141388-13	MW-4B-EB	Total/NA	Water	7470A	455960
280-141388-14	W-3D	Total/NA	Water	7470A	455960
MB 240-455960/1-A	Method Blank	Total/NA	Water	7470A	455960
LCS 240-455960/2-A	Lab Control Sample	Total/NA	Water	7470A	455960

Analysis Batch: 456232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total Recoverable	Water	6020A	455957
280-141388-2	W-3	Total Recoverable	Water	6020A	455957
280-141388-3	W-5	Total Recoverable	Water	6020A	455957
280-141388-4	W-6	Total Recoverable	Water	6020A	455957
280-141388-5	W-7	Total Recoverable	Water	6020A	455957
280-141388-6	MW-1B	Total Recoverable	Water	6020A	455957
280-141388-7	MW-2B	Total Recoverable	Water	6020A	455957
280-141388-8	MW-3	Total Recoverable	Water	6020A	455957
280-141388-9	MW-4B	Total Recoverable	Water	6020A	455957
280-141388-10	MW-5	Total Recoverable	Water	6020A	455957
280-141388-11	MW-6	Total Recoverable	Water	6020A	455957
280-141388-12	MW-6-D	Total Recoverable	Water	6020A	455957
280-141388-13	MW-4B-EB	Total Recoverable	Water	6020A	455957
280-141388-14	W-3D	Total Recoverable	Water	6020A	455957
MB 240-455957/1-A	Method Blank	Total Recoverable	Water	6020A	455957
LCS 240-455957/27-A	Lab Control Sample	Total Recoverable	Water	6020A	455957
280-141388-1 MS	W-2A	Total Recoverable	Water	6020A	455957
280-141388-1 MSD	W-2A	Total Recoverable	Water	6020A	455957

Analysis Batch: 456237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total Recoverable	Water	6010C	455957
280-141388-2	W-3	Total Recoverable	Water	6010C	455957
280-141388-3	W-5	Total Recoverable	Water	6010C	455957
280-141388-4	W-6	Total Recoverable	Water	6010C	455957
280-141388-5	W-7	Total Recoverable	Water	6010C	455957
280-141388-6	MW-1B	Total Recoverable	Water	6010C	455957
280-141388-7	MW-2B	Total Recoverable	Water	6010C	455957
280-141388-8	MW-3	Total Recoverable	Water	6010C	455957
280-141388-9	MW-4B	Total Recoverable	Water	6010C	455957
280-141388-10	MW-5	Total Recoverable	Water	6010C	455957
280-141388-11	MW-6	Total Recoverable	Water	6010C	455957
280-141388-12	MW-6-D	Total Recoverable	Water	6010C	455957
280-141388-13	MW-4B-EB	Total Recoverable	Water	6010C	455957
280-141388-14	W-3D	Total Recoverable	Water	6010C	455957
MB 240-455957/1-A	Method Blank	Total Recoverable	Water	6010C	455957
LCS 240-455957/2-A	Lab Control Sample	Total Recoverable	Water	6010C	455957

General Chemistry

Analysis Batch: 512221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-13	MW-4B-EB	Total/NA	Water	SM 2540D	
280-141388-14	W-3D	Total/NA	Water	SM 2540D	
MB 280-512221/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-512221/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-141388-13 DU	MW-4B-EB	Total/NA	Water	SM 2540D	

Analysis Batch: 512339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	9040B	
280-141388-2	W-3	Total/NA	Water	9040B	
280-141388-3	W-5	Total/NA	Water	9040B	
280-141388-4	W-6	Total/NA	Water	9040B	
280-141388-5	W-7	Total/NA	Water	9040B	
280-141388-6	MW-1B	Total/NA	Water	9040B	
280-141388-7	MW-2B	Total/NA	Water	9040B	
280-141388-8	MW-3	Total/NA	Water	9040B	
280-141388-9	MW-4B	Total/NA	Water	9040B	
280-141388-10	MW-5	Total/NA	Water	9040B	
280-141388-11	MW-6	Total/NA	Water	9040B	
LCS 280-512339/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 512437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	9056A	
280-141388-2	W-3	Total/NA	Water	9056A	
280-141388-2	W-3	Total/NA	Water	9056A	
280-141388-3	W-5	Total/NA	Water	9056A	
280-141388-4	W-6	Total/NA	Water	9056A	
280-141388-5	W-7	Total/NA	Water	9056A	
280-141388-6	MW-1B	Total/NA	Water	9056A	
280-141388-7	MW-2B	Total/NA	Water	9056A	
280-141388-8	MW-3	Total/NA	Water	9056A	
280-141388-9	MW-4B	Total/NA	Water	9056A	
280-141388-10	MW-5	Total/NA	Water	9056A	
280-141388-11	MW-6	Total/NA	Water	9056A	
280-141388-12	MW-6-D	Total/NA	Water	9056A	
280-141388-14	W-3D	Total/NA	Water	9056A	
MB 280-512437/43	Method Blank	Total/NA	Water	9056A	
MB 280-512437/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512437/4	Lab Control Sample	Total/NA	Water	9056A	
LCS 280-512437/41	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512437/42	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 280-512437/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512437/3	Lab Control Sample	Total/NA	Water	9056A	
280-141388-2 MS	W-3	Total/NA	Water	9056A	
280-141388-2 MSD	W-3	Total/NA	Water	9056A	
280-141388-9 MS	MW-4B	Total/NA	Water	9056A	
280-141388-9 MSD	MW-4B	Total/NA	Water	9056A	
280-141388-2 DU	W-3	Total/NA	Water	9056A	
280-141388-9 DU	MW-4B	Total/NA	Water	9056A	

General Chemistry

Analysis Batch: 512443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-12	MW-6-D	Total/NA	Water	9040B	
280-141388-14	W-3D	Total/NA	Water	9040B	
LCS 280-512443/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 512445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	SM 2540C	
280-141388-2	W-3	Total/NA	Water	SM 2540C	
280-141388-3	W-5	Total/NA	Water	SM 2540C	
280-141388-4	W-6	Total/NA	Water	SM 2540C	
280-141388-5	W-7	Total/NA	Water	SM 2540C	
280-141388-6	MW-1B	Total/NA	Water	SM 2540C	
280-141388-7	MW-2B	Total/NA	Water	SM 2540C	
280-141388-8	MW-3	Total/NA	Water	SM 2540C	
280-141388-9	MW-4B	Total/NA	Water	SM 2540C	
280-141388-10	MW-5	Total/NA	Water	SM 2540C	
280-141388-11	MW-6	Total/NA	Water	SM 2540C	
280-141388-12	MW-6-D	Total/NA	Water	SM 2540C	
280-141388-13	MW-4B-EB	Total/NA	Water	SM 2540C	
280-141388-14	W-3D	Total/NA	Water	SM 2540C	
MB 280-512445/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-512445/1	Lab Control Sample	Total/NA	Water	SM 2540C	
280-141388-14 DU	W-3D	Total/NA	Water	SM 2540C	

Analysis Batch: 512479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	SM 2540D	
280-141388-2	W-3	Total/NA	Water	SM 2540D	
280-141388-3	W-5	Total/NA	Water	SM 2540D	
280-141388-4	W-6	Total/NA	Water	SM 2540D	
280-141388-5	W-7	Total/NA	Water	SM 2540D	
280-141388-6	MW-1B	Total/NA	Water	SM 2540D	
280-141388-7	MW-2B	Total/NA	Water	SM 2540D	
280-141388-8	MW-3	Total/NA	Water	SM 2540D	
280-141388-9	MW-4B	Total/NA	Water	SM 2540D	
280-141388-10	MW-5	Total/NA	Water	SM 2540D	
280-141388-11	MW-6	Total/NA	Water	SM 2540D	
280-141388-12	MW-6-D	Total/NA	Water	SM 2540D	
MB 280-512479/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-512479/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-141388-2 DU	W-3	Total/NA	Water	SM 2540D	

Analysis Batch: 512544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	9056A	
280-141388-2	W-3	Total/NA	Water	9056A	
280-141388-3	W-5	Total/NA	Water	9056A	
280-141388-5	W-7	Total/NA	Water	9056A	
280-141388-6	MW-1B	Total/NA	Water	9056A	
280-141388-9	MW-4B	Total/NA	Water	9056A	
280-141388-10	MW-5	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 512544 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-13	MW-4B-EB	Total/NA	Water	9056A	
280-141388-14	W-3D	Total/NA	Water	9056A	
MB 280-512544/60	Method Blank	Total/NA	Water	9056A	
LCS 280-512544/58	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512544/59	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512544/3	Lab Control Sample	Total/NA	Water	9056A	
280-141388-5 MS	W-7	Total/NA	Water	9056A	
280-141388-5 MSD	W-7	Total/NA	Water	9056A	
280-141388-11 MS	MW-6	Total/NA	Water	9056A	
280-141388-11 MSD	MW-6	Total/NA	Water	9056A	
280-141388-5 DU	W-7	Total/NA	Water	9056A	
280-141388-11 DU	MW-6	Total/NA	Water	9056A	

Analysis Batch: 512583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-13	MW-4B-EB	Total/NA	Water	9040B	
LCS 280-512583/30	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 512780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	9056A	
280-141388-5	W-7	Total/NA	Water	9056A	
280-141388-7	MW-2B	Total/NA	Water	9056A	
280-141388-8	MW-3	Total/NA	Water	9056A	
MB 280-512780/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512780/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512780/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512780/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 512941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-14	W-3D	Total/NA	Water	9056A	
MB 280-512941/6	Method Blank	Total/NA	Water	9056A	
LCS 280-512941/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-512941/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-512941/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 513157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-4	W-6	Total/NA	Water	9056A	
280-141388-7	MW-2B	Total/NA	Water	9056A	
280-141388-8	MW-3	Total/NA	Water	9056A	
280-141388-11	MW-6	Total/NA	Water	9056A	
280-141388-12	MW-6-D	Total/NA	Water	9056A	
MB 280-513157/13	Method Blank	Total/NA	Water	9056A	
LCS 280-513157/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-513157/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-513157/10	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-141388-1
Date Collected: 10/08/20 10:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:01	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 15:23	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 19:46	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 20:57	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 02:21	NK	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	512780	10/16/20 02:43	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/15/20 11:19	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: W-3
Lab Sample ID: 280-141388-2
Date Collected: 10/07/20 15:15
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:05	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 14:04	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 19:49	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:02	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	512437	10/14/20 02:39	NK	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 02:56	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/15/20 11:36	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-141388-3
Date Collected: 10/07/20 09:00
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:10	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:01	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 19:51	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:38	CJ	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-141388-3

Date Collected: 10/07/20 09:00
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 04:41	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/15/20 11:52	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: W-6
Lab Sample ID: 280-141388-4

Date Collected: 10/07/20 08:25
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:14	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 14:14	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 19:53	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:24	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 04:59	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/19/20 20:41	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	15 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: W-7
Lab Sample ID: 280-141388-5

Date Collected: 10/07/20 13:50
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:19	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			456232	10/15/20 16:06	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 19:55	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:46	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 05:16	NK	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	512780	10/16/20 03:00	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/15/20 12:25	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-1B
Lab Sample ID: 280-141388-6

Date Collected: 10/08/20 11:20
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:23	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			456232	10/15/20 16:11	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:01	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:10	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 05:34	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/15/20 14:04	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-2B
Lab Sample ID: 280-141388-7

Date Collected: 10/08/20 13:25
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:28	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			456232	10/15/20 16:23	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:03	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:13	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 05:51	NK	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	512780	10/16/20 03:18	NK	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	513157	10/19/20 20:57	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-3
Lab Sample ID: 280-141388-8

Date Collected: 10/07/20 09:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:41	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			456232	10/15/20 16:31	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:05	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:17	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 06:09	NK	TAL DEN

Client Sample ID: MW-3
Lab Sample ID: 280-141388-8

Date Collected: 10/07/20 09:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		500	5 mL	5 mL	512780	10/16/20 03:35	NK	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	513157	10/19/20 21:14	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-4B
Lab Sample ID: 280-141388-9

Date Collected: 10/07/20 12:55
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:45	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 14:26	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:07	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:20	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 06:26	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/15/20 14:53	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	15 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-5
Lab Sample ID: 280-141388-10

Date Collected: 10/07/20 11:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:50	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 16:36	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:09	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:06	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 09:04	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512544	10/15/20 15:09	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-6
Lab Sample ID: 280-141388-11
Date Collected: 10/07/20 14:55
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:54	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 14:32	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:11	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512339	10/12/20 21:42	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 09:21	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/19/20 21:47	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	15 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-6-D
Lab Sample ID: 280-141388-12
Date Collected: 10/07/20 15:00
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 17:59	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 14:34	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:13	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512443	10/13/20 15:39	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 09:38	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	513157	10/19/20 21:30	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	15 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512479	10/14/20 06:44	LEB	TAL DEN

Client Sample ID: MW-4B-EB
Lab Sample ID: 280-141388-13
Date Collected: 10/07/20 13:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 18:03	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 14:37	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:15	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512583	10/14/20 00:45	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/15/20 17:21	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-4B-EB
Lab Sample ID: 280-141388-13
Date Collected: 10/07/20 13:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512221	10/12/20 13:38	LEB	TAL DEN

Client Sample ID: W-3D
Lab Sample ID: 280-141388-14
Date Collected: 10/07/20 15:15
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			456237	10/15/20 18:08	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	455957	10/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			456232	10/15/20 14:44	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	455960	10/14/20 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			456142	10/14/20 20:17	SLD	TAL CAN
Total/NA	Analysis	9040B		1			512443	10/13/20 15:51	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	512437	10/14/20 10:13	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	512941	10/16/20 17:46	BWH	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	512544	10/15/20 17:37	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	512445	10/13/20 18:53	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	512221	10/12/20 13:38	LEB	TAL DEN

Laboratory References:

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

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

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141388-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: Evan Hiser	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 10682O HDR-1
Client Contact: Molly Reeves	Phone: 720 273 3136	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days):			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

280-141388 Chain of Custody

J - DI Water; K - EDTA; L - EDA; M - Hexane; W - pH 4-5; Z - other (specify); Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sediment, Groundwater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C, Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli+W, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226R5Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
~~W-1~~				Water									(EW)
W-2A	10/08/20	1030	G	Water	N	N	1	1	1	1	2	6	
~~W-2B~~				Water									(EW)
W-3	10/07/20	1515	G	Water	N	N	1	1	1	1	2	6	
~~W-4~~				Water									(EW)
W-5	10/07/20	0900	G	Water	N	N	1	1	1	1	2	6	
W-6	10/07/20	0825	G	Water	N	N	1	1	1	1	2	6	
W-7	10/07/20	1350	G	Water	N	N	1	1	1	1	2	6	
~~W-8A~~				Water									(EW)
~~W-8B~~				Water									(EW)
MW-1B	10/08/20	1120	G	Water	N	N	1	1	1	1	2	6	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 10/09/20 1110	Company: HDR	Received by:	Date/Time: 10/09/2020 1110	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☒ Yes ☐ No

Custody Seal No.: 1414461, 1414463, 1414463, 1414494, 1414467, 1414466 1414466

Cooler Temperature(s) °C and Other Remarks: 3.6C, 2.2C, 2.3C, 2.8C, 1.8C, 2.0C CF-0.3C

IR#11

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

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: Emily Miner	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 10CS20HDR-1
Client Contact: Molly Reeves	Phone: 720 233 3136	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		
City: Englewood	TAT Requested (days): Rush			
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, Air, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl!+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228 combined															Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D															X	
MW-2	10/07/20	1320	G	Water	N	N	1	1	1	1	2															6	
MW-3	10/07/20	0930	G	Water	N	N	1	1	1	1	2															6	
MW-4	10/07/20	1155	G	Water	N	N	1	1	1	1	2															6	
MW-5	10/07/20	1130	G	Water	N	N	1	1	1	1	2															6	
MW-6	10/07/20	1455	G	Water	N	N	1	1	1	1	2															6	
MW-16-0 ~~DUP-EW~~	10/07/20	1500	G	Water	N	N	1	1	1	1	2															6	
MW-413-EB	10/07/20	1330	G	Water	N	N	1	1	1	1	2															6	
IW-30	10/07/20	1515	G	Water	N	N	1	1	1	1	2															6	

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time: 10/09/20 1110	Company: HDR	Received by: [signature]	Date/Time: 10/09/2020 1110	Company: TAL DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-542477.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141388-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 10/16/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Solid, Composite, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A_t3 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-141388-1)	10/8/20	10:30 Mountain		Water			X	X	X	1	Use Collision Cell
W-3 (280-141388-2)	10/7/20	15:15 Mountain		Water			X	X	X	1	Use Collision Cell
W-5 (280-141388-3)	10/7/20	09:00 Mountain		Water			X	X	X	1	Use Collision Cell
W-6 (280-141388-4)	10/7/20	08:25 Mountain		Water			X	X	X	1	Use Collision Cell
W-7 (280-141388-5)	10/7/20	13:50 Mountain		Water			X	X	X	1	Use Collision Cell
MW-1B (280-141388-6)	10/6/20	11:20 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2B (280-141388-7)	10/6/20	13:25 Mountain		Water			X	X	X	1	Use Collision Cell
MW-3 (280-141388-8)	10/7/20	09:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-4B (280-141388-9)	10/7/20	12:55 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/13/20 1345			10/13/20 1700	EFA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-542477.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141388-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 10/16/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Waste, Air, Tissue, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-5 (280-141388-10)	10/7/20	11:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-141388-11)	10/7/20	14:55 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6-D (280-141388-12)	10/7/20	15:00 Mountain		Water			X	X	X	1	Use Collision Cell
MW-46-EB (280-141388-13)	10/7/20	13:30 Mountain		Water			X	X	X	1	Use Collision Cell
W-3D (280-141388-14)	10/7/20	15:15 Mountain		Water			X	X	X	1	Use Collision Cell

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	10/12/2020 0545		D.Bradwell	10/13/20 1000	EA
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client TA Canton Site Name _____ Cooler unpacked by: B. Bidwell

Cooler Received on 10/13/20 Opened on 10/13/20

FedEx: 1st Grd ~~Exp~~ UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam ~~Plastic Bag~~ None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt [X] See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)? Yes No
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes No NA
    [redacted] Larger than this.
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
17. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins TestAmerica Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA Client Box Other	IR-10 IR-11	0.7	1.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11	10.5	11.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11	9.8	10.7	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-10 IR-11	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141388-1

Login Number: 141388
List Number: 1
Creator: Turner, Shelby R

List Source: Eurofins TestAmerica, Denver

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

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 280-141388-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/30/2020 4:04:18 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-141388-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141388-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/9/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 1.5º C, 1.7º C, 2.0º C, 2.3º C, 2.5º C and 3.3º C.

This report only contains the radioactive results. All other analyses are reported under job 280-141388-1.

RADIUM-226 (GFPC)
The method 9315 MS/MSD could not be performed for this batch, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

The following samples were prepared at a reduced aliquot due to discoloration and/or cloudiness of the samples: W-2A (280-141388-1), W-3 (280-141388-2), W-5 (280-141388-3), W-6 (280-141388-4), W-7 (280-141388-5), MW-1B (280-141388-6), MW-2B (280-141388-7), MW-3 (280-141388-8), MW-4B (280-141388-9), MW-5 (280-141388-10), and W-3D (280-141388-14).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228
The LCS recovered outside the method limits of 75-125 for Radium-228, however, it is within our statistical limits of 60-140%. Additionally the LCSD was within limits with a recovery of 77% and the RER/RPD between the LCS/LCSD passed. Therefore, corrective action is deemed unnecessary.

The following samples were prepared at a reduced aliquot due to discoloration and/or cloudiness of the samples: W-2A (280-141388-1), W-3 (280-141388-2), W-5 (280-141388-3), W-6 (280-141388-4), W-7 (280-141388-5), MW-1B (280-141388-6), MW-2B (280-141388-7), MW-3 (280-141388-8), MW-4B (280-141388-9), MW-5 (280-141388-10), and W-3D (280-141388-14).

The method 9320 MS/MSD could not be performed for this batch, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 280-141388-2 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Detection Summary

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A — Lab Sample ID: 280-141388-1

No Detections.

Client Sample ID: W-3 — Lab Sample ID: 280-141388-2

No Detections.

Client Sample ID: W-5 — Lab Sample ID: 280-141388-3

No Detections.

Client Sample ID: W-6 — Lab Sample ID: 280-141388-4

No Detections.

Client Sample ID: W-7 — Lab Sample ID: 280-141388-5

No Detections.

Client Sample ID: MW-1B — Lab Sample ID: 280-141388-6

No Detections.

Client Sample ID: MW-2B — Lab Sample ID: 280-141388-7

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 280-141388-8

No Detections.

Client Sample ID: MW-4B — Lab Sample ID: 280-141388-9

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 280-141388-10

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 280-141388-11

No Detections.

Client Sample ID: MW-6-D — Lab Sample ID: 280-141388-12

No Detections.

Client Sample ID: MW-4B-EB — Lab Sample ID: 280-141388-13

No Detections.

Client Sample ID: W-3D — Lab Sample ID: 280-141388-14

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141388-1	W-2A	Water	10/08/20 10:30	10/09/20 11:10	
280-141388-2	W-3	Water	10/07/20 15:15	10/09/20 11:10	
280-141388-3	W-5	Water	10/07/20 09:00	10/09/20 11:10	
280-141388-4	W-6	Water	10/07/20 08:25	10/09/20 11:10	
280-141388-5	W-7	Water	10/07/20 13:50	10/09/20 11:10	
280-141388-6	MW-1B	Water	10/08/20 11:20	10/09/20 11:10	
280-141388-7	MW-2B	Water	10/08/20 13:25	10/09/20 11:10	
280-141388-8	MW-3	Water	10/07/20 09:30	10/09/20 11:10	
280-141388-9	MW-4B	Water	10/07/20 12:55	10/09/20 11:10	
280-141388-10	MW-5	Water	10/07/20 11:30	10/09/20 11:10	
280-141388-11	MW-6	Water	10/07/20 14:55	10/09/20 11:10	
280-141388-12	MW-6-D	Water	10/07/20 15:00	10/09/20 11:10	
280-141388-13	MW-4B-EB	Water	10/07/20 13:30	10/09/20 11:10	
280-141388-14	W-3D	Water	10/07/20 15:15	10/09/20 11:10	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.79**		0.546	0.569	1.00	0.533	pCi/L	10/16/20 14:00	11/17/20 19:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*53.1*		*40 - 110*	*10/16/20 14:00*	*11/17/20 19:43*	*1*

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0246	U	0.126	0.126	1.00	0.277	pCi/L	10/16/20 14:00	11/17/20 19:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*10/16/20 14:00*	*11/17/20 19:43*	*1*

Client Sample ID: W-5
Date Collected: 10/07/20 09:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.776**		0.485	0.490	1.00	0.675	pCi/L	10/16/20 14:00	11/17/20 19:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*66.3*		*40 - 110*	*10/16/20 14:00*	*11/17/20 19:43*	*1*

Client Sample ID: W-6
Date Collected: 10/07/20 08:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.123	U	0.141	0.141	1.00	0.226	pCi/L	10/16/20 14:00	11/17/20 19:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.1*		*40 - 110*	*10/16/20 14:00*	*11/17/20 19:44*	*1*

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.24**		0.473	0.515	1.00	0.286	pCi/L	10/16/20 14:00	11/17/20 19:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.2*		*40 - 110*	*10/16/20 14:00*	*11/17/20 19:44*	*1*

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-1B
Date Collected: 10/08/20 11:20
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.959		0.407	0.416	1.00	0.433	pCi/L	10/16/20 14:00	11/17/20 19:44	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	53.7		40 - 110	10/16/20 14:00	11/17/20 19:44	1

Client Sample ID: MW-2B
Date Collected: 10/08/20 13:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.17		0.450	0.462	1.00	0.506	pCi/L	10/16/20 14:00	11/17/20 19:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	63.9		40 - 110	10/16/20 14:00	11/17/20 19:48	1

Client Sample ID: MW-3
Date Collected: 10/07/20 09:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.175	U	0.197	0.198	1.00	0.321	pCi/L	10/16/20 14:00	11/17/20 19:48	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110	10/16/20 14:00	11/17/20 19:48	1

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.367	U	0.260	0.262	1.00	0.377	pCi/L	10/16/20 14:00	11/17/20 19:49	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110	10/16/20 14:00	11/17/20 19:49	1

Client Sample ID: MW-5
Date Collected: 10/07/20 11:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.343	U	0.281	0.283	1.00	0.421	pCi/L	10/16/20 14:00	11/17/20 19:49	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	73.6		40 - 110	10/16/20 14:00	11/17/20 19:49	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-6
Date Collected: 10/07/20 14:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.199	U	0.171	0.172	1.00	0.263	pCi/L	10/16/20 14:00	11/17/20 19:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*10/16/20 14:00*	*11/17/20 19:49*	*1*

Client Sample ID: MW-6-D
Date Collected: 10/07/20 15:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.205	U	0.158	0.159	1.00	0.228	pCi/L	10/16/20 14:00	11/17/20 19:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*10/16/20 14:00*	*11/17/20 19:49*	*1*

Client Sample ID: MW-4B-EB
Date Collected: 10/07/20 13:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0367	U	0.0832	0.0832	1.00	0.150	pCi/L	10/16/20 14:00	11/21/20 17:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*40 - 110*	*10/16/20 14:00*	*11/21/20 17:40*	*1*

Client Sample ID: W-3D
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.184**		0.110	0.111	1.00	0.136	pCi/L	10/16/20 14:00	11/21/20 17:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.0*		*40 - 110*	*10/16/20 14:00*	*11/21/20 17:41*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.74**	*	0.488	0.549	1.00	0.523	pCi/L	11/17/20 11:38	11/25/20 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.8*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:53*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-1
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	102		40 - 110	11/17/20 11:38	11/25/20 11:53	1

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.501	U *	0.372	0.375	1.00	0.583	pCi/L	11/17/20 11:38	11/25/20 11:53	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	73.0		40 - 110	11/17/20 11:38	11/25/20 11:53	1
Y Carrier	99.1		40 - 110	11/17/20 11:38	11/25/20 11:53	1

Client Sample ID: W-5
Date Collected: 10/07/20 09:00
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.06	*	0.471	0.481	1.00	0.667	pCi/L	11/17/20 11:38	11/25/20 11:53	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110	11/17/20 11:38	11/25/20 11:53	1
Y Carrier	108		40 - 110	11/17/20 11:38	11/25/20 11:53	1

Client Sample ID: W-6
Date Collected: 10/07/20 08:25
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.23	*	0.440	0.455	1.00	0.601	pCi/L	11/17/20 11:38	11/25/20 11:55	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110	11/17/20 11:38	11/25/20 11:55	1
Y Carrier	108		40 - 110	11/17/20 11:38	11/25/20 11:55	1

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.43	*	0.348	0.372	1.00	0.417	pCi/L	11/17/20 11:38	11/25/20 11:55	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.7		40 - 110	11/17/20 11:38	11/25/20 11:55	1
Y Carrier	106		40 - 110	11/17/20 11:38	11/25/20 11:55	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-1B
Date Collected: 10/08/20 11:20
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.04	*	0.402	0.413	1.00	0.567	pCi/L	11/17/20 11:38	11/25/20 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:55*	*1*
Y Carrier	*95.0*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:55*	*1*

Client Sample ID: MW-2B
Date Collected: 10/08/20 13:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.34	*	0.412	0.465	1.00	0.423	pCi/L	11/17/20 11:38	11/25/20 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.2*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:55*	*1*
Y Carrier	*103*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:55*	*1*

Client Sample ID: MW-3
Date Collected: 10/07/20 09:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.798	*	0.408	0.415	1.00	0.598	pCi/L	11/17/20 11:38	11/25/20 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.2*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:55*	*1*
Y Carrier	*106*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:55*	*1*

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.281	U *	0.255	0.256	1.00	0.408	pCi/L	11/17/20 11:38	11/25/20 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:56*	*1*
Y Carrier	*104*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:56*	*1*

Client Sample ID: MW-5
Date Collected: 10/07/20 11:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00508	U *	0.261	0.261	1.00	0.468	pCi/L	11/17/20 11:38	11/25/20 11:56	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110	11/17/20 11:38	11/25/20 11:56	1
Y Carrier	107		40 - 110	11/17/20 11:38	11/25/20 11:56	1

Client Sample ID: MW-6
Date Collected: 10/07/20 14:55
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.191	U *	0.264	0.264	1.00	0.440	pCi/L	11/17/20 11:38	11/25/20 11:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110	11/17/20 11:38	11/25/20 11:56	1
Y Carrier	104		40 - 110	11/17/20 11:38	11/25/20 11:56	1

Client Sample ID: MW-6-D
Date Collected: 10/07/20 15:00
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.267	U *	0.255	0.257	1.00	0.413	pCi/L	11/17/20 11:38	11/25/20 11:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110	11/17/20 11:38	11/25/20 11:56	1
Y Carrier	103		40 - 110	11/17/20 11:38	11/25/20 11:56	1

Client Sample ID: MW-4B-EB
Date Collected: 10/07/20 13:30
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00249	U *	0.228	0.228	1.00	0.413	pCi/L	11/17/20 11:38	11/25/20 11:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110	11/17/20 11:38	11/25/20 11:56	1
Y Carrier	108		40 - 110	11/17/20 11:38	11/25/20 11:56	1

Client Sample ID: W-3D
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.288	U *	0.283	0.284	1.00	0.459	pCi/L	11/17/20 11:38	11/25/20 11:56	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110	11/17/20 11:38	11/25/20 11:56	1
Y Carrier	106		40 - 110	11/17/20 11:38	11/25/20 11:56	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-2A
Date Collected: 10/08/20 10:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.53		0.732	0.791	5.00	0.533	pCi/L		11/30/20 14:22	1

Client Sample ID: W-3
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.477	U	0.393	0.396	5.00	0.583	pCi/L		11/30/20 14:22	1

Client Sample ID: W-5
Date Collected: 10/07/20 09:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.84		0.676	0.687	5.00	0.675	pCi/L		11/30/20 14:22	1

Client Sample ID: W-6
Date Collected: 10/07/20 08:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.35		0.462	0.476	5.00	0.601	pCi/L		11/30/20 14:22	1

Client Sample ID: W-7
Date Collected: 10/07/20 13:50
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.67		0.587	0.635	5.00	0.417	pCi/L		11/30/20 14:22	1

Client Sample ID: MW-1B
Date Collected: 10/08/20 11:20
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.00		0.572	0.586	5.00	0.567	pCi/L		11/30/20 14:22	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: MW-2B
Date Collected: 10/08/20 13:25
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.51		0.610	0.655	5.00	0.506	pCi/L		11/30/20 14:22	1

Client Sample ID: MW-3
Date Collected: 10/07/20 09:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.972		0.453	0.460	5.00	0.598	pCi/L		11/30/20 14:22	1

Client Sample ID: MW-4B
Date Collected: 10/07/20 12:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.648		0.364	0.366	5.00	0.408	pCi/L		11/30/20 14:22	1

Client Sample ID: MW-5
Date Collected: 10/07/20 11:30
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.338	U	0.384	0.385	5.00	0.468	pCi/L		11/30/20 14:22	1

Client Sample ID: MW-6
Date Collected: 10/07/20 14:55
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.390	U	0.315	0.315	5.00	0.440	pCi/L		11/30/20 14:22	1

Client Sample ID: MW-6-D
Date Collected: 10/07/20 15:00
Date Received: 10/09/20 11:10
Lab Sample ID: 280-141388-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.472		0.300	0.302	5.00	0.413	pCi/L		11/30/20 14:22	1

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: MW-4B-EB
Date Collected: 10/07/20 13:30
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0392	U	0.243	0.243	5.00	0.413	pCi/L		11/30/20 14:22	1

Client Sample ID: W-3D
Date Collected: 10/07/20 15:15
Date Received: 10/09/20 11:10

Lab Sample ID: 280-141388-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.472**		0.304	0.305	5.00	0.459	pCi/L		11/30/20 14:22	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-485965/23-A
Matrix: Water
Analysis Batch: 490119

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485965

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.007886	U	0.0588	0.0588	1.00	0.130	pCi/L	10/16/20 14:00	11/24/20 09:49	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*10/16/20 14:00*	*11/24/20 09:49*	*1*

Lab Sample ID: LCS 160-485965/1-A
Matrix: Water
Analysis Batch: 489414

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 485965

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			15.1	12.14		1.47	1.00	0.236	pCi/L	80	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.9*		*40 - 110*

Lab Sample ID: LCSD 160-485965/2-A
Matrix: Water
Analysis Batch: 489414

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 485965

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			15.1	13.28		1.58	1.00	0.247	pCi/L	88	75 - 125	0.37	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*90.3*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-489375/23-A
Matrix: Water
Analysis Batch: 490291

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 489375

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.07343	U	0.310	0.310	1.00	0.540	pCi/L	11/17/20 11:38	11/25/20 11:57	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.9*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:57*	*1*
Y Carrier	*103*		*40 - 110*	*11/17/20 11:38*	*11/25/20 11:57*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-489375/1-A
Matrix: Water
Analysis Batch: 490279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489375

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			10.2	6.685	*	0.896	1.00	0.417	pCi/L	66	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*83.6*		*40 - 110*
Y Carrier	*105*		*40 - 110*

Lab Sample ID: LCSD 160-489375/2-A
Matrix: Water
Analysis Batch: 490291

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 489375

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			10.2	7.806		1.01	1.00	0.505	pCi/L	77	75 - 125	0.59	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*81.5*		*40 - 110*
Y Carrier	*106*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 485965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	PrecSep-21	
280-141388-2	W-3	Total/NA	Water	PrecSep-21	
280-141388-3	W-5	Total/NA	Water	PrecSep-21	
280-141388-4	W-6	Total/NA	Water	PrecSep-21	
280-141388-5	W-7	Total/NA	Water	PrecSep-21	
280-141388-6	MW-1B	Total/NA	Water	PrecSep-21	
280-141388-7	MW-2B	Total/NA	Water	PrecSep-21	
280-141388-8	MW-3	Total/NA	Water	PrecSep-21	
280-141388-9	MW-4B	Total/NA	Water	PrecSep-21	
280-141388-10	MW-5	Total/NA	Water	PrecSep-21	
280-141388-11	MW-6	Total/NA	Water	PrecSep-21	
280-141388-12	MW-6-D	Total/NA	Water	PrecSep-21	
280-141388-13	MW-4B-EB	Total/NA	Water	PrecSep-21	
280-141388-14	W-3D	Total/NA	Water	PrecSep-21	
MB 160-485965/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-485965/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-485965/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 489375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141388-1	W-2A	Total/NA	Water	PrecSep_0	
280-141388-2	W-3	Total/NA	Water	PrecSep_0	
280-141388-3	W-5	Total/NA	Water	PrecSep_0	
280-141388-4	W-6	Total/NA	Water	PrecSep_0	
280-141388-5	W-7	Total/NA	Water	PrecSep_0	
280-141388-6	MW-1B	Total/NA	Water	PrecSep_0	
280-141388-7	MW-2B	Total/NA	Water	PrecSep_0	
280-141388-8	MW-3	Total/NA	Water	PrecSep_0	
280-141388-9	MW-4B	Total/NA	Water	PrecSep_0	
280-141388-10	MW-5	Total/NA	Water	PrecSep_0	
280-141388-11	MW-6	Total/NA	Water	PrecSep_0	
280-141388-12	MW-6-D	Total/NA	Water	PrecSep_0	
280-141388-13	MW-4B-EB	Total/NA	Water	PrecSep_0	
280-141388-14	W-3D	Total/NA	Water	PrecSep_0	
MB 160-489375/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-489375/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-489375/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-141388-1
Date Collected: 10/08/20 10:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.44 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489414	11/17/20 19:43	CMM	TAL SL
Total/NA	Prep	PrecSep_0			750.42 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:53	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: W-3
Lab Sample ID: 280-141388-2
Date Collected: 10/07/20 15:15
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.06 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489414	11/17/20 19:43	CMM	TAL SL
Total/NA	Prep	PrecSep_0			749.28 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:53	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: W-5
Lab Sample ID: 280-141388-3
Date Collected: 10/07/20 09:00
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.99 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489414	11/17/20 19:43	CMM	TAL SL
Total/NA	Prep	PrecSep_0			500.39 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:53	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: W-6
Lab Sample ID: 280-141388-4
Date Collected: 10/07/20 08:25
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.13 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489414	11/17/20 19:44	CMM	TAL SL
Total/NA	Prep	PrecSep_0			500.17 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:55	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-7
Lab Sample ID: 280-141388-5
Date Collected: 10/07/20 13:50
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.24 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489414	11/17/20 19:44	CMM	TAL SL
Total/NA	Prep	PrecSep_0			749.04 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:55	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: MW-1B
Lab Sample ID: 280-141388-6
Date Collected: 10/08/20 11:20
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.10 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489414	11/17/20 19:44	CMM	TAL SL
Total/NA	Prep	PrecSep_0			749.12 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:55	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: MW-2B
Lab Sample ID: 280-141388-7
Date Collected: 10/08/20 13:25
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.33 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489416	11/17/20 19:48	CMM	TAL SL
Total/NA	Prep	PrecSep_0			750.35 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:55	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: MW-3
Lab Sample ID: 280-141388-8
Date Collected: 10/07/20 09:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.04 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489416	11/17/20 19:48	CMM	TAL SL
Total/NA	Prep	PrecSep_0			499.08 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:55	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-4B
Lab Sample ID: 280-141388-9
Date Collected: 10/07/20 12:55
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.19 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489416	11/17/20 19:49	CMM	TAL SL
Total/NA	Prep	PrecSep_0			750.08 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:56	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: MW-5
Lab Sample ID: 280-141388-10
Date Collected: 10/07/20 11:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.83 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489416	11/17/20 19:49	CMM	TAL SL
Total/NA	Prep	PrecSep_0			749.62 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:56	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: MW-6
Lab Sample ID: 280-141388-11
Date Collected: 10/07/20 14:55
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.63 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489416	11/17/20 19:49	CMM	TAL SL
Total/NA	Prep	PrecSep_0			749.89 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:56	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: MW-6-D
Lab Sample ID: 280-141388-12
Date Collected: 10/07/20 15:00
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.63 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489416	11/17/20 19:49	CMM	TAL SL
Total/NA	Prep	PrecSep_0			750.76 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:56	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-4B-EB
Lab Sample ID: 280-141388-13
Date Collected: 10/07/20 13:30
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.85 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489920	11/21/20 17:40	CMM	TAL SL
Total/NA	Prep	PrecSep_0			749.71 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:56	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Client Sample ID: W-3D
Lab Sample ID: 280-141388-14
Date Collected: 10/07/20 15:15
Matrix: Water
Date Received: 10/09/20 11:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.15 mL	1.0 g	485965	10/16/20 14:00	AVB	TAL SL
Total/NA	Analysis	9315		1			489920	11/21/20 17:41	CMM	TAL SL
Total/NA	Prep	PrecSep_0			750.08 mL	1.0 g	489375	11/17/20 11:38	AVB	TAL SL
Total/NA	Analysis	9320		1			490291	11/25/20 11:56	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490570	11/30/20 14:22	GRW	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	12-01-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: Evan Hiser	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 10682O HDR-1
Client Contact: Molly Reeves	Phone: 720 273 3136	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days):			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

280-141388 Chain of Custody

J - DI Water; K - EDTA; L - EDA; M - Hexane; W - pH 4-5; Z - other (specify); Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sediment, Groundwater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C, Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli+W, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226R5Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
~~W-1~~				Water									
W-2A	10/08/20	1030	G	Water	N	N	1	1	1	1	2	6	
~~W-2B~~				Water									
W-3	10/07/20	1515	G	Water	N	N	1	1	1	1	2	6	
~~W-4~~				Water									
W-5	10/07/20	0900	G	Water	N	N	1	1	1	1	2	6	
W-6	10/07/20	0825	G	Water	N	N	1	1	1	1	2	6	
W-7	10/07/20	1350	G	Water	N	N	1	1	1	1	2	6	
~~W-8A~~				Water									
~~W-8B~~				Water									
MW-1B	10/05/20	1120	G	Water	N	N	1	1	1	1	2	6	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 10/09/20 1110	Company: HDR	Received by:	Date/Time: 10/09/2020 1110	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☒ Yes ☐ No

Custody Seal No.: 1414461, 1414463, 1414463, 1414494, 1414467, 1414466 1414466

Cooler Temperature(s) °C and Other Remarks: 3.6C, 2.2C, 2.3C, 2.8C, 1.8C, 2.0C CF-0.3C

IR# 11

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: Emily Miner	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 10052020HDR-1
Client Contact: Molly Reeves	Phone: 720 233 3136	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): Rush			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appiii+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2	10/07/20	1320	G	Water	N	N	1	1	1	1	2	6	
MW-3	10/07/20	0930	G	Water	N	N	1	1	1	1	2	6	
MW-4	10/07/20	1155	G	Water	N	N	1	1	1	1	2	6	
MW-5	10/07/20	1130	G	Water	N	N	1	1	1	1	2	6	
MW-6	10/07/20	1455	G	Water	N	N	1	1	1	1	2	6	
MW-16-0 ~~DUP-01~~	10/07/20	1500	G	Water	N	N	1	1	1	1	2	6	
MW-413-EB	10/07/20	1330	G	Water	N	N	1	1	1	1	2	6	
MW-30	10/07/20	1515	G	Water	N	N	1	1	1	1	2	6	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/09/20 1110	HDR		10/09/2020 1110	TAL DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-542478.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141388-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/6/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wewater, Sewater, Dwwastelqt, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-141388-1)	10/8/20	10:30 Mountain		Water			X	X	X	2	
W-3 (280-141388-2)	10/7/20	15:15 Mountain		Water			X	X	X	2	
W-5 (280-141388-3)	10/7/20	09:00 Mountain		Water			X	X	X	2	
W-6 (280-141388-4)	10/7/20	08:25 Mountain		Water			X	X	X	2	
W-7 (280-141388-5)	10/7/20	13:50 Mountain		Water			X	X	X	2	
MW-1B (280-141388-6)	10/8/20	11:20 Mountain		Water			X	X	X	2	
MW-2B (280-141388-7)	10/8/20	13:25 Mountain		Water			X	X	X	2	
MW-3 (280-141388-8)	10/7/20	09:30 Mountain		Water			X	X	X	2	
MW-4B (280-141388-9)	10/7/20	12:55 Mountain		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 10/7/2020 1300	Company	Received by: FED EX	Date/Time	Company
Relinquished by: FED EX	Date/Time:	Company	Received by:	Date/Time: 10/13/2020 0922	Company: EIA STL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-542478.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Darlene.Bandy@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141388-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/6/2020			Preservation Codes:
City: Earth City	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-5 (280-141388-10)	10/7/20	11:30 Mountain		Water			X	X	X	2	
MW-6 (280-141388-11)	10/7/20	14:55 Mountain		Water			X	X	X	2	
MW-6-D (280-141388-12)	10/7/20	15:00 Mountain		Water			X	X	X	2	
MW-4B-EB (280-141388-13)	10/7/20	13:30 Mountain		Water			X	X	X	2	
W-3D (280-141388-14)	10/7/20	15:15 Mountain		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	10/12/2020 1300		FED EX		
FED EX			[signature]	10/13/2020 0927	ETA STL

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141388-2

Login Number: 141388
List Number: 1
Creator: Turner, Shelby R

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141388-2

Login Number: 141388
List Number: 3
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis
List Creation: 10/15/20 01:38 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-141388-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
280-141388-1	W-2A	53.1
280-141388-2	W-3	95.3
280-141388-3	W-5	66.3
280-141388-4	W-6	99.1
280-141388-5	W-7	74.2
280-141388-6	MW-1B	53.7
280-141388-7	MW-2B	63.9
280-141388-8	MW-3	97.9
280-141388-9	MW-4B	94.4
280-141388-10	MW-5	73.6
280-141388-11	MW-6	102
280-141388-12	MW-6-D	95.3
280-141388-13	MW-4B-EB	88.0
280-141388-14	W-3D	95.0
LCS 160-485965/1-A	Lab Control Sample	90.9
LCSD 160-485965/2-A	Lab Control Sample Dup	90.3
MB 160-485965/23-A	Method Blank	92.4

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
280-141388-1	W-2A	84.8	102
280-141388-2	W-3	73.0	99.1
280-141388-3	W-5	83.6	108
280-141388-4	W-6	100	108
280-141388-5	W-7	96.7	106
280-141388-6	MW-1B	88.8	95.0
280-141388-7	MW-2B	95.2	103
280-141388-8	MW-3	95.2	106
280-141388-9	MW-4B	89.4	104
280-141388-10	MW-5	87.9	107
280-141388-11	MW-6	98.5	104
280-141388-12	MW-6-D	99.1	103
280-141388-13	MW-4B-EB	93.3	108
280-141388-14	W-3D	92.1	106
LCS 160-489375/1-A	Lab Control Sample	83.6	105
LCSD 160-489375/2-A	Lab Control Sample Dup	81.5	106
MB 160-489375/23-A	Method Blank	87.9	103

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

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ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-141712-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
10/29/2020 11:19:41 AM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-141712-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141712-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/16/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.0 C.

Please note, for W-4 limited volume was received and the RAD work and TSS analyses were cancelled for this sample.

TOTAL RECOVERABLE METALS- Method 6010C/6020A/7470A
Samples W-1 (280-141712-1), W-2B (280-141712-2) and W-4 (280-141712-3) required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The accuracy and precision of the Calcium MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY- VARIOUS METHODS
Samples W-1 (280-141712-1), W-2B (280-141712-2), and W-4 (280-141712-3) required dilution prior to analysis for Method 9056A. The reporting limits have been adjusted accordingly.

Reanalysis of the following samples for method 2540C_Calcd batch 514175 were performed outside of the analytical holding time due to initial results being outside of historical data limits : W-4 (280-141712-3). Sample results were within historical upon re-analysis. Both results are reported.

Please note that the recoveries, for the Chloride and Sulfate laboratory generated MS/MSD, are within QC limits; however, these are estimated values as the concentrations exceeded the calibration range. Method precision and accuracy has been verified by the acceptable LCS/LCSD analysis data; therefore, corrective action is deemed unnecessary.

The accuracy and precision of the Sulfate MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Job ID: 280-141712-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1 — Lab Sample ID: 280-141712-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.9		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0078		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.021		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00031	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0012		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0018	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.020		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00058	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.93		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	2.1		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	700		30	10	mg/L	10		9056A	Total/NA
Fluoride	41		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	30000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	16000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	44		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2B — Lab Sample ID: 280-141712-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0058		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.035		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.13		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.00093	J	0.0010	0.00031	mg/L	1		6020A	Total Recoverable
Calcium	170		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0030		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.040		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.034		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.028		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.020		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.2		0.0050	0.00089	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-2B (Continued) — Lab Sample ID: 280-141712-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.0013		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	5.2		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	810		30	10	mg/L	10		9056A	Total/NA
Fluoride	84		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	49000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	23000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	310		10	2.8	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-4 — Lab Sample ID: 280-141712-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0024	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.036		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.013		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.013		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.10		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00049	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.0031	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00030	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.6		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	400		30	10	mg/L	10		9056A	Total/NA
Fluoride	15		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	26000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	27000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids (TDS)	39000	H	200	94	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141712-1	W-1	Water	10/15/20 15:55	10/16/20 22:59	
280-141712-2	W-2B	Water	10/15/20 16:20	10/16/20 22:59	
280-141712-3	W-4	Water	10/15/20 15:25	10/16/20 22:59	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-1
Date Collected: 10/15/20 15:55
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.9**		0.10	0.023	mg/L		10/21/20 14:00	10/22/20 12:08	1

Client Sample ID: W-2B
Date Collected: 10/15/20 16:20
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.4**		0.10	0.023	mg/L		10/21/20 14:00	10/22/20 12:13	1

Client Sample ID: W-4
Date Collected: 10/15/20 15:25
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.2**		0.10	0.023	mg/L		10/21/20 14:00	10/22/20 12:17	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-1
Date Collected: 10/15/20 15:55
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/21/20 14:00	10/22/20 18:59	1
Arsenic	**0.0078**		0.0050	0.00075	mg/L		10/21/20 14:00	10/22/20 18:59	1
Barium	**0.021**		0.0050	0.0022	mg/L		10/21/20 14:00	10/22/20 18:59	1
Beryllium	ND		0.0010	0.00031	mg/L		10/21/20 14:00	10/22/20 18:59	1
Calcium	**400**		1.0	0.58	mg/L		10/21/20 14:00	10/22/20 18:59	1
Cadmium	**0.00031**	**J**	0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 18:59	1
Cobalt	**0.0012**		0.0010	0.00019	mg/L		10/21/20 14:00	10/22/20 18:59	1
Chromium	**0.0018**	**J**	0.0020	0.00098	mg/L		10/21/20 14:00	10/22/20 18:59	1
Molybdenum	**0.020**		0.010	0.0011	mg/L		10/21/20 14:00	10/22/20 18:59	1
Lead	**0.00058**	**J**	0.0010	0.00045	mg/L		10/21/20 14:00	10/22/20 18:59	1
Selenium	**0.93**		0.0050	0.00089	mg/L		10/21/20 14:00	10/22/20 18:59	1
Thallium	ND		0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 18:59	1
Lithium	**2.1**		0.040	0.0083	mg/L		10/21/20 14:00	10/23/20 12:25	5

Client Sample ID: W-2B
Date Collected: 10/15/20 16:20
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0058**		0.0020	0.00057	mg/L		10/21/20 14:00	10/22/20 19:02	1
Arsenic	**0.035**		0.0050	0.00075	mg/L		10/21/20 14:00	10/22/20 19:02	1
Barium	**0.13**		0.0050	0.0022	mg/L		10/21/20 14:00	10/22/20 19:02	1
Beryllium	**0.00093**	**J**	0.0010	0.00031	mg/L		10/21/20 14:00	10/22/20 19:02	1
Calcium	**170**		1.0	0.58	mg/L		10/21/20 14:00	10/22/20 19:02	1
Cadmium	**0.0030**		0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 19:02	1
Cobalt	**0.040**		0.0010	0.00019	mg/L		10/21/20 14:00	10/22/20 19:02	1
Chromium	**0.034**		0.0020	0.00098	mg/L		10/21/20 14:00	10/22/20 19:02	1
Molybdenum	**0.028**		0.010	0.0011	mg/L		10/21/20 14:00	10/22/20 19:02	1
Lead	**0.020**		0.0010	0.00045	mg/L		10/21/20 14:00	10/22/20 19:02	1
Selenium	**2.2**		0.0050	0.00089	mg/L		10/21/20 14:00	10/22/20 19:02	1
Thallium	**0.0013**		0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 19:02	1
Lithium	**5.2**		0.040	0.0083	mg/L		10/21/20 14:00	10/23/20 12:27	5

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-4
Date Collected: 10/15/20 15:25
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/21/20 14:00	10/22/20 19:05	1
Arsenic	**0.0024**	**J**	0.0050	0.00075	mg/L		10/21/20 14:00	10/22/20 19:05	1
Barium	**0.036**		0.0050	0.0022	mg/L		10/21/20 14:00	10/22/20 19:05	1
Beryllium	ND		0.0010	0.00031	mg/L		10/21/20 14:00	10/22/20 19:05	1
Calcium	**390**		1.0	0.58	mg/L		10/21/20 14:00	10/22/20 19:05	1
Cadmium	ND		0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 19:05	1
Cobalt	**0.013**		0.0010	0.00019	mg/L		10/21/20 14:00	10/22/20 19:05	1
Chromium	**0.013**		0.0020	0.00098	mg/L		10/21/20 14:00	10/22/20 19:05	1
Molybdenum	**0.10**		0.010	0.0011	mg/L		10/21/20 14:00	10/22/20 19:05	1
Lead	**0.00049**	**J**	0.0010	0.00045	mg/L		10/21/20 14:00	10/22/20 19:05	1
Selenium	**0.0031**	**J**	0.0050	0.00089	mg/L		10/21/20 14:00	10/22/20 19:05	1
Thallium	**0.00030**	**J**	0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 19:05	1
Lithium	**1.6**		0.040	0.0083	mg/L		10/21/20 14:00	10/23/20 12:30	5

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-1
Date Collected: 10/15/20 15:55
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/21/20 12:00	10/22/20 12:39	1

Client Sample ID: W-2B
Date Collected: 10/15/20 16:20
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/21/20 12:00	10/22/20 12:41	1

Client Sample ID: W-4
Date Collected: 10/15/20 15:25
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/21/20 12:00	10/22/20 12:43	1

General Chemistry

Client Sample ID: W-1
Date Collected: 10/15/20 15:55
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.4**	**HF**	0.1	0.1	SU			10/19/20 20:59	1
Temperature	**20.5**	**HF**	1.0	1.0	Degrees C			10/19/20 20:59	1
Chloride	**700**		30	10	mg/L			10/23/20 05:19	10
Fluoride	**41**		5.0	1.7	mg/L			10/23/20 05:19	10
Sulfate	**30000**		2500	520	mg/L			10/23/20 05:35	500
Total Dissolved Solids (TDS)	**16000**		1000	470	mg/L			10/20/20 16:09	1
Total Suspended Solids	**44**		4.0	1.1	mg/L			10/21/20 16:52	1

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: W-2B
Date Collected: 10/15/20 16:20
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			10/19/20 21:03	1
Temperature	20.3	HF	1.0	1.0	Degrees C			10/19/20 21:03	1
Chloride	810		30	10	mg/L			10/23/20 05:51	10
Fluoride	84		5.0	1.7	mg/L			10/23/20 05:51	10
Sulfate	49000		5000	1000	mg/L			10/23/20 06:08	1000
Total Dissolved Solids (TDS)	23000		1000	470	mg/L			10/20/20 16:09	1
Total Suspended Solids	310		10	2.8	mg/L			10/21/20 16:52	1

Client Sample ID: W-4
Date Collected: 10/15/20 15:25
Date Received: 10/16/20 22:59
Lab Sample ID: 280-141712-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			10/19/20 20:56	1
Temperature	20.9	HF	1.0	1.0	Degrees C			10/19/20 20:56	1
Chloride	400		30	10	mg/L			10/23/20 06:24	10
Fluoride	15		5.0	1.7	mg/L			10/23/20 06:24	10
Sulfate	26000		1000	210	mg/L			10/23/20 06:41	200
Total Dissolved Solids (TDS)	27000		1000	470	mg/L			10/20/20 16:09	1
Total Dissolved Solids (TDS)	39000	H	200	94	mg/L			10/26/20 18:23	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-457052/1-A
Matrix: Water
Analysis Batch: 457411

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 457052

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		10/21/20 14:00	10/22/20 10:39	1

Lab Sample ID: LCS 240-457052/2-A
Matrix: Water
Analysis Batch: 457411

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 457052

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.05		mg/L		105	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-457052/1-A
Matrix: Water
Analysis Batch: 457454

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 457052

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/21/20 14:00	10/22/20 18:25	1
Arsenic	ND		0.0050	0.00075	mg/L		10/21/20 14:00	10/22/20 18:25	1
Barium	ND		0.0050	0.0022	mg/L		10/21/20 14:00	10/22/20 18:25	1
Beryllium	ND		0.0010	0.00031	mg/L		10/21/20 14:00	10/22/20 18:25	1
Calcium	ND		1.0	0.58	mg/L		10/21/20 14:00	10/22/20 18:25	1
Cadmium	ND		0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 18:25	1
Cobalt	ND		0.0010	0.00019	mg/L		10/21/20 14:00	10/22/20 18:25	1
Chromium	ND		0.0020	0.00098	mg/L		10/21/20 14:00	10/22/20 18:25	1
Molybdenum	ND		0.010	0.0011	mg/L		10/21/20 14:00	10/22/20 18:25	1
Lead	ND		0.0010	0.00045	mg/L		10/21/20 14:00	10/22/20 18:25	1
Selenium	ND		0.0050	0.00089	mg/L		10/21/20 14:00	10/22/20 18:25	1
Thallium	ND		0.0010	0.00020	mg/L		10/21/20 14:00	10/22/20 18:25	1
Lithium	ND		0.0080	0.0017	mg/L		10/21/20 14:00	10/22/20 18:25	1

Lab Sample ID: LCS 240-457052/3-A
Matrix: Water
Analysis Batch: 457454

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 457052

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0948		mg/L		95	80 - 120
Arsenic	1.00	0.970		mg/L		97	80 - 120
Barium	1.00	1.02		mg/L		102	80 - 120
Beryllium	0.500	0.500		mg/L		100	80 - 120
Calcium	25.0	24.5		mg/L		98	80 - 120
Cadmium	0.500	0.485		mg/L		97	80 - 120
Cobalt	0.500	0.493		mg/L		99	80 - 120
Chromium	0.500	0.503		mg/L		101	80 - 120
Molybdenum	0.500	0.481		mg/L		96	80 - 120
Lead	0.500	0.505		mg/L		101	80 - 120
Selenium	1.00	0.952		mg/L		95	80 - 120
Thallium	1.00	0.922		mg/L		92	80 - 120
Lithium	0.500	0.489		mg/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-457054/1-A
Matrix: Water
Analysis Batch: 457442

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457054

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/21/20 12:00	10/22/20 12:10	1

Lab Sample ID: LCS 240-457054/2-A
Matrix: Water
Analysis Batch: 457442

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457054

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00468		mg/L		94	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-513270/4
Matrix: Water
Analysis Batch: 513270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-513678/6
Matrix: Water
Analysis Batch: 513678

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/22/20 16:30	1
Fluoride	ND		0.50	0.17	mg/L			10/22/20 16:30	1
Sulfate	ND		5.0	1.0	mg/L			10/22/20 16:30	1

Lab Sample ID: LCS 280-513678/4
Matrix: Water
Analysis Batch: 513678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	92.1		mg/L		92	90 - 110
Fluoride	5.00	4.91		mg/L		98	90 - 110
Sulfate	100	91.4		mg/L		91	90 - 110

Lab Sample ID: LCSD 280-513678/5
Matrix: Water
Analysis Batch: 513678

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	92.1		mg/L		92	90 - 110	0	10
Fluoride	5.00	4.92		mg/L		98	90 - 110	0	10
Sulfate	100	91.6		mg/L		92	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-513678/3
Matrix: Water
Analysis Batch: 513678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.94		mg/L		79	50 - 150
Fluoride	0.500	0.499	J	mg/L		100	50 - 150
Sulfate	5.00	4.24	J	mg/L		85	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-513344/1
Matrix: Water
Analysis Batch: 513344

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/20/20 16:09	1

Lab Sample ID: LCS 280-513344/2
Matrix: Water
Analysis Batch: 513344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	507		mg/L		101	93 - 110

Lab Sample ID: MB 280-514175/2
Matrix: Water
Analysis Batch: 514175

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/26/20 18:23	1

Lab Sample ID: LCS 280-514175/1
Matrix: Water
Analysis Batch: 514175

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	509		mg/L		102	93 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-513533/3
Matrix: Water
Analysis Batch: 513533

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			10/21/20 16:52	1

Lab Sample ID: LCS 280-513533/1
Matrix: Water
Analysis Batch: 513533

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	111		mg/L		111	79 - 114

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 280-513533/2
Matrix: Water
Analysis Batch: 513533

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids			100	109		mg/L		109	79 - 114	1	20

Metals

Prep Batch: 457052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total Recoverable	Water	3005A	
280-141712-2	W-2B	Total Recoverable	Water	3005A	
280-141712-3	W-4	Total Recoverable	Water	3005A	
MB 240-457052/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-457052/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-457052/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 457054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	7470A	
280-141712-2	W-2B	Total/NA	Water	7470A	
280-141712-3	W-4	Total/NA	Water	7470A	
MB 240-457054/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-457054/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 457411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total Recoverable	Water	6010C	457052
280-141712-2	W-2B	Total Recoverable	Water	6010C	457052
280-141712-3	W-4	Total Recoverable	Water	6010C	457052
MB 240-457052/1-A	Method Blank	Total Recoverable	Water	6010C	457052
LCS 240-457052/2-A	Lab Control Sample	Total Recoverable	Water	6010C	457052

Analysis Batch: 457442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	7470A	457054
280-141712-2	W-2B	Total/NA	Water	7470A	457054
280-141712-3	W-4	Total/NA	Water	7470A	457054
MB 240-457054/1-A	Method Blank	Total/NA	Water	7470A	457054
LCS 240-457054/2-A	Lab Control Sample	Total/NA	Water	7470A	457054

Analysis Batch: 457454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total Recoverable	Water	6020A	457052
280-141712-2	W-2B	Total Recoverable	Water	6020A	457052
280-141712-3	W-4	Total Recoverable	Water	6020A	457052
MB 240-457052/1-A	Method Blank	Total Recoverable	Water	6020A	457052
LCS 240-457052/3-A	Lab Control Sample	Total Recoverable	Water	6020A	457052

Analysis Batch: 457520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total Recoverable	Water	6020A	457052
280-141712-2	W-2B	Total Recoverable	Water	6020A	457052
280-141712-3	W-4	Total Recoverable	Water	6020A	457052

General Chemistry

Analysis Batch: 513270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	9040B	
280-141712-2	W-2B	Total/NA	Water	9040B	

General Chemistry (Continued)

Analysis Batch: 513270 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-3	W-4	Total/NA	Water	9040B	
LCS 280-513270/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 513344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	SM 2540C	
280-141712-2	W-2B	Total/NA	Water	SM 2540C	
280-141712-3	W-4	Total/NA	Water	SM 2540C	
MB 280-513344/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-513344/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 513533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	SM 2540D	
280-141712-2	W-2B	Total/NA	Water	SM 2540D	
MB 280-513533/3	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-513533/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-513533/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 513678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	9056A	
280-141712-1	W-1	Total/NA	Water	9056A	
280-141712-2	W-2B	Total/NA	Water	9056A	
280-141712-2	W-2B	Total/NA	Water	9056A	
280-141712-3	W-4	Total/NA	Water	9056A	
280-141712-3	W-4	Total/NA	Water	9056A	
MB 280-513678/6	Method Blank	Total/NA	Water	9056A	
LCS 280-513678/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-513678/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-513678/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 514175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-3	W-4	Total/NA	Water	SM 2540C	
MB 280-514175/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-514175/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-141712-1
Date Collected: 10/15/20 15:55
Matrix: Water
Date Received: 10/16/20 22:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			457411	10/22/20 12:08	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			457454	10/22/20 18:59	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			457520	10/23/20 12:25	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457054	10/21/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			457442	10/22/20 12:39	SLD	TAL CAN
Total/NA	Analysis	9040B		1			513270	10/19/20 20:59	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	513678	10/23/20 05:19	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	513678	10/23/20 05:35	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	513344	10/20/20 16:09	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513533	10/21/20 16:52	SVC	TAL DEN

Client Sample ID: W-2B
Lab Sample ID: 280-141712-2
Date Collected: 10/15/20 16:20
Matrix: Water
Date Received: 10/16/20 22:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			457411	10/22/20 12:13	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			457454	10/22/20 19:02	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			457520	10/23/20 12:27	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457054	10/21/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			457442	10/22/20 12:41	SLD	TAL CAN
Total/NA	Analysis	9040B		1			513270	10/19/20 21:03	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	513678	10/23/20 05:51	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	513678	10/23/20 06:08	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	513344	10/20/20 16:09	BAR	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	513533	10/21/20 16:52	SVC	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-141712-3
Date Collected: 10/15/20 15:25
Matrix: Water
Date Received: 10/16/20 22:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			457411	10/22/20 12:17	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			457454	10/22/20 19:05	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457052	10/21/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			457520	10/23/20 12:30	DTN	TAL CAN

Lab Chronicle

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4
Lab Sample ID: 280-141712-3
Date Collected: 10/15/20 15:25
Matrix: Water
Date Received: 10/16/20 22:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	457054	10/21/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			457442	10/22/20 12:43	SLD	TAL CAN
Total/NA	Analysis	9040B		1			513270	10/19/20 20:56	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	513678	10/23/20 06:24	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	513678	10/23/20 06:41	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	513344	10/20/20 16:09	BAR	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	514175	10/26/20 18:23	SVC	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141712-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street

Arvada, CO 80002-4517
phone 303.736.0100 fax 303.431.7171

Chain of Custody Record

eurofins | Environment Testing America

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact	**Project Manager: Matt Rohr**	**Site Contact: Emily Munoz** / **Date: 10/16/20**
HDR, Inc.	Email: matthew.rohr@hdrinc.com	**Lab Contact: Danielle Harrington** / **Carrier: Hand-carry**
9781 S Meridian Blvd Ste 400	**Tel/Fax: 402.598.8470**	
Englewood, CO 80112	**Analysis Turnaround Time**	
(xxx) xxx-xxxx Phone	☐ CALENDAR DAYS ☐ WORKING DAYS	
(xxx) xxx-xxxx FAX	TAT if different from Below RUSH	
Project Name: Xcel-Comanche	☐ 2 weeks	
Site:	☐ 1 week	
PO# 10-2018	☐ 2 days	
	☐ 1 day	

COC No: 101620-HDR1
1 of 1 COCs
TALS Project #: 280-141396
Sampler: Emily Munoz
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	TDS -	TSS -	Anions/pH	Metals (total)	Ra226+228 -	Sample Specific Notes:
W-1	10/15/20	1555	G	W	6	N	N	1	1	1	1	2	
W-2B	10/15/20	1620	G	W	6	N	N	1	1	1	1	2	
W-4	10/15/20	1525	G	W	2	N	N	X	X	X	X	X	Limited volume (~450ml)

280-141712 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☑ Disposal by Lab ☐ Archive for Months

Special Instructions/QC Requirements & Comments:
Contact Molly Reeves (molly.reeves@hdrinc.com / 734.263.7138) for direction on analytical priority for samples with insufficient volume for analysis.

10/16/2020 SO

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: 2.3	Corr'd: 2.0	Therm ID No.: 11	
Relinquished by:	Company: HDR	Date/Time: 10/16/20 1005	Received by:	Company: TA Denver	Date/Time: 10/16/2020 1005	
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:	
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:	

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10/29/2020

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-543473.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141712-1
Address: 4101 Shuffel Street NW.	Due Date Requested: 10/23/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

SC9

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6020A/3005A (MOD) 12 Total Metals (w/collision cell)	7470A/7470A_Prep Mercury	6020A/3005A (MOD) 3 Total Metals (w/collision cell)	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
W-4 (280-141712-3)	10/15/20	15:25 Mountain		Water			X	X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Dal Tso	10/16/2020 1920			10-16-20 1000	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client EM Denver Site Name _____ Cooler unpacked by: [illegible]

Cooler Received on 10-10-20 Opened on 10-10-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 14 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam ~~Plastic Bag~~ None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 12.6 °C Corrected Cooler Temp. 13.5 °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes ~~No~~
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes ~~No~~
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? ● Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
17. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141712-1

Login Number: 141712
List Number: 1
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-141712-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
12/1/2020 12:57:44 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-141712-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141712-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/16/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.0 C.

Please note, this report only contains the radioactive analyses. All other analyses are reported under job 280-141712-1.

RADIUM-226 (GFPC)
Both samples were prepared at a reduced aliquot due to yellow discoloration.

The Radium-226 MS/MSD could not be performed for this batch, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228
Both samples were prepared at a reduced aliquot due to yellow discoloration.

The Radium-228 MS/MSD could not be performed for this batch, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-141712-1

No Detections.

Client Sample ID: W-2B
Lab Sample ID: 280-141712-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141712-1	W-1	Water	10/15/20 15:55	10/16/20 22:59	
280-141712-2	W-2B	Water	10/15/20 16:20	10/16/20 22:59	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-1
Date Collected: 10/15/20 15:55
Date Received: 10/16/20 22:59

Lab Sample ID: 280-141712-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.354		0.137	0.141	1.00	0.137	pCi/L	10/29/20 09:24	11/23/20 11:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*76.8*		*40 - 110*	*10/29/20 09:24*	*11/23/20 11:09*	*1*

Client Sample ID: W-2B
Date Collected: 10/15/20 16:20
Date Received: 10/16/20 22:59

Lab Sample ID: 280-141712-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	5.58		0.501	0.709	1.00	0.152	pCi/L	10/29/20 09:24	11/23/20 11:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.1*		*40 - 110*	*10/29/20 09:24*	*11/23/20 11:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-1
Date Collected: 10/15/20 15:55
Date Received: 10/16/20 22:59

Lab Sample ID: 280-141712-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.69		0.498	0.521	1.00	0.628	pCi/L	10/29/20 11:03	11/11/20 12:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*76.8*		*40 - 110*	*10/29/20 11:03*	*11/11/20 12:06*	*1*
Y Carrier	*78.9*		*40 - 110*	*10/29/20 11:03*	*11/11/20 12:06*	*1*

Client Sample ID: W-2B
Date Collected: 10/15/20 16:20
Date Received: 10/16/20 22:59

Lab Sample ID: 280-141712-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	9.79		1.01	1.35	1.00	0.782	pCi/L	10/29/20 11:03	11/11/20 12:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.1*		*40 - 110*	*10/29/20 11:03*	*11/11/20 12:06*	*1*
Y Carrier	*75.9*		*40 - 110*	*10/29/20 11:03*	*11/11/20 12:06*	*1*

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-1
Date Collected: 10/15/20 15:55
Date Received: 10/16/20 22:59

Lab Sample ID: 280-141712-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.04		0.517	0.540	5.00	0.628	pCi/L		11/30/20 21:51	1

Client Sample ID: W-2B
Date Collected: 10/15/20 16:20
Date Received: 10/16/20 22:59

Lab Sample ID: 280-141712-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	15.4		1.13	1.52	5.00	0.782	pCi/L		11/30/20 21:51	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-487078/23-A
Matrix: Water
Analysis Batch: 490007

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487078

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06058	U	0.0625	0.0627	1.00	0.0978	pCi/L	10/29/20 09:24	11/23/20 14:08	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.2*		*40 - 110*	*10/29/20 09:24*	*11/23/20 14:08*	*1*

Lab Sample ID: LCS 160-487078/1-A
Matrix: Water
Analysis Batch: 490007

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487078

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	10.39		1.08	1.00	0.0972	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.4*		*40 - 110*

Lab Sample ID: LCSD 160-487078/2-A
Matrix: Water
Analysis Batch: 490007

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487078

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	11.08		1.15	1.00	0.0994	pCi/L	98	75 - 125	0.31	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*84.2*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-487267/23-A
Matrix: Water
Analysis Batch: 488917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487267

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3473	U	0.324	0.326	1.00	0.524	pCi/L	10/29/20 11:03	11/11/20 12:06	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.2*		*40 - 110*	*10/29/20 11:03*	*11/11/20 12:06*	*1*
Y Carrier	*79.6*		*40 - 110*	*10/29/20 11:03*	*11/11/20 12:06*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-487267/1-A
Matrix: Water
Analysis Batch: 488917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487267

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.66	8.320		1.01	1.00	0.449	pCi/L	109	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.4*		*40 - 110*
Y Carrier	*81.5*		*40 - 110*

Lab Sample ID: LCSD 160-487267/2-A
Matrix: Water
Analysis Batch: 488917

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487267

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			7.66	7.688		0.992	1.00	0.506	pCi/L	100	75 - 125	0.31	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*84.2*		*40 - 110*
Y Carrier	*77.8*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 487078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	PrecSep-21	
280-141712-2	W-2B	Total/NA	Water	PrecSep-21	
MB 160-487078/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-487078/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-487078/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 487267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141712-1	W-1	Total/NA	Water	PrecSep_0	
280-141712-2	W-2B	Total/NA	Water	PrecSep_0	
MB 160-487267/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-487267/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-487267/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-141712-1
Date Collected: 10/15/20 15:55
Matrix: Water
Date Received: 10/16/20 22:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.90 mL	1.0 g	487078	10/29/20 09:24	AVB	TAL SL
Total/NA	Analysis	9315		1			490007	11/23/20 11:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.90 mL	1.0 g	487267	10/29/20 11:03	AVB	TAL SL
Total/NA	Analysis	9320		1			488917	11/11/20 12:06	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490589	11/30/20 21:51	GRW	TAL SL

Client Sample ID: W-2B
Lab Sample ID: 280-141712-2
Date Collected: 10/15/20 16:20
Matrix: Water
Date Received: 10/16/20 22:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.07 mL	1.0 g	487078	10/29/20 09:24	AVB	TAL SL
Total/NA	Analysis	9315		1			490007	11/23/20 11:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.07 mL	1.0 g	487267	10/29/20 11:03	AVB	TAL SL
Total/NA	Analysis	9320		1			488917	11/11/20 12:06	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490589	11/30/20 21:51	GRW	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	11-30-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Eurofins TestAmerica, Denver
4955 Yarrow Street

Arvada, CO 80002-4517
phone 303.736.0100 fax 303.431.7171

Chain of Custody Record

eurofins | Environment Testing America

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

COC No: 101620-HDR1
1 of 1 COCs

Client Contact	Project Manager: Matt Rohr	Site Contact: Emily Munoz	Date: 10/16/20	TALS Project #: 280-141396
HDR, Inc.	Email: matthew.rohr@hdrinc.com	Lab Contact: Danielle Harrington	Carrier: Hand-carry	Sampler: Emily Munoz
9781 S Meridian Blvd Ste 400	Tel/Fax: 402.598.8470			For Lab Use Only:
Englewood, CO 80112	Analysis Turnaround Time			Walk-in Client:
(xxx) xxx-xxxx Phone	☐ CALENDAR DAYS ☐ WORKING DAYS			Lab Sampling:
(xxx) xxx-xxxx FAX	TAT if different from Below RUSH			
Project Name: Xcel-Comanche	☐ 2 weeks			Job / SDG No.:
Site:	☐ 1 week			
PO# 10-2018	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	TDS -	TSS -	Anions/pH	Metals (total)	Ra226+228 -	Sample Specific Notes:
W-1	10/15/20	1555	G	W	6	N	N	1	1	1	1	2	
W-2B	10/15/20	1620	G	W	6	N	N	1	1	1	1	2	
W-4	10/15/20	1525	G	W	2	N	N	X	X	X	X	X	Limited volume (~450ml)



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☑ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
Contact Molly Reeves (molly.reeves@hdrinc.com / 734.263.7138) for direction on analytical priority for samples with insufficient volume for analysis.

10/16/2020 SO

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 2.3 Corr'd: 2.0 | Therm ID No.: 11

	Company	Date/Time		Company	Date/Time
Relinquished by:	HDR	10/16/20 1005	Received by:	TA Denver	10/16/2020 1005
Relinquished by:			Received by:		
Relinquished by:			Received in Laboratory by:		

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12/1/2020

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-543466.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141712-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/16/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Waste/oil, BT=Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-1 (280-141712-1)	10/15/20	15:55 Mountain		Water			X	X	X	2	
W-2B (280-141712-2)	10/15/20	16:20 Mountain		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 10/19/2020 1425	Company	Received by: FED EX	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by:	Date/Time: 10/20/2020 0910	Company: EASTL
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141712-2

Login Number: 141712
List Number: 1
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141712-2

Login Number: 141712
List Number: 3
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis
List Creation: 10/21/20 10:45 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-141712-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
280-141712-1	W-1	76.8
280-141712-2	W-2B	72.1
LCS 160-487078/1-A	Lab Control Sample	92.4
LCSD 160-487078/2-A	Lab Control Sample Dup	84.2
MB 160-487078/23-A	Method Blank	81.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
280-141712-1	W-1	76.8	78.9
280-141712-2	W-2B	72.1	75.9
LCS 160-487267/1-A	Lab Control Sample	92.4	81.5
LCSD 160-487267/2-A	Lab Control Sample Dup	84.2	77.8
MB 160-487267/23-A	Method Blank	81.2	79.6

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
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Laboratory Job ID: 280-141851-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/19/2020 10:28:57 AM

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LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141851-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F3	Duplicate RPD exceeds the control limit
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-141851-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141851-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/21/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 3.8º C, 3.9º C, 4.5º C and 5.8º C.

TOTAL RECOVERABLE METALS- Method 6010C/6020A
Samples W-2A (280-141851-1), W-7 (280-141851-5), MW-1 (280-141851-6), MW-2 (280-141851-7), MW-3 (280-141851-8), MW-5 (280-141851-10), and W-7-DUP (280-141851-12) required dilution prior to analysis for Method 6020A. The reporting limits have been adjusted accordingly.

Low levels of Boro are present in the method blank associated with QC batch 280-458077. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The closing continuing calibration verification low (CCVL) standard associated with batch 240-458190 failed to meet acceptance limits for Lithium. The associated samples were above the CCV concentration for Lithium and were accepted based upon the CCV acceptance criteria.

Method 6020A: The continuing calibration verification (CCV) associated with batch 240-458209 recovered above the upper control limit for lithium. The sample associated with this CCV was less than the reporting limit for the affected analyte; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for Mercury method 7470A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY- VARIOUS
Several samples required a dilution for Method 9056A prior to analysis. The reporting limits have been adjusted accordingly.

Job ID: 280-141851-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Due to a required dilution, several samples was analyzed past the EPA-recommended holding time for method 2540C Total Dissolved Solids; the original analysis of the undiluted sample was performed within holding time. The out-of-hold, diluted result is confirmed by the undiluted result; both results have been reported at client request. There is no impact on data usability.

MS/MSD analysis was performed on sample MW-2. The MS/MSD for Fluoride method 9056A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for Fluoride method 9056A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The accuracy and precision of the Sulfate MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The Total Suspended Solids sample duplicate analysis performed on sample MW-2 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Fluoride failed the recovery criteria high for MRL 280-514882/3. As none of the results ae reporting Fluoride from this batch, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-141851-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-141851-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.6	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.026		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.016		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	310		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0036		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0070		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0011	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0028	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00046	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	3.0		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0045		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.7	^	0.080	0.017	mg/L	10		6020A	Total Recoverable
Mercury	0.00020		0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	810		60	20	mg/L	20		9056A	Total/NA
Fluoride	65		10	3.3	mg/L	20		9056A	Total/NA
Sulfate	51000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	71000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	78		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3
Lab Sample ID: 280-141851-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.3	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.034		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	510		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00056	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0016	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.043		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00045	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.016		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.11	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-3 (Continued) — Lab Sample ID: 280-141851-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	51		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.60		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2700		100	21	mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	4000		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	17		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5 — Lab Sample ID: 280-141851-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.3	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00061	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0023	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.028		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	390		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00024	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0066		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.012		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.039		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00054	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00031	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.45	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	490		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	2.4	J	2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	9100		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	13000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	5.6		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-141851-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	9.4	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00068	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0023	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.026		0.0050	0.0022	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-6 (Continued)
Lab Sample ID: 280-141851-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	440		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00034	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0025		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0015	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.40		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0029	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00025	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.15	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	23.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	160		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	1.9	J	2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	4000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	7000		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	6.4		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7
Lab Sample ID: 280-141851-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.5	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.020		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	410		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0057		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.016		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0012	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0052	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00084	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0048		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.8	^	0.080	0.017	mg/L	10		6020A	Total Recoverable
Mercury	0.00024		0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	760		30	10	mg/L	10		9056A	Total/NA
Fluoride	70		10	3.3	mg/L	20		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-7 (Continued) — Lab Sample ID: 280-141851-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	46000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	70000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	82		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 280-141851-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.6	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00073	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0052		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.013		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0029		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.024		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0046	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.58		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0032		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.4	^	0.080	0.017	mg/L	10		6020A	Total Recoverable
Mercury	0.00020		0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	350		30	10	mg/L	10		9056A	Total/NA
Fluoride	22		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	15000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	34000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	14		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 280-141851-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.5	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.019		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0011		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.022		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0074	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.6		0.0050	0.00089	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-2 (Continued) — Lab Sample ID: 280-141851-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.0098		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	4.2	^	0.080	0.017	mg/L	10		6020A	Total Recoverable
Mercury	0.00019	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	540		30	10	mg/L	10		9056A	Total/NA
Fluoride	49	F1	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	30000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	51000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	14		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 280-141851-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.8	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0053		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.015		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.017		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.034		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.028		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0044	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.75		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0044		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.9	^	0.080	0.017	mg/L	10		6020A	Total Recoverable
Mercury	0.00024		0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	360		30	10	mg/L	10		9056A	Total/NA
Fluoride	82		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	38000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	60000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	20		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 280-141851-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.61	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.019		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.024		0.0050	0.0022	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-4 (Continued) — Lab Sample ID: 280-141851-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	570		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00021	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0025		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0011	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.017		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.7		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00031	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.44	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Mercury	0.00013	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	190		30	10	mg/L	10		9056A	Total/NA
Fluoride	5.5		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	2900		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6400		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-141851-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.8	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00094	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0047	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.025		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00053	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0027		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0053		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0080	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.19		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0012		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.9	^	0.080	0.017	mg/L	10		6020A	Total Recoverable
Mercury	0.00014	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1600		30	10	mg/L	10		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 280-141851-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	28		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	18000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	36000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	27		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-141851-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.3	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0075		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0072		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	420		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00052	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0014	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.010		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.19	^	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	290		30	10	mg/L	10		9056A	Total/NA
Fluoride	4.7		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	4200		250	52	mg/L	50		9056A	Total/NA
Total Dissolved Solids (TDS)	7000		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	31		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7-DUP — Lab Sample ID: 280-141851-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.5	B	0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.018		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	320		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0058		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.016		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0013	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0050	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00085	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	2.2		0.0050	0.00089	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-7-DUP (Continued)
Lab Sample ID: 280-141851-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.0049		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	3.7	^	0.080	0.017	mg/L	10		6020A	Total Recoverable
Mercury	0.00023		0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.9	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	750		30	10	mg/L	10		9056A	Total/NA
Fluoride	91		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	48000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	88000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	35		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2-EB
Lab Sample ID: 280-141851-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	6.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Sulfate	1.5	J	5.0	1.0	mg/L	1		9056A	Total/NA
Total Dissolved Solids (TDS)	56		10	4.7	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-141851-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-141851-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141851-1	W-2A	Water	10/20/20 15:40	10/21/20 15:47	
280-141851-2	W-3	Water	10/20/20 13:15	10/21/20 15:47	
280-141851-3	W-5	Water	10/19/20 15:20	10/21/20 15:47	
280-141851-4	W-6	Water	10/19/20 14:10	10/21/20 15:47	
280-141851-5	W-7	Water	10/20/20 10:30	10/21/20 15:47	
280-141851-6	MW-1	Water	10/20/20 14:40	10/21/20 15:47	
280-141851-7	MW-2	Water	10/20/20 11:00	10/21/20 15:47	
280-141851-8	MW-3	Water	10/20/20 08:30	10/21/20 15:47	
280-141851-9	MW-4	Water	10/21/20 11:50	10/21/20 15:47	
280-141851-10	MW-5	Water	10/20/20 16:45	10/21/20 15:47	
280-141851-11	MW-6	Water	10/20/20 16:00	10/21/20 15:47	
280-141851-12	W-7-DUP	Water	10/20/20 10:30	10/21/20 15:47	
280-141851-13	MW-2-EB	Water	10/20/20 11:40	10/21/20 15:47	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 10/20/20 15:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 16:46	1

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.3	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 16:59	1

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.3	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:03	1

Client Sample ID: W-6
Date Collected: 10/19/20 14:10
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.4	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:08	1

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.5	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:12	1

Client Sample ID: MW-1
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.6	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:17	1

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.5	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:21	1

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.8	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:26	1

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.61	B	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:31	1

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.8**	**B**	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:35	1

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.3**	**B**	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:40	1

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.5**	**B**	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:53	1

Client Sample ID: MW-2-EB
Date Collected: 10/20/20 11:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		10/26/20 14:00	10/27/20 17:57	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 10/20/20 15:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:21	1
Arsenic	**0.026**		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:21	1
Barium	**0.016**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:21	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:21	1
Calcium	**310**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:21	1
Cadmium	**0.0036**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:21	1
Cobalt	**0.0070**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:21	1
Chromium	**0.0011**	**J**	0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:21	1
Molybdenum	**0.0028**	**J**	0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:21	1
Lead	**0.00046**	**J**	0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:21	1
Selenium	**3.0**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:21	1
Thallium	**0.0045**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:21	1
Lithium	**3.7**	**^**	0.080	0.017	mg/L		10/26/20 14:00	10/28/20 12:45	10

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:24	1
Arsenic	**0.0018**	**J**	0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:24	1
Barium	**0.034**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:24	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:24	1
Calcium	**510**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:24	1
Cadmium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:24	1
Cobalt	**0.00056**	**J**	0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:24	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0016	J	0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:24	1
Molybdenum	0.043		0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:24	1
Lead	0.00045	J	0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:24	1
Selenium	0.016		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:24	1
Thallium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:24	1
Lithium	0.11	^	0.0080	0.0017	mg/L		10/26/20 14:00	10/28/20 12:48	1

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00061	J	0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:26	1
Arsenic	0.0023	J	0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:26	1
Barium	0.028		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:26	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:26	1
Calcium	390		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:26	1
Cadmium	0.00024	J	0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:26	1
Cobalt	0.0066		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:26	1
Chromium	0.012		0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:26	1
Molybdenum	0.039		0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:26	1
Lead	0.00054	J	0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:26	1
Selenium	0.011		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:26	1
Thallium	0.00031	J	0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:26	1
Lithium	0.45	^	0.0080	0.0017	mg/L		10/26/20 14:00	10/28/20 12:50	1

Client Sample ID: W-6
Date Collected: 10/19/20 14:10
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00068	J	0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:29	1
Arsenic	0.0023	J	0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:29	1
Barium	0.026		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:29	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:29	1
Calcium	440		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:29	1
Cadmium	0.00034	J	0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:29	1
Cobalt	0.0025		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:29	1
Chromium	0.0015	J	0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:29	1
Molybdenum	0.40		0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:29	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:29	1
Selenium	0.0029	J	0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:29	1
Thallium	0.00025	J	0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:29	1
Lithium	0.15	^	0.0080	0.0017	mg/L		10/26/20 14:00	10/28/20 12:53	1

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:31	1
Arsenic	0.020		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:31	1
Barium	0.017		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:31	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:31	1
Calcium	**410**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:31	1
Cadmium	**0.0057**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:31	1
Cobalt	**0.016**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:31	1
Chromium	**0.0012**	**J**	0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:31	1
Molybdenum	**0.0052**	**J**	0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:31	1
Lead	**0.00084**	**J**	0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:31	1
Selenium	**2.1**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:31	1
Thallium	**0.0048**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:31	1
Lithium	**3.8**	**^**	0.080	0.017	mg/L		10/26/20 14:00	10/28/20 12:55	10

Client Sample ID: MW-1
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00073**	**J**	0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:37	1
Arsenic	**0.0052**		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:37	1
Barium	**0.013**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:37	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:37	1
Calcium	**400**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:37	1
Cadmium	**0.0029**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:37	1
Cobalt	**0.024**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:37	1
Chromium	ND		0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:37	1
Molybdenum	**0.0046**	**J**	0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:37	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:37	1
Selenium	**0.58**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:37	1
Thallium	**0.0032**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:37	1
Lithium	**2.4**	**^**	0.080	0.017	mg/L		10/26/20 14:00	10/28/20 12:58	10

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:42	1
Arsenic	**0.019**		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:42	1
Barium	**0.017**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:42	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:42	1
Calcium	**400**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:42	1
Cadmium	**0.0011**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:42	1
Cobalt	**0.022**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:42	1
Chromium	ND		0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:42	1
Molybdenum	**0.0074**	**J**	0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:42	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:42	1
Selenium	**2.6**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:42	1
Thallium	**0.0098**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:42	1
Lithium	**4.2**	**^**	0.080	0.017	mg/L		10/26/20 14:00	10/28/20 13:00	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:52	1
Arsenic	**0.0053**		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:52	1
Barium	**0.015**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:52	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:52	1
Calcium	**400**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:52	1
Cadmium	**0.017**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:52	1
Cobalt	**0.034**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:52	1
Chromium	**0.028**		0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:52	1
Molybdenum	**0.0044**	**J**	0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:52	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:52	1
Selenium	**0.75**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:52	1
Thallium	**0.0044**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:52	1
Lithium	**1.9**	**^**	0.080	0.017	mg/L		10/26/20 14:00	10/28/20 13:03	10

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 18:57	1
Arsenic	**0.019**		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 18:57	1
Barium	**0.024**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 18:57	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 18:57	1
Calcium	**570**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 18:57	1
Cadmium	**0.00021**	**J**	0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:57	1
Cobalt	**0.0025**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 18:57	1
Chromium	**0.0011**	**J**	0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 18:57	1
Molybdenum	**0.017**		0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 18:57	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 18:57	1
Selenium	**2.7**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 18:57	1
Thallium	**0.00031**	**J**	0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 18:57	1
Lithium	**0.44**	**^**	0.0080	0.0017	mg/L		10/26/20 14:00	10/28/20 13:05	1

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00094**	**J**	0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 19:00	1
Arsenic	**0.0047**	**J**	0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 19:00	1
Barium	**0.025**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 19:00	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 19:00	1
Calcium	**400**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 19:00	1
Cadmium	**0.00053**	**J**	0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:00	1
Cobalt	**0.0027**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 19:00	1
Chromium	**0.0053**		0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 19:00	1
Molybdenum	**0.0080**	**J**	0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 19:00	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 19:00	1
Selenium	**0.19**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 19:00	1
Thallium	**0.0012**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:00	1
Lithium	**2.9**	**^**	0.080	0.017	mg/L		10/26/20 14:00	10/28/20 13:13	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 19:03	1
Arsenic	**0.0075**		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 19:03	1
Barium	**0.0072**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 19:03	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 19:03	1
Calcium	**420**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 19:03	1
Cadmium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:03	1
Cobalt	**0.00052**	**J**	0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 19:03	1
Chromium	**0.0014**	**J**	0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 19:03	1
Molybdenum	**0.010**		0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 19:03	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 19:03	1
Selenium	**1.1**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 19:03	1
Thallium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:03	1
Lithium	**0.19**	**^**	0.0080	0.0017	mg/L		10/26/20 14:00	10/28/20 13:15	1

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 19:05	1
Arsenic	**0.018**		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 19:05	1
Barium	**0.017**		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 19:05	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 19:05	1
Calcium	**320**		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 19:05	1
Cadmium	**0.0058**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:05	1
Cobalt	**0.016**		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 19:05	1
Chromium	**0.0013**	**J**	0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 19:05	1
Molybdenum	**0.0050**	**J**	0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 19:05	1
Lead	**0.00085**	**J**	0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 19:05	1
Selenium	**2.2**		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 19:05	1
Thallium	**0.0049**		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:05	1
Lithium	**3.7**	**^**	0.080	0.017	mg/L		10/26/20 14:00	10/28/20 13:18	10

Client Sample ID: MW-2-EB
Date Collected: 10/20/20 11:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 19:10	1
Arsenic	ND		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 19:10	1
Barium	ND		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 19:10	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 19:10	1
Calcium	ND		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 19:10	1
Cadmium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:10	1
Cobalt	ND		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 19:10	1
Chromium	ND		0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 19:10	1
Molybdenum	ND		0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 19:10	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 19:10	1
Selenium	ND		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 19:10	1
Thallium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 19:10	1
Lithium	ND	^	0.0080	0.0017	mg/L		10/26/20 14:00	10/28/20 14:42	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2A
Date Collected: 10/20/20 15:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00020**		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:05	1

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:07	1

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:09	1

Client Sample ID: W-6
Date Collected: 10/19/20 14:10
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:11	1

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00024**		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:13	1

Client Sample ID: MW-1
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00020**		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:15	1

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00019**	**J**	0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:17	1

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00024**		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:24	1

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J**	0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:26	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00014**	**J**	0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:28	1

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:30	1

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00023**		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:32	1

Client Sample ID: MW-2-EB
Date Collected: 10/20/20 11:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 11:34	1

General Chemistry

Client Sample ID: W-2A
Date Collected: 10/20/20 15:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.0**	**HF**	0.1	0.1	SU			10/27/20 09:20	1
Temperature	**21.7**	**HF**	1.0	1.0	Degrees C			10/27/20 09:20	1
Chloride	**810**		60	20	mg/L			10/31/20 16:48	20
Fluoride	**65**		10	3.3	mg/L			10/30/20 04:16	20
Sulfate	**51000**		2500	520	mg/L			10/31/20 17:05	500
Total Dissolved Solids (TDS)	**71000**	**E**	100	47	mg/L			10/27/20 10:52	1
Total Suspended Solids	**78**		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.6**	**HF**	0.1	0.1	SU			10/27/20 09:17	1
Temperature	**21.6**	**HF**	1.0	1.0	Degrees C			10/27/20 09:17	1
Chloride	**51**		3.0	1.0	mg/L			10/31/20 17:23	1
Fluoride	**0.60**		0.50	0.17	mg/L			10/30/20 04:32	1
Sulfate	**2700**		100	21	mg/L			10/31/20 17:40	20
Total Dissolved Solids (TDS)	**4000**		40	19	mg/L			10/27/20 10:52	1
Total Suspended Solids	**17**		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.5**	**HF**	0.1	0.1	SU			10/27/20 09:14	1

General Chemistry (Continued)

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature	22.4	HF	1.0	1.0	Degrees C			10/27/20 09:14	1
Chloride	490		15	5.1	mg/L			10/31/20 23:13	5
Fluoride	2.4	J	2.5	0.83	mg/L			10/30/20 04:48	5
Sulfate	9100		500	100	mg/L			10/31/20 23:30	100
Total Dissolved Solids (TDS)	13000		200	94	mg/L			10/26/20 18:23	1
Total Suspended Solids	5.6		4.0	1.1	mg/L			10/26/20 13:21	1

Client Sample ID: W-6
Date Collected: 10/19/20 14:10
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			10/27/20 09:10	1
Temperature	23.7	HF	1.0	1.0	Degrees C			10/27/20 09:10	1
Chloride	160		15	5.1	mg/L			10/31/20 23:48	5
Fluoride	1.9	J	2.5	0.83	mg/L			10/30/20 05:05	5
Sulfate	4000		500	100	mg/L			11/01/20 00:06	100
Total Dissolved Solids (TDS)	7000		100	47	mg/L			10/26/20 18:23	1
Total Suspended Solids	6.4		4.0	1.1	mg/L			10/26/20 13:21	1

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			10/27/20 08:46	1
Temperature	20.6	HF	1.0	1.0	Degrees C			10/27/20 08:46	1
Chloride	760		30	10	mg/L			10/31/20 04:52	10
Fluoride	70		10	3.3	mg/L			10/31/20 05:44	20
Sulfate	46000		2500	520	mg/L			11/15/20 04:18	500
Total Dissolved Solids (TDS)	70000	E	100	47	mg/L			10/27/20 10:52	1
Total Suspended Solids	82		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: MW-1
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			10/27/20 08:43	1
Temperature	18.8	HF	1.0	1.0	Degrees C			10/27/20 08:43	1
Chloride	350		30	10	mg/L			11/01/20 00:23	10
Fluoride	22		5.0	1.7	mg/L			10/30/20 09:32	10
Sulfate	15000		2500	520	mg/L			11/01/20 00:41	500
Total Dissolved Solids (TDS)	34000	E	100	47	mg/L			10/27/20 10:52	1
Total Suspended Solids	14		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			10/27/20 08:40	1
Temperature	19.0	HF	1.0	1.0	Degrees C			10/27/20 08:40	1
Chloride	540		30	10	mg/L			10/31/20 07:03	10

General Chemistry (Continued)

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	49	F1	5.0	1.7	mg/L			10/30/20 09:48	10
Sulfate	30000		1000	210	mg/L			10/31/20 07:19	200
Total Dissolved Solids (TDS)	51000	E	100	47	mg/L			10/27/20 10:52	1
Total Suspended Solids	14		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			10/27/20 08:38	1
Temperature	20.8	HF	1.0	1.0	Degrees C			10/27/20 08:38	1
Chloride	360		30	10	mg/L			10/31/20 07:36	10
Fluoride	82		5.0	1.7	mg/L			10/30/20 11:26	10
Sulfate	38000		1000	210	mg/L			10/31/20 07:52	200
Total Dissolved Solids (TDS)	60000	E	100	47	mg/L			10/27/20 10:52	1
Total Suspended Solids	20		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			10/27/20 08:35	1
Temperature	21.6	HF	1.0	1.0	Degrees C			10/27/20 08:35	1
Chloride	190		30	10	mg/L			10/31/20 08:09	10
Fluoride	5.5		5.0	1.7	mg/L			10/30/20 11:43	10
Sulfate	2900		500	100	mg/L			10/31/20 08:25	100
Total Dissolved Solids (TDS)	6400		40	19	mg/L			10/28/20 13:43	1
Total Suspended Solids	9.2		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU			10/27/20 08:31	1
Temperature	20.8	HF	1.0	1.0	Degrees C			10/27/20 08:31	1
Chloride	1600		30	10	mg/L			10/31/20 10:20	10
Fluoride	28		5.0	1.7	mg/L			10/30/20 11:59	10
Sulfate	18000		1000	210	mg/L			10/31/20 10:36	200
Total Dissolved Solids (TDS)	36000	E	100	47	mg/L			10/27/20 10:52	1
Total Suspended Solids	27		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			10/27/20 08:28	1
Temperature	20.8	HF	1.0	1.0	Degrees C			10/27/20 08:28	1
Chloride	290		30	10	mg/L			10/31/20 10:52	10
Fluoride	4.7		0.50	0.17	mg/L			10/30/20 12:16	1
Sulfate	4200		250	52	mg/L			10/31/20 11:09	50

General Chemistry (Continued)

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	**7000**		40	19	mg/L			10/27/20 10:52	1
Total Suspended Solids	**31**		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.9**	**HF**	0.1	0.1	SU			10/27/20 08:24	1
Temperature	**20.7**	**HF**	1.0	1.0	Degrees C			10/27/20 08:24	1
Chloride	**750**		30	10	mg/L			10/31/20 11:25	10
Fluoride	**91**		5.0	1.7	mg/L			10/30/20 12:32	10
Sulfate	**48000**		5000	1000	mg/L			10/31/20 11:42	1000
Total Dissolved Solids (TDS)	**88000**	**E**	100	47	mg/L			10/27/20 10:52	1
Total Suspended Solids	**35**		4.0	1.1	mg/L			10/24/20 09:17	1

Client Sample ID: MW-2-EB
Date Collected: 10/20/20 11:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.3**	**HF**	0.1	0.1	SU			10/27/20 08:17	1
Temperature	**22.7**	**HF**	1.0	1.0	Degrees C			10/27/20 08:17	1
Chloride	ND		3.0	1.0	mg/L			10/30/20 22:02	1
Fluoride	ND		0.50	0.17	mg/L			10/31/20 01:37	1
Sulfate	**1.5**	**J**	5.0	1.0	mg/L			10/31/20 01:37	1
Total Dissolved Solids (TDS)	**56**		10	4.7	mg/L			10/27/20 10:52	1
Total Suspended Solids	ND		4.0	1.1	mg/L			10/24/20 09:17	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-457717/1-A
Matrix: Water
Analysis Batch: 458077

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 457717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0573	J	0.10	0.023	mg/L		10/26/20 14:00	10/27/20 15:55	1

Lab Sample ID: LCS 240-457717/2-A
Matrix: Water
Analysis Batch: 458077

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 457717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.03		mg/L		103	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-457717/1-A
Matrix: Water
Analysis Batch: 458090

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 457717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/26/20 14:00	10/27/20 17:52	1
Arsenic	ND		0.0050	0.00075	mg/L		10/26/20 14:00	10/27/20 17:52	1
Barium	ND		0.0050	0.0022	mg/L		10/26/20 14:00	10/27/20 17:52	1
Beryllium	ND		0.0010	0.00031	mg/L		10/26/20 14:00	10/27/20 17:52	1
Calcium	ND		1.0	0.58	mg/L		10/26/20 14:00	10/27/20 17:52	1
Cadmium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 17:52	1
Cobalt	ND		0.0010	0.00019	mg/L		10/26/20 14:00	10/27/20 17:52	1
Chromium	ND		0.0020	0.00098	mg/L		10/26/20 14:00	10/27/20 17:52	1
Molybdenum	ND		0.010	0.0011	mg/L		10/26/20 14:00	10/27/20 17:52	1
Lead	ND		0.0010	0.00045	mg/L		10/26/20 14:00	10/27/20 17:52	1
Selenium	ND		0.0050	0.00089	mg/L		10/26/20 14:00	10/27/20 17:52	1
Thallium	ND		0.0010	0.00020	mg/L		10/26/20 14:00	10/27/20 17:52	1
Lithium	ND		0.0080	0.0017	mg/L		10/26/20 14:00	10/27/20 17:52	1

Lab Sample ID: LCS 240-457717/3-A
Matrix: Water
Analysis Batch: 458090

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 457717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0968		mg/L		97	80 - 120
Arsenic	1.00	1.00		mg/L		100	80 - 120
Barium	1.00	1.04		mg/L		104	80 - 120
Beryllium	0.500	0.502		mg/L		100	80 - 120
Calcium	25.0	24.9		mg/L		99	80 - 120
Cadmium	0.500	0.494		mg/L		99	80 - 120
Cobalt	0.500	0.510		mg/L		102	80 - 120
Chromium	0.500	0.517		mg/L		103	80 - 120
Molybdenum	0.500	0.500		mg/L		100	80 - 120
Lead	0.500	0.513		mg/L		103	80 - 120
Selenium	1.00	0.984		mg/L		98	80 - 120
Thallium	1.00	0.986		mg/L		99	80 - 120
Lithium	0.500	0.500		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-457718/1-A
Matrix: Water
Analysis Batch: 458102

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 457718

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/26/20 12:00	10/27/20 10:44	1

Lab Sample ID: LCS 240-457718/2-A
Matrix: Water
Analysis Batch: 458102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 457718

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00500	0.00492		mg/L		98	80 - 120		

Method: 9040B - pH

Lab Sample ID: LCS 280-514259/4
Matrix: Water
Analysis Batch: 514259

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH adj. to 25 deg C			7.00	7.1		SU		101	99 - 101		

Lab Sample ID: 280-141851-13 DU
Matrix: Water
Analysis Batch: 514259

Client Sample ID: MW-2-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH adj. to 25 deg C	6.3	HF		6.2		SU				2	5
Temperature	22.7	HF		20.8		Degrees C				9	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-514714/6
Matrix: Water
Analysis Batch: 514714

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.17	mg/L			10/29/20 18:04	1

Lab Sample ID: LCS 280-514714/4
Matrix: Water
Analysis Batch: 514714

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			5.00	4.62		mg/L		92	90 - 110		

Lab Sample ID: LCSD 280-514714/5
Matrix: Water
Analysis Batch: 514714

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride			5.00	4.61		mg/L		92	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-514714/3
Matrix: Water
Analysis Batch: 514714

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.500	0.488	J	mg/L		98	50 - 150

Lab Sample ID: 280-141851-7 MS
Matrix: Water
Analysis Batch: 514714

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	49	F1	50.0	38.5	F1	mg/L		-20	80 - 120

Lab Sample ID: 280-141851-7 MSD
Matrix: Water
Analysis Batch: 514714

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	49	F1	50.0	37.8	F1	mg/L		-22	80 - 120	2	20

Lab Sample ID: 280-141851-7 DU
Matrix: Water
Analysis Batch: 514714

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	49	F1	45.9		mg/L		6	15

Lab Sample ID: MB 280-514858/6
Matrix: Water
Analysis Batch: 514858

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/30/20 18:30	1
Sulfate	ND		5.0	1.0	mg/L			10/30/20 18:30	1

Lab Sample ID: LCS 280-514858/4
Matrix: Water
Analysis Batch: 514858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.5		mg/L		94	90 - 110
Sulfate	100	96.5		mg/L		96	90 - 110

Lab Sample ID: LCSD 280-514858/5
Matrix: Water
Analysis Batch: 514858

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.8		mg/L		95	90 - 110	0	10
Sulfate	100	96.5		mg/L		97	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-514858/3
Matrix: Water
Analysis Batch: 514858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.98		mg/L		100	50 - 150		
Sulfate			5.00	5.01		mg/L		100	50 - 150		

Lab Sample ID: 280-141851-13 MS
Matrix: Water
Analysis Batch: 514858

Client Sample ID: MW-2-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	ND		50.0	52.8		mg/L		106	80 - 120		

Lab Sample ID: 280-141851-13 MSD
Matrix: Water
Analysis Batch: 514858

Client Sample ID: MW-2-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		50.0	52.7		mg/L		105	80 - 120	0	20

Lab Sample ID: 280-141851-13 DU
Matrix: Water
Analysis Batch: 514858

Client Sample ID: MW-2-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	ND			ND		mg/L				NC	15

Lab Sample ID: MB 280-514879/6
Matrix: Water
Analysis Batch: 514879

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.17	mg/L			10/30/20 17:19	1
Sulfate	ND		5.0	1.0	mg/L			10/30/20 17:19	1

Lab Sample ID: LCS 280-514879/4
Matrix: Water
Analysis Batch: 514879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			5.00	4.68		mg/L		94	90 - 110		
Sulfate			100	90.4		mg/L		90	90 - 110		

Lab Sample ID: LCSD 280-514879/5
Matrix: Water
Analysis Batch: 514879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride			5.00	4.74		mg/L		95	90 - 110	1	10
Sulfate			100	91.6		mg/L		92	90 - 110	1	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-514879/3
Matrix: Water
Analysis Batch: 514879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.500	0.501		mg/L		100	50 - 150
Sulfate	5.00	3.80	J	mg/L		76	50 - 150

Lab Sample ID: MB 280-514882/78
Matrix: Water
Analysis Batch: 514882

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			10/31/20 15:20	1
Fluoride	ND		0.50	0.17	mg/L			10/31/20 15:20	1
Sulfate	ND		5.0	1.0	mg/L			10/31/20 15:20	1

Lab Sample ID: LCS 280-514882/76
Matrix: Water
Analysis Batch: 514882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.0		mg/L		98	90 - 110
Fluoride	5.00	4.95		mg/L		99	90 - 110
Sulfate	100	97.6		mg/L		98	90 - 110

Lab Sample ID: LCSD 280-514882/77
Matrix: Water
Analysis Batch: 514882

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.4		mg/L		98	90 - 110	0	10
Fluoride	5.00	5.29		mg/L		106	90 - 110	7	10
Sulfate	100	98.0		mg/L		98	90 - 110	0	10

Lab Sample ID: MRL 280-514882/3
Matrix: Water
Analysis Batch: 514882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.44		mg/L		89	50 - 150
Fluoride	0.500	0.852	^	mg/L		170	50 - 150
Sulfate	5.00	4.27	J	mg/L		85	50 - 150

Lab Sample ID: MB 280-516658/62
Matrix: Water
Analysis Batch: 516658

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.0	mg/L			11/14/20 10:24	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-516658/60
Matrix: Water
Analysis Batch: 516658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	97.1		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-516658/61
Matrix: Water
Analysis Batch: 516658

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100	99.8		mg/L		100	90 - 110	3	10

Lab Sample ID: MRL 280-516658/3
Matrix: Water
Analysis Batch: 516658

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.79	J	mg/L		96	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-514175/2
Matrix: Water
Analysis Batch: 514175

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/26/20 18:23	1

Lab Sample ID: LCS 280-514175/1
Matrix: Water
Analysis Batch: 514175

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	509		mg/L		102	93 - 110

Lab Sample ID: MB 280-514266/1
Matrix: Water
Analysis Batch: 514266

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/27/20 10:52	1

Lab Sample ID: LCS 280-514266/2
Matrix: Water
Analysis Batch: 514266

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	522		mg/L		104	93 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 280-514463/1
Matrix: Water
Analysis Batch: 514463

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/28/20 13:43	1

Lab Sample ID: LCS 280-514463/2
Matrix: Water
Analysis Batch: 514463

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	537		mg/L		107	93 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-513956/1
Matrix: Water
Analysis Batch: 513956

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			10/24/20 09:17	1

Lab Sample ID: LCS 280-513956/2
Matrix: Water
Analysis Batch: 513956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	87.2		mg/L		87	79 - 114

Lab Sample ID: 280-141851-1 DU
Matrix: Water
Analysis Batch: 513956

Client Sample ID: W-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	78		26.4	F3	mg/L		98	10

Lab Sample ID: MB 280-514119/1
Matrix: Water
Analysis Batch: 514119

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			10/26/20 13:21	1

Lab Sample ID: LCS 280-514119/2
Matrix: Water
Analysis Batch: 514119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	100		mg/L		100	79 - 114

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 280-141851-3 DU
Client Sample ID: W-5
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 514119

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	5.6			17.6	F3	mg/L				103	10

Metals

Prep Batch: 457717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total Recoverable	Water	3005A	
280-141851-2	W-3	Total Recoverable	Water	3005A	
280-141851-3	W-5	Total Recoverable	Water	3005A	
280-141851-4	W-6	Total Recoverable	Water	3005A	
280-141851-5	W-7	Total Recoverable	Water	3005A	
280-141851-6	MW-1	Total Recoverable	Water	3005A	
280-141851-7	MW-2	Total Recoverable	Water	3005A	
280-141851-8	MW-3	Total Recoverable	Water	3005A	
280-141851-9	MW-4	Total Recoverable	Water	3005A	
280-141851-10	MW-5	Total Recoverable	Water	3005A	
280-141851-11	MW-6	Total Recoverable	Water	3005A	
280-141851-12	W-7-DUP	Total Recoverable	Water	3005A	
280-141851-13	MW-2-EB	Total Recoverable	Water	3005A	
MB 240-457717/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-457717/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-457717/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 457718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	7470A	
280-141851-2	W-3	Total/NA	Water	7470A	
280-141851-3	W-5	Total/NA	Water	7470A	
280-141851-4	W-6	Total/NA	Water	7470A	
280-141851-5	W-7	Total/NA	Water	7470A	
280-141851-6	MW-1	Total/NA	Water	7470A	
280-141851-7	MW-2	Total/NA	Water	7470A	
280-141851-8	MW-3	Total/NA	Water	7470A	
280-141851-9	MW-4	Total/NA	Water	7470A	
280-141851-10	MW-5	Total/NA	Water	7470A	
280-141851-11	MW-6	Total/NA	Water	7470A	
280-141851-12	W-7-DUP	Total/NA	Water	7470A	
280-141851-13	MW-2-EB	Total/NA	Water	7470A	
MB 240-457718/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-457718/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 458077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total Recoverable	Water	6010C	457717
280-141851-2	W-3	Total Recoverable	Water	6010C	457717
280-141851-3	W-5	Total Recoverable	Water	6010C	457717
280-141851-4	W-6	Total Recoverable	Water	6010C	457717
280-141851-5	W-7	Total Recoverable	Water	6010C	457717
280-141851-6	MW-1	Total Recoverable	Water	6010C	457717
280-141851-7	MW-2	Total Recoverable	Water	6010C	457717
280-141851-8	MW-3	Total Recoverable	Water	6010C	457717
280-141851-9	MW-4	Total Recoverable	Water	6010C	457717
280-141851-10	MW-5	Total Recoverable	Water	6010C	457717
280-141851-11	MW-6	Total Recoverable	Water	6010C	457717
280-141851-12	W-7-DUP	Total Recoverable	Water	6010C	457717
280-141851-13	MW-2-EB	Total Recoverable	Water	6010C	457717
MB 240-457717/1-A	Method Blank	Total Recoverable	Water	6010C	457717

Metals (Continued)

Analysis Batch: 458077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-457717/2-A	Lab Control Sample	Total Recoverable	Water	6010C	457717

Analysis Batch: 458090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total Recoverable	Water	6020A	457717
280-141851-2	W-3	Total Recoverable	Water	6020A	457717
280-141851-3	W-5	Total Recoverable	Water	6020A	457717
280-141851-4	W-6	Total Recoverable	Water	6020A	457717
280-141851-5	W-7	Total Recoverable	Water	6020A	457717
280-141851-6	MW-1	Total Recoverable	Water	6020A	457717
280-141851-7	MW-2	Total Recoverable	Water	6020A	457717
280-141851-8	MW-3	Total Recoverable	Water	6020A	457717
280-141851-9	MW-4	Total Recoverable	Water	6020A	457717
280-141851-10	MW-5	Total Recoverable	Water	6020A	457717
280-141851-11	MW-6	Total Recoverable	Water	6020A	457717
280-141851-12	W-7-DUP	Total Recoverable	Water	6020A	457717
280-141851-13	MW-2-EB	Total Recoverable	Water	6020A	457717
MB 240-457717/1-A	Method Blank	Total Recoverable	Water	6020A	457717
LCS 240-457717/3-A	Lab Control Sample	Total Recoverable	Water	6020A	457717

Analysis Batch: 458102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	7470A	457718
280-141851-2	W-3	Total/NA	Water	7470A	457718
280-141851-3	W-5	Total/NA	Water	7470A	457718
280-141851-4	W-6	Total/NA	Water	7470A	457718
280-141851-5	W-7	Total/NA	Water	7470A	457718
280-141851-6	MW-1	Total/NA	Water	7470A	457718
280-141851-7	MW-2	Total/NA	Water	7470A	457718
280-141851-8	MW-3	Total/NA	Water	7470A	457718
280-141851-9	MW-4	Total/NA	Water	7470A	457718
280-141851-10	MW-5	Total/NA	Water	7470A	457718
280-141851-11	MW-6	Total/NA	Water	7470A	457718
280-141851-12	W-7-DUP	Total/NA	Water	7470A	457718
280-141851-13	MW-2-EB	Total/NA	Water	7470A	457718
MB 240-457718/1-A	Method Blank	Total/NA	Water	7470A	457718
LCS 240-457718/2-A	Lab Control Sample	Total/NA	Water	7470A	457718

Analysis Batch: 458190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total Recoverable	Water	6020A	457717
280-141851-2	W-3	Total Recoverable	Water	6020A	457717
280-141851-3	W-5	Total Recoverable	Water	6020A	457717
280-141851-4	W-6	Total Recoverable	Water	6020A	457717
280-141851-5	W-7	Total Recoverable	Water	6020A	457717
280-141851-6	MW-1	Total Recoverable	Water	6020A	457717
280-141851-7	MW-2	Total Recoverable	Water	6020A	457717
280-141851-8	MW-3	Total Recoverable	Water	6020A	457717
280-141851-9	MW-4	Total Recoverable	Water	6020A	457717
280-141851-10	MW-5	Total Recoverable	Water	6020A	457717
280-141851-11	MW-6	Total Recoverable	Water	6020A	457717

Metals (Continued)

Analysis Batch: 458190 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-12	W-7-DUP	Total Recoverable	Water	6020A	457717

Analysis Batch: 458209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-13	MW-2-EB	Total Recoverable	Water	6020A	457717

General Chemistry

Analysis Batch: 513956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	SM 2540D	
280-141851-2	W-3	Total/NA	Water	SM 2540D	
280-141851-5	W-7	Total/NA	Water	SM 2540D	
280-141851-6	MW-1	Total/NA	Water	SM 2540D	
280-141851-7	MW-2	Total/NA	Water	SM 2540D	
280-141851-8	MW-3	Total/NA	Water	SM 2540D	
280-141851-9	MW-4	Total/NA	Water	SM 2540D	
280-141851-10	MW-5	Total/NA	Water	SM 2540D	
280-141851-11	MW-6	Total/NA	Water	SM 2540D	
280-141851-12	W-7-DUP	Total/NA	Water	SM 2540D	
280-141851-13	MW-2-EB	Total/NA	Water	SM 2540D	
MB 280-513956/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-513956/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-141851-1 DU	W-2A	Total/NA	Water	SM 2540D	

Analysis Batch: 514119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-3	W-5	Total/NA	Water	SM 2540D	
280-141851-4	W-6	Total/NA	Water	SM 2540D	
MB 280-514119/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-514119/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-141851-3 DU	W-5	Total/NA	Water	SM 2540D	

Analysis Batch: 514175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-3	W-5	Total/NA	Water	SM 2540C	
280-141851-4	W-6	Total/NA	Water	SM 2540C	
MB 280-514175/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-514175/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 514259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	9040B	
280-141851-2	W-3	Total/NA	Water	9040B	
280-141851-3	W-5	Total/NA	Water	9040B	
280-141851-4	W-6	Total/NA	Water	9040B	
280-141851-5	W-7	Total/NA	Water	9040B	
280-141851-6	MW-1	Total/NA	Water	9040B	
280-141851-7	MW-2	Total/NA	Water	9040B	
280-141851-8	MW-3	Total/NA	Water	9040B	
280-141851-9	MW-4	Total/NA	Water	9040B	

General Chemistry (Continued)

Analysis Batch: 514259 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-10	MW-5	Total/NA	Water	9040B	
280-141851-11	MW-6	Total/NA	Water	9040B	
280-141851-12	W-7-DUP	Total/NA	Water	9040B	
280-141851-13	MW-2-EB	Total/NA	Water	9040B	
LCS 280-514259/4	Lab Control Sample	Total/NA	Water	9040B	
280-141851-13 DU	MW-2-EB	Total/NA	Water	9040B	

Analysis Batch: 514266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	SM 2540C	
280-141851-2	W-3	Total/NA	Water	SM 2540C	
280-141851-5	W-7	Total/NA	Water	SM 2540C	
280-141851-6	MW-1	Total/NA	Water	SM 2540C	
280-141851-7	MW-2	Total/NA	Water	SM 2540C	
280-141851-8	MW-3	Total/NA	Water	SM 2540C	
280-141851-10	MW-5	Total/NA	Water	SM 2540C	
280-141851-11	MW-6	Total/NA	Water	SM 2540C	
280-141851-12	W-7-DUP	Total/NA	Water	SM 2540C	
280-141851-13	MW-2-EB	Total/NA	Water	SM 2540C	
MB 280-514266/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-514266/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 514463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-9	MW-4	Total/NA	Water	SM 2540C	
MB 280-514463/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-514463/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 514714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	9056A	
280-141851-2	W-3	Total/NA	Water	9056A	
280-141851-3	W-5	Total/NA	Water	9056A	
280-141851-4	W-6	Total/NA	Water	9056A	
280-141851-6	MW-1	Total/NA	Water	9056A	
280-141851-7	MW-2	Total/NA	Water	9056A	
280-141851-8	MW-3	Total/NA	Water	9056A	
280-141851-9	MW-4	Total/NA	Water	9056A	
280-141851-10	MW-5	Total/NA	Water	9056A	
280-141851-11	MW-6	Total/NA	Water	9056A	
280-141851-12	W-7-DUP	Total/NA	Water	9056A	
MB 280-514714/6	Method Blank	Total/NA	Water	9056A	
LCS 280-514714/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-514714/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-514714/3	Lab Control Sample	Total/NA	Water	9056A	
280-141851-7 MS	MW-2	Total/NA	Water	9056A	
280-141851-7 MSD	MW-2	Total/NA	Water	9056A	
280-141851-7 DU	MW-2	Total/NA	Water	9056A	

General Chemistry

Analysis Batch: 514858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-5	W-7	Total/NA	Water	9056A	
280-141851-7	MW-2	Total/NA	Water	9056A	
280-141851-7	MW-2	Total/NA	Water	9056A	
280-141851-8	MW-3	Total/NA	Water	9056A	
280-141851-8	MW-3	Total/NA	Water	9056A	
280-141851-9	MW-4	Total/NA	Water	9056A	
280-141851-9	MW-4	Total/NA	Water	9056A	
280-141851-10	MW-5	Total/NA	Water	9056A	
280-141851-10	MW-5	Total/NA	Water	9056A	
280-141851-11	MW-6	Total/NA	Water	9056A	
280-141851-11	MW-6	Total/NA	Water	9056A	
280-141851-12	W-7-DUP	Total/NA	Water	9056A	
280-141851-12	W-7-DUP	Total/NA	Water	9056A	
280-141851-13	MW-2-EB	Total/NA	Water	9056A	
MB 280-514858/6	Method Blank	Total/NA	Water	9056A	
LCS 280-514858/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-514858/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-514858/3	Lab Control Sample	Total/NA	Water	9056A	
280-141851-13 MS	MW-2-EB	Total/NA	Water	9056A	
280-141851-13 MSD	MW-2-EB	Total/NA	Water	9056A	
280-141851-13 DU	MW-2-EB	Total/NA	Water	9056A	

Analysis Batch: 514879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-5	W-7	Total/NA	Water	9056A	
280-141851-13	MW-2-EB	Total/NA	Water	9056A	
MB 280-514879/6	Method Blank	Total/NA	Water	9056A	
LCS 280-514879/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-514879/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-514879/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 514882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	9056A	
280-141851-1	W-2A	Total/NA	Water	9056A	
280-141851-2	W-3	Total/NA	Water	9056A	
280-141851-2	W-3	Total/NA	Water	9056A	
280-141851-3	W-5	Total/NA	Water	9056A	
280-141851-3	W-5	Total/NA	Water	9056A	
280-141851-4	W-6	Total/NA	Water	9056A	
280-141851-4	W-6	Total/NA	Water	9056A	
280-141851-6	MW-1	Total/NA	Water	9056A	
280-141851-6	MW-1	Total/NA	Water	9056A	
MB 280-514882/78	Method Blank	Total/NA	Water	9056A	
LCS 280-514882/76	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-514882/77	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-514882/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 516658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-5	W-7	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 516658 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-516658/62	Method Blank	Total/NA	Water	9056A	
LCS 280-516658/60	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-516658/61	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-516658/3	Lab Control Sample	Total/NA	Water	9056A	

Client Sample ID: W-2A
Lab Sample ID: 280-141851-1
Date Collected: 10/20/20 15:40
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 16:46	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:21	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			458190	10/28/20 12:45	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:05	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 09:20	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	514882	10/31/20 16:48	NK	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	514882	10/31/20 17:05	NK	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	514714	10/30/20 04:16	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: W-3
Lab Sample ID: 280-141851-2
Date Collected: 10/20/20 13:15
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 16:59	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:24	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458190	10/28/20 12:48	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:07	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 09:17	SPG	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	514882	10/31/20 17:23	NK	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	514882	10/31/20 17:40	NK	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	514714	10/30/20 04:32	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: W-5
Lab Sample ID: 280-141851-3
Date Collected: 10/19/20 15:20
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:03	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:26	DSH	TAL CAN

Client Sample ID: W-5
Lab Sample ID: 280-141851-3
Date Collected: 10/19/20 15:20
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458190	10/28/20 12:50	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:09	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 09:14	SPG	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	514882	10/31/20 23:13	NK	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	514882	10/31/20 23:30	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	514714	10/30/20 04:48	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	514175	10/26/20 18:23	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	514119	10/26/20 13:21	LEB	TAL DEN

Client Sample ID: W-6
Lab Sample ID: 280-141851-4
Date Collected: 10/19/20 14:10
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:08	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:29	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458190	10/28/20 12:53	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:11	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 09:10	SPG	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	514882	10/31/20 23:48	NK	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	514882	11/01/20 00:06	NK	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	514714	10/30/20 05:05	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514175	10/26/20 18:23	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	514119	10/26/20 13:21	LEB	TAL DEN

Client Sample ID: W-7
Lab Sample ID: 280-141851-5
Date Collected: 10/20/20 10:30
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:12	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:31	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			458190	10/28/20 12:55	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:13	SLD	TAL CAN

Client Sample ID: W-7
Lab Sample ID: 280-141851-5
Date Collected: 10/20/20 10:30
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040B		1			514259	10/27/20 08:46	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	514879	10/31/20 05:44	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514858	10/31/20 04:52	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	516658	11/15/20 04:18	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: MW-1
Lab Sample ID: 280-141851-6
Date Collected: 10/20/20 14:40
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:17	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:37	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			458190	10/28/20 12:58	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:15	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:43	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514882	11/01/20 00:23	NK	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	514882	11/01/20 00:41	NK	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514714	10/30/20 09:32	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: MW-2
Lab Sample ID: 280-141851-7
Date Collected: 10/20/20 11:00
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:21	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:42	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			458190	10/28/20 13:00	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:17	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:40	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514714	10/30/20 09:48	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514858	10/31/20 07:03	CJ	TAL DEN

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		200	5 mL	5 mL	514858	10/31/20 07:19	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:26	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:52	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			458190	10/28/20 13:03	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:24	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:38	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514714	10/30/20 11:26	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514858	10/31/20 07:36	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	514858	10/31/20 07:52	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:31	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 18:57	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458190	10/28/20 13:05	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:26	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:35	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514714	10/30/20 11:43	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514858	10/31/20 08:09	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	514858	10/31/20 08:25	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	514463	10/28/20 13:43	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:35	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 19:00	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			458190	10/28/20 13:13	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:28	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:31	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514714	10/30/20 11:59	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514858	10/31/20 10:20	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	514858	10/31/20 10:36	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:40	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 19:03	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458190	10/28/20 13:15	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:30	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:28	SPG	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	514714	10/30/20 12:16	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514858	10/31/20 10:52	CJ	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	514858	10/31/20 11:09	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:53	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 19:05	DSH	TAL CAN

Client Sample ID: W-7-DUP
Lab Sample ID: 280-141851-12

Date Collected: 10/20/20 10:30
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			458190	10/28/20 13:18	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:32	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:24	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514714	10/30/20 12:32	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	514858	10/31/20 11:25	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	514858	10/31/20 11:42	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Client Sample ID: MW-2-EB
Lab Sample ID: 280-141851-13

Date Collected: 10/20/20 11:40
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			458077	10/27/20 17:57	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458209	10/28/20 14:42	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	457717	10/26/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			458090	10/27/20 19:10	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	457718	10/26/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			458102	10/27/20 11:34	SLD	TAL CAN
Total/NA	Analysis	9040B		1			514259	10/27/20 08:17	SPG	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	514879	10/31/20 01:37	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	514858	10/30/20 22:02	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	514266	10/27/20 10:52	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	513956	10/24/20 09:17	LEB	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141851-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-102210-30342.2
Client Contact: Molly Reeves	Phone: 720 838 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

280-141851 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B - Alkalinity	6020B - Total Metals - Mg, K, Na	9056A - Anions, F	9315/9320 Ra-226	9315/9320 Ra-228	9040B pH	9056A - Anions, Cl, SO4	6010C - Boron	7470 - Hg	SM2540C - TDS	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	B	N	P	P	N	N	N	N	N	X	
W-1				Water														
W-2A	10/20/20	1540	G	Water	N					X	X	X	X	X	X	X	6	
W-2B				Water														
W-3	10/20/20	1315	G	Water	N					X	X	X	X	X	X	X	6	
W-4				Water														
W-5	10/19/20	1520	G	Water	N					X	X	X	X	X	X	X	6	
W-6	10/19/20	1410	G	Water	N					X	X	X	X	X	X	X	6	
W-7	10/20/20	1030	G	Water	N					X	X	X	X	X	X	X	6	
W-8A				Water														
W-8B				Water														
MW-1	10/20/20	1440	G	Water	N					X	X	X	X	X	X	X	6	

Total Number of containers: 1 - Ice; 3 - DI Water; K - EDTA; L - EDA; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other: Decahydrate

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
John Moore	10/21/20 1547	HDR	Kelly Hall	10/21/20 1547	Eurofins Denver
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 6.1, 4.1, 4.3, 4.2 IR#11-0-3 12P 10/21/20

Ver. 01/16/2019

11/19/2020

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TJM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-102210-30342.2
Client Contact: Molly Reeves	Phone: 720 838 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes: A - HCl, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-268-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			Other:
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Aprilli-IV, 7470A Hg	9040B pH, 9056A_28O Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226R$Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2	10/20/20	1100	G	Water	N		X	X	X	X	X	6	
MW-3	10/20/20	0830	G	Water	N		X	X	X	X	X	6	
MW-4	10/21/20	1150	G	Water	N		X	X	X	X	X	6	
MW-5	10/20/20	1645	G	Water	N		X	X	X	X	X	6	
MW-6	10/20/20	1600	G	Water	N		X	X	X	X	X	6	
MW-7 -DUP	10/20/20	1030	G	Water	N		X	X	X	X	X	6	
MW-2 -EB	10/20/20	1140	G	Water	N		X	X	X	X	X	6	
				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 10/21/2020/1547	Company: HDR	Received by:	Date/Time: 10/21/20 1547	Company: ETA Denver
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

11/19/2020

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-544059.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141851-1
Address: 4101 Shuffel Street NW.	Due Date Requested: 10/28/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	6020A/3005A 13 Total Metals (w/collision cell) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-141851-1)	10/20/20	15:40 Mountain		Water			X	X	X	1	Use Collision Cell
W-3 (280-141851-2)	10/20/20	13:15 Mountain		Water			X	X	X	1	Use Collision Cell
W-5 (280-141851-3)	10/19/20	15:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-6 (280-141851-4)	10/19/20	14:10 Mountain		Water			X	X	X	1	Use Collision Cell
W-7 (280-141851-5)	10/20/20	10:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-1 (280-141851-6)	10/20/20	14:40 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2 (280-141851-7)	10/20/20	11:00 Mountain		Water			X	X	X	1	Use Collision Cell
MW-3 (280-141851-8)	10/20/20	08:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-4 (280-141851-9)	10/21/20	11:50 Mountain		Water			X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-544059.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141851-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 10/28/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 26014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sludge, Groundwater, Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	6020A/3005A 13 Total Metals (w/collision cell) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-5 (280-141851-10)	10/20/20	16:45 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-141851-11)	10/20/20	16:00 Mountain		Water			X	X	X	1	Use Collision Cell
W-7-DUP (280-141851-12)	10/20/20	10:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2-EB (280-141851-13)	10/20/20	11:40 Mountain		Water			X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: [illegible]

Cooler Received on 10-23-20 Opened on 10-24-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 11 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 11.1 °C Corrected Cooler Temp. 12.0 °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861
14. Were VOAs on the COC? Yes No
15. Were air bubbles ≥6 mm in any VOA vials? ● ← Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
17. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble ≥6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141851-1

Login Number: 141851
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-141851-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
12/1/2020 1:25:30 PM

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LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-141851-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-141851-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/21/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 3.8º C, 3.9º C, 4.5º C and 5.8º C.

Please note, this report only contains the radioactive analyses. All other analyses are reported under job 280-141851-1.

RADIUM-226 (GFPC)
All of the samples, except MW-6 and MW-2 EB, were prepared at a reduced aliquot due to discoloration

The samples were inadvertently counted for longer than the standard count time of 100 minutes. All sample MDC are below the RL and all associated QC are within limits. Therefore corrective action was not performed.

The Radium-226 MS/MSD could not be performed for this batch, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228
All of the samples, except MW-6 and MW-2 EB, were prepared at a reduced aliquot due to discoloration

The Radium-228 MS/MSD could not be performed for this batch, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A — Lab Sample ID: 280-141851-1

No Detections.

Client Sample ID: W-3 — Lab Sample ID: 280-141851-2

No Detections.

Client Sample ID: W-5 — Lab Sample ID: 280-141851-3

No Detections.

Client Sample ID: W-6 — Lab Sample ID: 280-141851-4

No Detections.

Client Sample ID: W-7 — Lab Sample ID: 280-141851-5

No Detections.

Client Sample ID: MW-1 — Lab Sample ID: 280-141851-6

No Detections.

Client Sample ID: MW-2 — Lab Sample ID: 280-141851-7

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 280-141851-8

No Detections.

Client Sample ID: MW-4 — Lab Sample ID: 280-141851-9

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 280-141851-10

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 280-141851-11

No Detections.

Client Sample ID: W-7-DUP — Lab Sample ID: 280-141851-12

No Detections.

Client Sample ID: MW-2-EB — Lab Sample ID: 280-141851-13

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141851-1	W-2A	Water	10/20/20 15:40	10/21/20 15:47	
280-141851-2	W-3	Water	10/20/20 13:15	10/21/20 15:47	
280-141851-3	W-5	Water	10/19/20 15:20	10/21/20 15:47	
280-141851-4	W-6	Water	10/19/20 14:10	10/21/20 15:47	
280-141851-5	W-7	Water	10/20/20 10:30	10/21/20 15:47	
280-141851-6	MW-1	Water	10/20/20 14:40	10/21/20 15:47	
280-141851-7	MW-2	Water	10/20/20 11:00	10/21/20 15:47	
280-141851-8	MW-3	Water	10/20/20 08:30	10/21/20 15:47	
280-141851-9	MW-4	Water	10/21/20 11:50	10/21/20 15:47	
280-141851-10	MW-5	Water	10/20/20 16:45	10/21/20 15:47	
280-141851-11	MW-6	Water	10/20/20 16:00	10/21/20 15:47	
280-141851-12	W-7-DUP	Water	10/20/20 10:30	10/21/20 15:47	
280-141851-13	MW-2-EB	Water	10/20/20 11:40	10/21/20 15:47	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-2A
Date Collected: 10/20/20 15:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.25**		0.271	0.294	1.00	0.190	pCi/L	10/29/20 07:51	11/24/20 17:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:42*	*1*

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.145	U	0.110	0.111	1.00	0.153	pCi/L	10/29/20 07:51	11/24/20 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:43*	*1*

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.188**		0.130	0.131	1.00	0.173	pCi/L	10/29/20 07:51	11/24/20 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.0*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:43*	*1*

Client Sample ID: W-6
Date Collected: 10/19/20 14:10
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0688	U	0.0983	0.0985	1.00	0.167	pCi/L	10/29/20 07:51	11/24/20 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.8*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:43*	*1*

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.27**		0.351	0.406	1.00	0.153	pCi/L	10/29/20 07:51	11/24/20 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.5*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:43*	*1*

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-1
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.644		0.208	0.216	1.00	0.185	pCi/L	10/29/20 07:51	11/24/20 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.1*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:43*	*1*

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.21		0.274	0.295	1.00	0.179	pCi/L	10/29/20 07:51	11/24/20 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.1*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:44*	*1*

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.904		0.245	0.258	1.00	0.202	pCi/L	10/29/20 07:51	11/24/20 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.4*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:44*	*1*

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.481		0.178	0.183	1.00	0.180	pCi/L	10/29/20 07:51	11/24/20 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:44*	*1*

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0827	U	0.100	0.100	1.00	0.164	pCi/L	10/29/20 07:51	11/24/20 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*10/29/20 07:51*	*11/24/20 17:44*	*1*

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.260**		0.109	0.112	1.00	0.118	pCi/L	10/29/20 07:51	11/26/20 17:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*40 - 110*	*10/29/20 07:51*	*11/26/20 17:28*	*1*

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.33**		0.345	0.404	1.00	0.202	pCi/L	10/29/20 07:51	11/26/20 17:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*10/29/20 07:51*	*11/26/20 17:28*	*1*

Client Sample ID: MW-2-EB
Date Collected: 10/20/20 11:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0495	U	0.0667	0.0668	1.00	0.157	pCi/L	10/29/20 07:51	11/26/20 17:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.9*		*40 - 110*	*10/29/20 07:51*	*11/26/20 17:28*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-2A
Date Collected: 10/20/20 15:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.36**		0.571	0.611	1.00	0.697	pCi/L	10/29/20 08:34	11/20/20 11:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:36*	*1*
Y Carrier	*72.9*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:36*	*1*

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.642**		0.395	0.399	1.00	0.603	pCi/L	10/29/20 08:34	11/20/20 11:36	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110	10/29/20 08:34	11/20/20 11:36	1
Y Carrier	76.3		40 - 110	10/29/20 08:34	11/20/20 11:36	1

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.677		0.426	0.431	1.00	0.650	pCi/L	10/29/20 08:34	11/20/20 11:36	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.0		40 - 110	10/29/20 08:34	11/20/20 11:36	1
Y Carrier	75.9		40 - 110	10/29/20 08:34	11/20/20 11:36	1

Client Sample ID: W-6
Date Collected: 10/19/20 14:10
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.328	U	0.393	0.394	1.00	0.650	pCi/L	10/29/20 08:34	11/20/20 11:36	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110	10/29/20 08:34	11/20/20 11:36	1
Y Carrier	76.6		40 - 110	10/29/20 08:34	11/20/20 11:36	1

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.37		0.554	0.595	1.00	0.658	pCi/L	10/29/20 08:34	11/20/20 11:37	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.5		40 - 110	10/29/20 08:34	11/20/20 11:37	1
Y Carrier	74.0		40 - 110	10/29/20 08:34	11/20/20 11:37	1

Client Sample ID: MW-1
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.852		0.447	0.454	1.00	0.656	pCi/L	10/29/20 08:34	11/20/20 11:37	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110	10/29/20 08:34	11/20/20 11:37	1
Y Carrier	75.5		40 - 110	10/29/20 08:34	11/20/20 11:37	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.40**		0.548	0.591	1.00	0.641	pCi/L	10/29/20 08:34	11/20/20 11:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.1*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:37*	*1*
Y Carrier	*81.1*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:37*	*1*

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.03**		0.491	0.500	1.00	0.723	pCi/L	10/29/20 08:34	11/20/20 11:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.4*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:37*	*1*
Y Carrier	*76.6*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:37*	*1*

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.374	U	0.367	0.369	1.00	0.596	pCi/L	10/29/20 08:34	11/20/20 11:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:39*	*1*
Y Carrier	*77.4*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:39*	*1*

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.477	U	0.334	0.336	1.00	0.518	pCi/L	10/29/20 08:34	11/20/20 11:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:39*	*1*
Y Carrier	*81.1*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:39*	*1*

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.582**		0.333	0.337	1.00	0.505	pCi/L	10/29/20 08:34	11/20/20 11:40	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110	10/29/20 08:34	11/20/20 11:40	1
Y Carrier	73.6		40 - 110	10/29/20 08:34	11/20/20 11:40	1

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.55		0.498	0.551	1.00	0.543	pCi/L	10/29/20 08:34	11/20/20 11:40	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110	10/29/20 08:34	11/20/20 11:40	1
Y Carrier	82.2		40 - 110	10/29/20 08:34	11/20/20 11:40	1

Client Sample ID: MW-2-EB
Date Collected: 10/20/20 11:40
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.262	U	0.291	0.292	1.00	0.477	pCi/L	10/29/20 08:34	11/20/20 11:40	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110	10/29/20 08:34	11/20/20 11:40	1
Y Carrier	78.5		40 - 110	10/29/20 08:34	11/20/20 11:40	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-2A
Date Collected: 10/20/20 15:40
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.61		0.632	0.678	5.00	0.697	pCi/L		11/30/20 17:23	1

Client Sample ID: W-3
Date Collected: 10/20/20 13:15
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.786		0.410	0.414	5.00	0.603	pCi/L		11/30/20 17:23	1

Client Sample ID: W-5
Date Collected: 10/19/20 15:20
Date Received: 10/21/20 15:47

Lab Sample ID: 280-141851-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.865		0.445	0.450	5.00	0.650	pCi/L		11/30/20 17:23	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-6
Date Collected: 10/19/20 14:10
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.396	U	0.405	0.406	5.00	0.650	pCi/L		11/30/20 17:23	1

Client Sample ID: W-7
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**4.63**		0.656	0.720	5.00	0.658	pCi/L		11/30/20 17:23	1

Client Sample ID: MW-1
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.50**		0.493	0.503	5.00	0.656	pCi/L		11/30/20 17:23	1

Client Sample ID: MW-2
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**3.61**		0.613	0.661	5.00	0.641	pCi/L		11/30/20 17:23	1

Client Sample ID: MW-3
Date Collected: 10/20/20 08:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.94**		0.549	0.563	5.00	0.723	pCi/L		11/30/20 17:23	1

Client Sample ID: MW-4
Date Collected: 10/21/20 11:50
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.855**		0.408	0.412	5.00	0.596	pCi/L		11/30/20 17:23	1

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: MW-5
Date Collected: 10/20/20 16:45
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.560**		0.349	0.351	5.00	0.518	pCi/L		11/30/20 17:23	1

Client Sample ID: MW-6
Date Collected: 10/20/20 16:00
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.841**		0.350	0.355	5.00	0.505	pCi/L		11/30/20 17:23	1

Client Sample ID: W-7-DUP
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**4.88**		0.606	0.683	5.00	0.543	pCi/L		11/30/20 17:23	1

Client Sample ID: MW-2-EB
Date Collected: 10/20/20 11:40
Date Received: 10/21/20 15:47
Lab Sample ID: 280-141851-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.213	U	0.299	0.300	5.00	0.477	pCi/L		11/30/20 17:23	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-487066/23-A
Matrix: Water
Analysis Batch: 490292

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487066

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02216	U	0.0676	0.0677	1.00	0.147	pCi/L	10/29/20 07:51	11/26/20 17:28	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*40 - 110*	*10/29/20 07:51*	*11/26/20 17:28*	*1*

Lab Sample ID: LCS 160-487066/1-A
Matrix: Water
Analysis Batch: 490121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487066

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	10.46		1.08	1.00	0.155	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*63.3*		*40 - 110*

Lab Sample ID: LCSD 160-487066/2-A
Matrix: Water
Analysis Batch: 490121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487066

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	11.25		1.13	1.00	0.132	pCi/L	99	75 - 125	0.36	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*84.2*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-487067/23-A
Matrix: Water
Analysis Batch: 489823

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487067

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3446	U	0.256	0.258	1.00	0.402	pCi/L	10/29/20 08:34	11/20/20 11:40	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:40*	*1*
Y Carrier	*84.9*		*40 - 110*	*10/29/20 08:34*	*11/20/20 11:40*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-487067/1-A
Matrix: Water
Analysis Batch: 489827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487067

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.64	6.947		1.01	1.00	0.670	pCi/L	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*63.3*		*40 - 110*
Y Carrier	*80.4*		*40 - 110*

Lab Sample ID: LCSD 160-487067/2-A
Matrix: Water
Analysis Batch: 489827

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487067

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			7.64	8.065		1.03	1.00	0.513	pCi/L	106	75 - 125	0.55	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*84.2*		*40 - 110*
Y Carrier	*77.4*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 487066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	PrecSep-21	
280-141851-2	W-3	Total/NA	Water	PrecSep-21	
280-141851-3	W-5	Total/NA	Water	PrecSep-21	
280-141851-4	W-6	Total/NA	Water	PrecSep-21	
280-141851-5	W-7	Total/NA	Water	PrecSep-21	
280-141851-6	MW-1	Total/NA	Water	PrecSep-21	
280-141851-7	MW-2	Total/NA	Water	PrecSep-21	
280-141851-8	MW-3	Total/NA	Water	PrecSep-21	
280-141851-9	MW-4	Total/NA	Water	PrecSep-21	
280-141851-10	MW-5	Total/NA	Water	PrecSep-21	
280-141851-11	MW-6	Total/NA	Water	PrecSep-21	
280-141851-12	W-7-DUP	Total/NA	Water	PrecSep-21	
280-141851-13	MW-2-EB	Total/NA	Water	PrecSep-21	
MB 160-487066/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-487066/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-487066/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 487067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-141851-1	W-2A	Total/NA	Water	PrecSep_0	
280-141851-2	W-3	Total/NA	Water	PrecSep_0	
280-141851-3	W-5	Total/NA	Water	PrecSep_0	
280-141851-4	W-6	Total/NA	Water	PrecSep_0	
280-141851-5	W-7	Total/NA	Water	PrecSep_0	
280-141851-6	MW-1	Total/NA	Water	PrecSep_0	
280-141851-7	MW-2	Total/NA	Water	PrecSep_0	
280-141851-8	MW-3	Total/NA	Water	PrecSep_0	
280-141851-9	MW-4	Total/NA	Water	PrecSep_0	
280-141851-10	MW-5	Total/NA	Water	PrecSep_0	
280-141851-11	MW-6	Total/NA	Water	PrecSep_0	
280-141851-12	W-7-DUP	Total/NA	Water	PrecSep_0	
280-141851-13	MW-2-EB	Total/NA	Water	PrecSep_0	
MB 160-487067/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-487067/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-487067/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-141851-1
Date Collected: 10/20/20 15:40
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.32 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:42	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.32 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:36	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: W-3
Lab Sample ID: 280-141851-2
Date Collected: 10/20/20 13:15
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.24 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:43	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.24 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:36	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: W-5
Lab Sample ID: 280-141851-3
Date Collected: 10/19/20 15:20
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.33 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:43	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.33 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:36	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: W-6
Lab Sample ID: 280-141851-4
Date Collected: 10/19/20 14:10
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.05 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:43	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.05 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:36	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-7
Lab Sample ID: 280-141851-5
Date Collected: 10/20/20 10:30
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.27 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:43	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.27 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:37	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: MW-1
Lab Sample ID: 280-141851-6
Date Collected: 10/20/20 14:40
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.61 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:43	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.61 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:37	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: MW-2
Lab Sample ID: 280-141851-7
Date Collected: 10/20/20 11:00
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.20 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.20 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:37	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: MW-3
Lab Sample ID: 280-141851-8
Date Collected: 10/20/20 08:30
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.66 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.66 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489827	11/20/20 11:37	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-4
Lab Sample ID: 280-141851-9
Date Collected: 10/21/20 11:50
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.34 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.34 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489823	11/20/20 11:39	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: MW-5
Lab Sample ID: 280-141851-10
Date Collected: 10/20/20 16:45
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.37 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490119	11/24/20 17:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.37 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489823	11/20/20 11:39	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: MW-6
Lab Sample ID: 280-141851-11
Date Collected: 10/20/20 16:00
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.70 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490292	11/26/20 17:28	CMM	TAL SL
Total/NA	Prep	PrecSep_0			1000.70 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489823	11/20/20 11:40	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Client Sample ID: W-7-DUP
Lab Sample ID: 280-141851-12
Date Collected: 10/20/20 10:30
Matrix: Water
Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.31 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1			490292	11/26/20 17:28	CMM	TAL SL
Total/NA	Prep	PrecSep_0			750.31 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489823	11/20/20 11:40	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2-EB
Lab Sample ID: 280-141851-13

Date Collected: 10/20/20 11:40
Matrix: Water

Date Received: 10/21/20 15:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.01 mL	1.0 g	487066	10/29/20 07:51	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	490292	11/26/20 17:28	CMM	TAL SL
Total/NA	Prep	PrecSep_0			999.01 mL	1.0 g	487067	10/29/20 08:34	AVB	TAL SL
Total/NA	Analysis	9320		1			489823	11/20/20 11:40	CMM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			490584	11/30/20 17:23	GRW	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	11-30-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS/JM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-102210-30342.2
Client Contact: Molly Reeves	Phone: 720 838 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

280-141851 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B - Alkalinity	6020B - 5 Total Metals - Mg, K, Na	9056A - Anions	9040B pH	6010C - Boron, 7470 - Hg	9040B pH, 9056A Anions	2540C - TDS	2540D - TSS	9315/9320 Ra	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	B	N	N	N	N	N	N	N	X	
W-1				Water													
W-2A	10/20/20	1540	G	Water	N						X	X	X	X	X	6	
W-2B				Water													
W-3	10/20/20	1315	G	Water	N						X	X	X	X	X	6	
W-4				Water													
W-5	10/19/20	1520	G	Water	N						X	X	X	X	X	6	
W-6	10/19/20	1410	G	Water	N						X	X	X	X	X	6	
W-7	10/20/20	1030	G	Water	N						X	X	X	X	X	6	
W-8A				Water													
W-8B				Water													
MW-1	10/20/20	1440	G	Water	N						X	X	X	X	X	6	

I - Ice
J - DI Water
K - EDTA
L - EDA
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
John Moore	10/21/20 1547	HDR	Kathy Hall	10/21/20 1547	EFA Denver
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 6.1, 4.1, 4.3, 4.2 IR#11-0-3 12R 10/21/20

Ver. 01/16/2019

12/1/2020

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TJM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 280-102210-30342.2
Client Contact: Molly Reeves	Phone: 720 838 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes: A - HCl, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-268-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			Other:
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Apollo-IV, 7470A Hg	9056A_28O Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226R$Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2	10/20/20	1100	G	Water	N		X	X	X	X	X	6	
MW-3	10/20/20	0830	G	Water	N		X	X	X	X	X	6	
MW-4	10/21/20	1150	G	Water	N		X	X	X	X	X	6	
MW-5	10/20/20	1645	G	Water	N		X	X	X	X	X	6	
MW-6	10/20/20	1600	G	Water	N		X	X	X	X	X	6	
MW-7 -DUP	10/20/20	1030	G	Water	N		X	X	X	X	X	6	
MW-2 -EB	10/20/20	1140	G	Water	N		X	X	X	X	X	6	
				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 10/21/2020/1547	Company: HDR	Received by:	Date/Time: 10/21/20 1547	Company: ETA Denver
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-544058.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141851-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/9/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra226/PrecSep_0 Ra226 (2/3) - SUB	Ra226Ra228_GFPCr Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-141851-1)	10/20/20	15:40 Mountain		Water			X	X	X	2	
W-3 (280-141851-2)	10/20/20	13:15 Mountain		Water			X	X	X	2	
W-5 (280-141851-3)	10/19/20	15:20 Mountain		Water			X	X	X	2	
W-6 (280-141851-4)	10/19/20	14:10 Mountain		Water			X	X	X	2	
W-7 (280-141851-5)	10/20/20	10:30 Mountain		Water			X	X	X	2	
MW-1 (280-141851-6)	10/20/20	14:40 Mountain		Water			X	X	X	2	
MW-2 (280-141851-7)	10/20/20	11:00 Mountain		Water			X	X	X	2	
MW-3 (280-141851-8)	10/20/20	08:30 Mountain		Water			X	X	X	2	
MW-4 (280-141851-9)	10/21/20	11:50 Mountain		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 10/22/2020 1235	Company	Received by: FED EX
Relinquished by: FED EX	Date/Time:	Company	Received by: Date/Time: 10/23/2020 1025 Company ETA STL
Relinquished by	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-544058.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-141851-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/9/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226/Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-5 (280-141851-10)	10/20/20	16:45 Mountain		Water			X	X	X	2	
MW-6 (280-141851-11)	10/20/20	16:00 Mountain		Water			X	X	X	2	
W-7-DUP (280-141851-12)	10/20/20	10:30 Mountain		Water			X	X	X	2	
MW-2-EB (280-141851-13)	10/20/20	11:40 Mountain		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/22/2020 1255		FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by:	Date/Time: 10/23/2020 1625	Company EATSTL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141851-2

Login Number: 141851
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-141851-2

Login Number: 141851
List Number: 2
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis
List Creation: 10/23/20 04:40 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-141851-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
280-141851-1	W-2A	85.6
280-141851-2	W-3	91.2
280-141851-3	W-5	78.0
280-141851-4	W-6	86.8
280-141851-5	W-7	86.5
280-141851-6	MW-1	80.1
280-141851-7	MW-2	80.1
280-141851-8	MW-3	82.4
280-141851-9	MW-4	92.4
280-141851-10	MW-5	97.1
280-141851-11	MW-6	88.9
280-141851-12	W-7-DUP	92.4
280-141851-13	MW-2-EB	78.9
LCS 160-487066/1-A	Lab Control Sample	63.3
LCSD 160-487066/2-A	Lab Control Sample Dup	84.2
MB 160-487066/23-A	Method Blank	88.9

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
280-141851-1	W-2A	85.6	72.9
280-141851-2	W-3	91.2	76.3
280-141851-3	W-5	78.0	75.9
280-141851-4	W-6	86.8	76.6
280-141851-5	W-7	86.5	74.0
280-141851-6	MW-1	80.1	75.5
280-141851-7	MW-2	80.1	81.1
280-141851-8	MW-3	82.4	76.6
280-141851-9	MW-4	92.4	77.4
280-141851-10	MW-5	97.1	81.1
280-141851-11	MW-6	88.9	73.6
280-141851-12	W-7-DUP	92.4	82.2
280-141851-13	MW-2-EB	78.9	78.5
LCS 160-487067/1-A	Lab Control Sample	63.3	80.4
LCSD 160-487067/2-A	Lab Control Sample Dup	84.2	77.4
MB 160-487067/23-A	Method Blank	88.9	84.9

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-142174-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/12/2020 1:23:39 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-142174-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-142174-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/30/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 14.1 C, which is above the EPA's recommended temperature of 6C.

Please note, limited sample volume was received for sample W-4.The was split for sample W-4 for Metals, TDS, pH, Chloride, Fluoride, and Sulfate analyses.

TOTAL RECOVERABLE METALS- Method 6010C/6020A/7470A

Samples W-1 (280-142174-1), W-4 (280-142174-2) and W-2B (280-142174-3) required dilution prior to analysis due to matrix interferences or high analyte concentrations. The reporting limits have been adjusted accordingly.

The accuracy and precision of the Lithium MS/MSD performed on a sample W-1 could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

MS/MSD analyses were performed on sample W-1. The MS/MSD for method 6020A exhibited spike compound recoveries outside the QC limits for Beryllium and Selenium. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The accuracy and precision of the Calcium MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY- VARIOUS ANALYSES

Samples W-1 (280-142174-1), W-4 (280-142174-2) and W-2B (280-142174-3) required dilution prior to analysis for Method 9056A due to high analyte concentrations. The reporting limits have been adjusted accordingly.

Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for method 9056A exhibited spike compound recoveries outside the QC limits Fluoride and Sulfate. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Job ID: 280-142174-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for method 9056A exhibited spike compound recoveries outside the QC limits Chloride and Sulfate. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The Chloride and Sulfate sample duplicate analysis data associated with QC batch 280-515966 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1 — Lab Sample ID: 280-142174-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	6.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0084		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.021		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Cadmium	0.00039	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Calcium	420		10	5.8	mg/L	10		6020A	Total Recoverable
Chromium	0.0017	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.0014		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.00098	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	2.0		0.080	0.017	mg/L	10		6020A	Total Recoverable
Molybdenum	0.019		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.84	F1	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	770		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	3.1		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	24000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	43000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	36		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-4 — Lab Sample ID: 280-142174-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.0		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0069	J	0.020	0.0057	mg/L	10		6020A	Total Recoverable
Barium	0.051		0.050	0.022	mg/L	10		6020A	Total Recoverable
Beryllium	0.0075	J	0.010	0.0031	mg/L	10		6020A	Total Recoverable
Calcium	410		10	5.8	mg/L	10		6020A	Total Recoverable
Cadmium	0.0063	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Cobalt	0.014		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Chromium	0.057		0.020	0.0098	mg/L	10		6020A	Total Recoverable
Molybdenum	0.22		0.10	0.011	mg/L	10		6020A	Total Recoverable
Lead	0.0064	J	0.010	0.0045	mg/L	10		6020A	Total Recoverable
Selenium	0.012	J	0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.0093	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-4 (Continued) — Lab Sample ID: 280-142174-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	1.4		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	460		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	5.6		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	26000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	40000		1000	470	mg/L	1		SM 2540C	Total/NA

Client Sample ID: W-2B — Lab Sample ID: 280-142174-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.013		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.026		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.076		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.00037	J	0.0010	0.00031	mg/L	1		6020A	Total Recoverable
Cadmium	0.0027		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Calcium	340		10	5.8	mg/L	10		6020A	Total Recoverable
Chromium	0.011		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Cobalt	0.070		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lead	0.0068		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	4.8		0.080	0.017	mg/L	10		6020A	Total Recoverable
Molybdenum	0.059		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.7		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.0022		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	950		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	3.0		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	52000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	80000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	340		10	2.8	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-142174-1	W-1	Water	10/29/20 10:45	10/30/20 14:22	
280-142174-2	W-4	Water	10/29/20 11:30	10/30/20 14:22	
280-142174-3	W-2B	Water	10/29/20 11:50	10/30/20 14:22	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-1
Date Collected: 10/29/20 10:45
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**6.5**		0.10	0.023	mg/L		11/04/20 16:00	11/05/20 09:30	1

Client Sample ID: W-4
Date Collected: 10/29/20 11:30
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.0**		0.10	0.023	mg/L		11/05/20 14:00	11/06/20 09:19	1

Client Sample ID: W-2B
Date Collected: 10/29/20 11:50
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.1**		0.10	0.023	mg/L		11/04/20 16:00	11/06/20 09:45	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-1
Date Collected: 10/29/20 10:45
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/04/20 16:00	11/05/20 14:57	1
Arsenic	**0.0084**		0.0050	0.00075	mg/L		11/04/20 16:00	11/05/20 14:57	1
Barium	**0.021**		0.0050	0.0022	mg/L		11/04/20 16:00	11/05/20 14:57	1
Beryllium	ND	F1	0.0010	0.00031	mg/L		11/04/20 16:00	11/05/20 14:57	1
Cadmium	**0.00039**	**J**	0.0010	0.00020	mg/L		11/04/20 16:00	11/05/20 14:57	1
Calcium	**420**		10	5.8	mg/L		11/04/20 16:00	11/06/20 13:03	10
Chromium	**0.0017**	**J**	0.0020	0.00098	mg/L		11/04/20 16:00	11/05/20 14:57	1
Cobalt	**0.0014**		0.0010	0.00019	mg/L		11/04/20 16:00	11/05/20 14:57	1
Lead	**0.00098**	**J**	0.0010	0.00045	mg/L		11/04/20 16:00	11/05/20 14:57	1
Lithium	**2.0**		0.080	0.017	mg/L		11/04/20 16:00	11/06/20 13:03	10
Molybdenum	**0.019**		0.010	0.0011	mg/L		11/04/20 16:00	11/05/20 14:57	1
Selenium	**0.84**	**F1**	0.0050	0.00089	mg/L		11/04/20 16:00	11/05/20 14:57	1
Thallium	ND		0.0010	0.00020	mg/L		11/04/20 16:00	11/05/20 14:57	1

Client Sample ID: W-4
Date Collected: 10/29/20 11:30
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0069**	**J**	0.020	0.0057	mg/L		11/05/20 14:00	11/06/20 13:43	10
Arsenic	ND		0.050	0.0075	mg/L		11/05/20 14:00	11/06/20 13:43	10
Barium	**0.051**		0.050	0.022	mg/L		11/05/20 14:00	11/06/20 13:43	10
Beryllium	**0.0075**	**J**	0.010	0.0031	mg/L		11/05/20 14:00	11/06/20 13:43	10
Calcium	**410**		10	5.8	mg/L		11/05/20 14:00	11/06/20 13:43	10
Cadmium	**0.0063**	**J**	0.010	0.0020	mg/L		11/05/20 14:00	11/06/20 13:43	10
Cobalt	**0.014**		0.010	0.0019	mg/L		11/05/20 14:00	11/06/20 13:43	10
Chromium	**0.057**		0.020	0.0098	mg/L		11/05/20 14:00	11/06/20 13:43	10
Molybdenum	**0.22**		0.10	0.011	mg/L		11/05/20 14:00	11/06/20 13:43	10
Lead	**0.0064**	**J**	0.010	0.0045	mg/L		11/05/20 14:00	11/06/20 13:43	10
Selenium	**0.012**	**J**	0.050	0.0089	mg/L		11/05/20 14:00	11/06/20 13:43	10
Thallium	**0.0093**	**J**	0.010	0.0020	mg/L		11/05/20 14:00	11/06/20 13:43	10
Lithium	**1.4**		0.080	0.017	mg/L		11/05/20 14:00	11/06/20 13:43	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-2B
Date Collected: 10/29/20 11:50
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.013		0.0020	0.00057	mg/L		11/04/20 16:00	11/05/20 15:10	1
Arsenic	0.026		0.0050	0.00075	mg/L		11/04/20 16:00	11/05/20 15:10	1
Barium	0.076		0.0050	0.0022	mg/L		11/04/20 16:00	11/05/20 15:10	1
Beryllium	0.00037	J	0.0010	0.00031	mg/L		11/04/20 16:00	11/05/20 15:10	1
Cadmium	0.0027		0.0010	0.00020	mg/L		11/04/20 16:00	11/05/20 15:10	1
Calcium	340		10	5.8	mg/L		11/04/20 16:00	11/06/20 15:38	10
Chromium	0.011		0.0020	0.00098	mg/L		11/04/20 16:00	11/05/20 15:10	1
Cobalt	0.070		0.0010	0.00019	mg/L		11/04/20 16:00	11/05/20 15:10	1
Lead	0.0068		0.0010	0.00045	mg/L		11/04/20 16:00	11/05/20 15:10	1
Lithium	4.8		0.080	0.017	mg/L		11/04/20 16:00	11/06/20 15:38	10
Molybdenum	0.059		0.010	0.0011	mg/L		11/04/20 16:00	11/05/20 15:10	1
Selenium	1.7		0.0050	0.00089	mg/L		11/04/20 16:00	11/05/20 15:10	1
Thallium	0.0022		0.0010	0.00020	mg/L		11/04/20 16:00	11/05/20 15:10	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-1
Date Collected: 10/29/20 10:45
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/04/20 12:00	11/05/20 15:43	1

Client Sample ID: W-4
Date Collected: 10/29/20 11:30
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/05/20 12:00	11/05/20 15:15	1

Client Sample ID: W-2B
Date Collected: 10/29/20 11:50
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/04/20 12:00	11/05/20 15:57	1

General Chemistry

Client Sample ID: W-1
Date Collected: 10/29/20 10:45
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			11/04/20 18:12	1
Temperature	21.8	HF	1.0	1.0	Degrees C			11/04/20 18:12	1
Chloride	770		15	5.1	mg/L			11/10/20 07:36	5
Fluoride	3.1		2.5	0.83	mg/L			11/10/20 07:36	5
Sulfate	24000		2500	520	mg/L			11/10/20 07:53	500
Total Dissolved Solids (TDS)	43000		1000	470	mg/L			11/05/20 20:48	1
Total Suspended Solids	36		4.0	1.1	mg/L			11/04/20 20:01	1

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: W-4
Date Collected: 10/29/20 11:30
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU			11/04/20 18:57	1
Temperature	22.6	HF	1.0	1.0	Degrees C			11/04/20 18:57	1
Chloride	460		15	5.1	mg/L			11/10/20 05:09	5
Fluoride	5.6		2.5	0.83	mg/L			11/10/20 05:09	5
Sulfate	26000		1000	210	mg/L			11/10/20 05:25	200
Total Dissolved Solids (TDS)	40000		1000	470	mg/L			11/05/20 20:48	1

Client Sample ID: W-2B
Date Collected: 10/29/20 11:50
Date Received: 10/30/20 14:22
Lab Sample ID: 280-142174-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU			11/04/20 18:19	1
Temperature	22.3	HF	1.0	1.0	Degrees C			11/04/20 18:19	1
Chloride	950		15	5.1	mg/L			11/10/20 04:36	5
Fluoride	3.0		2.5	0.83	mg/L			11/10/20 04:36	5
Sulfate	52000		5000	1000	mg/L			11/10/20 04:52	1000
Total Dissolved Solids (TDS)	80000		1000	470	mg/L			11/05/20 20:48	1
Total Suspended Solids	340		10	2.8	mg/L			11/04/20 20:01	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-459214/1-A
Matrix: Water
Analysis Batch: 459250

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/04/20 16:00	11/05/20 07:06	1

Lab Sample ID: MB 240-459214/1-A
Matrix: Water
Analysis Batch: 459586

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/04/20 16:00	11/05/20 09:01	1

Lab Sample ID: LCS 240-459214/2-A
Matrix: Water
Analysis Batch: 459250

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: LCS 240-459214/2-A
Matrix: Water
Analysis Batch: 459586

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: MB 240-459424/1-A
Matrix: Water
Analysis Batch: 459674

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/05/20 14:00	11/06/20 09:10	1

Lab Sample ID: LCS 240-459424/2-A
Matrix: Water
Analysis Batch: 459674

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 459424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.986		mg/L		99	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-459214/1-A
Matrix: Water
Analysis Batch: 459611

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/04/20 16:00	11/05/20 12:27	1
Arsenic	ND		0.0050	0.00075	mg/L		11/04/20 16:00	11/05/20 12:27	1
Barium	ND		0.0050	0.0022	mg/L		11/04/20 16:00	11/05/20 12:27	1
Beryllium	ND		0.0010	0.00031	mg/L		11/04/20 16:00	11/05/20 12:27	1
Cadmium	ND		0.0010	0.00020	mg/L		11/04/20 16:00	11/05/20 12:27	1
Calcium	ND		1.0	0.58	mg/L		11/04/20 16:00	11/05/20 12:27	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-459214/1-A
Matrix: Water
Analysis Batch: 459611

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0020	0.00098	mg/L		11/04/20 16:00	11/05/20 12:27	1
Cobalt	ND		0.0010	0.00019	mg/L		11/04/20 16:00	11/05/20 12:27	1
Lead	ND		0.0010	0.00045	mg/L		11/04/20 16:00	11/05/20 12:27	1
Molybdenum	ND		0.010	0.0011	mg/L		11/04/20 16:00	11/05/20 12:27	1
Selenium	ND		0.0050	0.00089	mg/L		11/04/20 16:00	11/05/20 12:27	1
Lithium	ND		0.0080	0.0017	mg/L		11/04/20 16:00	11/05/20 12:27	1
Thallium	ND		0.0010	0.00020	mg/L		11/04/20 16:00	11/05/20 12:27	1

Lab Sample ID: LCS 240-459214/3-A
Matrix: Water
Analysis Batch: 459611

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0956		mg/L		96	80 - 120
Arsenic	1.00	0.998		mg/L		100	80 - 120
Barium	1.00	1.03		mg/L		103	80 - 120
Beryllium	0.500	0.516		mg/L		103	80 - 120
Cadmium	0.500	0.498		mg/L		100	80 - 120
Calcium	25.0	26.0		mg/L		104	80 - 120
Chromium	0.500	0.517		mg/L		103	80 - 120
Cobalt	0.500	0.511		mg/L		102	80 - 120
Lead	0.500	0.516		mg/L		103	80 - 120
Molybdenum	0.500	0.504		mg/L		101	80 - 120
Selenium	1.00	0.969		mg/L		97	80 - 120
Lithium	0.500	0.514		mg/L		103	80 - 120
Thallium	1.00	0.986		mg/L		99	80 - 120

Lab Sample ID: 280-142174-1 MS
Matrix: Water
Analysis Batch: 459611

Client Sample ID: W-1
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.100	0.0922		mg/L		92	75 - 125
Arsenic	0.0084		1.00	1.13		mg/L		113	75 - 125
Barium	0.021		1.00	0.942		mg/L		92	75 - 125
Beryllium	ND	F1	0.500	0.393		mg/L		79	75 - 125
Cadmium	0.00039	J	0.500	0.448		mg/L		90	75 - 125
Chromium	0.0017	J	0.500	0.472		mg/L		94	75 - 125
Cobalt	0.0014		0.500	0.545		mg/L		109	75 - 125
Lead	0.00098	J	0.500	0.458		mg/L		91	75 - 125
Molybdenum	0.019		0.500	0.539		mg/L		104	75 - 125
Selenium	0.84	F1	1.00	2.13	F1	mg/L		129	75 - 125
Thallium	ND		1.00	0.874		mg/L		87	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-142174-1 MS
Matrix: Water
Analysis Batch: 459701

Client Sample ID: W-1
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	420		25.0	452	4	mg/L		135	75 - 125
Lithium	2.0		0.500	2.61	4	mg/L		116	75 - 125

Lab Sample ID: 280-142174-1 MSD
Matrix: Water
Analysis Batch: 459611

Client Sample ID: W-1
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.100	0.0904		mg/L		90	75 - 125	2	20
Arsenic	0.0084		1.00	1.11		mg/L		110	75 - 125	2	20
Barium	0.021		1.00	0.906		mg/L		89	75 - 125	4	20
Beryllium	ND	F1	0.500	0.372	F1	mg/L		74	75 - 125	6	20
Cadmium	0.00039	J	0.500	0.439		mg/L		88	75 - 125	2	20
Chromium	0.0017	J	0.500	0.460		mg/L		92	75 - 125	3	20
Cobalt	0.0014		0.500	0.535		mg/L		107	75 - 125	2	20
Lead	0.00098	J	0.500	0.452		mg/L		90	75 - 125	1	20
Molybdenum	0.019		0.500	0.532		mg/L		103	75 - 125	1	20
Selenium	0.84	F1	1.00	2.05		mg/L		121	75 - 125	4	20
Thallium	ND		1.00	0.858		mg/L		86	75 - 125	2	20

Lab Sample ID: 280-142174-1 MSD
Matrix: Water
Analysis Batch: 459701

Client Sample ID: W-1
Prep Type: Total Recoverable
Prep Batch: 459214

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	420		25.0	432	4	mg/L		54	75 - 125	5	20
Lithium	2.0		0.500	2.47	4	mg/L		87	75 - 125	6	20

Lab Sample ID: MB 240-459424/1-A
Matrix: Water
Analysis Batch: 459701

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/05/20 14:00	11/06/20 13:38	1
Arsenic	ND		0.0050	0.00075	mg/L		11/05/20 14:00	11/06/20 13:38	1
Barium	ND		0.0050	0.0022	mg/L		11/05/20 14:00	11/06/20 13:38	1
Beryllium	ND		0.0010	0.00031	mg/L		11/05/20 14:00	11/06/20 13:38	1
Cadmium	ND		0.0010	0.00020	mg/L		11/05/20 14:00	11/06/20 13:38	1
Calcium	ND		1.0	0.58	mg/L		11/05/20 14:00	11/06/20 13:38	1
Chromium	ND		0.0020	0.00098	mg/L		11/05/20 14:00	11/06/20 13:38	1
Cobalt	ND		0.0010	0.00019	mg/L		11/05/20 14:00	11/06/20 13:38	1
Lead	ND		0.0010	0.00045	mg/L		11/05/20 14:00	11/06/20 13:38	1
Molybdenum	ND		0.010	0.0011	mg/L		11/05/20 14:00	11/06/20 13:38	1
Selenium	ND		0.0050	0.00089	mg/L		11/05/20 14:00	11/06/20 13:38	1
Lithium	ND		0.0080	0.0017	mg/L		11/05/20 14:00	11/06/20 13:38	1
Thallium	ND		0.0010	0.00020	mg/L		11/05/20 14:00	11/06/20 13:38	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-459424/3-A
Matrix: Water
Analysis Batch: 459701

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 459424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0902		mg/L		90	80 - 120
Arsenic	1.00	0.960		mg/L		96	80 - 120
Barium	1.00	0.958		mg/L		96	80 - 120
Beryllium	0.500	0.455		mg/L		91	80 - 120
Cadmium	0.500	0.473		mg/L		95	80 - 120
Calcium	25.0	24.4		mg/L		98	80 - 120
Chromium	0.500	0.486		mg/L		97	80 - 120
Cobalt	0.500	0.492		mg/L		98	80 - 120
Lead	0.500	0.484		mg/L		97	80 - 120
Molybdenum	0.500	0.474		mg/L		95	80 - 120
Selenium	1.00	0.946		mg/L		95	80 - 120
Lithium	0.500	0.458		mg/L		92	80 - 120
Thallium	1.00	0.921		mg/L		92	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-459232/1-A
Matrix: Water
Analysis Batch: 459643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459232

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/04/20 12:00	11/05/20 15:32	1

Lab Sample ID: LCS 240-459232/2-A
Matrix: Water
Analysis Batch: 459643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459232

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00494		mg/L		99	80 - 120

Lab Sample ID: 280-142174-1 MS
Matrix: Water
Analysis Batch: 459643

Client Sample ID: W-1
Prep Type: Total/NA
Prep Batch: 459232

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.000973		mg/L		97	80 - 120

Lab Sample ID: 280-142174-1 MSD
Matrix: Water
Analysis Batch: 459643

Client Sample ID: W-1
Prep Type: Total/NA
Prep Batch: 459232

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.000858		mg/L		86	80 - 120	13	20

Lab Sample ID: MB 240-459429/1-A
Matrix: Water
Analysis Batch: 459643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459429

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/05/20 12:00	11/05/20 15:05	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LCS 240-459429/2-A
Matrix: Water
Analysis Batch: 459643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459429

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00512		mg/L		102	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-515575/30
Matrix: Water
Analysis Batch: 515575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		101	99 - 101

Lab Sample ID: LCS 280-515575/56
Matrix: Water
Analysis Batch: 515575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-515966/13
Matrix: Water
Analysis Batch: 515966

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/09/20 20:34	1
Fluoride	ND		0.50	0.17	mg/L			11/09/20 20:34	1
Sulfate	ND		5.0	1.0	mg/L			11/09/20 20:34	1

Lab Sample ID: LCS 280-515966/11
Matrix: Water
Analysis Batch: 515966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.8		mg/L		95	90 - 110
Fluoride	5.00	4.83		mg/L		97	90 - 110
Sulfate	100	92.5		mg/L		92	90 - 110

Lab Sample ID: LCSD 280-515966/12
Matrix: Water
Analysis Batch: 515966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.5		mg/L		94	90 - 110	0	10
Fluoride	5.00	4.87		mg/L		97	90 - 110	1	10
Sulfate	100	92.9		mg/L		93	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-515966/10
Matrix: Water
Analysis Batch: 515966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.99		mg/L		80	50 - 150
Fluoride	0.500	0.403	J	mg/L		81	50 - 150
Sulfate	5.00	6.42		mg/L		128	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-515636/2
Matrix: Water
Analysis Batch: 515636

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/05/20 20:48	1

Lab Sample ID: LCS 280-515636/1
Matrix: Water
Analysis Batch: 515636

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	519		mg/L		104	93 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-515465/2
Matrix: Water
Analysis Batch: 515465

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/04/20 20:01	1

Lab Sample ID: LCS 280-515465/1
Matrix: Water
Analysis Batch: 515465

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	89.6		mg/L		90	79 - 114

Lab Sample ID: 280-142174-1 DU
Matrix: Water
Analysis Batch: 515465

Client Sample ID: W-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	36		34.8		mg/L		3	10

Metals

Prep Batch: 459214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total Recoverable	Water	3005A	
280-142174-3	W-2B	Total Recoverable	Water	3005A	
MB 240-459214/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-459214/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-459214/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-142174-1 MS	W-1	Total Recoverable	Water	3005A	
280-142174-1 MSD	W-1	Total Recoverable	Water	3005A	

Prep Batch: 459232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	7470A	
280-142174-3	W-2B	Total/NA	Water	7470A	
MB 240-459232/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-459232/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-142174-1 MS	W-1	Total/NA	Water	7470A	
280-142174-1 MSD	W-1	Total/NA	Water	7470A	

Analysis Batch: 459250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-459214/1-A	Method Blank	Total Recoverable	Water	6010C	459214
LCS 240-459214/2-A	Lab Control Sample	Total Recoverable	Water	6010C	459214

Prep Batch: 459424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-2	W-4	Total Recoverable	Water	3005A	
MB 240-459424/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-459424/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-459424/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 459429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-2	W-4	Total/NA	Water	7470A	
MB 240-459429/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-459429/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 459586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total Recoverable	Water	6010C	459214
MB 240-459214/1-A	Method Blank	Total Recoverable	Water	6010C	459214
LCS 240-459214/2-A	Lab Control Sample	Total Recoverable	Water	6010C	459214

Analysis Batch: 459611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total Recoverable	Water	6020A	459214
280-142174-3	W-2B	Total Recoverable	Water	6020A	459214
MB 240-459214/1-A	Method Blank	Total Recoverable	Water	6020A	459214
LCS 240-459214/3-A	Lab Control Sample	Total Recoverable	Water	6020A	459214
280-142174-1 MS	W-1	Total Recoverable	Water	6020A	459214
280-142174-1 MSD	W-1	Total Recoverable	Water	6020A	459214

Metals

Analysis Batch: 459643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	7470A	459232
280-142174-2	W-4	Total/NA	Water	7470A	459429
280-142174-3	W-2B	Total/NA	Water	7470A	459232
MB 240-459232/1-A	Method Blank	Total/NA	Water	7470A	459232
MB 240-459429/1-A	Method Blank	Total/NA	Water	7470A	459429
LCS 240-459232/2-A	Lab Control Sample	Total/NA	Water	7470A	459232
LCS 240-459429/2-A	Lab Control Sample	Total/NA	Water	7470A	459429
280-142174-1 MS	W-1	Total/NA	Water	7470A	459232
280-142174-1 MSD	W-1	Total/NA	Water	7470A	459232

Analysis Batch: 459674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-2	W-4	Total Recoverable	Water	6010C	459424
280-142174-3	W-2B	Total Recoverable	Water	6010C	459214
MB 240-459424/1-A	Method Blank	Total Recoverable	Water	6010C	459424
LCS 240-459424/2-A	Lab Control Sample	Total Recoverable	Water	6010C	459424

Analysis Batch: 459701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total Recoverable	Water	6020A	459214
280-142174-2	W-4	Total Recoverable	Water	6020A	459424
280-142174-3	W-2B	Total Recoverable	Water	6020A	459214
MB 240-459424/1-A	Method Blank	Total Recoverable	Water	6020A	459424
LCS 240-459424/3-A	Lab Control Sample	Total Recoverable	Water	6020A	459424
280-142174-1 MS	W-1	Total Recoverable	Water	6020A	459214
280-142174-1 MSD	W-1	Total Recoverable	Water	6020A	459214

General Chemistry

Analysis Batch: 515465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	SM 2540D	
280-142174-3	W-2B	Total/NA	Water	SM 2540D	
MB 280-515465/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-515465/1	Lab Control Sample	Total/NA	Water	SM 2540D	
280-142174-1 DU	W-1	Total/NA	Water	SM 2540D	

Analysis Batch: 515575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	9040B	
280-142174-2	W-4	Total/NA	Water	9040B	
280-142174-3	W-2B	Total/NA	Water	9040B	
LCS 280-515575/30	Lab Control Sample	Total/NA	Water	9040B	
LCS 280-515575/56	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 515636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	SM 2540C	
280-142174-2	W-4	Total/NA	Water	SM 2540C	
280-142174-3	W-2B	Total/NA	Water	SM 2540C	
MB 280-515636/2	Method Blank	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 515636 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-515636/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 515966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	9056A	
280-142174-1	W-1	Total/NA	Water	9056A	
280-142174-2	W-4	Total/NA	Water	9056A	
280-142174-2	W-4	Total/NA	Water	9056A	
280-142174-3	W-2B	Total/NA	Water	9056A	
280-142174-3	W-2B	Total/NA	Water	9056A	
MB 280-515966/13	Method Blank	Total/NA	Water	9056A	
LCS 280-515966/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-515966/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-515966/10	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-142174-1
Date Collected: 10/29/20 10:45
Matrix: Water
Date Received: 10/30/20 14:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459214	11/04/20 16:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			459586	11/05/20 09:30	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459214	11/04/20 16:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			459611	11/05/20 14:57	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459214	11/04/20 16:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			459701	11/06/20 13:03	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459232	11/04/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			459643	11/05/20 15:43	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515575	11/04/20 18:12	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	515966	11/10/20 07:36	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	515966	11/10/20 07:53	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	515636	11/05/20 20:48	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	515465	11/04/20 20:01	SVC	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-142174-2
Date Collected: 10/29/20 11:30
Matrix: Water
Date Received: 10/30/20 14:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459424	11/05/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			459674	11/06/20 09:19	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459424	11/05/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			459701	11/06/20 13:43	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459429	11/05/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			459643	11/05/20 15:15	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515575	11/04/20 18:57	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	515966	11/10/20 05:09	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	515966	11/10/20 05:25	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	515636	11/05/20 20:48	SVC	TAL DEN

Client Sample ID: W-2B
Lab Sample ID: 280-142174-3
Date Collected: 10/29/20 11:50
Matrix: Water
Date Received: 10/30/20 14:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459214	11/04/20 16:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			459674	11/06/20 09:45	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459214	11/04/20 16:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			459611	11/05/20 15:10	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459214	11/04/20 16:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			459701	11/06/20 15:38	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459232	11/04/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			459643	11/05/20 15:57	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515575	11/04/20 18:19	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2B
Lab Sample ID: 280-142174-3
Date Collected: 10/29/20 11:50
Matrix: Water
Date Received: 10/30/20 14:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	515966	11/10/20 04:36	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	515966	11/10/20 04:52	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	515636	11/05/20 20:48	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	515465	11/04/20 20:01	SVC	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-142174-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Chain of Custody Record 430956

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Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other: TAL-8210

Client Contact	Project Manager: Molly Reeves	Site Contact: TS	Date: 10/30/20	COC No: 1 of 1 COCs
Company Name: HDR	Tel/Email:	Lab Contact: Danielle H	Carrier:	Sampler:
Address: 9781 S Meridian Blvd, Ste 400	Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only: Walk-in Client: Lab Sampling:
City/State/Zip: Englewood, CO 80112	TAT if different from Below: ☐ 2 weeks ☐ 1 week ASAP ☐ 2 days ☐ 1 day			Job / SDG No.:
Phone: 743-263-7138				
Fax: Email: Molly.Reeves@hdrinc.com				
Project Name: XcEl CCR - Comanche				
Site: Colorado				
PO# DEN-018				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	25406	6010C/6020A	9040B	2540B	9315/9320	Sample Specific Notes:
W-1	10/29/20	1045	G	W	6	N		X	X	X	X	X	
W-4	10/29/20	1130	G	W	1	N							300 mL collected ↳ coordinate w/ PM on analyses
W-2B	10/29/20	1150	G	W	6	N		X	X	X	X	X	

280-142174 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

14.4 14.1 11

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____

Relinquished by:	Company: HDR	Date/Time: 10/30/20 1420	Received by:	Company:	Date/Time: 10/30/2020 1420
Relinquished by:	Company:	Date/Time:	Received by:	Company: ETA DI	Date/Time: 10/30/2020
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

13 2/14.1

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sample:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-545391.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-142174-1
Address: 4101 Shuttel Street NW.	Due Date Requested: 11/6/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wwater, Ssolid, Oowaste/oil, BTissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 12 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	6020A/3005A 13 Total Metals (w/collision cell) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:									585 W 25
W-1 (280-142174-1)	10/29/20	10:45 Mountain		Water			X	X	X		3	Use Collision Cell
W-4 (280-142174-2)	10/29/20	11:30 Mountain		Water			X	X	X	X	3	Use Collision Cell
W-2B (280-142174-3)	10/29/20	11:50 Mountain		Water			X	X	X		3	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Scott C Hall	11/2/20 1014	ETA Denver		11-3-20 1000	ETA C
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: ~~1510402~~ 1510403 SCH 11/2/20	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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11/12/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client EA Denver Site Name _____ Cooler unpacked by:

Cooler Received on 11-3-20 Opened on 11-3-20

FedEx: 1st Grd ~~Exp~~ UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location

TestAmerica Cooler # 12 Foam Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam ~~Plastic Bag~~ None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water (None)

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 13.2 °C Corrected Cooler Temp. 14.1 °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 ~~Yes~~ No
   -Were the seals on the outside of the cooler(s) signed & dated? ~~Yes~~ No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes ~~No~~
   -Were tamper/custody seals intact and uncompromised? ~~Yes~~ No NA
3. Shippers' packing slip attached to the cooler(s)? ~~Yes~~ No
4. Did custody papers accompany the sample(s)? ~~Yes~~ No
5. Were the custody papers relinquished & signed in the appropriate place? ~~Yes~~ No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes ~~No~~
7. Did all bottles arrive in good condition (Unbroken)? ~~Yes~~ No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? ~~Yes~~ No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? ~~Yes~~ No
11. Sufficient quantity received to perform indicated analyses? ~~Yes~~ No
12. Are these work share samples and all listed on the COC? ~~Yes~~ No
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC907861
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? ● Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
17. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142174-1

Login Number: 142174
List Number: 1
Creator: Kramer, Julieann L

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-142174-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
1/5/2021 8:10:18 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-142174-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-142174-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/30/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 14.1 C.

Please note, this report only contains the Radioactive analyses. All other results are reported under job 280-142174-1.

RADIUM-226 (GFPC)
Low levels of Radium-226 are present in the method blank associated with QC batch 160-488580. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

Sample W-1 was prepared at a reduced aliquot due to yellow discoloration. Sample W-2B was prepared at a reduced aliquot due to brown discoloration and a cloudy appearance.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228
Sample W-1 was prepared at a reduced aliquot due to yellow discoloration. Sample W-2B was prepared at a reduced aliquot due to brown discoloration and a cloudy appearance.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-142174-1

No Detections.

Client Sample ID: W-2B
Lab Sample ID: 280-142174-3

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-142174-1	W-1	Water	10/29/20 10:45	10/30/20 14:22	
280-142174-3	W-2B	Water	10/29/20 11:50	10/30/20 14:22	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-1
Date Collected: 10/29/20 10:45
Date Received: 10/30/20 14:22

Lab Sample ID: 280-142174-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.815		0.453	0.459	1.00	0.612	pCi/L	11/09/20 13:44	12/28/20 20:29	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110	11/09/20 13:44	12/28/20 20:29	1

Client Sample ID: W-2B
Date Collected: 10/29/20 11:50
Date Received: 10/30/20 14:22

Lab Sample ID: 280-142174-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.68		0.680	0.697	1.00	0.809	pCi/L	11/09/20 13:44	12/28/20 20:29	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110	11/09/20 13:44	12/28/20 20:29	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-1
Date Collected: 10/29/20 10:45
Date Received: 10/30/20 14:22

Lab Sample ID: 280-142174-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.15		0.385	0.400	1.00	0.513	pCi/L	11/10/20 07:27	12/28/20 13:59	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110	11/10/20 07:27	12/28/20 13:59	1
Y Carrier	108		40 - 110	11/10/20 07:27	12/28/20 13:59	1

Client Sample ID: W-2B
Date Collected: 10/29/20 11:50
Date Received: 10/30/20 14:22

Lab Sample ID: 280-142174-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.44		0.607	0.648	1.00	0.731	pCi/L	11/10/20 07:27	12/28/20 14:02	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110	11/10/20 07:27	12/28/20 14:02	1
Y Carrier	105		40 - 110	11/10/20 07:27	12/28/20 14:02	1

Client Sample Results

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-1
Date Collected: 10/29/20 10:45
Date Received: 10/30/20 14:22

Lab Sample ID: 280-142174-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.97		0.595	0.609	5.00	0.612	pCi/L		01/05/21 15:23	1

Client Sample ID: W-2B
Date Collected: 10/29/20 11:50
Date Received: 10/30/20 14:22

Lab Sample ID: 280-142174-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.12		0.912	0.952	5.00	0.809	pCi/L		01/05/21 15:23	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-488580/24-A
Matrix: Water
Analysis Batch: 493324

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488580

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.3384		0.214	0.216	1.00	0.275	pCi/L	11/09/20 13:44	12/29/20 06:06	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.2*		*40 - 110*	*11/09/20 13:44*	*12/29/20 06:06*	*1*

Lab Sample ID: LCS 160-488580/1-A
Matrix: Water
Analysis Batch: 493176

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488580

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	9.760		1.29	1.00	0.312	pCi/L	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*85.8*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-488626/24-A
Matrix: Water
Analysis Batch: 493182

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488626

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.08041	U	0.220	0.220	1.00	0.407	pCi/L	11/10/20 07:27	12/28/20 14:02	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.2*		*40 - 110*	*11/10/20 07:27*	*12/28/20 14:02*	*1*
Y Carrier	*104*		*40 - 110*	*11/10/20 07:27*	*12/28/20 14:02*	*1*

Lab Sample ID: LCS 160-488626/1-A
Matrix: Water
Analysis Batch: 493206

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488626

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.55	5.652		0.735	1.00	0.365	pCi/L	75	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*85.8*		*40 - 110*
Y Carrier	*108*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 488580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	PrecSep-21	
280-142174-3	W-2B	Total/NA	Water	PrecSep-21	
MB 160-488580/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-488580/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 488626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142174-1	W-1	Total/NA	Water	PrecSep_0	
280-142174-3	W-2B	Total/NA	Water	PrecSep_0	
MB 160-488626/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-488626/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-142174-1
Date Collected: 10/29/20 10:45
Matrix: Water
Date Received: 10/30/20 14:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.00 mL	1.0 g	488580	11/09/20 13:44	AVB	TAL SL
Total/NA	Analysis	9315		1			493206	12/28/20 20:29	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.00 mL	1.0 g	488626	11/10/20 07:27	AVB	TAL SL
Total/NA	Analysis	9320		1			493182	12/28/20 13:59	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			493925	01/05/21 15:23	GRW	TAL SL

Client Sample ID: W-2B
Lab Sample ID: 280-142174-3
Date Collected: 10/29/20 11:50
Matrix: Water
Date Received: 10/30/20 14:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.61 mL	1.0 g	488580	11/09/20 13:44	AVB	TAL SL
Total/NA	Analysis	9315		1			493206	12/28/20 20:29	FLC	TAL SL
Total/NA	Prep	PrecSep_0			500.61 mL	1.0 g	488626	11/10/20 07:27	AVB	TAL SL
Total/NA	Analysis	9320		1			493182	12/28/20 14:02	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			493925	01/05/21 15:23	GRW	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-21
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-21
Kentucky (DW)	State	KY90125	12-31-20 *
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record 430956

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Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other: TAL-8210

Client Contact	Project Manager: Molly Reeves	Site Contact: TS	Date: 10/30/20	COC No: 1 of 1 COCs
Company Name: HDR	Tel/Email:	Lab Contact: Danielle H	Carrier:	Sampler:
Address: 9781 S Meridian Blvd, Ste 400	Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
City/State/Zip: Englewood, CO 80112	TAT if different from Below: ☐ 2 weeks ☐ 1 week ASAP ☐ 2 days ☐ 1 day			Walk-in Client:
Phone: 743-263-7138				Lab Sampling:
Fax: Email: Molly.Reeves@hdrinc.com				Job / SDG No.:
Project Name: XcEl CCR - Comanche				
Site: Colorado				
PO# DEN-018				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	25406	6010C/6020A	9040B	2540B	9315/9320	Sample Specific Notes:
W-1	10/29/20	1045	G	W	6	N		X	X	X	X	X	
W-4	10/29/20	1130	G	W	1	N							300 mL collected ↳ coordinate w/ PM on analyses
W-2B	10/29/20	1150	G	W	6	N		X	X	X	X	X	

280-142174 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

14.4 14.1 11

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	HDR	10/30/20 1420		10/30/2020 14	10/30/2020 1420
Relinquished by:	Company:	Date/Time:	Received by:	Company: ETA DI	Date/Time: 10/30/2020
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-545396.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-142174-2
Address: 13715 Rider Trail North	Due Date Requested: 11/18/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
W-1 (280-142174-1)	10/29/20	10:45 Mountain		Water			X	X	2	
W-2B (280-142174-3)	10/29/20	11:50 Mountain		Water			X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	11/2/2020 1340		FED EX		
2	FED EX			[signature]	NOV 03 2020 08:48	ETA SL
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142174-2

Login Number: 142174
List Number: 1
Creator: Kramer, Julieann L

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142174-2

Login Number: 142174
List Number: 4
Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis
List Creation: 11/03/20 01:31 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-142174-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
280-142174-1	W-1	80.9
280-142174-3	W-2B	87.6
LCS 160-488580/1-A	Lab Control Sample	85.8
MB 160-488580/24-A	Method Blank	88.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
280-142174-1	W-1	80.9	108
280-142174-3	W-2B	87.6	105
LCS 160-488626/1-A	Lab Control Sample	85.8	108
MB 160-488626/24-A	Method Blank	88.2	104

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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ANALYTICAL REPORT

Eurofins TestAmerica, Denver
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Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-142394-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/23/2020 4:02:06 PM

Danielle Harrington, Project Manager II
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LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-142394-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-142394-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/05/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.2º C, 1.3º C, 1.6º C, 3.6º C, 7.5º C, 9.1º C and 9.6º C.

Please note, the following samples were received at the laboratory outside the required temperature criteria for Samples: W-6, MW-1B, MW-2B, MW-4B, MW-6, and MW-2B-EB. For sample W-6 the container labels list a sample collection time of 16:20, while the chain of custody lists 16:50. The sample was logged per the chain of custody. For sample MW-3, the container labels list a sample collection time of 09:00, while the chain of custody lists 15:20. The sample was logged per the chain of custody. For sample W-2B A 1 L plastic bottle with nitric acid was received without a label container. The container was logged under sample-2B through a process of elimination, as the sample was missing a container and no other samples were missing a container:

TOTAL RECOVERABLE METALS- Method 6010C/6020A

Several samples required dilution prior to analysis due to matrix interferences. The reporting limits have been adjusted accordingly.

The accuracy and precision of the Dissolved Calcium MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The continuing calibration verification low (CCVL) associated with batch 240-460346 recovered above the upper control limit for Chromium. The samples associated with this CCVL were non-detects for the affected analytes; therefore, corrective action is deemed unnecessary.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY- VARIOUS

Several samples required dilution prior to analysis for Method 9056A. The reporting limits have been adjusted accordingly.

Due to a required dilution, sample W-7 was analyzed past the EPA-recommended holding time for method 2540C Total Dissolved Solids; the original analysis of the undiluted sample was performed within holding time. The out-of-hold, diluted result is confirmed by the

Job ID: 280-142394-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

undiluted result; only the diluted result has been reported. There is no impact on data usability.
The Total Suspended Solids sample duplicate was performed on sample W-7 and a laboratory generated sample exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The pH sample duplicate was performed on sample MW-6 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Laboratory generated MS/MSD analysis data have been provided in batch 280-516917. The MS/MSD for method 9056A exhibited spike compound recoveries outside the QC limits for Chloride, Fluoride, and Sulfate. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Laboratory generated MS/MSD analysis data have been provided in batch 280-517046. The MS/MSD for method 9056A exhibited spike compound recoveries outside the QC limits for Fluoride and Sulfate. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-142394-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.020	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.031		0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	210		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.0039	J	0.0050	0.00099	mg/L	5		6020A	Total Recoverable
Cobalt	0.0079		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Chromium	0.0084	J ^	0.010	0.0049	mg/L	5		6020A	Total Recoverable
Selenium	2.3		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0052		0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	4.1		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	6.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	780		30	10	mg/L	10		9056A	Total/NA
Fluoride	1.4	J	2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	60000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	75000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	92		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2B
Lab Sample ID: 280-142394-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.016		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.017		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.033		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	170		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.0012		0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.064		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.072		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0010		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	1.4		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00086	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	4.9		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Client Sample ID: W-2B (Continued) — Lab Sample ID: 280-142394-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	940		30	10	mg/L	10		9056A	Total/NA
Fluoride	3.2	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	98000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	63000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	52		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3 — Lab Sample ID: 280-142394-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0021	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.027		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	450		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00061	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0013	J ^	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.037		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.022		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.11		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	35		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.70		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	1800		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	3900		50	24	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	9.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5 — Lab Sample ID: 280-142394-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0016	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0049	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.020		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	410		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00023	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0014		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.026		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.010		0.0050	0.00089	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-5 (Continued) — Lab Sample ID: 280-142394-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.26		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	270		30	10	mg/L	10		9056A	Total/NA
Fluoride	2.4	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	4100		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	7400		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	16		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-142394-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	9.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00064	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0034	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.030		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	480		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00035	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0039		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0011	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.42		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0028	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.16		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	130		30	10	mg/L	10		9056A	Total/NA
Fluoride	2.7	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	3900		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	7200		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	18		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-142394-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.011	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.017	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	450		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.0061		0.0050	0.00099	mg/L	5		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-7 (Continued) — Lab Sample ID: 280-142394-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.016		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Selenium	1.6		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0057		0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	4.0		0.040	0.0083	mg/L	5		6020A	Total Recoverable
Mercury	0.00013	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	690		30	10	mg/L	10		9056A	Total/NA
Fluoride	170	J	250	83	mg/L	500		9056A	Total/NA
Sulfate	78000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	71000	H	1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	95		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-1B — Lab Sample ID: 280-142394-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.9		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0046	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.013	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	420		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.0027	J	0.0050	0.00099	mg/L	5		6020A	Total Recoverable
Cobalt	0.032		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Selenium	0.62		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0039	J	0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	3.0		0.040	0.0083	mg/L	5		6020A	Total Recoverable
Mercury	0.00013	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	590	J	1500	510	mg/L	500		9056A	Total/NA
Fluoride	0.90		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	19000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	31000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	39		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2B — Lab Sample ID: 280-142394-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.012	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.016	J	0.025	0.011	mg/L	5		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-2B (Continued)
Lab Sample ID: 280-142394-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	410		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.0014	J	0.0050	0.00099	mg/L	5		6020A	Total Recoverable
Cobalt	0.022		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Molybdenum	0.0062	J	0.050	0.0054	mg/L	5		6020A	Total Recoverable
Selenium	1.9		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.010		0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	4.6		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	490		30	10	mg/L	10		9056A	Total/NA
Fluoride	63		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	35000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	48000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	53		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3
Lab Sample ID: 280-142394-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.6		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.012	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	130		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.016		0.0050	0.00099	mg/L	5		6020A	Total Recoverable
Cobalt	0.020		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Selenium	0.47		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0045	J	0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	2.2		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	140		30	10	mg/L	10		9056A	Total/NA
Fluoride	42		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	39000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	58000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	70		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4B
Lab Sample ID: 280-142394-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.55		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.019		0.0050	0.00075	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-4B (Continued)
Lab Sample ID: 280-142394-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.022		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	550		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00023	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0026		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.4		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00027	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.43		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	150		60	20	mg/L	20		9056A	Total/NA
Fluoride	1.9		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2900		100	21	mg/L	20		9056A	Total/NA
Total Dissolved Solids (TDS)	6400		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	16		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5
Lab Sample ID: 280-142394-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.8		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.023	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	430		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cobalt	0.0015	J	0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Chromium	0.0049	J ^	0.010	0.0049	mg/L	5		6020A	Total Recoverable
Molybdenum	0.0062	J	0.050	0.0054	mg/L	5		6020A	Total Recoverable
Selenium	0.18		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0018	J	0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	3.1		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1700		30	10	mg/L	10		9056A	Total/NA
Fluoride	44		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	18000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	29000		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	30		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6
Lab Sample ID: 280-142394-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0090		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0076		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	420		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00078	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0014	J ^	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0097	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.21		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	200		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.45	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3500		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	8600		200	94	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	10		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7-DUP
Lab Sample ID: 280-142394-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.015	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.019	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	400		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.0060		0.0050	0.00099	mg/L	5		6020A	Total Recoverable
Cobalt	0.016		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Selenium	1.6		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0054		0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	4.0		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	680		30	10	mg/L	10		9056A	Total/NA
Fluoride	71		25	8.3	mg/L	50		9056A	Total/NA
Sulfate	42000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	72000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	100		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2B-EB
Lab Sample ID: 280-142394-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0042	J	0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	6.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Dissolved Solids (TDS)	15		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	1.6	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-142394-1	W-2A	Ground Water	11/04/20 08:50	11/05/20 12:10	
280-142394-2	W-2B	Ground Water	11/04/20 10:05	11/05/20 12:10	
280-142394-3	W-3	Ground Water	11/04/20 15:20	11/05/20 12:10	
280-142394-4	W-5	Ground Water	11/03/20 16:20	11/05/20 12:10	
280-142394-5	W-6	Ground Water	11/03/20 16:50	11/05/20 12:10	
280-142394-6	W-7	Ground Water	11/04/20 13:10	11/05/20 12:10	
280-142394-7	MW-1B	Ground Water	11/04/20 11:10	11/05/20 12:10	
280-142394-8	MW-2B	Ground Water	11/04/20 08:50	11/05/20 12:10	
280-142394-9	MW-3	Ground Water	11/04/20 15:20	11/05/20 12:10	
280-142394-10	MW-4B	Ground Water	11/04/20 16:45	11/05/20 12:10	
280-142394-11	MW-5	Water	11/05/20 08:05	11/05/20 12:10	
280-142394-12	MW-6	Ground Water	11/04/20 14:15	11/05/20 12:10	
280-142394-13	W-7-DUP	Water	11/04/20 13:10	11/05/20 12:10	
280-142394-14	MW-2B-EB	Water	11/04/20 09:30	11/05/20 12:10	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:01	1

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:06	1

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.3		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:10	1

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.5		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:15	1

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.3		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:19	1

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.5		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:32	1

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:36	1

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.4		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:41	1

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.6		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:46	1

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.55**		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:50	1

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.8**		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:55	1

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.2**		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 17:59	1

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.4**		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 18:04	1

Client Sample ID: MW-2B-EB
Date Collected: 11/04/20 09:30
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 18:08	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/09/20 14:00	11/10/20 22:00	5
Arsenic	**0.020**	**J**	0.025	0.0038	mg/L		11/09/20 14:00	11/10/20 22:00	5
Barium	**0.031**		0.025	0.011	mg/L		11/09/20 14:00	11/10/20 22:00	5
Beryllium	ND		0.0050	0.0015	mg/L		11/09/20 14:00	11/10/20 22:00	5
Calcium	**210**		5.0	2.9	mg/L		11/09/20 14:00	11/10/20 22:00	5
Cadmium	**0.0039**	**J**	0.0050	0.00099	mg/L		11/09/20 14:00	11/10/20 22:00	5
Cobalt	**0.0079**		0.0050	0.00095	mg/L		11/09/20 14:00	11/10/20 22:00	5
Chromium	**0.0084**	**J ^**	0.010	0.0049	mg/L		11/09/20 14:00	11/10/20 22:00	5
Molybdenum	ND		0.050	0.0054	mg/L		11/09/20 14:00	11/10/20 22:00	5
Lead	ND		0.0050	0.0023	mg/L		11/09/20 14:00	11/10/20 22:00	5
Selenium	**2.3**		0.025	0.0045	mg/L		11/09/20 14:00	11/10/20 22:00	5
Thallium	**0.0052**		0.0050	0.0010	mg/L		11/09/20 14:00	11/10/20 22:00	5
Lithium	**4.1**		0.040	0.0083	mg/L		11/09/20 14:00	11/10/20 22:00	5

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.016**		0.0020	0.00057	mg/L		11/09/20 14:00	11/10/20 22:03	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.017		0.0050	0.00075	mg/L		11/09/20 14:00	11/10/20 22:03	1
Barium	0.033		0.0050	0.0022	mg/L		11/09/20 14:00	11/10/20 22:03	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/10/20 22:03	1
Calcium	170		1.0	0.58	mg/L		11/09/20 14:00	11/10/20 22:03	1
Cadmium	0.0012		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:03	1
Cobalt	0.064		0.0010	0.00019	mg/L		11/09/20 14:00	11/10/20 22:03	1
Chromium	ND		0.010	0.0049	mg/L		11/09/20 14:00	11/11/20 15:55	5
Molybdenum	0.072		0.010	0.0011	mg/L		11/09/20 14:00	11/10/20 22:03	1
Lead	0.0010		0.0010	0.00045	mg/L		11/09/20 14:00	11/10/20 22:03	1
Selenium	1.4		0.0050	0.00089	mg/L		11/09/20 14:00	11/10/20 22:03	1
Thallium	0.00086	J	0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:03	1
Lithium	4.9		0.0080	0.0017	mg/L		11/09/20 14:00	11/10/20 22:03	1

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/09/20 14:00	11/10/20 22:05	1
Arsenic	0.0021	J	0.0050	0.00075	mg/L		11/09/20 14:00	11/10/20 22:05	1
Barium	0.027		0.0050	0.0022	mg/L		11/09/20 14:00	11/10/20 22:05	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/10/20 22:05	1
Calcium	450		1.0	0.58	mg/L		11/09/20 14:00	11/10/20 22:05	1
Cadmium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:05	1
Cobalt	0.00061	J	0.0010	0.00019	mg/L		11/09/20 14:00	11/10/20 22:05	1
Chromium	0.0013	J ^	0.0020	0.00098	mg/L		11/09/20 14:00	11/10/20 22:05	1
Molybdenum	0.037		0.010	0.0011	mg/L		11/09/20 14:00	11/10/20 22:05	1
Lead	ND		0.0010	0.00045	mg/L		11/09/20 14:00	11/10/20 22:05	1
Selenium	0.022		0.0050	0.00089	mg/L		11/09/20 14:00	11/10/20 22:05	1
Thallium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:05	1
Lithium	0.11		0.0080	0.0017	mg/L		11/09/20 14:00	11/10/20 22:05	1

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0016	J	0.0020	0.00057	mg/L		11/09/20 14:00	11/10/20 22:08	1
Arsenic	0.0049	J	0.0050	0.00075	mg/L		11/09/20 14:00	11/10/20 22:08	1
Barium	0.020		0.0050	0.0022	mg/L		11/09/20 14:00	11/10/20 22:08	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/10/20 22:08	1
Calcium	410		1.0	0.58	mg/L		11/09/20 14:00	11/10/20 22:08	1
Cadmium	0.00023	J	0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:08	1
Cobalt	0.0014		0.0010	0.00019	mg/L		11/09/20 14:00	11/10/20 22:08	1
Chromium	ND	^	0.0020	0.00098	mg/L		11/09/20 14:00	11/10/20 22:08	1
Molybdenum	0.026		0.010	0.0011	mg/L		11/09/20 14:00	11/10/20 22:08	1
Lead	ND		0.0010	0.00045	mg/L		11/09/20 14:00	11/10/20 22:08	1
Selenium	0.010		0.0050	0.00089	mg/L		11/09/20 14:00	11/10/20 22:08	1
Thallium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:08	1
Lithium	0.26		0.0080	0.0017	mg/L		11/09/20 14:00	11/10/20 22:08	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00064	J	0.0020	0.00057	mg/L		11/09/20 14:00	11/11/20 15:58	1
Arsenic	0.0034	J	0.0050	0.00075	mg/L		11/09/20 14:00	11/11/20 15:58	1
Barium	0.030		0.0050	0.0022	mg/L		11/09/20 14:00	11/11/20 15:58	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/11/20 15:58	1
Calcium	480		1.0	0.58	mg/L		11/09/20 14:00	11/11/20 15:58	1
Cadmium	0.00035	J	0.0010	0.00020	mg/L		11/09/20 14:00	11/11/20 15:58	1
Cobalt	0.0039		0.0010	0.00019	mg/L		11/09/20 14:00	11/11/20 15:58	1
Chromium	0.0011	J	0.0020	0.00098	mg/L		11/09/20 14:00	11/11/20 15:58	1
Molybdenum	0.42		0.010	0.0011	mg/L		11/09/20 14:00	11/11/20 15:58	1
Lead	ND		0.0010	0.00045	mg/L		11/09/20 14:00	11/11/20 15:58	1
Selenium	0.0028	J	0.0050	0.00089	mg/L		11/09/20 14:00	11/11/20 15:58	1
Thallium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/11/20 15:58	1
Lithium	0.16		0.0080	0.0017	mg/L		11/09/20 14:00	11/11/20 15:58	1

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/09/20 14:00	11/10/20 22:13	5
Arsenic	0.011	J	0.025	0.0038	mg/L		11/09/20 14:00	11/10/20 22:13	5
Barium	0.017	J	0.025	0.011	mg/L		11/09/20 14:00	11/10/20 22:13	5
Beryllium	ND		0.0050	0.0015	mg/L		11/09/20 14:00	11/10/20 22:13	5
Calcium	450		5.0	2.9	mg/L		11/09/20 14:00	11/10/20 22:13	5
Cadmium	0.0061		0.0050	0.00099	mg/L		11/09/20 14:00	11/10/20 22:13	5
Cobalt	0.016		0.0050	0.00095	mg/L		11/09/20 14:00	11/10/20 22:13	5
Chromium	ND	^	0.010	0.0049	mg/L		11/09/20 14:00	11/10/20 22:13	5
Molybdenum	ND		0.050	0.0054	mg/L		11/09/20 14:00	11/10/20 22:13	5
Lead	ND		0.0050	0.0023	mg/L		11/09/20 14:00	11/10/20 22:13	5
Selenium	1.6		0.025	0.0045	mg/L		11/09/20 14:00	11/10/20 22:13	5
Thallium	0.0057		0.0050	0.0010	mg/L		11/09/20 14:00	11/10/20 22:13	5
Lithium	4.0		0.040	0.0083	mg/L		11/09/20 14:00	11/10/20 22:13	5

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/09/20 14:00	11/10/20 22:16	5
Arsenic	0.0046	J	0.025	0.0038	mg/L		11/09/20 14:00	11/10/20 22:16	5
Barium	0.013	J	0.025	0.011	mg/L		11/09/20 14:00	11/10/20 22:16	5
Beryllium	ND		0.0050	0.0015	mg/L		11/09/20 14:00	11/10/20 22:16	5
Calcium	420		5.0	2.9	mg/L		11/09/20 14:00	11/10/20 22:16	5
Cadmium	0.0027	J	0.0050	0.00099	mg/L		11/09/20 14:00	11/10/20 22:16	5
Cobalt	0.032		0.0050	0.00095	mg/L		11/09/20 14:00	11/10/20 22:16	5
Chromium	ND	^	0.010	0.0049	mg/L		11/09/20 14:00	11/10/20 22:16	5
Molybdenum	ND		0.050	0.0054	mg/L		11/09/20 14:00	11/10/20 22:16	5
Lead	ND		0.0050	0.0023	mg/L		11/09/20 14:00	11/10/20 22:16	5
Selenium	0.62		0.025	0.0045	mg/L		11/09/20 14:00	11/10/20 22:16	5
Thallium	0.0039	J	0.0050	0.0010	mg/L		11/09/20 14:00	11/10/20 22:16	5
Lithium	3.0		0.040	0.0083	mg/L		11/09/20 14:00	11/10/20 22:16	5

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/09/20 14:00	11/10/20 22:23	5
Arsenic	**0.012**	**J**	0.025	0.0038	mg/L		11/09/20 14:00	11/10/20 22:23	5
Barium	**0.016**	**J**	0.025	0.011	mg/L		11/09/20 14:00	11/10/20 22:23	5
Beryllium	ND		0.0050	0.0015	mg/L		11/09/20 14:00	11/10/20 22:23	5
Calcium	**410**		5.0	2.9	mg/L		11/09/20 14:00	11/10/20 22:23	5
Cadmium	**0.0014**	**J**	0.0050	0.00099	mg/L		11/09/20 14:00	11/10/20 22:23	5
Cobalt	**0.022**		0.0050	0.00095	mg/L		11/09/20 14:00	11/10/20 22:23	5
Chromium	ND	^	0.010	0.0049	mg/L		11/09/20 14:00	11/10/20 22:23	5
Molybdenum	**0.0062**	**J**	0.050	0.0054	mg/L		11/09/20 14:00	11/10/20 22:23	5
Lead	ND		0.0050	0.0023	mg/L		11/09/20 14:00	11/10/20 22:23	5
Selenium	**1.9**		0.025	0.0045	mg/L		11/09/20 14:00	11/10/20 22:23	5
Thallium	**0.010**		0.0050	0.0010	mg/L		11/09/20 14:00	11/10/20 22:23	5
Lithium	**4.6**		0.040	0.0083	mg/L		11/09/20 14:00	11/10/20 22:23	5

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/09/20 14:00	11/10/20 22:26	5
Arsenic	ND		0.025	0.0038	mg/L		11/09/20 14:00	11/10/20 22:26	5
Barium	**0.012**	**J**	0.025	0.011	mg/L		11/09/20 14:00	11/10/20 22:26	5
Beryllium	ND		0.0050	0.0015	mg/L		11/09/20 14:00	11/10/20 22:26	5
Calcium	**130**		5.0	2.9	mg/L		11/09/20 14:00	11/10/20 22:26	5
Cadmium	**0.016**		0.0050	0.00099	mg/L		11/09/20 14:00	11/10/20 22:26	5
Cobalt	**0.020**		0.0050	0.00095	mg/L		11/09/20 14:00	11/10/20 22:26	5
Chromium	ND	^	0.010	0.0049	mg/L		11/09/20 14:00	11/10/20 22:26	5
Molybdenum	ND		0.050	0.0054	mg/L		11/09/20 14:00	11/10/20 22:26	5
Lead	ND		0.0050	0.0023	mg/L		11/09/20 14:00	11/10/20 22:26	5
Selenium	**0.47**		0.025	0.0045	mg/L		11/09/20 14:00	11/10/20 22:26	5
Thallium	**0.0045**	**J**	0.0050	0.0010	mg/L		11/09/20 14:00	11/10/20 22:26	5
Lithium	**2.2**		0.040	0.0083	mg/L		11/09/20 14:00	11/10/20 22:26	5

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/09/20 14:00	11/10/20 22:29	1
Arsenic	**0.019**		0.0050	0.00075	mg/L		11/09/20 14:00	11/10/20 22:29	1
Barium	**0.022**		0.0050	0.0022	mg/L		11/09/20 14:00	11/10/20 22:29	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/10/20 22:29	1
Calcium	**550**		1.0	0.58	mg/L		11/09/20 14:00	11/10/20 22:29	1
Cadmium	**0.00023**	**J**	0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:29	1
Cobalt	**0.0026**		0.0010	0.00019	mg/L		11/09/20 14:00	11/10/20 22:29	1
Chromium	ND	^	0.0020	0.00098	mg/L		11/09/20 14:00	11/10/20 22:29	1
Molybdenum	**0.016**		0.010	0.0011	mg/L		11/09/20 14:00	11/10/20 22:29	1
Lead	ND		0.0010	0.00045	mg/L		11/09/20 14:00	11/10/20 22:29	1
Selenium	**2.4**		0.0050	0.00089	mg/L		11/09/20 14:00	11/10/20 22:29	1
Thallium	**0.00027**	**J**	0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:29	1
Lithium	**0.43**		0.0080	0.0017	mg/L		11/09/20 14:00	11/10/20 22:29	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/09/20 14:00	11/10/20 22:31	5
Arsenic	ND		0.025	0.0038	mg/L		11/09/20 14:00	11/10/20 22:31	5
Barium	**0.023**	**J**	0.025	0.011	mg/L		11/09/20 14:00	11/10/20 22:31	5
Beryllium	ND		0.0050	0.0015	mg/L		11/09/20 14:00	11/10/20 22:31	5
Calcium	**430**		5.0	2.9	mg/L		11/09/20 14:00	11/10/20 22:31	5
Cadmium	ND		0.0050	0.00099	mg/L		11/09/20 14:00	11/10/20 22:31	5
Cobalt	**0.0015**	**J**	0.0050	0.00095	mg/L		11/09/20 14:00	11/10/20 22:31	5
Chromium	**0.0049**	**J ^**	0.010	0.0049	mg/L		11/09/20 14:00	11/10/20 22:31	5
Molybdenum	**0.0062**	**J**	0.050	0.0054	mg/L		11/09/20 14:00	11/10/20 22:31	5
Lead	ND		0.0050	0.0023	mg/L		11/09/20 14:00	11/10/20 22:31	5
Selenium	**0.18**		0.025	0.0045	mg/L		11/09/20 14:00	11/10/20 22:31	5
Thallium	**0.0018**	**J**	0.0050	0.0010	mg/L		11/09/20 14:00	11/10/20 22:31	5
Lithium	**3.1**		0.040	0.0083	mg/L		11/09/20 14:00	11/10/20 22:31	5

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/09/20 14:00	11/10/20 22:34	1
Arsenic	**0.0090**		0.0050	0.00075	mg/L		11/09/20 14:00	11/10/20 22:34	1
Barium	**0.0076**		0.0050	0.0022	mg/L		11/09/20 14:00	11/10/20 22:34	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/10/20 22:34	1
Calcium	**420**		1.0	0.58	mg/L		11/09/20 14:00	11/10/20 22:34	1
Cadmium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:34	1
Cobalt	**0.00078**	**J**	0.0010	0.00019	mg/L		11/09/20 14:00	11/10/20 22:34	1
Chromium	**0.0014**	**J ^**	0.0020	0.00098	mg/L		11/09/20 14:00	11/10/20 22:34	1
Molybdenum	**0.0097**	**J**	0.010	0.0011	mg/L		11/09/20 14:00	11/10/20 22:34	1
Lead	ND		0.0010	0.00045	mg/L		11/09/20 14:00	11/10/20 22:34	1
Selenium	**1.1**		0.0050	0.00089	mg/L		11/09/20 14:00	11/10/20 22:34	1
Thallium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:34	1
Lithium	**0.21**		0.0080	0.0017	mg/L		11/09/20 14:00	11/10/20 22:34	1

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/09/20 14:00	11/10/20 22:36	5
Arsenic	**0.015**	**J**	0.025	0.0038	mg/L		11/09/20 14:00	11/10/20 22:36	5
Barium	**0.019**	**J**	0.025	0.011	mg/L		11/09/20 14:00	11/10/20 22:36	5
Beryllium	ND		0.0050	0.0015	mg/L		11/09/20 14:00	11/10/20 22:36	5
Calcium	**400**		5.0	2.9	mg/L		11/09/20 14:00	11/10/20 22:36	5
Cadmium	**0.0060**		0.0050	0.00099	mg/L		11/09/20 14:00	11/10/20 22:36	5
Cobalt	**0.016**		0.0050	0.00095	mg/L		11/09/20 14:00	11/10/20 22:36	5
Chromium	ND	^	0.010	0.0049	mg/L		11/09/20 14:00	11/10/20 22:36	5
Molybdenum	ND		0.050	0.0054	mg/L		11/09/20 14:00	11/10/20 22:36	5
Lead	ND		0.0050	0.0023	mg/L		11/09/20 14:00	11/10/20 22:36	5
Selenium	**1.6**		0.025	0.0045	mg/L		11/09/20 14:00	11/10/20 22:36	5
Thallium	**0.0054**		0.0050	0.0010	mg/L		11/09/20 14:00	11/10/20 22:36	5
Lithium	**4.0**		0.040	0.0083	mg/L		11/09/20 14:00	11/10/20 22:36	5

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-2B-EB
Date Collected: 11/04/20 09:30
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/09/20 14:00	11/10/20 22:39	1
Arsenic	ND		0.0050	0.00075	mg/L		11/09/20 14:00	11/10/20 22:39	1
Barium	ND		0.0050	0.0022	mg/L		11/09/20 14:00	11/10/20 22:39	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/10/20 22:39	1
Calcium	ND		1.0	0.58	mg/L		11/09/20 14:00	11/10/20 22:39	1
Cadmium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:39	1
Cobalt	ND		0.0010	0.00019	mg/L		11/09/20 14:00	11/10/20 22:39	1
Chromium	ND	^	0.0020	0.00098	mg/L		11/09/20 14:00	11/10/20 22:39	1
Molybdenum	ND		0.010	0.0011	mg/L		11/09/20 14:00	11/10/20 22:39	1
Lead	ND		0.0010	0.00045	mg/L		11/09/20 14:00	11/10/20 22:39	1
Selenium	ND		0.0050	0.00089	mg/L		11/09/20 14:00	11/10/20 22:39	1
Thallium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 22:39	1
Lithium	**0.0042**	**J**	0.0080	0.0017	mg/L		11/09/20 14:00	11/10/20 22:39	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:46	1

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:48	1

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:50	1

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:53	1

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:55	1

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J**	0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:57	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J**	0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:59	1

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 16:01	1

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 16:03	1

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 16:05	1

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 16:11	1

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 16:13	1

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 16:15	1

Client Sample ID: MW-2B-EB
Date Collected: 11/04/20 09:30
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 16:17	1

General Chemistry

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.7**	**HF**	0.1	0.1	SU			11/07/20 12:34	1
Temperature	**19.5**	**HF**	1.0	1.0	Degrees C			11/07/20 12:34	1

General Chemistry (Continued)

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	780		30	10	mg/L			11/16/20 21:06	10
Fluoride	1.4	J	2.5	0.83	mg/L			11/19/20 02:03	5
Sulfate	60000		5000	1000	mg/L			11/17/20 23:40	1000
Total Dissolved Solids (TDS)	75000		1000	470	mg/L			11/11/20 15:59	1
Total Suspended Solids	92		4.0	1.1	mg/L			11/11/20 06:35	1

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			11/07/20 12:37	1
Temperature	19.5	HF	1.0	1.0	Degrees C			11/07/20 12:37	1
Chloride	940		30	10	mg/L			11/16/20 21:39	10
Fluoride	3.2	J	5.0	1.7	mg/L			11/16/20 21:39	10
Sulfate	98000		2500	520	mg/L			11/18/20 11:38	500
Total Dissolved Solids (TDS)	63000		1000	470	mg/L			11/11/20 15:59	1
Total Suspended Solids	52		4.0	1.1	mg/L			11/11/20 06:35	1

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			11/07/20 12:41	1
Temperature	19.8	HF	1.0	1.0	Degrees C			11/07/20 12:41	1
Chloride	35		30	10	mg/L			11/16/20 22:12	10
Fluoride	0.70		0.50	0.17	mg/L			11/17/20 23:57	1
Sulfate	1800		500	100	mg/L			11/16/20 22:28	100
Total Dissolved Solids (TDS)	3900		50	24	mg/L			11/11/20 15:59	1
Total Suspended Solids	9.2		4.0	1.1	mg/L			11/11/20 06:35	1

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			11/07/20 12:44	1
Temperature	20.4	HF	1.0	1.0	Degrees C			11/07/20 12:44	1
Chloride	270		30	10	mg/L			11/18/20 21:57	10
Fluoride	2.4	J	5.0	1.7	mg/L			11/18/20 21:57	10
Sulfate	4100		500	100	mg/L			11/18/20 22:13	100
Total Dissolved Solids (TDS)	7400		100	47	mg/L			11/10/20 17:12	1
Total Suspended Solids	16		4.0	1.1	mg/L			11/10/20 08:10	1

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			11/07/20 12:48	1
Temperature	19.7	HF	1.0	1.0	Degrees C			11/07/20 12:48	1
Chloride	130		30	10	mg/L			11/18/20 22:30	10
Fluoride	2.7	J	5.0	1.7	mg/L			11/18/20 22:30	10

General Chemistry (Continued)

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3900		500	100	mg/L			11/18/20 22:46	100
Total Dissolved Solids (TDS)	7200		100	47	mg/L			11/10/20 17:12	1
Total Suspended Solids	18		4.0	1.1	mg/L			11/10/20 08:10	1

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU			11/07/20 12:52	1
Temperature	19.3	HF	1.0	1.0	Degrees C			11/07/20 12:52	1
Chloride	690		30	10	mg/L			11/18/20 02:08	10
Fluoride	170	J	250	83	mg/L			11/18/20 02:24	500
Sulfate	78000		2500	520	mg/L			11/18/20 02:24	500
Total Dissolved Solids (TDS)	71000	H	1000	470	mg/L			11/16/20 17:44	1
Total Suspended Solids	95		4.0	1.1	mg/L			11/11/20 06:14	1

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			11/07/20 12:55	1
Temperature	19.2	HF	1.0	1.0	Degrees C			11/07/20 12:55	1
Chloride	590	J	1500	510	mg/L			11/18/20 02:57	500
Fluoride	0.90		0.50	0.17	mg/L			11/18/20 02:41	1
Sulfate	19000		2500	520	mg/L			11/18/20 02:57	500
Total Dissolved Solids (TDS)	31000		200	94	mg/L			11/11/20 15:59	1
Total Suspended Solids	39		4.0	1.1	mg/L			11/11/20 06:14	1

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			11/07/20 13:31	1
Temperature	19.5	HF	1.0	1.0	Degrees C			11/07/20 13:31	1
Chloride	490		30	10	mg/L			11/18/20 03:14	10
Fluoride	63		5.0	1.7	mg/L			11/18/20 03:14	10
Sulfate	35000		1000	210	mg/L			11/18/20 03:30	200
Total Dissolved Solids (TDS)	48000		1000	470	mg/L			11/11/20 15:59	1
Total Suspended Solids	53		4.0	1.1	mg/L			11/11/20 06:14	1

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			11/07/20 13:34	1
Temperature	20.6	HF	1.0	1.0	Degrees C			11/07/20 13:34	1
Chloride	140		30	10	mg/L			11/18/20 05:25	10
Fluoride	42		5.0	1.7	mg/L			11/18/20 05:25	10
Sulfate	39000		2500	520	mg/L			11/18/20 05:41	500
Total Dissolved Solids (TDS)	58000		1000	470	mg/L			11/11/20 15:59	1

General Chemistry (Continued)

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	70		4.0	1.1	mg/L			11/10/20 08:10	1

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			11/07/20 12:58	1
Temperature	18.9	HF	1.0	1.0	Degrees C			11/07/20 12:58	1
Chloride	150		60	20	mg/L			11/18/20 10:17	20
Fluoride	1.9		0.50	0.17	mg/L			11/18/20 05:58	1
Sulfate	2900		100	21	mg/L			11/18/20 10:17	20
Total Dissolved Solids (TDS)	6400		100	47	mg/L			11/11/20 15:59	1
Total Suspended Solids	16		4.0	1.1	mg/L			11/10/20 08:10	1

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			11/07/20 13:19	1
Temperature	20.7	HF	1.0	1.0	Degrees C			11/07/20 13:19	1
Chloride	1700		30	10	mg/L			11/19/20 00:41	10
Fluoride	44		5.0	1.7	mg/L			11/19/20 00:41	10
Sulfate	18000		1000	210	mg/L			11/19/20 00:57	200
Total Dissolved Solids (TDS)	29000		200	94	mg/L			11/11/20 15:59	1
Total Suspended Solids	30		4.0	1.1	mg/L			11/11/20 06:35	1

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			11/06/20 22:19	1
Temperature	20.9	HF	1.0	1.0	Degrees C			11/06/20 22:19	1
Chloride	200		30	10	mg/L			11/19/20 01:30	10
Fluoride	0.45	J	0.50	0.17	mg/L			11/19/20 01:14	1
Sulfate	3500		500	100	mg/L			11/19/20 01:47	100
Total Dissolved Solids (TDS)	8600		200	94	mg/L			11/11/20 15:59	1
Total Suspended Solids	10		4.0	1.1	mg/L			11/10/20 08:10	1

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU			11/06/20 22:27	1
Temperature	19.7	HF	1.0	1.0	Degrees C			11/06/20 22:27	1
Chloride	680		30	10	mg/L			11/18/20 10:32	10
Fluoride	71		25	8.3	mg/L			11/19/20 18:28	50
Sulfate	42000		5000	1000	mg/L			11/18/20 10:49	1000
Total Dissolved Solids (TDS)	72000		1000	470	mg/L			11/11/20 15:59	1
Total Suspended Solids	100		4.0	1.1	mg/L			11/10/20 08:10	1

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: MW-2B-EB
Date Collected: 11/04/20 09:30
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.4**	**HF**	0.1	0.1	SU			11/07/20 13:15	1
Temperature	**21.7**	**HF**	1.0	1.0	Degrees C			11/07/20 13:15	1
Chloride	ND		3.0	1.0	mg/L			11/19/20 04:31	1
Fluoride	ND		0.50	0.17	mg/L			11/19/20 04:31	1
Sulfate	ND		5.0	1.0	mg/L			11/19/20 04:31	1
Total Dissolved Solids (TDS)	**15**		10	4.7	mg/L			11/11/20 15:59	1
Total Suspended Solids	**1.6**	**J**	4.0	1.1	mg/L			11/10/20 08:10	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-459919/1-A
Matrix: Water
Analysis Batch: 460377

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459919

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/09/20 14:00	11/11/20 15:58	1

Lab Sample ID: LCS 240-459919/2-A
Matrix: Water
Analysis Batch: 460377

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 459919

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.01		mg/L		101	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-459919/1-A
Matrix: Water
Analysis Batch: 460346

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 459919

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/09/20 14:00	11/10/20 21:26	1
Arsenic	ND		0.0050	0.00075	mg/L		11/09/20 14:00	11/10/20 21:26	1
Barium	ND		0.0050	0.0022	mg/L		11/09/20 14:00	11/10/20 21:26	1
Beryllium	ND		0.0010	0.00031	mg/L		11/09/20 14:00	11/10/20 21:26	1
Calcium	ND		1.0	0.58	mg/L		11/09/20 14:00	11/10/20 21:26	1
Cadmium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 21:26	1
Cobalt	ND		0.0010	0.00019	mg/L		11/09/20 14:00	11/10/20 21:26	1
Chromium	ND		0.0020	0.00098	mg/L		11/09/20 14:00	11/10/20 21:26	1
Molybdenum	ND		0.010	0.0011	mg/L		11/09/20 14:00	11/10/20 21:26	1
Lead	ND		0.0010	0.00045	mg/L		11/09/20 14:00	11/10/20 21:26	1
Selenium	ND		0.0050	0.00089	mg/L		11/09/20 14:00	11/10/20 21:26	1
Thallium	ND		0.0010	0.00020	mg/L		11/09/20 14:00	11/10/20 21:26	1
Lithium	ND		0.0080	0.0017	mg/L		11/09/20 14:00	11/10/20 21:26	1

Lab Sample ID: LCS 240-459919/3-A
Matrix: Water
Analysis Batch: 460346

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 459919

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0949		mg/L		95	80 - 120
Arsenic	1.00	0.958		mg/L		96	80 - 120
Barium	1.00	0.973		mg/L		97	80 - 120
Beryllium	0.500	0.531		mg/L		106	80 - 120
Calcium	25.0	25.5		mg/L		102	80 - 120
Cadmium	0.500	0.479		mg/L		96	80 - 120
Cobalt	0.500	0.473		mg/L		95	80 - 120
Chromium	0.500	0.482		mg/L		96	80 - 120
Molybdenum	0.500	0.493		mg/L		99	80 - 120
Lead	0.500	0.508		mg/L		102	80 - 120
Selenium	1.00	0.959		mg/L		96	80 - 120
Thallium	1.00	0.970		mg/L		97	80 - 120
Lithium	0.500	0.483		mg/L		97	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-459921/1-A
Matrix: Water
Analysis Batch: 460372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459921

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/20 12:00	11/10/20 15:21	1

Lab Sample ID: LCS 240-459921/2-A
Matrix: Water
Analysis Batch: 460372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459921

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00524		mg/L		105	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-515785/4
Matrix: Water
Analysis Batch: 515785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Lab Sample ID: 280-142394-12 DU
Matrix: Ground Water
Analysis Batch: 515785

Client Sample ID: MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.0	HF	7.4	F3	SU		7	5
Temperature	20.9	HF	20.0		Degrees C		5	10

Lab Sample ID: LCS 280-515839/4
Matrix: Water
Analysis Batch: 515839

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-516917/6
Matrix: Water
Analysis Batch: 516917

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/16/20 20:50	1
Fluoride	ND		0.50	0.17	mg/L			11/16/20 20:50	1
Sulfate	ND		5.0	1.0	mg/L			11/16/20 20:50	1

Lab Sample ID: LCS 280-516917/4
Matrix: Water
Analysis Batch: 516917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.0		mg/L		95	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-516917/4
Matrix: Water
Analysis Batch: 516917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	5.00	5.32		mg/L		106	90 - 110
Sulfate	100	93.3		mg/L		93	90 - 110

Lab Sample ID: LCSD 280-516917/5
Matrix: Water
Analysis Batch: 516917

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.5		mg/L		95	90 - 110	0	10
Fluoride	5.00	5.27		mg/L		105	90 - 110	1	10
Sulfate	100	92.4		mg/L		92	90 - 110	1	10

Lab Sample ID: MRL 280-516917/3
Matrix: Water
Analysis Batch: 516917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.09		mg/L		82	50 - 150
Fluoride	0.500	0.551		mg/L		110	50 - 150
Sulfate	5.00	4.48	J	mg/L		90	50 - 150

Lab Sample ID: MB 280-517046/6
Matrix: Water
Analysis Batch: 517046

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/17/20 18:02	1
Fluoride	ND		0.50	0.17	mg/L			11/17/20 18:02	1
Sulfate	ND		5.0	1.0	mg/L			11/17/20 18:02	1

Lab Sample ID: LCS 280-517046/4
Matrix: Water
Analysis Batch: 517046

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	97.0		mg/L		97	90 - 110
Fluoride	5.00	5.46		mg/L		109	90 - 110
Sulfate	100	94.9		mg/L		95	90 - 110

Lab Sample ID: LCSD 280-517046/5
Matrix: Water
Analysis Batch: 517046

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.3		mg/L		95	90 - 110	2	10
Fluoride	5.00	5.38		mg/L		108	90 - 110	2	10
Sulfate	100	93.8		mg/L		94	90 - 110	1	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-517046/3
Matrix: Water
Analysis Batch: 517046

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.02		mg/L		80	50 - 150
Fluoride	0.500	0.545		mg/L		109	50 - 150
Sulfate	5.00	4.45	J	mg/L		89	50 - 150

Lab Sample ID: MB 280-517218/6
Matrix: Water
Analysis Batch: 517218

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/18/20 17:43	1
Fluoride	ND		0.50	0.17	mg/L			11/18/20 17:43	1
Sulfate	ND		5.0	1.0	mg/L			11/18/20 17:43	1

Lab Sample ID: LCS 280-517218/4
Matrix: Water
Analysis Batch: 517218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	96.4		mg/L		96	90 - 110
Fluoride	5.00	5.40		mg/L		108	90 - 110
Sulfate	100	95.0		mg/L		95	90 - 110

Lab Sample ID: LCSD 280-517218/5
Matrix: Water
Analysis Batch: 517218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.6		mg/L		99	90 - 110	2	10
Fluoride	5.00	5.51		mg/L		110	90 - 110	2	10
Sulfate	100	97.0		mg/L		97	90 - 110	2	10

Lab Sample ID: MRL 280-517218/3
Matrix: Water
Analysis Batch: 517218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.06		mg/L		81	50 - 150
Fluoride	0.500	0.547		mg/L		109	50 - 150
Sulfate	5.00	4.42	J	mg/L		88	50 - 150

Lab Sample ID: MB 280-517396/6
Matrix: Water
Analysis Batch: 517396

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.17	mg/L			11/19/20 17:10	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-517396/4
Matrix: Water
Analysis Batch: 517396

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	5.00	5.11		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-517396/5
Matrix: Water
Analysis Batch: 517396

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	5.00	5.27		mg/L		105	90 - 110	3	10

Lab Sample ID: MRL 280-517396/3
Matrix: Water
Analysis Batch: 517396

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.500	0.518		mg/L		104	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-516142/2
Matrix: Water
Analysis Batch: 516142

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/10/20 17:12	1

Lab Sample ID: LCS 280-516142/1
Matrix: Water
Analysis Batch: 516142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	522		mg/L		104	93 - 110

Lab Sample ID: 280-142394-4 DU
Matrix: Ground Water
Analysis Batch: 516142

Client Sample ID: W-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	7400		7300		mg/L		2	10

Lab Sample ID: MB 280-516315/2
Matrix: Water
Analysis Batch: 516315

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/11/20 15:59	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 280-516315/1
Matrix: Water
Analysis Batch: 516315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	531		mg/L		106	93 - 110

Lab Sample ID: MB 280-516924/2
Matrix: Water
Analysis Batch: 516924

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/16/20 17:44	1

Lab Sample ID: LCS 280-516924/1
Matrix: Water
Analysis Batch: 516924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	498		mg/L		100	93 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-516040/1
Matrix: Water
Analysis Batch: 516040

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/10/20 08:10	1

Lab Sample ID: LCS 280-516040/2
Matrix: Water
Analysis Batch: 516040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	92.0		mg/L		92	79 - 114

Lab Sample ID: LCSD 280-516040/3
Matrix: Water
Analysis Batch: 516040

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	96.0		mg/L		96	79 - 114	4	20

Lab Sample ID: MB 280-516192/1
Matrix: Water
Analysis Batch: 516192

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/11/20 06:14	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 280-516192/2
Matrix: Water
Analysis Batch: 516192

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	94.0		mg/L		94	79 - 114		

Lab Sample ID: 280-142394-6 DU
Matrix: Ground Water
Analysis Batch: 516192

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	95			107	F3	mg/L				12	10

Lab Sample ID: MB 280-516195/1
Matrix: Water
Analysis Batch: 516195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/11/20 06:35	1

Lab Sample ID: LCS 280-516195/2
Matrix: Water
Analysis Batch: 516195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	94.0		mg/L		94	79 - 114		

Metals

Prep Batch: 459919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total Recoverable	Ground Water	3005A	
280-142394-2	W-2B	Total Recoverable	Ground Water	3005A	
280-142394-3	W-3	Total Recoverable	Ground Water	3005A	
280-142394-4	W-5	Total Recoverable	Ground Water	3005A	
280-142394-5	W-6	Total Recoverable	Ground Water	3005A	
280-142394-6	W-7	Total Recoverable	Ground Water	3005A	
280-142394-7	MW-1B	Total Recoverable	Ground Water	3005A	
280-142394-8	MW-2B	Total Recoverable	Ground Water	3005A	
280-142394-9	MW-3	Total Recoverable	Ground Water	3005A	
280-142394-10	MW-4B	Total Recoverable	Ground Water	3005A	
280-142394-11	MW-5	Total Recoverable	Water	3005A	
280-142394-12	MW-6	Total Recoverable	Ground Water	3005A	
280-142394-13	W-7-DUP	Total Recoverable	Water	3005A	
280-142394-14	MW-2B-EB	Total Recoverable	Water	3005A	
MB 240-459919/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-459919/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-459919/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 459921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	7470A	
280-142394-2	W-2B	Total/NA	Ground Water	7470A	
280-142394-3	W-3	Total/NA	Ground Water	7470A	
280-142394-4	W-5	Total/NA	Ground Water	7470A	
280-142394-5	W-6	Total/NA	Ground Water	7470A	
280-142394-6	W-7	Total/NA	Ground Water	7470A	
280-142394-7	MW-1B	Total/NA	Ground Water	7470A	
280-142394-8	MW-2B	Total/NA	Ground Water	7470A	
280-142394-9	MW-3	Total/NA	Ground Water	7470A	
280-142394-10	MW-4B	Total/NA	Ground Water	7470A	
280-142394-11	MW-5	Total/NA	Water	7470A	
280-142394-12	MW-6	Total/NA	Ground Water	7470A	
280-142394-13	W-7-DUP	Total/NA	Water	7470A	
280-142394-14	MW-2B-EB	Total/NA	Water	7470A	
MB 240-459921/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-459921/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 460346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total Recoverable	Ground Water	6020A	459919
280-142394-2	W-2B	Total Recoverable	Ground Water	6020A	459919
280-142394-3	W-3	Total Recoverable	Ground Water	6020A	459919
280-142394-4	W-5	Total Recoverable	Ground Water	6020A	459919
280-142394-6	W-7	Total Recoverable	Ground Water	6020A	459919
280-142394-7	MW-1B	Total Recoverable	Ground Water	6020A	459919
280-142394-8	MW-2B	Total Recoverable	Ground Water	6020A	459919
280-142394-9	MW-3	Total Recoverable	Ground Water	6020A	459919
280-142394-10	MW-4B	Total Recoverable	Ground Water	6020A	459919
280-142394-11	MW-5	Total Recoverable	Water	6020A	459919
280-142394-12	MW-6	Total Recoverable	Ground Water	6020A	459919
280-142394-13	W-7-DUP	Total Recoverable	Water	6020A	459919

Metals (Continued)

Analysis Batch: 460346 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-14	MW-2B-EB	Total Recoverable	Water	6020A	459919
MB 240-459919/1-A	Method Blank	Total Recoverable	Water	6020A	459919
LCS 240-459919/3-A	Lab Control Sample	Total Recoverable	Water	6020A	459919

Analysis Batch: 460372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	7470A	459921
280-142394-2	W-2B	Total/NA	Ground Water	7470A	459921
280-142394-3	W-3	Total/NA	Ground Water	7470A	459921
280-142394-4	W-5	Total/NA	Ground Water	7470A	459921
280-142394-5	W-6	Total/NA	Ground Water	7470A	459921
280-142394-6	W-7	Total/NA	Ground Water	7470A	459921
280-142394-7	MW-1B	Total/NA	Ground Water	7470A	459921
280-142394-8	MW-2B	Total/NA	Ground Water	7470A	459921
280-142394-9	MW-3	Total/NA	Ground Water	7470A	459921
280-142394-10	MW-4B	Total/NA	Ground Water	7470A	459921
280-142394-11	MW-5	Total/NA	Water	7470A	459921
280-142394-12	MW-6	Total/NA	Ground Water	7470A	459921
280-142394-13	W-7-DUP	Total/NA	Water	7470A	459921
280-142394-14	MW-2B-EB	Total/NA	Water	7470A	459921
MB 240-459921/1-A	Method Blank	Total/NA	Water	7470A	459921
LCS 240-459921/2-A	Lab Control Sample	Total/NA	Water	7470A	459921

Analysis Batch: 460377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total Recoverable	Ground Water	6010C	459919
280-142394-2	W-2B	Total Recoverable	Ground Water	6010C	459919
280-142394-3	W-3	Total Recoverable	Ground Water	6010C	459919
280-142394-4	W-5	Total Recoverable	Ground Water	6010C	459919
280-142394-5	W-6	Total Recoverable	Ground Water	6010C	459919
280-142394-6	W-7	Total Recoverable	Ground Water	6010C	459919
280-142394-7	MW-1B	Total Recoverable	Ground Water	6010C	459919
280-142394-8	MW-2B	Total Recoverable	Ground Water	6010C	459919
280-142394-9	MW-3	Total Recoverable	Ground Water	6010C	459919
280-142394-10	MW-4B	Total Recoverable	Ground Water	6010C	459919
280-142394-11	MW-5	Total Recoverable	Water	6010C	459919
280-142394-12	MW-6	Total Recoverable	Ground Water	6010C	459919
280-142394-13	W-7-DUP	Total Recoverable	Water	6010C	459919
280-142394-14	MW-2B-EB	Total Recoverable	Water	6010C	459919
MB 240-459919/1-A	Method Blank	Total Recoverable	Water	6010C	459919
LCS 240-459919/2-A	Lab Control Sample	Total Recoverable	Water	6010C	459919

Analysis Batch: 460603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-2	W-2B	Total Recoverable	Ground Water	6020A	459919
280-142394-5	W-6	Total Recoverable	Ground Water	6020A	459919

General Chemistry

Analysis Batch: 515785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-12	MW-6	Total/NA	Ground Water	9040B	
280-142394-13	W-7-DUP	Total/NA	Water	9040B	
LCS 280-515785/4	Lab Control Sample	Total/NA	Water	9040B	
280-142394-12 DU	MW-6	Total/NA	Ground Water	9040B	

Analysis Batch: 515839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	9040B	
280-142394-2	W-2B	Total/NA	Ground Water	9040B	
280-142394-3	W-3	Total/NA	Ground Water	9040B	
280-142394-4	W-5	Total/NA	Ground Water	9040B	
280-142394-5	W-6	Total/NA	Ground Water	9040B	
280-142394-6	W-7	Total/NA	Ground Water	9040B	
280-142394-7	MW-1B	Total/NA	Ground Water	9040B	
280-142394-8	MW-2B	Total/NA	Ground Water	9040B	
280-142394-9	MW-3	Total/NA	Ground Water	9040B	
280-142394-10	MW-4B	Total/NA	Ground Water	9040B	
280-142394-11	MW-5	Total/NA	Water	9040B	
280-142394-14	MW-2B-EB	Total/NA	Water	9040B	
LCS 280-515839/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 516040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-4	W-5	Total/NA	Ground Water	SM 2540D	
280-142394-5	W-6	Total/NA	Ground Water	SM 2540D	
280-142394-9	MW-3	Total/NA	Ground Water	SM 2540D	
280-142394-10	MW-4B	Total/NA	Ground Water	SM 2540D	
280-142394-12	MW-6	Total/NA	Ground Water	SM 2540D	
280-142394-13	W-7-DUP	Total/NA	Water	SM 2540D	
280-142394-14	MW-2B-EB	Total/NA	Water	SM 2540D	
MB 280-516040/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-516040/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-516040/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 516142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-4	W-5	Total/NA	Ground Water	SM 2540C	
280-142394-5	W-6	Total/NA	Ground Water	SM 2540C	
MB 280-516142/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-516142/1	Lab Control Sample	Total/NA	Water	SM 2540C	
280-142394-4 DU	W-5	Total/NA	Ground Water	SM 2540C	

Analysis Batch: 516192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-6	W-7	Total/NA	Ground Water	SM 2540D	
280-142394-7	MW-1B	Total/NA	Ground Water	SM 2540D	
280-142394-8	MW-2B	Total/NA	Ground Water	SM 2540D	
MB 280-516192/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-516192/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-142394-6 DU	W-7	Total/NA	Ground Water	SM 2540D	

General Chemistry

Analysis Batch: 516195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	SM 2540D	
280-142394-2	W-2B	Total/NA	Ground Water	SM 2540D	
280-142394-3	W-3	Total/NA	Ground Water	SM 2540D	
280-142394-11	MW-5	Total/NA	Water	SM 2540D	
MB 280-516195/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-516195/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 516315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	SM 2540C	
280-142394-2	W-2B	Total/NA	Ground Water	SM 2540C	
280-142394-3	W-3	Total/NA	Ground Water	SM 2540C	
280-142394-7	MW-1B	Total/NA	Ground Water	SM 2540C	
280-142394-8	MW-2B	Total/NA	Ground Water	SM 2540C	
280-142394-9	MW-3	Total/NA	Ground Water	SM 2540C	
280-142394-10	MW-4B	Total/NA	Ground Water	SM 2540C	
280-142394-11	MW-5	Total/NA	Water	SM 2540C	
280-142394-12	MW-6	Total/NA	Ground Water	SM 2540C	
280-142394-13	W-7-DUP	Total/NA	Water	SM 2540C	
280-142394-14	MW-2B-EB	Total/NA	Water	SM 2540C	
MB 280-516315/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-516315/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 516917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	9056A	
280-142394-2	W-2B	Total/NA	Ground Water	9056A	
280-142394-3	W-3	Total/NA	Ground Water	9056A	
280-142394-3	W-3	Total/NA	Ground Water	9056A	
MB 280-516917/6	Method Blank	Total/NA	Water	9056A	
LCS 280-516917/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-516917/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-516917/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 516924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-6	W-7	Total/NA	Ground Water	SM 2540C	
MB 280-516924/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-516924/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 517046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	9056A	
280-142394-2	W-2B	Total/NA	Ground Water	9056A	
280-142394-3	W-3	Total/NA	Ground Water	9056A	
280-142394-6	W-7	Total/NA	Ground Water	9056A	
280-142394-6	W-7	Total/NA	Ground Water	9056A	
280-142394-7	MW-1B	Total/NA	Ground Water	9056A	
280-142394-7	MW-1B	Total/NA	Ground Water	9056A	
280-142394-8	MW-2B	Total/NA	Ground Water	9056A	
280-142394-8	MW-2B	Total/NA	Ground Water	9056A	

General Chemistry (Continued)

Analysis Batch: 517046 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-9	MW-3	Total/NA	Ground Water	9056A	
280-142394-9	MW-3	Total/NA	Ground Water	9056A	
280-142394-10	MW-4B	Total/NA	Ground Water	9056A	
280-142394-10	MW-4B	Total/NA	Ground Water	9056A	
280-142394-13	W-7-DUP	Total/NA	Water	9056A	
280-142394-13	W-7-DUP	Total/NA	Water	9056A	
MB 280-517046/6	Method Blank	Total/NA	Water	9056A	
LCS 280-517046/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-517046/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-517046/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 517218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	9056A	
280-142394-4	W-5	Total/NA	Ground Water	9056A	
280-142394-4	W-5	Total/NA	Ground Water	9056A	
280-142394-5	W-6	Total/NA	Ground Water	9056A	
280-142394-5	W-6	Total/NA	Ground Water	9056A	
280-142394-11	MW-5	Total/NA	Water	9056A	
280-142394-11	MW-5	Total/NA	Water	9056A	
280-142394-12	MW-6	Total/NA	Ground Water	9056A	
280-142394-12	MW-6	Total/NA	Ground Water	9056A	
280-142394-12	MW-6	Total/NA	Ground Water	9056A	
280-142394-14	MW-2B-EB	Total/NA	Water	9056A	
MB 280-517218/6	Method Blank	Total/NA	Water	9056A	
LCS 280-517218/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-517218/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-517218/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 517396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-13	W-7-DUP	Total/NA	Water	9056A	
MB 280-517396/6	Method Blank	Total/NA	Water	9056A	
LCS 280-517396/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-517396/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-517396/3	Lab Control Sample	Total/NA	Water	9056A	

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:01	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460346	11/10/20 22:00	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 15:46	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:34	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	516917	11/16/20 21:06	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	517046	11/17/20 23:40	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	517218	11/19/20 02:03	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516195	11/11/20 06:35	LEB	TAL DEN

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:06	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			460346	11/10/20 22:03	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460603	11/11/20 15:55	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 15:48	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:37	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	516917	11/16/20 21:39	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	517046	11/18/20 11:38	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516195	11/11/20 06:35	LEB	TAL DEN

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:10	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			460346	11/10/20 22:05	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 15:50	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:41	CJ	TAL DEN

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		10	5 mL	5 mL	516917	11/16/20 22:12	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	516917	11/16/20 22:28	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	517046	11/17/20 23:57	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516195	11/11/20 06:35	LEB	TAL DEN

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:15	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			460346	11/10/20 22:08	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 15:53	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:44	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517218	11/18/20 21:57	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	517218	11/18/20 22:13	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	516142	11/10/20 17:12	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516040	11/10/20 08:10	LEB	TAL DEN

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:19	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			460603	11/11/20 15:58	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 15:55	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:48	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517218	11/18/20 22:30	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	517218	11/18/20 22:46	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	516142	11/10/20 17:12	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516040	11/10/20 08:10	LEB	TAL DEN

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:32	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460346	11/10/20 22:13	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 15:57	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:52	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517046	11/18/20 02:08	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	517046	11/18/20 02:24	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	516924	11/16/20 17:44	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516192	11/11/20 06:14	LEB	TAL DEN

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:36	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460346	11/10/20 22:16	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 15:59	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:55	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	517046	11/18/20 02:41	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	517046	11/18/20 02:57	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516192	11/11/20 06:14	LEB	TAL DEN

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:41	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460346	11/10/20 22:23	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 16:01	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 13:31	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517046	11/18/20 03:14	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	517046	11/18/20 03:30	CJ	TAL DEN

Client Sample ID: MW-2B
Lab Sample ID: 280-142394-8
Date Collected: 11/04/20 08:50
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516192	11/11/20 06:14	LEB	TAL DEN

Client Sample ID: MW-3
Lab Sample ID: 280-142394-9
Date Collected: 11/04/20 15:20
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:46	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460346	11/10/20 22:26	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 16:03	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 13:34	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517046	11/18/20 05:25	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	517046	11/18/20 05:41	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516040	11/10/20 08:10	LEB	TAL DEN

Client Sample ID: MW-4B
Lab Sample ID: 280-142394-10
Date Collected: 11/04/20 16:45
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:50	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			460346	11/10/20 22:29	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 16:05	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 12:58	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	517046	11/18/20 05:58	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	517046	11/18/20 10:17	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516040	11/10/20 08:10	LEB	TAL DEN

Client Sample ID: MW-5
Lab Sample ID: 280-142394-11
Date Collected: 11/05/20 08:05
Matrix: Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:55	WKD	TAL CAN

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460346	11/10/20 22:31	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 16:11	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 13:19	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517218	11/19/20 00:41	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	517218	11/19/20 00:57	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516195	11/11/20 06:35	LEB	TAL DEN

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-12
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 17:59	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			460346	11/10/20 22:34	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 16:13	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515785	11/06/20 22:19	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	517218	11/19/20 01:14	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517218	11/19/20 01:30	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	517218	11/19/20 01:47	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516040	11/10/20 08:10	LEB	TAL DEN

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 18:04	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			460346	11/10/20 22:36	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 16:15	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515785	11/06/20 22:27	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517046	11/18/20 10:32	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	517046	11/18/20 10:49	CJ	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	517396	11/19/20 18:28	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-7-DUP
Lab Sample ID: 280-142394-13
Date Collected: 11/04/20 13:10
Matrix: Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516040	11/10/20 08:10	LEB	TAL DEN

Client Sample ID: MW-2B-EB
Lab Sample ID: 280-142394-14
Date Collected: 11/04/20 09:30
Matrix: Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			460377	11/11/20 18:08	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	459919	11/09/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			460346	11/10/20 22:39	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	459921	11/09/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			460372	11/10/20 16:17	SLD	TAL CAN
Total/NA	Analysis	9040B		1			515839	11/07/20 13:15	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	517218	11/19/20 04:31	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	516315	11/11/20 15:59	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516040	11/10/20 08:10	LEB	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-142394-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Ground Water	Temperature
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS/AM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #2 of #1
Client Contact: Molly Reeves	Phone: 720 838 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic A, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, Air, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C - Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228 combined	Total Number of containers	Special
			Preservation Code:				N	D	N	N	D		
W-1				Water									
W-2A	11/4/20	0850	G	Water	N		X	X	X	X	X	6	
W-2B	11/4/20	1005	G	Water	N		X	X	X	X	X	6	
W-3	11/4/20	1520	G	Water	N		X	X	X	X	X	6	
W-4				Water									
W-5	11/3/20	1620	G	Water	N		X	X	X	X	X	6	
W-6	11/3/20	1650	G	Water	N		X	X	X	X	X	6	
W-7	11/4/20	1310	G	Water	N		X	X	X	X	X	6	
W-8A				Water									
W-8B				Water									
MW-1B	11/4/20	1110	G	Water	N		X	X	X	X	X	6	

2800-142394 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 11/5/20 1210	Company: HDR	Received by:	Date/Time: 11/3/20 1210	Company: EFA-RM
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 7.8C, 9.4C, 9.9C, 3.9C, 1.6C, 1.5C, 1.9C CF-2.3C

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS/AM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #1
Client Contact: Molly Reeves	Phone: 7203386065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): ASAP			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			Other:
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air, Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Applit+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
MW-2 B	11/4/20	0850	G	Water	N		X	X	X	X	X	6	
MW-3	11/4/20	1920	G	Water	N		X	X	X	X	X	6	
MW-4 B	11/4/20	1645	G	Water	N		X	X	X	X	X	6	
MW-5	11/5/20	0805	G	Water	N		X	X	X	X	X	6	
MW-6	11/4/20	1415	G	Water	N		X	X	X	X	X	6	
MW-7 -DUP	11/4/20	1310	G	Water	N		X	X	X	X	X	6	
MW-38 -EB	11/4/20	0930	G	Water	N		X	X	X	X	X	6	
				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 11/5/20 1210	Company: HDR	Received by:	Date/Time: 11/5/20 1210	Company: FEDEX
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 7.8C, 9.4C, 9.9C, 3.9C, 1.6C, 1.5C, 1.9C
CF-0.3C 2R#11

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

0.9/18

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-646042.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-142394-1
Address: 4101 Shuttel Street NW,	Due Date Requested: 11/12/2020	Analysis Requested		Preservation Codes:
City: North Canton	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			54

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Waste/oil, BT=Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-142394-1)	11/4/20	08:50 Mountain		Water			X	X	X	1	Use Collision Cell
W-2B (280-142394-2)	11/4/20	10:05 Mountain		Water			X	X	X	1	Use Collision Cell
W-3 (280-142394-3)	11/4/20	15:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-5 (280-142394-4)	11/3/20	16:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-6 (280-142394-5)	11/3/20	16:50 Mountain		Water			X	X	X	1	Use Collision Cell
W-7 (280-142394-6)	11/4/20	13:10 Mountain		Water			X	X	X	1	Use Collision Cell
MW-1B (280-142394-7)	11/4/20	11:10 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2B (280-142394-8)	11/4/20	08:50 Mountain		Water			X	X	X	1	Use Collision Cell
MW-3 (280-142394-9)	11/4/20	15:20 Mountain		Water			X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/6/2020 1320			11-7-20 940	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Rev. 11/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-546042.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - AZLA		Job #: 280-142394-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 11/12/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								54
MW-4B (280-142394-10)	11/4/20	16:45 Mountain		Water			X	X	X	1	Use Collision Cell
MW-5 (280-142394-11)	11/5/20	08:05 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-142394-12)	11/4/20	14:15 Mountain		Water			X	X	X	1	Use Collision Cell
W-7-DUP (280-142394-13)	11/4/20	13:10 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2B-EB (280-142394-14)	11/4/20	09:30 Mountain		Water			X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11/6/20 1320		[signature]	11-7-20 940	EMC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client EFF Denver Site Name _____ Cooler unpacked by:

Cooler Received on 11-7-20 Opened on 11-8-20

FedEx: 1st Grd ~~Exp~~ UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # 164 Foam Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam ~~Plastic Bag~~ None Other _____

COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water ~~None~~

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 ~~Yes~~ No

-Were the seals on the outside of the cooler(s) signed & dated? ~~Yes~~ No NA

-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes ~~No~~

-Were tamper/custody seals intact and uncompromised? ~~Yes~~ No NA

3. Shippers' packing slip attached to the cooler(s)? ~~Yes~~ No

4. Did custody papers accompany the sample(s)? ~~Yes~~ No

5. Were the custody papers relinquished & signed in the appropriate place? ~~Yes~~ No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes ~~No~~

7. Did all bottles arrive in good condition (Unbroken)? ~~Yes~~ No

8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? ~~Yes~~ No

9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?

10. Were correct bottle(s) used for the test(s) indicated? ~~Yes~~ No

11. Sufficient quantity received to perform indicated analyses? ~~Yes~~ No

12. Are these work share samples and all listed on the COC? ~~Yes~~ No

If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC907861**

14. Were VOAs on the COC? Yes ~~No~~

15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. Yes No ~~NA~~

16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No

17. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login # : _____

Eurofins TestAmerica Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA Client Box Other	IR-11 IR-12	13.2	14.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12	0.9	1.8	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-11 IR-12			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142394-1

Login Number: 142394
List Number: 1
Creator: Collins, Janice S

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-142394-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
12/21/2020 8:43:11 AM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-142394-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-142394-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/05/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.2º C, 1.3º C, 1.6º C, 3.6º C, 7.5º C, 9.1º C and 9.6º C.

Please note, this report only contains the results for Radiochemistry analyses. All other analyses are reported under job 280-142394-2.

Please note, the following samples were received at the laboratory outside the required temperature criteria for Samples: W-6, MW-1B, MW-2B, MW-4B, MW-6, and MW-2B-EB. For sample W-6 the container labels list a sample collection time of 16:20, while the COC lists 16:50. The sample was logged per the COC. For sample MW-3 the container labels list a sample collection time of 09:00, while the COC lists 15:20. The sample was logged per the COC. For sample W-2B a 1 L plastic bottle with nitric acid was received without a label container. The container was logged under the following sample through a process of elimination, as the sample was missing a container and no other samples were missing a container.

RADIUM-226 (GFPC)

Method PrecSep-21: Radium 226 Prep Batch 160-488959: Insufficient sample volume was available to perform a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-489023: Insufficient sample volume was available to perform a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Several samples were prepared at a reduced aliquot due to yellow discoloration and/or a cloudy appearance.

The following sample has a barium carrier recovery above the 110% QC limit: W-7 (280-142394-6), MW-1B (280-142394-7), MW-2B (280-142394-8), MW-3 (280-142394-9), MW-5 (280-142394-11), W-7-DUP (280-142394-13) and MW-2B-EB (280-142394-14). Affected samples had a barium correction applied, however, there is significant concentrations of salt-like compounds (i.e. calcium, magnesium, sodium, and strontium) that can interfere with a barium sulfate recovery. The LCS (laboratory control sample) has an acceptable spike recovery demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier recovery may have.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228

Job ID: 280-142394-2 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Duplicate LCSs were prepared in prep Batch 160-488965. Recoveries for one of the pair were below lower control limits. The LCS was within control limits.

Method PrecSep_0: Radium 228 Prep Batch 160-488965: Insufficient sample volume was available to perform a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep_0: Radium 228 Prep Batch 160-489033: Insufficient sample volume was available to perform a sample duplicate. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Several samples were prepared at a reduced aliquot due to yellow discoloration and/or a cloudy appearance.

The Yttrium carrier recovery is outside the upper control limit (110%) for the following samples: W-7 (280-142394-6) (MB 160-489033/24-A), and MW-1B (280-142394-7). Samples were weighed above the 110% recovery threshold.

The Barium carrier recovery is outside the upper control limit (110%)for the following samples: W-7 (280-142394-6), MW-1B (280-142394-7), MW-2B (280-142394-8), MW-3 (280-142394-9), MW-4B (280-142394-10), W-7-DUP (280-142394-13) and MW-2B-EB (280-142394-14). Samples weighed over the 110% recovery threshold. Most/all samples affected were gray in color on the planchet after being dried. Samples appeared gray after the initial 5ml HNO3, 2ml (NH4)2So4, and 5ml CH3COOH were added.

The sample MW-2B-EB (280-142394-14) exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected. No further action is required.

The sample W-7 (280-142394-6), MW-1B (280-142394-7), MW-2B (280-142394-8), MW-3 (280-142394-9), MW-5 (280-142394-11), W-7-DUP (280-142394-13) and MW-2B-EB (280-142394-14) has a barium carrier recovery above the 110% QC limit. Affected samples had a barium correction applied, however, there is significant concentrations of salt-like compounds (i.e. calcium, magnesium, sodium, and strontium) that can interfere with a barium sulfate recovery. The LCS (laboratory control sample) has an acceptable spike recovery demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226/RADIUM-228 (GFPC)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A — Lab Sample ID: 280-142394-1

No Detections.

Client Sample ID: W-2B — Lab Sample ID: 280-142394-2

No Detections.

Client Sample ID: W-3 — Lab Sample ID: 280-142394-3

No Detections.

Client Sample ID: W-5 — Lab Sample ID: 280-142394-4

No Detections.

Client Sample ID: W-6 — Lab Sample ID: 280-142394-5

No Detections.

Client Sample ID: W-7 — Lab Sample ID: 280-142394-6

No Detections.

Client Sample ID: MW-1B — Lab Sample ID: 280-142394-7

No Detections.

Client Sample ID: MW-2B — Lab Sample ID: 280-142394-8

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 280-142394-9

No Detections.

Client Sample ID: MW-4B — Lab Sample ID: 280-142394-10

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 280-142394-11

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 280-142394-12

No Detections.

Client Sample ID: W-7-DUP — Lab Sample ID: 280-142394-13

No Detections.

Client Sample ID: MW-2B-EB — Lab Sample ID: 280-142394-14

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-142394-1	W-2A	Ground Water	11/04/20 08:50	11/05/20 12:10	
280-142394-2	W-2B	Ground Water	11/04/20 10:05	11/05/20 12:10	
280-142394-3	W-3	Ground Water	11/04/20 15:20	11/05/20 12:10	
280-142394-4	W-5	Ground Water	11/03/20 16:20	11/05/20 12:10	
280-142394-5	W-6	Ground Water	11/03/20 16:50	11/05/20 12:10	
280-142394-6	W-7	Ground Water	11/04/20 13:10	11/05/20 12:10	
280-142394-7	MW-1B	Ground Water	11/04/20 11:10	11/05/20 12:10	
280-142394-8	MW-2B	Ground Water	11/04/20 08:50	11/05/20 12:10	
280-142394-9	MW-3	Ground Water	11/04/20 15:20	11/05/20 12:10	
280-142394-10	MW-4B	Ground Water	11/04/20 16:45	11/05/20 12:10	
280-142394-11	MW-5	Water	11/05/20 08:05	11/05/20 12:10	
280-142394-12	MW-6	Ground Water	11/04/20 14:15	11/05/20 12:10	
280-142394-13	W-7-DUP	Water	11/04/20 13:10	11/05/20 12:10	
280-142394-14	MW-2B-EB	Water	11/04/20 09:30	11/05/20 12:10	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.828**		0.272	0.282	1.00	0.235	pCi/L	11/12/20 12:53	12/19/20 13:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*11/12/20 12:53*	*12/19/20 13:47*	*1*

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.28**		0.455	0.500	1.00	0.287	pCi/L	11/12/20 12:53	12/19/20 13:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.5*		*40 - 110*	*11/12/20 12:53*	*12/19/20 13:48*	*1*

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-3
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0520	U	0.159	0.159	1.00	0.353	pCi/L	11/12/20 12:53	12/19/20 13:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.3*		*40 - 110*	*11/12/20 12:53*	*12/19/20 13:48*	*1*

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-4
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.155	U	0.188	0.188	1.00	0.308	pCi/L	11/12/20 12:53	12/19/20 13:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.4*		*40 - 110*	*11/12/20 12:53*	*12/19/20 13:48*	*1*

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.383**		0.238	0.240	1.00	0.318	pCi/L	11/12/20 12:53	12/19/20 13:48	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.2*		*40 - 110*	*11/12/20 12:53*	*12/19/20 13:48*	*1*

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-6
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.40		0.586	0.625	1.00	0.403	pCi/L	11/13/20 12:39	12/15/20 16:31	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	118	X	40 - 110	11/13/20 12:39	12/15/20 16:31	1

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-7
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.591		0.325	0.329	1.00	0.415	pCi/L	11/13/20 12:39	12/15/20 16:32	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	136	X	40 - 110	11/13/20 12:39	12/15/20 16:32	1

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-8
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.26		0.417	0.432	1.00	0.381	pCi/L	11/13/20 12:39	12/15/20 16:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	160	X	40 - 110	11/13/20 12:39	12/15/20 16:34	1

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.402		0.262	0.265	1.00	0.346	pCi/L	11/13/20 12:39	12/15/20 16:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	118	X	40 - 110	11/13/20 12:39	12/15/20 16:34	1

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-10
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.459		0.260	0.263	1.00	0.323	pCi/L	11/13/20 12:39	12/15/20 16:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110	11/13/20 12:39	12/15/20 16:34	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109	U	0.206	0.206	1.00	0.370	pCi/L	11/13/20 12:39	12/15/20 16:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*161*	*X*	*40 - 110*	*11/13/20 12:39*	*12/15/20 16:34*	*1*

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-12
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.177	U	0.182	0.183	1.00	0.286	pCi/L	11/13/20 12:39	12/15/20 16:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*40 - 110*	*11/13/20 12:39*	*12/15/20 16:35*	*1*

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.94**		0.482	0.513	1.00	0.337	pCi/L	11/13/20 12:39	12/15/20 16:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*114*	*X*	*40 - 110*	*11/13/20 12:39*	*12/15/20 16:35*	*1*

Client Sample ID: MW-2B-EB
Date Collected: 11/04/20 09:30
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.103	U	0.162	0.162	1.00	0.280	pCi/L	11/13/20 12:39	12/15/20 16:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*122*	*X*	*40 - 110*	*11/13/20 12:39*	*12/15/20 16:32*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.49**	*	0.342	0.368	1.00	0.401	pCi/L	11/12/20 13:11	12/18/20 13:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*11/12/20 13:11*	*12/18/20 13:03*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-1
Matrix: Ground Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	100		40 - 110	11/12/20 13:11	12/18/20 13:03	1

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.96	*	0.424	0.461	1.00	0.489	pCi/L	11/12/20 13:11	12/18/20 13:03	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110	11/12/20 13:11	12/18/20 13:03	1
Y Carrier	96.1		40 - 110	11/12/20 13:11	12/18/20 13:03	1

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-3
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0230	U *	0.324	0.324	1.00	0.573	pCi/L	11/12/20 13:11	12/18/20 13:04	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110	11/12/20 13:11	12/18/20 13:04	1
Y Carrier	97.9		40 - 110	11/12/20 13:11	12/18/20 13:04	1

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-4
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0895	U *	0.323	0.323	1.00	0.560	pCi/L	11/12/20 13:11	12/18/20 13:04	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110	11/12/20 13:11	12/18/20 13:04	1
Y Carrier	93.5		40 - 110	11/12/20 13:11	12/18/20 13:04	1

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.263	U *	0.302	0.303	1.00	0.497	pCi/L	11/12/20 13:11	12/18/20 13:04	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.2		40 - 110	11/12/20 13:11	12/18/20 13:04	1
Y Carrier	95.0		40 - 110	11/12/20 13:11	12/18/20 13:04	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-6
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.13		0.327	0.381	1.00	0.313	pCi/L	11/13/20 13:57	12/15/20 09:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*118*	*X*	*40 - 110*	*11/13/20 13:57*	*12/15/20 09:33*	*1*
Y Carrier	*117*	*X*	*40 - 110*	*11/13/20 13:57*	*12/15/20 09:33*	*1*

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-7
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.800		0.205	0.218	1.00	0.245	pCi/L	11/13/20 13:57	12/15/20 09:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*136*	*X*	*40 - 110*	*11/13/20 13:57*	*12/15/20 09:33*	*1*
Y Carrier	*125*	*X*	*40 - 110*	*11/13/20 13:57*	*12/15/20 09:33*	*1*

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-8
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.82		0.262	0.311	1.00	0.229	pCi/L	11/13/20 13:57	12/15/20 09:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*160*	*X*	*40 - 110*	*11/13/20 13:57*	*12/15/20 09:33*	*1*
Y Carrier	*107*		*40 - 110*	*11/13/20 13:57*	*12/15/20 09:33*	*1*

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.800		0.274	0.284	1.00	0.371	pCi/L	11/13/20 13:57	12/15/20 09:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*118*	*X*	*40 - 110*	*11/13/20 13:57*	*12/15/20 09:35*	*1*
Y Carrier	*104*		*40 - 110*	*11/13/20 13:57*	*12/15/20 09:35*	*1*

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-10
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.461		0.255	0.259	1.00	0.384	pCi/L	11/13/20 13:57	12/15/20 09:34	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	110		40 - 110	11/13/20 13:57	12/15/20 09:34	1
Y Carrier	110		40 - 110	11/13/20 13:57	12/15/20 09:34	1

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.454		0.184	0.189	1.00	0.257	pCi/L	11/13/20 13:57	12/15/20 09:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	161	X	40 - 110	11/13/20 13:57	12/15/20 09:34	1
Y Carrier	105		40 - 110	11/13/20 13:57	12/15/20 09:34	1

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-12
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.438		0.224	0.228	1.00	0.328	pCi/L	11/13/20 13:57	12/15/20 09:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110	11/13/20 13:57	12/15/20 09:34	1
Y Carrier	103		40 - 110	11/13/20 13:57	12/15/20 09:34	1

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.07		0.370	0.416	1.00	0.392	pCi/L	11/13/20 13:57	12/15/20 09:34	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	114	X	40 - 110	11/13/20 13:57	12/15/20 09:34	1
Y Carrier	103		40 - 110	11/13/20 13:57	12/15/20 09:34	1

Client Sample ID: MW-2B-EB
Date Collected: 11/04/20 09:30
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.996	U	0.185	0.207	1.00	0.433	pCi/L	11/13/20 13:57	12/15/20 09:35	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	122	X	40 - 110	11/13/20 13:57	12/15/20 09:35	1
Y Carrier	110		40 - 110	11/13/20 13:57	12/15/20 09:35	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-2A
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-1
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**2.32**		0.437	0.464	5.00	0.401	pCi/L		12/20/20 19:43	1

Client Sample ID: W-2B
Date Collected: 11/04/20 10:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-2
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**4.24**		0.622	0.680	5.00	0.489	pCi/L		12/20/20 19:43	1

Client Sample ID: W-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-3
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0290	U	0.361	0.361	5.00	0.573	pCi/L		12/20/20 19:43	1

Client Sample ID: W-5
Date Collected: 11/03/20 16:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-4
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.244	U	0.374	0.374	5.00	0.560	pCi/L		12/20/20 19:43	1

Client Sample ID: W-6
Date Collected: 11/03/20 16:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-5
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.645**		0.385	0.387	5.00	0.497	pCi/L		12/20/20 19:43	1

Client Sample ID: W-7
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-6
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**4.52**		0.672	0.732	5.00	0.403	pCi/L		12/20/20 19:45	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: MW-1B
Date Collected: 11/04/20 11:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-7
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.39		0.384	0.395	5.00	0.415	pCi/L		12/20/20 19:45	1

Client Sample ID: MW-2B
Date Collected: 11/04/20 08:50
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-8
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.08		0.492	0.532	5.00	0.381	pCi/L		12/20/20 19:45	1

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-9
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.20		0.379	0.388	5.00	0.371	pCi/L		12/20/20 19:45	1

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-10
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.921		0.365	0.369	5.00	0.384	pCi/L		12/20/20 19:45	1

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.564		0.276	0.280	5.00	0.370	pCi/L		12/20/20 19:45	1

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-12
Matrix: Ground Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.615		0.289	0.292	5.00	0.328	pCi/L		12/20/20 19:45	1

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-7-DUP
Date Collected: 11/04/20 13:10
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**4.01**		0.608	0.660	5.00	0.392	pCi/L		12/20/20 19:45	1

Client Sample ID: MW-2B-EB
Date Collected: 11/04/20 09:30
Date Received: 11/05/20 12:10
Lab Sample ID: 280-142394-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.892	U	0.246	0.263	5.00	0.433	pCi/L		12/20/20 19:45	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-488959/16-A
Matrix: Water
Analysis Batch: 492452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488959

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02974	U	0.173	0.173	1.00	0.361	pCi/L	11/12/20 12:53	12/19/20 13:52	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*40 - 110*	*11/12/20 12:53*	*12/19/20 13:52*	*1*

Lab Sample ID: LCS 160-488959/1-A
Matrix: Water
Analysis Batch: 492451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488959

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			15.1	13.02		1.57	1.00	0.270	pCi/L	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*96.4*		*40 - 110*

Lab Sample ID: LCSD 160-488959/2-A
Matrix: Water
Analysis Batch: 492451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 488959

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			15.1	12.55		1.65	1.00	0.468	pCi/L	83	75 - 125	0.15	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*66.7*		*40 - 110*

Lab Sample ID: MB 160-489023/24-A
Matrix: Water
Analysis Batch: 491775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 489023

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06658	U	0.183	0.183	1.00	0.336	pCi/L	11/13/20 12:39	12/15/20 20:20	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.1*		*40 - 110*	*11/13/20 12:39*	*12/15/20 20:20*	*1*

Lab Sample ID: LCS 160-489023/1-A
Matrix: Water
Analysis Batch: 491775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489023

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	9.791		1.29	1.00	0.306	pCi/L	86	75 - 125		

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-489023/1-A
Matrix: Water
Analysis Batch: 491775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489023

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.1		40 - 110

Lab Sample ID: LCSD 160-489023/2-A
Matrix: Water
Analysis Batch: 491775

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 489023

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	8.926		1.19	1.00	0.330	pCi/L	79	75 - 125	0.35	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	90.3		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-488965/16-A
Matrix: Water
Analysis Batch: 492450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 488965

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1104	U	0.263	0.263	1.00	0.454	pCi/L	11/12/20 13:11	12/18/20 13:04	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110	11/12/20 13:11	12/18/20 13:04	1
Y Carrier	98.7		40 - 110	11/12/20 13:11	12/18/20 13:04	1

Lab Sample ID: LCS 160-488965/1-A
Matrix: Water
Analysis Batch: 492430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 488965

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			10.1	7.364	*	0.953	1.00	0.517	pCi/L	73	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.4		40 - 110
Y Carrier	100		40 - 110

Lab Sample ID: LCSD 160-488965/2-A
Matrix: Water
Analysis Batch: 492430

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 488965

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			10.1	6.952	*	1.05	1.00	0.706	pCi/L	69	75 - 125	0.21	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-488965/2-A
Matrix: Water
Analysis Batch: 492430

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 488965

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	66.7		40 - 110
Y Carrier	92.3		40 - 110

Lab Sample ID: MB 160-489033/24-A
Matrix: Water
Analysis Batch: 491762

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 489033

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2828	U	0.210	0.212	1.00	0.331	pCi/L	11/13/20 13:57	12/15/20 09:38	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110	11/13/20 13:57	12/15/20 09:38	1
Y Carrier	117	X	40 - 110	11/13/20 13:57	12/15/20 09:38	1

Lab Sample ID: LCS 160-489033/1-A
Matrix: Water
Analysis Batch: 491763

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 489033

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.58	7.281		0.886	1.00	0.369	pCi/L	96	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.1		40 - 110
Y Carrier	107		40 - 110

Lab Sample ID: LCSD 160-489033/2-A
Matrix: Water
Analysis Batch: 491763

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 489033

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			7.58	6.908		0.844	1.00	0.339	pCi/L	91	75 - 125	0.22	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	90.3		40 - 110
Y Carrier	106		40 - 110

Rad

Prep Batch: 488959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	PrecSep-21	
280-142394-2	W-2B	Total/NA	Ground Water	PrecSep-21	
280-142394-3	W-3	Total/NA	Ground Water	PrecSep-21	
280-142394-4	W-5	Total/NA	Ground Water	PrecSep-21	
280-142394-5	W-6	Total/NA	Ground Water	PrecSep-21	
MB 160-488959/16-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-488959/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-488959/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 488965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-1	W-2A	Total/NA	Ground Water	PrecSep_0	
280-142394-2	W-2B	Total/NA	Ground Water	PrecSep_0	
280-142394-3	W-3	Total/NA	Ground Water	PrecSep_0	
280-142394-4	W-5	Total/NA	Ground Water	PrecSep_0	
280-142394-5	W-6	Total/NA	Ground Water	PrecSep_0	
MB 160-488965/16-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-488965/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-488965/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 489023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-6	W-7	Total/NA	Ground Water	PrecSep-21	
280-142394-7	MW-1B	Total/NA	Ground Water	PrecSep-21	
280-142394-8	MW-2B	Total/NA	Ground Water	PrecSep-21	
280-142394-9	MW-3	Total/NA	Ground Water	PrecSep-21	
280-142394-10	MW-4B	Total/NA	Ground Water	PrecSep-21	
280-142394-11	MW-5	Total/NA	Water	PrecSep-21	
280-142394-12	MW-6	Total/NA	Ground Water	PrecSep-21	
280-142394-13	W-7-DUP	Total/NA	Water	PrecSep-21	
280-142394-14	MW-2B-EB	Total/NA	Water	PrecSep-21	
MB 160-489023/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-489023/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-489023/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 489033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142394-6	W-7	Total/NA	Ground Water	PrecSep_0	
280-142394-7	MW-1B	Total/NA	Ground Water	PrecSep_0	
280-142394-8	MW-2B	Total/NA	Ground Water	PrecSep_0	
280-142394-9	MW-3	Total/NA	Ground Water	PrecSep_0	
280-142394-10	MW-4B	Total/NA	Ground Water	PrecSep_0	
280-142394-11	MW-5	Total/NA	Water	PrecSep_0	
280-142394-12	MW-6	Total/NA	Ground Water	PrecSep_0	
280-142394-13	W-7-DUP	Total/NA	Water	PrecSep_0	
280-142394-14	MW-2B-EB	Total/NA	Water	PrecSep_0	
MB 160-489033/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-489033/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-489033/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-142394-1
Date Collected: 11/04/20 08:50
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.66 mL	1.0 g	488959	11/12/20 12:53	AVB	TAL SL
Total/NA	Analysis	9315		1			492451	12/19/20 13:47	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.66 mL	1.0 g	488965	11/12/20 13:11	AVB	TAL SL
Total/NA	Analysis	9320		1			492450	12/18/20 13:03	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492488	12/20/20 19:43	GRW	TAL SL

Client Sample ID: W-2B
Lab Sample ID: 280-142394-2
Date Collected: 11/04/20 10:05
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.30 mL	1.0 g	488959	11/12/20 12:53	AVB	TAL SL
Total/NA	Analysis	9315		1			492451	12/19/20 13:48	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.30 mL	1.0 g	488965	11/12/20 13:11	AVB	TAL SL
Total/NA	Analysis	9320		1			492450	12/18/20 13:03	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492488	12/20/20 19:43	GRW	TAL SL

Client Sample ID: W-3
Lab Sample ID: 280-142394-3
Date Collected: 11/04/20 15:20
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.76 mL	1.0 g	488959	11/12/20 12:53	AVB	TAL SL
Total/NA	Analysis	9315		1			492451	12/19/20 13:48	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.76 mL	1.0 g	488965	11/12/20 13:11	AVB	TAL SL
Total/NA	Analysis	9320		1			492450	12/18/20 13:04	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492488	12/20/20 19:43	GRW	TAL SL

Client Sample ID: W-5
Lab Sample ID: 280-142394-4
Date Collected: 11/03/20 16:20
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.38 mL	1.0 g	488959	11/12/20 12:53	AVB	TAL SL
Total/NA	Analysis	9315		1			492451	12/19/20 13:48	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.38 mL	1.0 g	488965	11/12/20 13:11	AVB	TAL SL
Total/NA	Analysis	9320		1			492450	12/18/20 13:04	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492488	12/20/20 19:43	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-6
Lab Sample ID: 280-142394-5
Date Collected: 11/03/20 16:50
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.50 mL	1.0 g	488959	11/12/20 12:53	AVB	TAL SL
Total/NA	Analysis	9315		1			492451	12/19/20 13:48	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.50 mL	1.0 g	488965	11/12/20 13:11	AVB	TAL SL
Total/NA	Analysis	9320		1			492450	12/18/20 13:04	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492488	12/20/20 19:43	GRW	TAL SL

Client Sample ID: W-7
Lab Sample ID: 280-142394-6
Date Collected: 11/04/20 13:10
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.35 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1			491775	12/15/20 16:31	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.35 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:33	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Client Sample ID: MW-1B
Lab Sample ID: 280-142394-7
Date Collected: 11/04/20 11:10
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.69 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1			491775	12/15/20 16:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.69 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:33	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Client Sample ID: MW-2B
Lab Sample ID: 280-142394-8
Date Collected: 11/04/20 08:50
Matrix: Ground Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.04 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	491775	12/15/20 16:34	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.04 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:33	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-3
Date Collected: 11/04/20 15:20
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-9
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.11 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	491775	12/15/20 16:34	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.11 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:35	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Client Sample ID: MW-4B
Date Collected: 11/04/20 16:45
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-10
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.95 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	491775	12/15/20 16:34	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.95 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:34	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Client Sample ID: MW-5
Date Collected: 11/05/20 08:05
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.61 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1			491775	12/15/20 16:34	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.61 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:34	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Client Sample ID: MW-6
Date Collected: 11/04/20 14:15
Date Received: 11/05/20 12:10

Lab Sample ID: 280-142394-12
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.52 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1			491775	12/15/20 16:35	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.52 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:34	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Lab Chronicle

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-7-DUP
Lab Sample ID: 280-142394-13
Date Collected: 11/04/20 13:10
Matrix: Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.25 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	491775	12/15/20 16:35	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.25 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:34	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Client Sample ID: MW-2B-EB
Lab Sample ID: 280-142394-14
Date Collected: 11/04/20 09:30
Matrix: Water
Date Received: 11/05/20 12:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.73 mL	1.0 g	489023	11/13/20 12:39	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	491775	12/15/20 16:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.73 mL	1.0 g	489033	11/13/20 13:57	AVB	TAL SL
Total/NA	Analysis	9320		1			491763	12/15/20 09:35	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			492489	12/20/20 19:45	GRW	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-21
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-21
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS/AM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #2 of #1
Client Contact: Molly Reeves	Phone: 720 838 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic A, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, Air, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C - Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228 combined	Total Number of containers	Special Instructions/Note
			Preservation Code:				N	D	N	N	D		
W-1				Water									
W-2A	11/4/20	0850	G	Water	N		X	X	X	X	X	6	
W-2B	11/4/20	1005	G	Water	N		X	X	X	X	X	6	
W-3	11/4/20	1520	G	Water	N		X	X	X	X	X	6	
W-4				Water									
W-5	11/3/20	1620	G	Water	N		X	X	X	X	X	6	
W-6	11/3/20	1650	G	Water	N		X	X	X	X	X	6	
W-7	11/4/20	1310	G	Water	N		X	X	X	X	X	6	
W-8A				Water									
W-8B				Water									
MW-1B	11/4/20	1110	G	Water	N		X	X	X	X	X	6	

2800-142394 Chain of Custody

Possible Hazard Identification: Non-Hazard, Flammable, Skin Irritant, Poison B, Unknown, Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): Return To Client, Disposal By Lab, Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 11/3/20 1210	Company: HDR	Received by:	Date/Time: 11/3/20 1210	Company: EFA-RM
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 7.8C, 9.4C, 9.9C, 3.9C, 1.6C, 1.5C, 1.9C CF-2.3C

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS/AM	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #1
Client Contact: Molly Reeves	Phone: 7203386065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): ASAP			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			Other:
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air, Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Applit+IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
MW-2 B	11/4/20	0850	G	Water	N		X	X	X	X	X	6	
MW-3	11/4/20	1920	G	Water	N		X	X	X	X	X	6	
MW-4 B	11/4/20	1645	G	Water	N		X	X	X	X	X	6	
MW-5	11/5/20	0805	G	Water	N		X	X	X	X	X	6	
MW-6	11/4/20	1415	G	Water	N		X	X	X	X	X	6	
MW-7 -DUP	11/4/20	1310	G	Water	N		X	X	X	X	X	6	
MW-38 -EB	11/4/20	0930	G	Water	N		X	X	X	X	X	6	
				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 11/5/20 1210	Company: HDR	Received by:	Date/Time: 11/5/20 1210	Company: TEST-TAM
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 7.8C, 9.4C, 9.9C, 3.9C, 1.6C, 1.5C, 1.9C
CF-0.3C 2R#11

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-546043.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-142394-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/12/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-142394-1)	11/4/20	08:50 Mountain		Water			X	X	X	2	
W-2B (280-142394-2)	11/4/20	10:05 Mountain		Water			X	X	X	2	
W-3 (280-142394-3)	11/4/20	15:20 Mountain		Water			X	X	X	2	
W-5 (280-142394-4)	11/3/20	16:20 Mountain		Water			X	X	X	2	
W-6 (280-142394-5)	11/3/20	16:50 Mountain		Water			X	X	X	2	
W-7 (280-142394-6)	11/4/20	13:10 Mountain		Water			X	X	X	2	
MW-1B (280-142394-7)	11/4/20	11:10 Mountain		Water			X	X	X	2	
MW-2B (280-142394-8)	11/4/20	08:50 Mountain		Water			X	X	X	2	
MW-3 (280-142394-9)	11/4/20	15:20 Mountain		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	11/6/2020 1345		FedEx		
2	FedEx			[signature]	11/7/20 08:15	ETASTL
3						

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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12/21/2020

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-546043.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-142394-2
Address: 13715 Rider Trail North,	Due Date Requested: 11/12/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/ProcSep_21 Ra226 (1/3) - SUB	9320_Ra228/ProcSep_9 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-4B (280-142394-10)	11/4/20	16:45 Mountain		Water			X	X	X	2	
MW-5 (280-142394-11)	11/5/20	08:05 Mountain		Water			X	X	X	2	
MW-6 (280-142394-12)	11/4/20	14:15 Mountain		Water			X	X	X	2	
W-7-DUP (280-142394-13)	11/4/20	13:10 Mountain		Water			X	X	X	2	
MW-2B-EB (280-142394-14)	11/4/20	09:30 Mountain		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	11/6/2020 1340		FedEx		
	Relinquished by: FedEx	Date/Time:	Company	Received by: [signature]	Date/Time: 11/7/20 08:15	Company ETASTL
	Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142394-2

Login Number: 142394
List Number: 1
Creator: Collins, Janice S

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142394-2

Login Number: 142394
List Number: 2
Creator: Boyd, Jacob C

List Source: Eurofins TestAmerica, St. Louis
List Creation: 11/07/20 01:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	See NCM. Samples 8 & 11 rec'd with pHs of 7 S.U. HNO3 added. pHs now 7 and 4.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
280-142394-1	W-2A	108
280-142394-2	W-2B	94.5
280-142394-3	W-3	87.3
280-142394-4	W-5	92.4
280-142394-5	W-6	94.2
280-142394-6	W-7	118 X
280-142394-7	MW-1B	136 X
280-142394-8	MW-2B	160 X
280-142394-9	MW-3	118 X
280-142394-10	MW-4B	110
280-142394-12	MW-6	94.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
280-142394-11	MW-5	161 X
280-142394-13	W-7-DUP	114 X
280-142394-14	MW-2B-EB	122 X
LCS 160-488959/1-A	Lab Control Sample	96.4
LCS 160-489023/1-A	Lab Control Sample	86.1
LCSD 160-488959/2-A	Lab Control Sample Dup	66.7
LCSD 160-489023/2-A	Lab Control Sample Dup	90.3
MB 160-488959/16-A	Method Blank	93.3
MB 160-489023/24-A	Method Blank	89.1

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
280-142394-1	W-2A	108	100
280-142394-2	W-2B	94.5	96.1
280-142394-3	W-3	87.3	97.9
280-142394-4	W-5	92.4	93.5
280-142394-5	W-6	94.2	95.0
280-142394-6	W-7	118 X	117 X
280-142394-7	MW-1B	136 X	125 X
280-142394-8	MW-2B	160 X	107
280-142394-9	MW-3	118 X	104
280-142394-10	MW-4B	110	110
280-142394-12	MW-6	94.8	103

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-142394-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
280-142394-11	MW-5	161 X	105
280-142394-13	W-7-DUP	114 X	103
280-142394-14	MW-2B-EB	122 X	110
LCS 160-488965/1-A	Lab Control Sample	96.4	100
LCS 160-489033/1-A	Lab Control Sample	86.1	107
LCSD 160-488965/2-A	Lab Control Sample Dup	66.7	92.3
LCSD 160-489033/2-A	Lab Control Sample Dup	90.3	106
MB 160-488965/16-A	Method Blank	93.3	98.7
MB 160-489033/24-A	Method Blank	89.1	117 X

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-142687-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
12/11/2020 9:49:21 AM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-142687-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-142687-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 11/11/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 12.1 C.

Please note, the laboratory received W-2 and W-4 with limited volume.
W-2 250ml Plastic (125ml)
W-4 1L Plastic (250ml)

TOTAL RECOVERABLE METALS- Method 6010C/6020A
Sample W-1 required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The accuracy and precision of the Calcium MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY- VARIOUS
Samples W-2, W-4, and W-1 required dilution prior to various analysis. The reporting limits have been adjusted accordingly.

Sample W-4 was analyzed at dilutions due to high concentrations of target compounds for Sulfate. Associated Sulfate results in the analytical report have been flagged with an “E”, as these are estimated values. There was insufficient volume remaining to do an additional dilution.

The Sulfate sample duplicate analysis data associated with QC batch 280-517909 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

REVISION

Job ID: 280-142687-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Per client, added Calcium to sample W-1.

Detection Summary

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2 — Lab Sample ID: 280-142687-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.9		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0054		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.053		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	450		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00025	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0011		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0091		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.015		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0015		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.75		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.97		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	8.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	700		300	100	mg/L	100		9056A	Total/NA
Fluoride	1.2		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	7000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	12000		100	47	mg/L	1		SM 2540C	Total/NA

Client Sample ID: W-4 — Lab Sample ID: 280-142687-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.0		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0021	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.034		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	400		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0072		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0079		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.13		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0048	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00038	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	1.5		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	8.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	410		30	10	mg/L	10		9056A	Total/NA
Fluoride	6.3		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	58000	E	1000	210	mg/L	200		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4 (Continued) — Lab Sample ID: 280-142687-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids (TDS)	43000	H	1000	470	mg/L	1		SM 2540C	Total/NA

Client Sample ID: W-1 — Lab Sample ID: 280-142687-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.6		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0094		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.035		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Cadmium	0.00038	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0019		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0034		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.018		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0014		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.91		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	2.2		0.080	0.017	mg/L	10		6020A	Total Recoverable
Calcium	420		1.0	0.58	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	690		30	10	mg/L	10		9056A	Total/NA
Fluoride	3.3	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	24000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	35000	H	1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	54		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-142687-1	W-2	Water	11/11/20 10:35	11/11/20 16:20	
280-142687-2	W-4	Water	11/11/20 11:50	11/11/20 16:20	
280-142687-3	W-1	Water	11/11/20 11:00	11/11/20 16:20	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-2
Date Collected: 11/11/20 10:35
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.9**		0.10	0.023	mg/L		11/16/20 14:00	11/17/20 17:04	1

Client Sample ID: W-4
Date Collected: 11/11/20 11:50
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.0**		0.10	0.023	mg/L		11/16/20 14:00	11/17/20 17:09	1

Client Sample ID: W-1
Date Collected: 11/11/20 11:00
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.6**		0.10	0.023	mg/L		11/16/20 14:00	11/17/20 17:22	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-2
Date Collected: 11/11/20 10:35
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/16/20 14:00	11/17/20 12:52	1
Arsenic	**0.0054**		0.0050	0.00075	mg/L		11/16/20 14:00	11/17/20 12:52	1
Barium	**0.053**		0.0050	0.0022	mg/L		11/16/20 14:00	11/17/20 12:52	1
Beryllium	ND		0.0010	0.00031	mg/L		11/16/20 14:00	11/17/20 12:52	1
Calcium	**450**		1.0	0.58	mg/L		11/16/20 14:00	11/17/20 12:52	1
Cadmium	**0.00025**	**J**	0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 12:52	1
Cobalt	**0.0011**		0.0010	0.00019	mg/L		11/16/20 14:00	11/17/20 12:52	1
Chromium	**0.0091**		0.0020	0.00098	mg/L		11/16/20 14:00	11/17/20 12:52	1
Molybdenum	**0.015**		0.010	0.0011	mg/L		11/16/20 14:00	11/17/20 12:52	1
Lead	**0.0015**		0.0010	0.00045	mg/L		11/16/20 14:00	11/17/20 12:52	1
Selenium	**0.75**		0.0050	0.00089	mg/L		11/16/20 14:00	11/17/20 12:52	1
Thallium	ND		0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 12:52	1
Lithium	**0.97**		0.0080	0.0017	mg/L		11/16/20 14:00	11/18/20 13:53	1

Client Sample ID: W-4
Date Collected: 11/11/20 11:50
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/16/20 14:00	11/17/20 12:55	1
Arsenic	**0.0021**	**J**	0.0050	0.00075	mg/L		11/16/20 14:00	11/17/20 12:55	1
Barium	**0.034**		0.0050	0.0022	mg/L		11/16/20 14:00	11/17/20 12:55	1
Beryllium	ND		0.0010	0.00031	mg/L		11/16/20 14:00	11/17/20 12:55	1
Calcium	**400**		1.0	0.58	mg/L		11/16/20 14:00	11/17/20 12:55	1
Cadmium	ND		0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 12:55	1
Cobalt	**0.0072**		0.0010	0.00019	mg/L		11/16/20 14:00	11/17/20 12:55	1
Chromium	**0.0079**		0.0020	0.00098	mg/L		11/16/20 14:00	11/17/20 12:55	1
Molybdenum	**0.13**		0.010	0.0011	mg/L		11/16/20 14:00	11/17/20 12:55	1
Lead	ND		0.0010	0.00045	mg/L		11/16/20 14:00	11/17/20 12:55	1
Selenium	**0.0048**	**J**	0.0050	0.00089	mg/L		11/16/20 14:00	11/17/20 12:55	1
Thallium	**0.00038**	**J**	0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 12:55	1
Lithium	**1.5**		0.0080	0.0017	mg/L		11/16/20 14:00	11/18/20 13:55	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-1
Date Collected: 11/11/20 11:00
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/16/20 14:00	11/17/20 13:02	1
Arsenic	**0.0094**		0.0050	0.00075	mg/L		11/16/20 14:00	11/17/20 13:02	1
Barium	**0.035**		0.0050	0.0022	mg/L		11/16/20 14:00	11/17/20 13:02	1
Beryllium	ND		0.0010	0.00031	mg/L		11/16/20 14:00	11/17/20 13:02	1
Cadmium	**0.00038**	**J**	0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 13:02	1
Cobalt	**0.0019**		0.0010	0.00019	mg/L		11/16/20 14:00	11/17/20 13:02	1
Chromium	**0.0034**		0.0020	0.00098	mg/L		11/16/20 14:00	11/17/20 13:02	1
Molybdenum	**0.018**		0.010	0.0011	mg/L		11/16/20 14:00	11/17/20 13:02	1
Lead	**0.0014**		0.0010	0.00045	mg/L		11/16/20 14:00	11/17/20 13:02	1
Selenium	**0.91**		0.0050	0.00089	mg/L		11/16/20 14:00	11/17/20 13:02	1
Thallium	ND		0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 13:02	1
Lithium	**2.2**		0.080	0.017	mg/L		11/16/20 14:00	11/18/20 13:58	10
Calcium	**420**		1.0	0.58	mg/L		11/16/20 14:00	11/17/20 13:02	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2
Date Collected: 11/11/20 10:35
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/16/20 12:00	11/16/20 19:07	1

Client Sample ID: W-4
Date Collected: 11/11/20 11:50
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/16/20 12:00	11/16/20 19:09	1

Client Sample ID: W-1
Date Collected: 11/11/20 11:00
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/16/20 12:00	11/16/20 19:11	1

General Chemistry

Client Sample ID: W-2
Date Collected: 11/11/20 10:35
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**8.1**	**HF**	0.1	0.1	SU			11/24/20 12:00	1
Temperature	**20.7**	**HF**	1.0	1.0	Degrees C			11/24/20 12:00	1
Chloride	**700**		300	100	mg/L			11/24/20 04:58	100
Fluoride	**1.2**		0.50	0.17	mg/L			11/23/20 02:43	1
Sulfate	**7000**		500	100	mg/L			11/24/20 04:58	100
Total Dissolved Solids (TDS)	**12000**		100	47	mg/L			11/18/20 10:05	1

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: W-4
Lab Sample ID: 280-142687-2
Date Collected: 11/11/20 11:50
Matrix: Water
Date Received: 11/11/20 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.1	HF	0.1	0.1	SU			11/24/20 12:07	1
Temperature	21.8	HF	1.0	1.0	Degrees C			11/24/20 12:07	1
Chloride	410		30	10	mg/L			11/24/20 05:30	10
Fluoride	6.3		5.0	1.7	mg/L			11/24/20 05:30	10
Sulfate	58000	E	1000	210	mg/L			11/24/20 05:47	200
Total Dissolved Solids (TDS)	43000	H	1000	470	mg/L			11/23/20 09:42	1

Client Sample ID: W-1
Lab Sample ID: 280-142687-3
Date Collected: 11/11/20 11:00
Matrix: Water
Date Received: 11/11/20 16:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			11/24/20 12:04	1
Temperature	21.2	HF	1.0	1.0	Degrees C			11/24/20 12:04	1
Chloride	690		30	10	mg/L			11/24/20 06:20	10
Fluoride	3.3	J	5.0	1.7	mg/L			11/24/20 06:20	10
Sulfate	24000		2500	520	mg/L			11/24/20 06:36	500
Total Dissolved Solids (TDS)	35000	H	1000	470	mg/L			11/23/20 09:42	1
Total Suspended Solids	54		4.0	1.1	mg/L			11/13/20 06:47	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-461136/1-A
Matrix: Water
Analysis Batch: 461361

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 461136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/16/20 14:00	11/17/20 15:44	1

Lab Sample ID: LCS 240-461136/2-A
Matrix: Water
Analysis Batch: 461361

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 461136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.965		mg/L		97	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-461136/1-A
Matrix: Water
Analysis Batch: 461560

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 461136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/16/20 14:00	11/17/20 12:05	1
Arsenic	ND		0.0050	0.00075	mg/L		11/16/20 14:00	11/17/20 12:05	1
Barium	ND		0.0050	0.0022	mg/L		11/16/20 14:00	11/17/20 12:05	1
Beryllium	ND		0.0010	0.00031	mg/L		11/16/20 14:00	11/17/20 12:05	1
Cadmium	ND		0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 12:05	1
Cobalt	ND		0.0010	0.00019	mg/L		11/16/20 14:00	11/17/20 12:05	1
Chromium	ND		0.0020	0.00098	mg/L		11/16/20 14:00	11/17/20 12:05	1
Molybdenum	ND		0.010	0.0011	mg/L		11/16/20 14:00	11/17/20 12:05	1
Lead	ND		0.0010	0.00045	mg/L		11/16/20 14:00	11/17/20 12:05	1
Selenium	ND		0.0050	0.00089	mg/L		11/16/20 14:00	11/17/20 12:05	1
Thallium	ND		0.0010	0.00020	mg/L		11/16/20 14:00	11/17/20 12:05	1
Lithium	ND		0.0080	0.0017	mg/L		11/16/20 14:00	11/17/20 12:05	1
Calcium	ND		1.0	0.58	mg/L		11/16/20 14:00	11/17/20 12:05	1

Lab Sample ID: LCS 240-461136/3-A
Matrix: Water
Analysis Batch: 461560

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 461136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0942		mg/L		94	80 - 120
Arsenic	1.00	0.977		mg/L		98	80 - 120
Barium	1.00	0.994		mg/L		99	80 - 120
Beryllium	0.500	0.502		mg/L		100	80 - 120
Cadmium	0.500	0.479		mg/L		96	80 - 120
Cobalt	0.500	0.505		mg/L		101	80 - 120
Chromium	0.500	0.495		mg/L		99	80 - 120
Molybdenum	0.500	0.487		mg/L		97	80 - 120
Lead	0.500	0.507		mg/L		101	80 - 120
Selenium	1.00	0.972		mg/L		97	80 - 120
Thallium	1.00	0.962		mg/L		96	80 - 120
Lithium	0.500	0.517		mg/L		103	80 - 120
Calcium	25.0	25.1		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-461140/1-A
Matrix: Water
Analysis Batch: 461341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 461140

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/16/20 12:00	11/16/20 18:32	1

Lab Sample ID: LCS 240-461140/2-A
Matrix: Water
Analysis Batch: 461341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 461140

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00475		mg/L		95	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-518025/31
Matrix: Water
Analysis Batch: 518025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-517731/6
Matrix: Water
Analysis Batch: 517731

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.17	mg/L			11/22/20 15:54	1

Lab Sample ID: LCS 280-517731/4
Matrix: Water
Analysis Batch: 517731

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	5.00	5.24		mg/L		105	90 - 110

Lab Sample ID: LCSD 280-517731/5
Matrix: Water
Analysis Batch: 517731

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	5.00	5.10		mg/L		102	90 - 110	3	10

Lab Sample ID: MRL 280-517731/3
Matrix: Water
Analysis Batch: 517731

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.500	0.536		mg/L		107	50 - 150

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-517909/13
Matrix: Water
Analysis Batch: 517909

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/24/20 01:24	1
Fluoride	ND		0.50	0.17	mg/L			11/24/20 01:24	1
Sulfate	ND		5.0	1.0	mg/L			11/24/20 01:24	1

Lab Sample ID: LCS 280-517909/11
Matrix: Water
Analysis Batch: 517909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.2		mg/L		95	90 - 110
Fluoride	5.00	4.75		mg/L		95	90 - 110
Sulfate	100	92.9		mg/L		93	90 - 110

Lab Sample ID: LCSD 280-517909/12
Matrix: Water
Analysis Batch: 517909

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	95.1		mg/L		95	90 - 110	0	10
Fluoride	5.00	4.75		mg/L		95	90 - 110	0	10
Sulfate	100	93.5		mg/L		93	90 - 110	1	10

Lab Sample ID: MRL 280-517909/10
Matrix: Water
Analysis Batch: 517909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.99		mg/L		80	50 - 150
Fluoride	0.500	0.483	J	mg/L		97	50 - 150
Sulfate	5.00	4.27	J	mg/L		85	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-517790/1
Matrix: Water
Analysis Batch: 517790

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/23/20 09:42	1

Lab Sample ID: LCS 280-517790/2
Matrix: Water
Analysis Batch: 517790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	475		mg/L		95	93 - 110

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-516558/1
Matrix: Water
Analysis Batch: 516558

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/13/20 06:47	1

Lab Sample ID: LCS 280-516558/2
Matrix: Water
Analysis Batch: 516558

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	93.2		mg/L		93	79 - 114		

QC Association Summary

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Metals

Prep Batch: 461136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total Recoverable	Water	3005A	
280-142687-2	W-4	Total Recoverable	Water	3005A	
280-142687-3	W-1	Total Recoverable	Water	3005A	
MB 240-461136/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-461136/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-461136/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 461140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total/NA	Water	7470A	
280-142687-2	W-4	Total/NA	Water	7470A	
280-142687-3	W-1	Total/NA	Water	7470A	
MB 240-461140/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-461140/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 461341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total/NA	Water	7470A	461140
280-142687-2	W-4	Total/NA	Water	7470A	461140
280-142687-3	W-1	Total/NA	Water	7470A	461140
MB 240-461140/1-A	Method Blank	Total/NA	Water	7470A	461140
LCS 240-461140/2-A	Lab Control Sample	Total/NA	Water	7470A	461140

Analysis Batch: 461361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total Recoverable	Water	6010C	461136
280-142687-2	W-4	Total Recoverable	Water	6010C	461136
280-142687-3	W-1	Total Recoverable	Water	6010C	461136
MB 240-461136/1-A	Method Blank	Total Recoverable	Water	6010C	461136
LCS 240-461136/2-A	Lab Control Sample	Total Recoverable	Water	6010C	461136

Analysis Batch: 461560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total Recoverable	Water	6020A	461136
280-142687-2	W-4	Total Recoverable	Water	6020A	461136
280-142687-3	W-1	Total Recoverable	Water	6020A	461136
MB 240-461136/1-A	Method Blank	Total Recoverable	Water	6020A	461136
LCS 240-461136/3-A	Lab Control Sample	Total Recoverable	Water	6020A	461136

Analysis Batch: 461657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total Recoverable	Water	6020A	461136
280-142687-2	W-4	Total Recoverable	Water	6020A	461136
280-142687-3	W-1	Total Recoverable	Water	6020A	461136

General Chemistry

Analysis Batch: 516558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-3	W-1	Total/NA	Water	SM 2540D	
MB 280-516558/1	Method Blank	Total/NA	Water	SM 2540D	

General Chemistry (Continued)

Analysis Batch: 516558 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-516558/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 516988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-516988/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 517152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total/NA	Water	SM 2540C	

Analysis Batch: 517731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total/NA	Water	9056A	
MB 280-517731/6	Method Blank	Total/NA	Water	9056A	
LCS 280-517731/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-517731/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-517731/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 517790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-2	W-4	Total/NA	Water	SM 2540C	
280-142687-3	W-1	Total/NA	Water	SM 2540C	
MB 280-517790/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-517790/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 517909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total/NA	Water	9056A	
280-142687-2	W-4	Total/NA	Water	9056A	
280-142687-2	W-4	Total/NA	Water	9056A	
280-142687-3	W-1	Total/NA	Water	9056A	
280-142687-3	W-1	Total/NA	Water	9056A	
MB 280-517909/13	Method Blank	Total/NA	Water	9056A	
LCS 280-517909/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-517909/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-517909/10	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 518025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total/NA	Water	9040B	
280-142687-2	W-4	Total/NA	Water	9040B	
280-142687-3	W-1	Total/NA	Water	9040B	
LCS 280-518025/31	Lab Control Sample	Total/NA	Water	9040B	

Lab Chronicle

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2
Lab Sample ID: 280-142687-1
Date Collected: 11/11/20 10:35
Matrix: Water
Date Received: 11/11/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			461361	11/17/20 17:04	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			461560	11/17/20 12:52	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			461657	11/18/20 13:53	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	461140	11/16/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			461341	11/16/20 19:07	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518025	11/24/20 12:00	SPG	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	517731	11/23/20 02:43	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	517909	11/24/20 04:58	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	517152	11/18/20 10:05	JMH	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-142687-2
Date Collected: 11/11/20 11:50
Matrix: Water
Date Received: 11/11/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			461361	11/17/20 17:09	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			461560	11/17/20 12:55	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			461657	11/18/20 13:55	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	461140	11/16/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			461341	11/16/20 19:09	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518025	11/24/20 12:07	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517909	11/24/20 05:30	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	517909	11/24/20 05:47	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	517790	11/23/20 09:42	JMH	TAL DEN

Client Sample ID: W-1
Lab Sample ID: 280-142687-3
Date Collected: 11/11/20 11:00
Matrix: Water
Date Received: 11/11/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			461361	11/17/20 17:22	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			461560	11/17/20 13:02	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			461657	11/18/20 13:58	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	461140	11/16/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			461341	11/16/20 19:11	SLD	TAL CAN

Lab Chronicle

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-142687-3
Date Collected: 11/11/20 11:00
Matrix: Water
Date Received: 11/11/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040B		1			518025	11/24/20 12:04	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	517909	11/24/20 06:20	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	517909	11/24/20 06:36	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	517790	11/23/20 09:42	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	516558	11/13/20 06:47	LEB	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-142687-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No:
Client Contact: Molly Reeves	Phone: 7208386065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - AsNaO2, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7136(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			Other:

280-142687 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appendix, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra228, 9320_Ra226, Ra226R5Ra228 combined	Total Number of c	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
~~MW-2~~ W-2	11/11/20	1035	C	Water								1	Comp 200 mL - Ask PM for analysis
MW-3				Water									
~~MW-4~~ W-4	11/11/20	1150	G	Water								1	Ask PM for analysis
MW-5				Water									250 mL collected in 1L unpreserved
MW-6				Water									
_____-DUP				Water									
_____-EB				Water									
W-1	11/11/20	1100	G	Water			X	X	X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify):

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/11/20 1620	HDR		11/11/20 1620	ETADenver
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 12.4 12H 11-03

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

9.2121

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-546915.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-142687-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 12/2/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)
Other:

S16

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sewage, Groundwater, Air=Air, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6020A/3005A (MOD) 12 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X					X	
W-2 (280-142687-1)	11/11/20	10:35 Mountain		Water			X	X	X	X	1	Use Collision Cell
W-4 (280-142687-2)	11/11/20	11:50 Mountain		Water			X	X	X	X	1	Use Collision Cell
W-1 (280-142687-3)	11/11/20	11:00 Mountain		Water				X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/12/20 1415				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 11/13/20 9:58	Company ETA

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: Alex Cole

Cooler Received on 11/13/20 Opened on 11/13/20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 2.1 °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⇦ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142687-1

Login Number: 142687
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-142687-3
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
11/24/2020 3:55:23 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-142687-3
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-142687-3

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-142687-3

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/11/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 12.1 C.

Please note this only contains the results for the Alkalinity and the three 6020 Metals for sample W-2 and W-4. All other results are reported under jobs 280-142687-1 and 280-142687-2.

TOTAL RECOVERABLE METALS (ICPMS)

Samples W-2 and W-4 required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The accuracy and precision of the Magnesium MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY

Low levels of Alkalinity and Bicarbonate Alkalinity as CaCO3 are present in the method blank associated with QC batch 280-517784. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The Alkalinity sample duplicate analysis data associated with QC batch 280-517784 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-142687-3
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2
Lab Sample ID: 280-142687-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	1000		1.0	0.20	mg/L	1		6020A	Total Recoverable
Potassium	14		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	1500		20	6.6	mg/L	20		6020A	Total Recoverable
Alkalinity	180	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	180	B	10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: W-4
Lab Sample ID: 280-142687-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	3500		20	4.0	mg/L	20		6020A	Total Recoverable
Potassium	28		1.0	0.22	mg/L	1		6020A	Total Recoverable
Sodium	5800		20	6.6	mg/L	20		6020A	Total Recoverable
Alkalinity	480	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	480	B	10	3.1	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-142687-3
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CAN
SM 2320B	Alkalinity	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-142687-3
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-142687-1	W-2	Water	11/11/20 10:35	11/11/20 16:20	
280-142687-2	W-4	Water	11/11/20 11:50	11/11/20 16:20	

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-2
Date Collected: 11/11/20 10:35
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	1000		1.0	0.20	mg/L		11/16/20 14:00	11/17/20 12:52	1
Potassium	14		1.0	0.22	mg/L		11/16/20 14:00	11/17/20 12:52	1
Sodium	1500		20	6.6	mg/L		11/16/20 14:00	11/19/20 21:36	20

Client Sample ID: W-4
Date Collected: 11/11/20 11:50
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	3500		20	4.0	mg/L		11/16/20 14:00	11/19/20 21:38	20
Potassium	28		1.0	0.22	mg/L		11/16/20 14:00	11/17/20 12:55	1
Sodium	5800		20	6.6	mg/L		11/16/20 14:00	11/19/20 21:38	20

General Chemistry

Client Sample ID: W-2
Date Collected: 11/11/20 10:35
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	180	B	10	3.1	mg/L			11/20/20 14:17	1
Bicarbonate Alkalinity as CaCO3	180	B	10	3.1	mg/L			11/20/20 14:17	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			11/20/20 14:17	1

Client Sample ID: W-4
Date Collected: 11/11/20 11:50
Date Received: 11/11/20 16:20
Lab Sample ID: 280-142687-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	480	B	10	3.1	mg/L			11/20/20 14:25	1
Bicarbonate Alkalinity as CaCO3	480	B	10	3.1	mg/L			11/20/20 14:25	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			11/20/20 14:25	1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-461136/1-A
Matrix: Water
Analysis Batch: 461560

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 461136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	ND		1.0	0.20	mg/L		11/16/20 14:00	11/17/20 12:05	1
Potassium	ND		1.0	0.22	mg/L		11/16/20 14:00	11/17/20 12:05	1
Sodium	ND		1.0	0.33	mg/L		11/16/20 14:00	11/17/20 12:05	1

Lab Sample ID: LCS 240-461136/3-A
Matrix: Water
Analysis Batch: 461560

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 461136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	25.0	24.8		mg/L		99	80 - 120
Potassium	25.0	24.5		mg/L		98	80 - 120
Sodium	25.0	25.0		mg/L		100	80 - 120

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-517784/5
Matrix: Water
Analysis Batch: 517784

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.94	J	10	3.1	mg/L			11/20/20 13:23	1
Bicarbonate Alkalinity as CaCO3	3.94	J	10	3.1	mg/L			11/20/20 13:23	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			11/20/20 13:23	1

Lab Sample ID: LCS 280-517784/4
Matrix: Water
Analysis Batch: 517784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	194		mg/L		97	89 - 109

QC Association Summary

Client: HDR Inc
Job ID: 280-142687-3
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Metals

Prep Batch: 461136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total Recoverable	Water	3005A	
280-142687-2	W-4	Total Recoverable	Water	3005A	
MB 240-461136/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-461136/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 461560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total Recoverable	Water	6020A	461136
280-142687-2	W-4	Total Recoverable	Water	6020A	461136
MB 240-461136/1-A	Method Blank	Total Recoverable	Water	6020A	461136
LCS 240-461136/3-A	Lab Control Sample	Total Recoverable	Water	6020A	461136

Analysis Batch: 462004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total Recoverable	Water	6020A	461136
280-142687-2	W-4	Total Recoverable	Water	6020A	461136

General Chemistry

Analysis Batch: 517784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-142687-1	W-2	Total/NA	Water	SM 2320B	
280-142687-2	W-4	Total/NA	Water	SM 2320B	
MB 280-517784/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-517784/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: HDR Inc
Job ID: 280-142687-3
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2
Lab Sample ID: 280-142687-1
Date Collected: 11/11/20 10:35
Matrix: Water
Date Received: 11/11/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			461560	11/17/20 12:52	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			462004	11/19/20 21:36	DSH	TAL CAN
Total/NA	Analysis	SM 2320B		1			517784	11/20/20 14:17	RAF	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-142687-2
Date Collected: 11/11/20 11:50
Matrix: Water
Date Received: 11/11/20 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			461560	11/17/20 12:55	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	461136	11/16/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			462004	11/19/20 21:38	DSH	TAL CAN
Total/NA	Analysis	SM 2320B		1			517784	11/20/20 14:25	RAF	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-142687-3
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

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Client Information	Sampler: TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No:
Client Contact: Molly Reeves	Phone: 7208386065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - AsNaO2, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7136(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			Other:

280-142687 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl'ble, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra228, 9320_Ra228, Ra226R5Ra228 combined	Total Number of c	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
~~MW-2~~ W-2	11/11/20	1035	C	Water								1	Comp 200 mL - Ask PM for analysis
MW-3				Water									
~~MW-4~~ W-4	11/11/20	1150	G	Water								1	Ask PM for analysis
MW-5				Water									250 mL collected in 1L unpreserved
MW-6				Water									
_____-DUP				Water									
_____-EB				Water									
W-1	11/11/20	1100	G	Water			X	X	X	X	X	6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify):

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/11/20 1620	HDR		11/11/20 1620	ETADenver
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 12.4 12H 11-03

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

9.2121

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Dahlelle M	Carrier Tracking No(s):	COC No: 280-546915.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-142687-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 12/2/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

S16
Special Instructions/Note:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sewage, Groundwater, Bl=Blank, Air=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6020A/3005A (MOD) 12 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X					X	
W-2 (280-142687-1)	11/11/20	10:35 Mountain		Water			X	X	X	X	1	Use Collision Cell
W-4 (280-142687-2)	11/11/20	11:50 Mountain		Water			X	X	X	X	1	Use Collision Cell
W-1 (280-142687-3)	11/11/20	11:00 Mountain		Water				X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/12/20 1415				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 11/13/20 9:58	Company ETA

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: Alex Cole

Cooler Received on 11/13/20 Opened on 11/13/20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 2.1 °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⇦ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-142687-3

Login Number: 142687
List Number: 1
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143113-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
12/18/2020 3:10:02 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-143113-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-143113-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/23/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 7.1º C, 9.3º C, 10.8º C, 11.2º C, 11.5º C and 11.5º C, which is above the EPA's recommended temperature of 6C. Please note the samples were collected on 11/19 and 11/20 but were not received by the client until 11/23/2020.

TOTAL RECOVERABLE METALS- Method 6010C/6020A

Several samples required dilution prior to analysis for Method 6020A. The reporting limits have been adjusted accordingly.

The accuracy and precision of the Calcium MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for method 6020A exhibited spike compound recoveries outside the QC limits for Beryllium and Lithium. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY

Several samples required dilution prior to analysis for Method 9056A. The reporting limits have been adjusted accordingly.

MS/MSD analyses were performed on sample W-3 DUP. The MS/MSD for Fluoride method 9056A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for method 9056A exhibited spike compound recoveries outside the QC limits for Sulfate. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Job ID: 280-143113-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

The Sulfate sample duplicate analysis data associated with QC batch 280-518848 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

REVISION

The report has been revised to correct the sample IDS of the first three samples from MW-2A, MW-2B, and MW-3 to W-2A, W-2B, and W-3.

Detection Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A — Lab Sample ID: 280-143113-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.0		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.012	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.014	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	98		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.0046	J	0.0050	0.00099	mg/L	5		6020A	Total Recoverable
Cobalt	0.0068		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Chromium	0.0065	J	0.010	0.0049	mg/L	5		6020A	Total Recoverable
Selenium	2.3		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0050		0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	2.6		0.16	0.033	mg/L	20		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	800		30	10	mg/L	10		9056A	Total/NA
Fluoride	100		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	76000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	30000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	70		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2B — Lab Sample ID: 280-143113-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0080	J	0.020	0.0057	mg/L	10		6020A	Total Recoverable
Arsenic	0.015	J	0.050	0.0075	mg/L	10		6020A	Total Recoverable
Barium	0.037	J	0.050	0.022	mg/L	10		6020A	Total Recoverable
Calcium	150		10	5.8	mg/L	10		6020A	Total Recoverable
Cobalt	0.031		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Molybdenum	0.034	J	0.10	0.011	mg/L	10		6020A	Total Recoverable
Selenium	1.2		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Lithium	4.3		0.16	0.033	mg/L	20		6020A	Total Recoverable
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	23.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	900		30	10	mg/L	10		9056A	Total/NA
Fluoride	100		10	3.3	mg/L	20		9056A	Total/NA
Sulfate	130000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	47000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	50		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-3
Lab Sample ID: 280-143113-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.026		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	420		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00057	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.033		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.015		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.055		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	33		30	10	mg/L	10		9056A	Total/NA
Fluoride	1.8		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2600		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	3300		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	14		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-5
Lab Sample ID: 280-143113-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.00096	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0033	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.020		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	370		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0021		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0019	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.028		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0081		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.25		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	410		30	10	mg/L	10		9056A	Total/NA
Fluoride	4.7		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	5500		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	9500		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	12		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-6 — Lab Sample ID: 280-143113-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	9.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0033	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.028		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	440		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00020	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0037		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.40		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0025	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.13		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	130		30	10	mg/L	10		9056A	Total/NA
Fluoride	2.1	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	42000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	7000		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	15		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-143113-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.022	J	0.050	0.0075	mg/L	10		6020A	Total Recoverable
Calcium	170		10	5.8	mg/L	10		6020A	Total Recoverable
Cadmium	0.0056	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Cobalt	0.016		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Selenium	1.5		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.0050	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Lithium	2.8		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	630		60	20	mg/L	20		9056A	Total/NA
Fluoride	80		10	3.3	mg/L	20		9056A	Total/NA
Sulfate	39000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	130000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	23		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-1B — Lab Sample ID: 280-143113-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0046	J	0.010	0.0015	mg/L	2		6020A	Total Recoverable
Barium	0.012		0.010	0.0045	mg/L	2		6020A	Total Recoverable
Calcium	200		2.0	1.2	mg/L	2		6020A	Total Recoverable
Cadmium	0.0022		0.0020	0.00039	mg/L	2		6020A	Total Recoverable
Cobalt	0.034		0.0020	0.00038	mg/L	2		6020A	Total Recoverable
Molybdenum	0.0050	J	0.020	0.0022	mg/L	2		6020A	Total Recoverable
Selenium	0.70		0.010	0.0018	mg/L	2		6020A	Total Recoverable
Thallium	0.0035		0.0020	0.00040	mg/L	2		6020A	Total Recoverable
Lithium	1.9		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	350		30	10	mg/L	10		9056A	Total/NA
Fluoride	36		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	20000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	15000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	26		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2B — Lab Sample ID: 280-143113-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.9		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.020	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.014	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	160		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cobalt	0.023		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Molybdenum	0.0076	J	0.050	0.0054	mg/L	5		6020A	Total Recoverable
Selenium	2.1		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0098		0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	4.6		0.20	0.041	mg/L	25		6020A	Total Recoverable
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	490		30	10	mg/L	10		9056A	Total/NA
Fluoride	53		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	26000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	26000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	57		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-3
Lab Sample ID: 280-143113-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0069	J	0.025	0.0038	mg/L	5		6020A	Total Recoverable
Barium	0.013	J	0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	140		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cadmium	0.015		0.0050	0.00099	mg/L	5		6020A	Total Recoverable
Cobalt	0.044		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Chromium	0.0091	J	0.010	0.0049	mg/L	5		6020A	Total Recoverable
Molybdenum	0.0094	J	0.050	0.0054	mg/L	5		6020A	Total Recoverable
Selenium	0.56		0.025	0.0045	mg/L	5		6020A	Total Recoverable
Thallium	0.0045	J	0.0050	0.0010	mg/L	5		6020A	Total Recoverable
Lithium	2.1		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	270		30	10	mg/L	10		9056A	Total/NA
Fluoride	76		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	33000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	110000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	63		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4B
Lab Sample ID: 280-143113-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.61		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.018		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.024		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	510		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00020	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0030		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.3		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00024	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	0.44		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	200		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	6.2		0.50	0.17	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-4B (Continued) — Lab Sample ID: 280-143113-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2500		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6100		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	18		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-143113-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0046	J	0.010	0.0015	mg/L	2		6020A	Total Recoverable
Barium	0.024		0.010	0.0045	mg/L	2		6020A	Total Recoverable
Calcium	400		2.0	1.2	mg/L	2		6020A	Total Recoverable
Cadmium	0.00045	J	0.0020	0.00039	mg/L	2		6020A	Total Recoverable
Cobalt	0.0020		0.0020	0.00038	mg/L	2		6020A	Total Recoverable
Molybdenum	0.0073	J	0.020	0.0022	mg/L	2		6020A	Total Recoverable
Selenium	0.18		0.010	0.0018	mg/L	2		6020A	Total Recoverable
Thallium	0.0016	J	0.0020	0.00040	mg/L	2		6020A	Total Recoverable
Lithium	2.8		0.016	0.0033	mg/L	2		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1700		300	100	mg/L	100		9056A	Total/NA
Fluoride	36		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	19000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	57000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	37		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-143113-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0093		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0092		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	410		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00071	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0012	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0094	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.0		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.17		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-6 (Continued) — Lab Sample ID: 280-143113-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	22.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	250		30	10	mg/L	10		9056A	Total/NA
Fluoride	1.8		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3700		250	52	mg/L	50		9056A	Total/NA
Total Dissolved Solids (TDS)	6000		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	31		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3-DUP — Lab Sample ID: 280-143113-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0023	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.027		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	420		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00058	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.033		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.014		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.083		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	32		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.51	F1	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2100		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	3500		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	14		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2B-EB — Lab Sample ID: 280-143113-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	8.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Suspended Solids	1.6	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143113-1	W-2A	Ground Water	11/20/20 13:25	11/23/20 10:50	
280-143113-2	W-2B	Ground Water	11/20/20 15:05	11/23/20 10:50	
280-143113-3	W-3	Ground Water	11/20/20 09:50	11/23/20 10:50	
280-143113-4	W-5	Ground Water	11/19/20 16:15	11/23/20 10:50	
280-143113-5	W-6	Ground Water	11/20/20 09:30	11/23/20 10:50	
280-143113-6	W-7	Water	11/20/20 17:45	11/23/20 10:50	
280-143113-7	MW-1B	Ground Water	11/19/20 15:50	11/23/20 10:50	
280-143113-8	MW-2B	Ground Water	11/19/20 14:00	11/23/20 10:50	
280-143113-9	MW-3	Ground Water	11/19/20 12:20	11/23/20 10:50	
280-143113-10	MW-4B	Ground Water	11/20/20 13:45	11/23/20 10:50	
280-143113-11	MW-5	Ground Water	11/20/20 14:45	11/23/20 10:50	
280-143113-12	MW-6	Ground Water	11/20/20 11:20	11/23/20 10:50	
280-143113-13	W-3-DUP	Ground Water	11/20/20 09:50	11/23/20 10:50	
280-143113-14	MW-2B-EB	Ground Water	11/19/20 14:30	11/23/20 10:50	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 11/20/20 13:25
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.0		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 11:50	1

Client Sample ID: W-2B
Date Collected: 11/20/20 15:05
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.3		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 11:54	1

Client Sample ID: W-3
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.1		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 11:59	1

Client Sample ID: W-5
Date Collected: 11/19/20 16:15
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.3		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:03	1

Client Sample ID: W-6
Date Collected: 11/20/20 09:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	9.5		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:08	1

Client Sample ID: W-7
Date Collected: 11/20/20 17:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.1		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:12	1

Client Sample ID: MW-1B
Date Collected: 11/19/20 15:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.1		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:16	1

Client Sample ID: MW-2B
Date Collected: 11/19/20 14:00
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.9		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:21	1

Client Sample ID: MW-3
Date Collected: 11/19/20 12:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.2		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:34	1

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: MW-4B
Date Collected: 11/20/20 13:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.61**		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:38	1

Client Sample ID: MW-5
Date Collected: 11/20/20 14:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.1**		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:43	1

Client Sample ID: MW-6
Date Collected: 11/20/20 11:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.4**		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:48	1

Client Sample ID: W-3-DUP
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-13
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.1**		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:52	1

Client Sample ID: MW-2B-EB
Date Collected: 11/19/20 14:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-14
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 12:56	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 11/20/20 13:25
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/27/20 14:00	12/01/20 13:53	5
Arsenic	**0.012**	**J**	0.025	0.0038	mg/L		11/27/20 14:00	12/01/20 13:53	5
Barium	**0.014**	**J**	0.025	0.011	mg/L		11/27/20 14:00	12/01/20 13:53	5
Beryllium	ND		0.0050	0.0015	mg/L		11/27/20 14:00	12/02/20 13:47	5
Calcium	**98**		5.0	2.9	mg/L		11/27/20 14:00	12/01/20 13:53	5
Cadmium	**0.0046**	**J**	0.0050	0.00099	mg/L		11/27/20 14:00	12/01/20 13:53	5
Cobalt	**0.0068**		0.0050	0.00095	mg/L		11/27/20 14:00	12/01/20 13:53	5
Chromium	**0.0065**	**J**	0.010	0.0049	mg/L		11/27/20 14:00	12/01/20 13:53	5
Molybdenum	ND		0.050	0.0054	mg/L		11/27/20 14:00	12/01/20 13:53	5
Lead	ND		0.0050	0.0023	mg/L		11/27/20 14:00	12/01/20 13:53	5
Selenium	**2.3**		0.025	0.0045	mg/L		11/27/20 14:00	12/01/20 13:53	5
Thallium	**0.0050**		0.0050	0.0010	mg/L		11/27/20 14:00	12/01/20 13:53	5
Lithium	**2.6**		0.16	0.033	mg/L		11/27/20 14:00	12/03/20 10:50	20

Client Sample ID: W-2B
Date Collected: 11/20/20 15:05
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0080**	**J**	0.020	0.0057	mg/L		11/27/20 14:00	12/01/20 13:55	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: W-2B
Date Collected: 11/20/20 15:05
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.015**	**J**	0.050	0.0075	mg/L		11/27/20 14:00	12/01/20 13:55	10
Barium	**0.037**	**J**	0.050	0.022	mg/L		11/27/20 14:00	12/01/20 13:55	10
Beryllium	ND		0.010	0.0031	mg/L		11/27/20 14:00	12/02/20 13:49	10
Calcium	**150**		10	5.8	mg/L		11/27/20 14:00	12/01/20 13:55	10
Cadmium	ND		0.010	0.0020	mg/L		11/27/20 14:00	12/01/20 13:55	10
Cobalt	**0.031**		0.010	0.0019	mg/L		11/27/20 14:00	12/01/20 13:55	10
Chromium	ND		0.020	0.0098	mg/L		11/27/20 14:00	12/01/20 13:55	10
Molybdenum	**0.034**	**J**	0.10	0.011	mg/L		11/27/20 14:00	12/01/20 13:55	10
Lead	ND		0.010	0.0045	mg/L		11/27/20 14:00	12/01/20 13:55	10
Selenium	**1.2**		0.050	0.0089	mg/L		11/27/20 14:00	12/01/20 13:55	10
Thallium	ND		0.010	0.0020	mg/L		11/27/20 14:00	12/01/20 13:55	10
Lithium	**4.3**		0.16	0.033	mg/L		11/27/20 14:00	12/03/20 10:52	20

Client Sample ID: W-3
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 13:58	1
Arsenic	**0.0018**	**J**	0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 13:58	1
Barium	**0.026**		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 13:58	1
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 13:52	1
Calcium	**420**		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 13:58	1
Cadmium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 13:58	1
Cobalt	**0.00057**	**J**	0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 13:58	1
Chromium	ND		0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 13:58	1
Molybdenum	**0.033**		0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 13:58	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 13:58	1
Selenium	**0.015**		0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 13:58	1
Thallium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 13:58	1
Lithium	**0.055**		0.0080	0.0017	mg/L		11/27/20 14:00	12/03/20 10:55	1

Client Sample ID: W-5
Date Collected: 11/19/20 16:15
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00096**	**J**	0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 14:00	1
Arsenic	**0.0033**	**J**	0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 14:00	1
Barium	**0.020**		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 14:00	1
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 13:55	1
Calcium	**370**		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 14:00	1
Cadmium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:00	1
Cobalt	**0.0021**		0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 14:00	1
Chromium	**0.0019**	**J**	0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 14:00	1
Molybdenum	**0.028**		0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 14:00	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 14:00	1
Selenium	**0.0081**		0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 14:00	1
Thallium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:00	1
Lithium	**0.25**		0.040	0.0083	mg/L		11/27/20 14:00	12/03/20 10:57	5

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-6
Date Collected: 11/20/20 09:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 14:08	1
Arsenic	**0.0033**	**J**	0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 14:08	1
Barium	**0.028**		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 14:08	1
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 13:57	1
Calcium	**440**		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 14:08	1
Cadmium	**0.00020**	**J**	0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:08	1
Cobalt	**0.0037**		0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 14:08	1
Chromium	ND		0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 14:08	1
Molybdenum	**0.40**		0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 14:08	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 14:08	1
Selenium	**0.0025**	**J**	0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 14:08	1
Thallium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:08	1
Lithium	**0.13**		0.040	0.0083	mg/L		11/27/20 14:00	12/03/20 11:00	5

Client Sample ID: W-7
Date Collected: 11/20/20 17:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		11/27/20 14:00	12/01/20 14:10	10
Arsenic	**0.022**	**J**	0.050	0.0075	mg/L		11/27/20 14:00	12/01/20 14:10	10
Barium	ND		0.050	0.022	mg/L		11/27/20 14:00	12/01/20 14:10	10
Beryllium	ND		0.010	0.0031	mg/L		11/27/20 14:00	12/02/20 14:00	10
Calcium	**170**		10	5.8	mg/L		11/27/20 14:00	12/01/20 14:10	10
Cadmium	**0.0056**	**J**	0.010	0.0020	mg/L		11/27/20 14:00	12/01/20 14:10	10
Cobalt	**0.016**		0.010	0.0019	mg/L		11/27/20 14:00	12/01/20 14:10	10
Chromium	ND		0.020	0.0098	mg/L		11/27/20 14:00	12/01/20 14:10	10
Molybdenum	ND		0.10	0.011	mg/L		11/27/20 14:00	12/01/20 14:10	10
Lead	ND		0.010	0.0045	mg/L		11/27/20 14:00	12/01/20 14:10	10
Selenium	**1.5**		0.050	0.0089	mg/L		11/27/20 14:00	12/01/20 14:10	10
Thallium	**0.0050**	**J**	0.010	0.0020	mg/L		11/27/20 14:00	12/01/20 14:10	10
Lithium	**2.8**		0.080	0.017	mg/L		11/27/20 14:00	12/03/20 11:02	10

Client Sample ID: MW-1B
Date Collected: 11/19/20 15:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		11/27/20 14:00	12/01/20 14:13	2
Arsenic	**0.0046**	**J**	0.010	0.0015	mg/L		11/27/20 14:00	12/01/20 14:13	2
Barium	**0.012**		0.010	0.0045	mg/L		11/27/20 14:00	12/01/20 14:13	2
Beryllium	ND		0.0050	0.0015	mg/L		11/27/20 14:00	12/02/20 13:39	5
Calcium	**200**		2.0	1.2	mg/L		11/27/20 14:00	12/01/20 14:13	2
Cadmium	**0.0022**		0.0020	0.00039	mg/L		11/27/20 14:00	12/01/20 14:13	2
Cobalt	**0.034**		0.0020	0.00038	mg/L		11/27/20 14:00	12/01/20 14:13	2
Chromium	ND		0.0040	0.0020	mg/L		11/27/20 14:00	12/01/20 14:13	2
Molybdenum	**0.0050**	**J**	0.020	0.0022	mg/L		11/27/20 14:00	12/01/20 14:13	2
Lead	ND		0.0020	0.00090	mg/L		11/27/20 14:00	12/01/20 14:13	2
Selenium	**0.70**		0.010	0.0018	mg/L		11/27/20 14:00	12/01/20 14:13	2
Thallium	**0.0035**		0.0020	0.00040	mg/L		11/27/20 14:00	12/01/20 14:13	2
Lithium	**1.9**		0.080	0.017	mg/L		11/27/20 14:00	12/03/20 11:05	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-2B
Date Collected: 11/19/20 14:00
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/27/20 14:00	12/01/20 14:16	5
Arsenic	**0.020**	**J**	0.025	0.0038	mg/L		11/27/20 14:00	12/01/20 14:16	5
Barium	**0.014**	**J**	0.025	0.011	mg/L		11/27/20 14:00	12/01/20 14:16	5
Beryllium	ND		0.0050	0.0015	mg/L		11/27/20 14:00	12/02/20 14:02	5
Calcium	**160**		5.0	2.9	mg/L		11/27/20 14:00	12/01/20 14:16	5
Cadmium	ND		0.0050	0.00099	mg/L		11/27/20 14:00	12/01/20 14:16	5
Cobalt	**0.023**		0.0050	0.00095	mg/L		11/27/20 14:00	12/01/20 14:16	5
Chromium	ND		0.010	0.0049	mg/L		11/27/20 14:00	12/01/20 14:16	5
Molybdenum	**0.0076**	**J**	0.050	0.0054	mg/L		11/27/20 14:00	12/01/20 14:16	5
Lead	ND		0.0050	0.0023	mg/L		11/27/20 14:00	12/01/20 14:16	5
Selenium	**2.1**		0.025	0.0045	mg/L		11/27/20 14:00	12/01/20 14:16	5
Thallium	**0.0098**		0.0050	0.0010	mg/L		11/27/20 14:00	12/01/20 14:16	5
Lithium	**4.6**		0.20	0.041	mg/L		11/27/20 14:00	12/02/20 16:19	25

Client Sample ID: MW-3
Date Collected: 11/19/20 12:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		11/27/20 14:00	12/01/20 14:18	5
Arsenic	**0.0069**	**J**	0.025	0.0038	mg/L		11/27/20 14:00	12/01/20 14:18	5
Barium	**0.013**	**J**	0.025	0.011	mg/L		11/27/20 14:00	12/01/20 14:18	5
Beryllium	ND		0.0050	0.0015	mg/L		11/27/20 14:00	12/02/20 14:15	5
Calcium	**140**		5.0	2.9	mg/L		11/27/20 14:00	12/01/20 14:18	5
Cadmium	**0.015**		0.0050	0.00099	mg/L		11/27/20 14:00	12/01/20 14:18	5
Cobalt	**0.044**		0.0050	0.00095	mg/L		11/27/20 14:00	12/01/20 14:18	5
Chromium	**0.0091**	**J**	0.010	0.0049	mg/L		11/27/20 14:00	12/01/20 14:18	5
Molybdenum	**0.0094**	**J**	0.050	0.0054	mg/L		11/27/20 14:00	12/01/20 14:18	5
Lead	ND		0.0050	0.0023	mg/L		11/27/20 14:00	12/01/20 14:18	5
Selenium	**0.56**		0.025	0.0045	mg/L		11/27/20 14:00	12/01/20 14:18	5
Thallium	**0.0045**	**J**	0.0050	0.0010	mg/L		11/27/20 14:00	12/01/20 14:18	5
Lithium	**2.1**		0.040	0.0083	mg/L		11/27/20 14:00	12/02/20 14:15	5

Client Sample ID: MW-4B
Date Collected: 11/20/20 13:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 14:21	1
Arsenic	**0.018**		0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 14:21	1
Barium	**0.024**		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 14:21	1
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 14:17	1
Calcium	**510**		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 14:21	1
Cadmium	**0.00020**	**J**	0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:21	1
Cobalt	**0.0030**		0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 14:21	1
Chromium	ND		0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 14:21	1
Molybdenum	**0.016**		0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 14:21	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 14:21	1
Selenium	**2.3**		0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 14:21	1
Thallium	**0.00024**	**J**	0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:21	1
Lithium	**0.44**		0.0080	0.0017	mg/L		11/27/20 14:00	12/02/20 14:17	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-5
Date Collected: 11/20/20 14:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		11/27/20 14:00	12/01/20 14:23	2
Arsenic	**0.0046**	**J**	0.010	0.0015	mg/L		11/27/20 14:00	12/01/20 14:23	2
Barium	**0.024**		0.010	0.0045	mg/L		11/27/20 14:00	12/01/20 14:23	2
Beryllium	ND		0.0020	0.00061	mg/L		11/27/20 14:00	12/02/20 14:20	2
Calcium	**400**		2.0	1.2	mg/L		11/27/20 14:00	12/01/20 14:23	2
Cadmium	**0.00045**	**J**	0.0020	0.00039	mg/L		11/27/20 14:00	12/01/20 14:23	2
Cobalt	**0.0020**		0.0020	0.00038	mg/L		11/27/20 14:00	12/01/20 14:23	2
Chromium	ND		0.0040	0.0020	mg/L		11/27/20 14:00	12/01/20 14:23	2
Molybdenum	**0.0073**	**J**	0.020	0.0022	mg/L		11/27/20 14:00	12/01/20 14:23	2
Lead	ND		0.0020	0.00090	mg/L		11/27/20 14:00	12/01/20 14:23	2
Selenium	**0.18**		0.010	0.0018	mg/L		11/27/20 14:00	12/01/20 14:23	2
Thallium	**0.0016**	**J**	0.0020	0.00040	mg/L		11/27/20 14:00	12/01/20 14:23	2
Lithium	**2.8**		0.016	0.0033	mg/L		11/27/20 14:00	12/02/20 14:20	2

Client Sample ID: MW-6
Date Collected: 11/20/20 11:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 14:26	1
Arsenic	**0.0093**		0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 14:26	1
Barium	**0.0092**		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 14:26	1
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 14:22	1
Calcium	**410**		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 14:26	1
Cadmium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:26	1
Cobalt	**0.00071**	**J**	0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 14:26	1
Chromium	**0.0012**	**J**	0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 14:26	1
Molybdenum	**0.0094**	**J**	0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 14:26	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 14:26	1
Selenium	**1.0**		0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 14:26	1
Thallium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:26	1
Lithium	**0.17**		0.0080	0.0017	mg/L		11/27/20 14:00	12/02/20 14:22	1

Client Sample ID: W-3-DUP
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-13
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 14:28	1
Arsenic	**0.0023**	**J**	0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 14:28	1
Barium	**0.027**		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 14:28	1
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 14:25	1
Calcium	**420**		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 14:28	1
Cadmium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:28	1
Cobalt	**0.00058**	**J**	0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 14:28	1
Chromium	ND		0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 14:28	1
Molybdenum	**0.033**		0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 14:28	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 14:28	1
Selenium	**0.014**		0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 14:28	1
Thallium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:28	1
Lithium	**0.083**		0.0080	0.0017	mg/L		11/27/20 14:00	12/02/20 14:25	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-2B-EB
Date Collected: 11/19/20 14:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-14
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 14:31	1
Arsenic	ND		0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 14:31	1
Barium	ND		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 14:31	1
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 14:27	1
Calcium	ND		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 14:31	1
Cadmium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:31	1
Cobalt	ND		0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 14:31	1
Chromium	ND		0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 14:31	1
Molybdenum	ND		0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 14:31	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 14:31	1
Selenium	ND		0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 14:31	1
Thallium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 14:31	1
Lithium	ND		0.0080	0.0017	mg/L		11/27/20 14:00	12/02/20 14:27	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2A
Date Collected: 11/20/20 13:25
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 14:49	1

Client Sample ID: W-2B
Date Collected: 11/20/20 15:05
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 14:51	1

Client Sample ID: W-3
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 14:53	1

Client Sample ID: W-5
Date Collected: 11/19/20 16:15
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 14:55	1

Client Sample ID: W-6
Date Collected: 11/20/20 09:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 14:57	1

Client Sample ID: W-7
Date Collected: 11/20/20 17:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 14:59	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-1B
Date Collected: 11/19/20 15:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:01	1

Client Sample ID: MW-2B
Date Collected: 11/19/20 14:00
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:03	1

Client Sample ID: MW-3
Date Collected: 11/19/20 12:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:05	1

Client Sample ID: MW-4B
Date Collected: 11/20/20 13:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:07	1

Client Sample ID: MW-5
Date Collected: 11/20/20 14:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:13	1

Client Sample ID: MW-6
Date Collected: 11/20/20 11:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:15	1

Client Sample ID: W-3-DUP
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-13
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:17	1

Client Sample ID: MW-2B-EB
Date Collected: 11/19/20 14:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-14
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 15:19	1

General Chemistry

Client Sample ID: W-2A
Date Collected: 11/20/20 13:25
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.0**	**HF**	0.1	0.1	SU			11/25/20 20:57	1
Temperature	**22.6**	**HF**	1.0	1.0	Degrees C			11/25/20 20:57	1

General Chemistry (Continued)

Client Sample ID: W-2A
Date Collected: 11/20/20 13:25
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	800		30	10	mg/L			11/29/20 13:16	10
Fluoride	100		5.0	1.7	mg/L			12/03/20 08:19	10
Sulfate	76000		5000	1000	mg/L			11/30/20 15:20	1000
Total Dissolved Solids (TDS)	30000		1000	470	mg/L			11/24/20 07:51	1
Total Suspended Solids	70		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: W-2B
Date Collected: 11/20/20 15:05
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU			11/25/20 20:54	1
Temperature	23.0	HF	1.0	1.0	Degrees C			11/25/20 20:54	1
Chloride	900		30	10	mg/L			11/29/20 13:48	10
Fluoride	100		10	3.3	mg/L			12/03/20 09:24	20
Sulfate	130000		5000	1000	mg/L			11/29/20 14:05	1000
Total Dissolved Solids (TDS)	47000		1000	470	mg/L			11/24/20 07:51	1
Total Suspended Solids	50		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: W-3
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU			11/25/20 20:50	1
Temperature	22.6	HF	1.0	1.0	Degrees C			11/25/20 20:50	1
Chloride	33		30	10	mg/L			11/29/20 14:21	10
Fluoride	1.8		0.50	0.17	mg/L			11/30/20 16:09	1
Sulfate	2600		2500	520	mg/L			11/29/20 14:38	500
Total Dissolved Solids (TDS)	3300		40	19	mg/L			11/25/20 09:36	1
Total Suspended Solids	14		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: W-5
Date Collected: 11/19/20 16:15
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			11/25/20 20:47	1
Temperature	22.4	HF	1.0	1.0	Degrees C			11/25/20 20:47	1
Chloride	410		30	10	mg/L			11/29/20 14:54	10
Fluoride	4.7		0.50	0.17	mg/L			12/01/20 02:32	1
Sulfate	5500		500	100	mg/L			12/01/20 03:05	100
Total Dissolved Solids (TDS)	9500		100	47	mg/L			11/25/20 09:36	1
Total Suspended Solids	12		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: W-6
Date Collected: 11/20/20 09:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU			11/25/20 19:55	1
Temperature	22.3	HF	1.0	1.0	Degrees C			11/25/20 19:55	1
Chloride	130		30	10	mg/L			11/30/20 16:25	10
Fluoride	2.1	J	5.0	1.7	mg/L			11/30/20 16:25	10

General Chemistry (Continued)

Client Sample ID: W-6
Date Collected: 11/20/20 09:30
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	42000		2500	520	mg/L			11/30/20 16:42	500
Total Dissolved Solids (TDS)	7000		40	19	mg/L			11/25/20 09:36	1
Total Suspended Solids	15		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: W-7
Date Collected: 11/20/20 17:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			11/25/20 21:01	1
Temperature	22.5	HF	1.0	1.0	Degrees C			11/25/20 21:01	1
Chloride	630		60	20	mg/L			11/30/20 18:53	20
Fluoride	80		10	3.3	mg/L			11/30/20 18:53	20
Sulfate	39000		5000	1000	mg/L			12/03/20 06:40	1000
Total Dissolved Solids (TDS)	130000		1000	470	mg/L			11/25/20 09:36	1
Total Suspended Solids	23		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: MW-1B
Date Collected: 11/19/20 15:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			11/25/20 20:20	1
Temperature	22.1	HF	1.0	1.0	Degrees C			11/25/20 20:20	1
Chloride	350		30	10	mg/L			11/30/20 19:42	10
Fluoride	36		5.0	1.7	mg/L			12/03/20 11:08	10
Sulfate	20000		1000	210	mg/L			11/30/20 19:59	200
Total Dissolved Solids (TDS)	15000		1000	470	mg/L			11/24/20 07:51	1
Total Suspended Solids	26		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: MW-2B
Date Collected: 11/19/20 14:00
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			11/25/20 20:17	1
Temperature	21.6	HF	1.0	1.0	Degrees C			11/25/20 20:17	1
Chloride	490		30	10	mg/L			11/30/20 22:10	10
Fluoride	53		5.0	1.7	mg/L			11/30/20 22:10	10
Sulfate	26000		5000	1000	mg/L			11/30/20 22:26	1000
Total Dissolved Solids (TDS)	26000		1000	470	mg/L			11/24/20 07:51	1
Total Suspended Solids	57		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: MW-3
Date Collected: 11/19/20 12:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			11/25/20 20:13	1
Temperature	21.3	HF	1.0	1.0	Degrees C			11/25/20 20:13	1
Chloride	270		30	10	mg/L			11/30/20 22:59	10
Fluoride	76		5.0	1.7	mg/L			11/30/20 22:59	10
Sulfate	33000		5000	1000	mg/L			11/30/20 23:16	1000
Total Dissolved Solids (TDS)	110000		1000	470	mg/L			11/25/20 09:36	1

General Chemistry (Continued)

Client Sample ID: MW-3
Date Collected: 11/19/20 12:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	63		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: MW-4B
Date Collected: 11/20/20 13:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			11/25/20 20:29	1
Temperature	22.0	HF	1.0	1.0	Degrees C			11/25/20 20:29	1
Chloride	200		3.0	1.0	mg/L			12/01/20 01:10	1
Fluoride	6.2		0.50	0.17	mg/L			12/01/20 01:10	1
Sulfate	2500		500	100	mg/L			12/01/20 01:43	100
Total Dissolved Solids (TDS)	6100		40	19	mg/L			11/25/20 09:36	1
Total Suspended Solids	18		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: MW-5
Date Collected: 11/20/20 14:45
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			11/25/20 20:33	1
Temperature	21.9	HF	1.0	1.0	Degrees C			11/25/20 20:33	1
Chloride	1700		300	100	mg/L			11/30/20 00:30	100
Fluoride	36		2.5	0.83	mg/L			12/03/20 09:57	5
Sulfate	19000		500	100	mg/L			11/30/20 00:30	100
Total Dissolved Solids (TDS)	57000		1000	470	mg/L			11/25/20 09:36	1
Total Suspended Solids	37		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: MW-6
Date Collected: 11/20/20 11:20
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-12
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			11/25/20 20:24	1
Temperature	22.1	HF	1.0	1.0	Degrees C			11/25/20 20:24	1
Chloride	250		30	10	mg/L			11/29/20 23:08	10
Fluoride	1.8		0.50	0.17	mg/L			12/01/20 02:00	1
Sulfate	3700		250	52	mg/L			12/01/20 02:16	50
Total Dissolved Solids (TDS)	6000		40	19	mg/L			11/25/20 09:36	1
Total Suspended Solids	31		4.0	1.1	mg/L			11/24/20 07:01	1

Client Sample ID: W-3-DUP
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50
Lab Sample ID: 280-143113-13
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU			11/25/20 20:09	1
Temperature	21.3	HF	1.0	1.0	Degrees C			11/25/20 20:09	1
Chloride	32		3.0	1.0	mg/L			11/30/20 00:46	1
Fluoride	0.51	F1	0.50	0.17	mg/L			11/30/20 23:32	1
Sulfate	2100		500	100	mg/L			11/30/20 01:03	100
Total Dissolved Solids (TDS)	3500		40	19	mg/L			11/25/20 09:36	1
Total Suspended Solids	14		4.0	1.1	mg/L			11/24/20 07:01	1

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: MW-2B-EB
Date Collected: 11/19/20 14:30
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-14
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**8.1**	**HF**	0.1	0.1	SU			11/27/20 17:42	1
Temperature	**20.5**	**HF**	1.0	1.0	Degrees C			11/27/20 17:42	1
Chloride	ND		3.0	1.0	mg/L			11/30/20 16:58	1
Fluoride	ND		0.50	0.17	mg/L			11/30/20 16:58	1
Sulfate	ND		5.0	1.0	mg/L			11/30/20 16:58	1
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/24/20 07:51	1
Total Suspended Solids	**1.6**	**J**	4.0	1.1	mg/L			11/24/20 07:01	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-463001/1-A
Matrix: Water
Analysis Batch: 463261

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/27/20 14:00	11/30/20 10:41	1

Lab Sample ID: LCS 240-463001/2-A
Matrix: Water
Analysis Batch: 463261

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.01		mg/L		101	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-463001/1-A
Matrix: Water
Analysis Batch: 463601

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/27/20 14:00	12/01/20 13:19	1
Arsenic	ND		0.0050	0.00075	mg/L		11/27/20 14:00	12/01/20 13:19	1
Barium	ND		0.0050	0.0022	mg/L		11/27/20 14:00	12/01/20 13:19	1
Calcium	ND		1.0	0.58	mg/L		11/27/20 14:00	12/01/20 13:19	1
Cadmium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 13:19	1
Cobalt	ND		0.0010	0.00019	mg/L		11/27/20 14:00	12/01/20 13:19	1
Chromium	ND		0.0020	0.00098	mg/L		11/27/20 14:00	12/01/20 13:19	1
Molybdenum	ND		0.010	0.0011	mg/L		11/27/20 14:00	12/01/20 13:19	1
Lead	ND		0.0010	0.00045	mg/L		11/27/20 14:00	12/01/20 13:19	1
Selenium	ND		0.0050	0.00089	mg/L		11/27/20 14:00	12/01/20 13:19	1
Thallium	ND		0.0010	0.00020	mg/L		11/27/20 14:00	12/01/20 13:19	1

Lab Sample ID: MB 240-463001/1-A
Matrix: Water
Analysis Batch: 463788

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00031	mg/L		11/27/20 14:00	12/02/20 12:00	1
Lithium	ND		0.0080	0.0017	mg/L		11/27/20 14:00	12/02/20 12:00	1

Lab Sample ID: LCS 240-463001/3-A
Matrix: Water
Analysis Batch: 463601

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0906		mg/L		91	80 - 120
Arsenic	1.00	0.935		mg/L		93	80 - 120
Barium	1.00	0.914		mg/L		91	80 - 120
Calcium	25.0	23.6		mg/L		94	80 - 120
Cadmium	0.500	0.467		mg/L		93	80 - 120
Cobalt	0.500	0.471		mg/L		94	80 - 120
Chromium	0.500	0.474		mg/L		95	80 - 120
Molybdenum	0.500	0.466		mg/L		93	80 - 120
Lead	0.500	0.484		mg/L		97	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-463001/3-A
Matrix: Water
Analysis Batch: 463601

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	1.00	0.931		mg/L		93	80 - 120
Thallium	1.00	0.929		mg/L		93	80 - 120

Lab Sample ID: LCS 240-463001/3-A
Matrix: Water
Analysis Batch: 463788

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463001

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.500	0.515		mg/L		103	80 - 120
Lithium	0.500	0.537		mg/L		107	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-463002/1-A
Matrix: Water
Analysis Batch: 463417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 463002

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/27/20 12:00	11/30/20 14:24	1

Lab Sample ID: LCS 240-463002/2-A
Matrix: Water
Analysis Batch: 463417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 463002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00492		mg/L		98	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-518355/30
Matrix: Water
Analysis Batch: 518355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Lab Sample ID: 280-143113-5 DU
Matrix: Ground Water
Analysis Batch: 518355

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.7	HF	7.6		SU		0.9	5
Temperature	22.3	HF	21.2		Degrees C		5	10

Lab Sample ID: LCS 280-518565/4
Matrix: Water
Analysis Batch: 518565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-518424/6
Matrix: Water
Analysis Batch: 518424

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/28/20 13:24	1
Sulfate	ND		5.0	1.0	mg/L			11/28/20 13:24	1

Lab Sample ID: LCS 280-518424/4
Matrix: Water
Analysis Batch: 518424

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	95.6		mg/L		96	90 - 110		
Sulfate			100	96.0		mg/L		96	90 - 110		

Lab Sample ID: LCSD 280-518424/5
Matrix: Water
Analysis Batch: 518424

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	95.9		mg/L		96	90 - 110	0	10
Sulfate			100	96.0		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 280-518424/3
Matrix: Water
Analysis Batch: 518424

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	5.01		mg/L		100	50 - 150		
Sulfate			5.00	4.87	J	mg/L		97	50 - 150		

Lab Sample ID: 280-143113-4 MS
Matrix: Ground Water
Analysis Batch: 518424

Client Sample ID: W-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	410		500	943		mg/L		106	80 - 120		

Lab Sample ID: 280-143113-4 MSD
Matrix: Ground Water
Analysis Batch: 518424

Client Sample ID: W-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	410		500	913		mg/L		100	80 - 120	3	20

Lab Sample ID: 280-143113-12 MS
Matrix: Ground Water
Analysis Batch: 518424

Client Sample ID: MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	250		500	749		mg/L		100	80 - 120		

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-143113-12 MSD
Matrix: Ground Water
Analysis Batch: 518424

Client Sample ID: MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250		500	750		mg/L		100	80 - 120	0	20

Lab Sample ID: 280-143113-4 DU
Matrix: Ground Water
Analysis Batch: 518424

Client Sample ID: W-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	410		395		mg/L		5	15

Lab Sample ID: 280-143113-12 DU
Matrix: Ground Water
Analysis Batch: 518424

Client Sample ID: MW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	250		239		mg/L		4	15

Lab Sample ID: MB 280-518579/6
Matrix: Water
Analysis Batch: 518579

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			11/30/20 14:50	1
Fluoride	ND		0.50	0.17	mg/L			11/30/20 14:50	1
Sulfate	ND		5.0	1.0	mg/L			11/30/20 14:50	1

Lab Sample ID: LCS 280-518579/4
Matrix: Water
Analysis Batch: 518579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.8		mg/L		95	90 - 110
Fluoride	5.00	4.53		mg/L		91	90 - 110
Sulfate	100	94.0		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-518579/5
Matrix: Water
Analysis Batch: 518579

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.7		mg/L		95	90 - 110	0	10
Fluoride	5.00	4.53		mg/L		91	90 - 110	0	10
Sulfate	100	95.4		mg/L		95	90 - 110	1	10

Lab Sample ID: MRL 280-518579/3
Matrix: Water
Analysis Batch: 518579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	3.96		mg/L		79	50 - 150
Fluoride	0.500	0.458	J	mg/L		92	50 - 150

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-518579/3
Matrix: Water
Analysis Batch: 518579

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	4.41	J	mg/L		88	50 - 150		

Lab Sample ID: 280-143113-13 MS
Matrix: Ground Water
Analysis Batch: 518579

Client Sample ID: W-3-DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	0.51	F1	5.00	4.30	F1	mg/L		76	80 - 120		

Lab Sample ID: 280-143113-13 MSD
Matrix: Ground Water
Analysis Batch: 518579

Client Sample ID: W-3-DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.51	F1	5.00	4.25	F1	mg/L		75	80 - 120	1	20

Lab Sample ID: 280-143113-14 MS
Matrix: Ground Water
Analysis Batch: 518579

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	ND		50.0	48.5		mg/L		97	80 - 120		
Fluoride	ND		5.00	5.03		mg/L		101	80 - 120		
Sulfate	ND		50.0	47.7		mg/L		95	80 - 120		

Lab Sample ID: 280-143113-14 MSD
Matrix: Ground Water
Analysis Batch: 518579

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		50.0	48.6		mg/L		97	80 - 120	0	20
Fluoride	ND		5.00	5.06		mg/L		101	80 - 120	0	20
Sulfate	ND		50.0	47.4		mg/L		95	80 - 120	1	20

Lab Sample ID: 280-143113-13 DU
Matrix: Ground Water
Analysis Batch: 518579

Client Sample ID: W-3-DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoride	0.51	F1		0.503		mg/L				1	15

Lab Sample ID: 280-143113-14 DU
Matrix: Ground Water
Analysis Batch: 518579

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	ND			ND		mg/L				NC	15
Fluoride	ND			ND		mg/L				NC	15
Sulfate	ND			ND		mg/L				NC	15

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-518848/6
Matrix: Water
Analysis Batch: 518848

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/02/20 17:22	1
Fluoride	ND		0.50	0.17	mg/L			12/02/20 17:22	1
Sulfate	ND		5.0	1.0	mg/L			12/02/20 17:22	1

Lab Sample ID: LCS 280-518848/4
Matrix: Water
Analysis Batch: 518848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.1		mg/L		94	90 - 110
Fluoride	5.00	4.74		mg/L		95	90 - 110
Sulfate	100	93.1		mg/L		93	90 - 110

Lab Sample ID: LCSD 280-518848/5
Matrix: Water
Analysis Batch: 518848

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	93.5		mg/L		93	90 - 110	1	10
Fluoride	5.00	4.70		mg/L		94	90 - 110	1	10
Sulfate	100	93.0		mg/L		93	90 - 110	0	10

Lab Sample ID: MRL 280-518848/3
Matrix: Water
Analysis Batch: 518848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.05		mg/L		81	50 - 150
Fluoride	0.500	0.482	J	mg/L		96	50 - 150
Sulfate	5.00	4.34	J	mg/L		87	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-517937/1
Matrix: Water
Analysis Batch: 517937

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/24/20 07:51	1

Lab Sample ID: LCS 280-517937/2
Matrix: Water
Analysis Batch: 517937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	483		mg/L		97	93 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 280-518139/1
Matrix: Water
Analysis Batch: 518139

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/25/20 09:36	1

Lab Sample ID: LCS 280-518139/2
Matrix: Water
Analysis Batch: 518139

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	471		mg/L		94	93 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-517929/1
Matrix: Water
Analysis Batch: 517929

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/24/20 07:01	1

Lab Sample ID: LCS 280-517929/2
Matrix: Water
Analysis Batch: 517929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	85.2		mg/L		85	79 - 114

Lab Sample ID: 280-143113-4 DU
Matrix: Ground Water
Analysis Batch: 517929

Client Sample ID: W-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	12		13.2		mg/L		6	10

Metals

Prep Batch: 463001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total Recoverable	Ground Water	3005A	
280-143113-2	W-2B	Total Recoverable	Ground Water	3005A	
280-143113-3	W-3	Total Recoverable	Ground Water	3005A	
280-143113-4	W-5	Total Recoverable	Ground Water	3005A	
280-143113-5	W-6	Total Recoverable	Ground Water	3005A	
280-143113-6	W-7	Total Recoverable	Water	3005A	
280-143113-7	MW-1B	Total Recoverable	Ground Water	3005A	
280-143113-8	MW-2B	Total Recoverable	Ground Water	3005A	
280-143113-9	MW-3	Total Recoverable	Ground Water	3005A	
280-143113-10	MW-4B	Total Recoverable	Ground Water	3005A	
280-143113-11	MW-5	Total Recoverable	Ground Water	3005A	
280-143113-12	MW-6	Total Recoverable	Ground Water	3005A	
280-143113-13	W-3-DUP	Total Recoverable	Ground Water	3005A	
280-143113-14	MW-2B-EB	Total Recoverable	Ground Water	3005A	
MB 240-463001/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-463001/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-463001/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 463002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	7470A	
280-143113-2	W-2B	Total/NA	Ground Water	7470A	
280-143113-3	W-3	Total/NA	Ground Water	7470A	
280-143113-4	W-5	Total/NA	Ground Water	7470A	
280-143113-5	W-6	Total/NA	Ground Water	7470A	
280-143113-6	W-7	Total/NA	Water	7470A	
280-143113-7	MW-1B	Total/NA	Ground Water	7470A	
280-143113-8	MW-2B	Total/NA	Ground Water	7470A	
280-143113-9	MW-3	Total/NA	Ground Water	7470A	
280-143113-10	MW-4B	Total/NA	Ground Water	7470A	
280-143113-11	MW-5	Total/NA	Ground Water	7470A	
280-143113-12	MW-6	Total/NA	Ground Water	7470A	
280-143113-13	W-3-DUP	Total/NA	Ground Water	7470A	
280-143113-14	MW-2B-EB	Total/NA	Ground Water	7470A	
MB 240-463002/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-463002/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 463261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total Recoverable	Ground Water	6010C	463001
280-143113-2	W-2B	Total Recoverable	Ground Water	6010C	463001
280-143113-3	W-3	Total Recoverable	Ground Water	6010C	463001
280-143113-4	W-5	Total Recoverable	Ground Water	6010C	463001
280-143113-5	W-6	Total Recoverable	Ground Water	6010C	463001
280-143113-6	W-7	Total Recoverable	Water	6010C	463001
280-143113-7	MW-1B	Total Recoverable	Ground Water	6010C	463001
280-143113-8	MW-2B	Total Recoverable	Ground Water	6010C	463001
280-143113-9	MW-3	Total Recoverable	Ground Water	6010C	463001
280-143113-10	MW-4B	Total Recoverable	Ground Water	6010C	463001
280-143113-11	MW-5	Total Recoverable	Ground Water	6010C	463001
280-143113-12	MW-6	Total Recoverable	Ground Water	6010C	463001

Metals (Continued)

Analysis Batch: 463261 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-13	W-3-DUP	Total Recoverable	Ground Water	6010C	463001
280-143113-14	MW-2B-EB	Total Recoverable	Ground Water	6010C	463001
MB 240-463001/1-A	Method Blank	Total Recoverable	Water	6010C	463001
LCS 240-463001/2-A	Lab Control Sample	Total Recoverable	Water	6010C	463001

Analysis Batch: 463417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	7470A	463002
280-143113-2	W-2B	Total/NA	Ground Water	7470A	463002
280-143113-3	W-3	Total/NA	Ground Water	7470A	463002
280-143113-4	W-5	Total/NA	Ground Water	7470A	463002
280-143113-5	W-6	Total/NA	Ground Water	7470A	463002
280-143113-6	W-7	Total/NA	Water	7470A	463002
280-143113-7	MW-1B	Total/NA	Ground Water	7470A	463002
280-143113-8	MW-2B	Total/NA	Ground Water	7470A	463002
280-143113-9	MW-3	Total/NA	Ground Water	7470A	463002
280-143113-10	MW-4B	Total/NA	Ground Water	7470A	463002
280-143113-11	MW-5	Total/NA	Ground Water	7470A	463002
280-143113-12	MW-6	Total/NA	Ground Water	7470A	463002
280-143113-13	W-3-DUP	Total/NA	Ground Water	7470A	463002
280-143113-14	MW-2B-EB	Total/NA	Ground Water	7470A	463002
MB 240-463002/1-A	Method Blank	Total/NA	Water	7470A	463002
LCS 240-463002/2-A	Lab Control Sample	Total/NA	Water	7470A	463002

Analysis Batch: 463601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total Recoverable	Ground Water	6020A	463001
280-143113-2	W-2B	Total Recoverable	Ground Water	6020A	463001
280-143113-3	W-3	Total Recoverable	Ground Water	6020A	463001
280-143113-4	W-5	Total Recoverable	Ground Water	6020A	463001
280-143113-5	W-6	Total Recoverable	Ground Water	6020A	463001
280-143113-6	W-7	Total Recoverable	Water	6020A	463001
280-143113-7	MW-1B	Total Recoverable	Ground Water	6020A	463001
280-143113-8	MW-2B	Total Recoverable	Ground Water	6020A	463001
280-143113-9	MW-3	Total Recoverable	Ground Water	6020A	463001
280-143113-10	MW-4B	Total Recoverable	Ground Water	6020A	463001
280-143113-11	MW-5	Total Recoverable	Ground Water	6020A	463001
280-143113-12	MW-6	Total Recoverable	Ground Water	6020A	463001
280-143113-13	W-3-DUP	Total Recoverable	Ground Water	6020A	463001
280-143113-14	MW-2B-EB	Total Recoverable	Ground Water	6020A	463001
MB 240-463001/1-A	Method Blank	Total Recoverable	Water	6020A	463001
LCS 240-463001/3-A	Lab Control Sample	Total Recoverable	Water	6020A	463001

Analysis Batch: 463788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total Recoverable	Ground Water	6020A	463001
280-143113-2	W-2B	Total Recoverable	Ground Water	6020A	463001
280-143113-3	W-3	Total Recoverable	Ground Water	6020A	463001
280-143113-4	W-5	Total Recoverable	Ground Water	6020A	463001
280-143113-5	W-6	Total Recoverable	Ground Water	6020A	463001
280-143113-6	W-7	Total Recoverable	Water	6020A	463001

Metals (Continued)

Analysis Batch: 463788 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-7	MW-1B	Total Recoverable	Ground Water	6020A	463001
280-143113-8	MW-2B	Total Recoverable	Ground Water	6020A	463001
280-143113-8	MW-2B	Total Recoverable	Ground Water	6020A	463001
280-143113-9	MW-3	Total Recoverable	Ground Water	6020A	463001
280-143113-10	MW-4B	Total Recoverable	Ground Water	6020A	463001
280-143113-11	MW-5	Total Recoverable	Ground Water	6020A	463001
280-143113-12	MW-6	Total Recoverable	Ground Water	6020A	463001
280-143113-13	W-3-DUP	Total Recoverable	Ground Water	6020A	463001
280-143113-14	MW-2B-EB	Total Recoverable	Ground Water	6020A	463001
MB 240-463001/1-A	Method Blank	Total Recoverable	Water	6020A	463001
LCS 240-463001/3-A	Lab Control Sample	Total Recoverable	Water	6020A	463001

Analysis Batch: 463846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total Recoverable	Ground Water	6020A	463001
280-143113-2	W-2B	Total Recoverable	Ground Water	6020A	463001
280-143113-3	W-3	Total Recoverable	Ground Water	6020A	463001
280-143113-4	W-5	Total Recoverable	Ground Water	6020A	463001
280-143113-5	W-6	Total Recoverable	Ground Water	6020A	463001
280-143113-6	W-7	Total Recoverable	Water	6020A	463001
280-143113-7	MW-1B	Total Recoverable	Ground Water	6020A	463001

General Chemistry

Analysis Batch: 517929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	SM 2540D	
280-143113-2	W-2B	Total/NA	Ground Water	SM 2540D	
280-143113-3	W-3	Total/NA	Ground Water	SM 2540D	
280-143113-4	W-5	Total/NA	Ground Water	SM 2540D	
280-143113-5	W-6	Total/NA	Ground Water	SM 2540D	
280-143113-6	W-7	Total/NA	Water	SM 2540D	
280-143113-7	MW-1B	Total/NA	Ground Water	SM 2540D	
280-143113-8	MW-2B	Total/NA	Ground Water	SM 2540D	
280-143113-9	MW-3	Total/NA	Ground Water	SM 2540D	
280-143113-10	MW-4B	Total/NA	Ground Water	SM 2540D	
280-143113-11	MW-5	Total/NA	Ground Water	SM 2540D	
280-143113-12	MW-6	Total/NA	Ground Water	SM 2540D	
280-143113-13	W-3-DUP	Total/NA	Ground Water	SM 2540D	
280-143113-14	MW-2B-EB	Total/NA	Ground Water	SM 2540D	
MB 280-517929/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-517929/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-143113-4 DU	W-5	Total/NA	Ground Water	SM 2540D	

Analysis Batch: 517937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	SM 2540C	
280-143113-2	W-2B	Total/NA	Ground Water	SM 2540C	
280-143113-7	MW-1B	Total/NA	Ground Water	SM 2540C	
280-143113-8	MW-2B	Total/NA	Ground Water	SM 2540C	
280-143113-14	MW-2B-EB	Total/NA	Ground Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 517937 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-517937/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-517937/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 518139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-3	W-3	Total/NA	Ground Water	SM 2540C	
280-143113-4	W-5	Total/NA	Ground Water	SM 2540C	
280-143113-5	W-6	Total/NA	Ground Water	SM 2540C	
280-143113-6	W-7	Total/NA	Water	SM 2540C	
280-143113-9	MW-3	Total/NA	Ground Water	SM 2540C	
280-143113-10	MW-4B	Total/NA	Ground Water	SM 2540C	
280-143113-11	MW-5	Total/NA	Ground Water	SM 2540C	
280-143113-12	MW-6	Total/NA	Ground Water	SM 2540C	
280-143113-13	W-3-DUP	Total/NA	Ground Water	SM 2540C	
MB 280-518139/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-518139/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 518355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	9040B	
280-143113-2	W-2B	Total/NA	Ground Water	9040B	
280-143113-3	W-3	Total/NA	Ground Water	9040B	
280-143113-4	W-5	Total/NA	Ground Water	9040B	
280-143113-5	W-6	Total/NA	Ground Water	9040B	
280-143113-6	W-7	Total/NA	Water	9040B	
280-143113-7	MW-1B	Total/NA	Ground Water	9040B	
280-143113-8	MW-2B	Total/NA	Ground Water	9040B	
280-143113-9	MW-3	Total/NA	Ground Water	9040B	
280-143113-10	MW-4B	Total/NA	Ground Water	9040B	
280-143113-11	MW-5	Total/NA	Ground Water	9040B	
280-143113-12	MW-6	Total/NA	Ground Water	9040B	
280-143113-13	W-3-DUP	Total/NA	Ground Water	9040B	
LCS 280-518355/30	Lab Control Sample	Total/NA	Water	9040B	
280-143113-5 DU	W-6	Total/NA	Ground Water	9040B	

Analysis Batch: 518424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	9056A	
280-143113-2	W-2B	Total/NA	Ground Water	9056A	
280-143113-2	W-2B	Total/NA	Ground Water	9056A	
280-143113-3	W-3	Total/NA	Ground Water	9056A	
280-143113-3	W-3	Total/NA	Ground Water	9056A	
280-143113-4	W-5	Total/NA	Ground Water	9056A	
280-143113-11	MW-5	Total/NA	Ground Water	9056A	
280-143113-12	MW-6	Total/NA	Ground Water	9056A	
280-143113-13	W-3-DUP	Total/NA	Ground Water	9056A	
280-143113-13	W-3-DUP	Total/NA	Ground Water	9056A	
MB 280-518424/6	Method Blank	Total/NA	Water	9056A	
LCS 280-518424/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-518424/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-518424/3	Lab Control Sample	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 518424 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-4 MS	W-5	Total/NA	Ground Water	9056A	
280-143113-4 MSD	W-5	Total/NA	Ground Water	9056A	
280-143113-12 MS	MW-6	Total/NA	Ground Water	9056A	
280-143113-12 MSD	MW-6	Total/NA	Ground Water	9056A	
280-143113-4 DU	W-5	Total/NA	Ground Water	9056A	
280-143113-12 DU	MW-6	Total/NA	Ground Water	9056A	

Analysis Batch: 518565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-14	MW-2B-EB	Total/NA	Ground Water	9040B	
LCS 280-518565/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 518579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	9056A	
280-143113-3	W-3	Total/NA	Ground Water	9056A	
280-143113-4	W-5	Total/NA	Ground Water	9056A	
280-143113-4	W-5	Total/NA	Ground Water	9056A	
280-143113-5	W-6	Total/NA	Ground Water	9056A	
280-143113-5	W-6	Total/NA	Ground Water	9056A	
280-143113-6	W-7	Total/NA	Water	9056A	
280-143113-7	MW-1B	Total/NA	Ground Water	9056A	
280-143113-7	MW-1B	Total/NA	Ground Water	9056A	
280-143113-8	MW-2B	Total/NA	Ground Water	9056A	
280-143113-8	MW-2B	Total/NA	Ground Water	9056A	
280-143113-9	MW-3	Total/NA	Ground Water	9056A	
280-143113-9	MW-3	Total/NA	Ground Water	9056A	
280-143113-10	MW-4B	Total/NA	Ground Water	9056A	
280-143113-10	MW-4B	Total/NA	Ground Water	9056A	
280-143113-12	MW-6	Total/NA	Ground Water	9056A	
280-143113-12	MW-6	Total/NA	Ground Water	9056A	
280-143113-13	W-3-DUP	Total/NA	Ground Water	9056A	
280-143113-14	MW-2B-EB	Total/NA	Ground Water	9056A	
MB 280-518579/6	Method Blank	Total/NA	Water	9056A	
LCS 280-518579/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-518579/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-518579/3	Lab Control Sample	Total/NA	Water	9056A	
280-143113-13 MS	W-3-DUP	Total/NA	Ground Water	9056A	
280-143113-13 MSD	W-3-DUP	Total/NA	Ground Water	9056A	
280-143113-14 MS	MW-2B-EB	Total/NA	Ground Water	9056A	
280-143113-14 MSD	MW-2B-EB	Total/NA	Ground Water	9056A	
280-143113-13 DU	W-3-DUP	Total/NA	Ground Water	9056A	
280-143113-14 DU	MW-2B-EB	Total/NA	Ground Water	9056A	

Analysis Batch: 518848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143113-1	W-2A	Total/NA	Ground Water	9056A	
280-143113-2	W-2B	Total/NA	Ground Water	9056A	
280-143113-6	W-7	Total/NA	Water	9056A	
280-143113-7	MW-1B	Total/NA	Ground Water	9056A	
280-143113-11	MW-5	Total/NA	Ground Water	9056A	

General Chemistry (Continued)

Analysis Batch: 518848 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-518848/6	Method Blank	Total/NA	Water	9056A	
LCS 280-518848/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-518848/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-518848/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-143113-1
Date Collected: 11/20/20 13:25
Matrix: Ground Water
Date Received: 11/23/20 10:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 11:50	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463601	12/01/20 13:53	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463788	12/02/20 13:47	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			463846	12/03/20 10:50	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 14:49	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:57	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	518579	11/30/20 15:20	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518848	12/03/20 08:19	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518424	11/29/20 13:16	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	517937	11/24/20 07:51	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: W-2B
Lab Sample ID: 280-143113-2
Date Collected: 11/20/20 15:05
Matrix: Ground Water
Date Received: 11/23/20 10:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 11:54	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			463601	12/01/20 13:55	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			463788	12/02/20 13:49	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			463846	12/03/20 10:52	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 14:51	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:54	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	518848	12/03/20 09:24	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518424	11/29/20 13:48	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	518424	11/29/20 14:05	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	517937	11/24/20 07:51	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-3
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 11:59	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 13:58	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463788	12/02/20 13:52	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463846	12/03/20 10:55	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 14:53	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:50	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	518579	11/30/20 16:09	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518424	11/29/20 14:21	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	518424	11/29/20 14:38	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: W-5
Date Collected: 11/19/20 16:15
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:03	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 14:00	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463788	12/02/20 13:55	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463846	12/03/20 10:57	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 14:55	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:47	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	518579	12/01/20 02:32	BWH	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	518579	12/01/20 03:05	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518424	11/29/20 14:54	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: W-6
Date Collected: 11/20/20 09:30
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:08	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 14:08	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463788	12/02/20 13:57	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463846	12/03/20 11:00	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 14:57	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 19:55	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518579	11/30/20 16:25	BWH	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	518579	11/30/20 16:42	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: W-7
Date Collected: 11/20/20 17:45
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:12	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			463601	12/01/20 14:10	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			463788	12/02/20 14:00	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			463846	12/03/20 11:02	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 14:59	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 21:01	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	518579	11/30/20 18:53	BWH	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	518848	12/03/20 06:40	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: MW-1B
Date Collected: 11/19/20 15:50
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:16	WKD	TAL CAN

Client Sample ID: MW-1B
Date Collected: 11/19/20 15:50
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			463601	12/01/20 14:13	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463788	12/02/20 13:39	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			463846	12/03/20 11:05	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:01	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:20	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518579	11/30/20 19:42	BWH	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	518579	11/30/20 19:59	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518848	12/03/20 11:08	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	517937	11/24/20 07:51	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: MW-2B
Date Collected: 11/19/20 14:00
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:21	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463601	12/01/20 14:16	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463788	12/02/20 14:02	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		25			463788	12/02/20 16:19	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:03	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:17	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518579	11/30/20 22:10	BWH	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	518579	11/30/20 22:26	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	517937	11/24/20 07:51	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: MW-3
Date Collected: 11/19/20 12:20
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-9
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:34	WKD	TAL CAN

Client Sample ID: MW-3
Date Collected: 11/19/20 12:20
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-9
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463601	12/01/20 14:18	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			463788	12/02/20 14:15	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:05	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:13	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518579	11/30/20 22:59	BWH	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	518579	11/30/20 23:16	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: MW-4B
Date Collected: 11/20/20 13:45
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-10
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:38	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 14:21	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463788	12/02/20 14:17	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:07	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:29	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	518579	12/01/20 01:10	BWH	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	518579	12/01/20 01:43	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: MW-5
Date Collected: 11/20/20 14:45
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-11
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:43	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			463601	12/01/20 14:23	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			463788	12/02/20 14:20	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:13	SLD	TAL CAN

Client Sample ID: MW-5
Date Collected: 11/20/20 14:45
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-11
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040B		1			518355	11/25/20 20:33	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	518848	12/03/20 09:57	BWH	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	518424	11/30/20 00:30	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: MW-6
Date Collected: 11/20/20 11:20
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-12
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:48	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 14:26	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463788	12/02/20 14:22	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:15	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:24	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	518579	12/01/20 02:00	BWH	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	518579	12/01/20 02:16	BWH	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	518424	11/29/20 23:08	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: W-3-DUP
Date Collected: 11/20/20 09:50
Date Received: 11/23/20 10:50

Lab Sample ID: 280-143113-13
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:52	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 14:28	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463788	12/02/20 14:25	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:17	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518355	11/25/20 20:09	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	518579	11/30/20 23:32	BWH	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	518424	11/30/20 00:46	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	518424	11/30/20 01:03	CJ	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-3-DUP
Lab Sample ID: 280-143113-13
Date Collected: 11/20/20 09:50
Matrix: Ground Water
Date Received: 11/23/20 10:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	518139	11/25/20 09:36	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Client Sample ID: MW-2B-EB
Lab Sample ID: 280-143113-14
Date Collected: 11/19/20 14:30
Matrix: Ground Water
Date Received: 11/23/20 10:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463261	11/30/20 12:56	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 14:31	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463001	11/27/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463788	12/02/20 14:27	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463002	11/27/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 15:19	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518565	11/27/20 17:42	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	518579	11/30/20 16:58	BWH	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	517937	11/24/20 07:51	LEB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	517929	11/24/20 07:01	LEB	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-143113-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Ground Water	Temperature
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: B/GK	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: 1
Client Contact: Molly Reeves	Phone: 720 535 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify); Other:
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appendix IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226&Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
W-1				Water									
W-2A	11/20/20	1325	G	Water			X	X	X	X	X	6	
W-2B	11/20/20	1505	G	Water			X	X	X	X	X	6	
W-3	11/20/20	0950	G	Water			X	X	X	X	X	6	
W-4				Water									
W-5	11/19/20	1615	G	Water			X	X	X	X	X	6	
W-6	11/20/20	0930	G	Water			X	X	X	X	X	6	
W-7	11/20/20	1745	G	Water			X	X	X	X	X	6	
W-8A				Water									
W-8B				Water									
MW-1B	11/19/20	1550	G	Water			X	X	X	X	X	6	

280-143113 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time: 11/23/20 1050	Company: HDR	Received by:	Date/Time: 11/23/20 1050	Company: ETA Denver
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 11.1, 7.4, 11.5, 9.4, 11.8, 1.8 IR11-03501 11/23/20

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TJ/GK	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #1
Client Contact: Molly Reeves	Phone: 720 838 6065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc		Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7136(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sludge, Groundwater, Air=Air, Solid, Tissue)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appdix IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226R5Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
MW-2B	11/19/20	1400	G	Water			X	XX	XX	X	X	6	
MW-3	11/19/20	1220	G	Water			X	X	X	X	X	6	
MW-4B	11/20/20	1345	G	Water			X	X	X	X	X	6	
MW-5	11/20/20	1445	G	Water			X	X	X	X	X	6	
MW-6	11/20/20	1120	G	Water			X	X	X	X	X	6	
MW-3 -DUP	11/20/20	0950	G	Water			X	X	X	X	X	6	
MW-2B -EB	11/19/20	1430	G	Water			X	X	X	X	X	6	
				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/23/20 1050	HDR		11/23/20 1050	EA Denver
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

C 2171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-546470.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-143113-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 12/1/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

S22

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-2A (280-143113-1)	11/20/20	13:25 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2B (280-143113-2)	11/20/20	15:05 Mountain		Water			X	X	X	1	Use Collision Cell
MW-3 (280-143113-3)	11/20/20	09:50 Mountain		Water			X	X	X	1	Use Collision Cell
W-5 (280-143113-4)	11/19/20	16:15 Mountain		Water			X	X	X	1	Use Collision Cell
W-6 (280-143113-5)	11/20/20	09:30 Mountain		Water			X	X	X	1	Use Collision Cell
W-7 (280-143113-6)	11/20/20	17:45 Mountain		Water			X	X	X	1	Use Collision Cell
MW-1B (280-143113-7)	11/19/20	15:50 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2B (280-143113-8)	11/19/20	14:00 Mountain		Water			X	X	X	1	Use Collision Cell
MW-3 (280-143113-9)	11/19/20	12:20 Mountain		Water			X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/24/2020 1400			11-25-20 1034	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-546470.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-143113-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 12/1/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720	PO #:			
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	WO #:			
Email:	Project #: 28014376			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Xcel Energy CCR - Comanche Station				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

SR2

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wwater, Sesolid, Owastelbil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-4B (280-143113-10)	11/20/20	13:45 Mountain		Water			X	X	X	1	Use Collision Cell
MW-5 (280-143113-11)	11/20/20	14:45 Mountain		Water			X	X	X	1	Use Collision Cell
MW-6 (280-143113-12)	11/20/20	11:20 Mountain		Water			X	X	X	1	Use Collision Cell
W-3-DUP (280-143113-13)	11/20/20	09:50 Mountain		Water			X	X	X	1	Use Collision Cell
MW-2B-EB (280-143113-14)	11/19/20	14:30 Mountain		Water			X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes in accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[illegible] DJ	11/20/2020 1400		[illegible]	11-25-20 1030	ETAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____

Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by:

Cooler Received on 11-25-20 Opened on 11-25-20

FedEx: 1st Grd ~~Exp~~ UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location

TestAmerica Cooler # 77 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 6.2 °C Corrected Cooler Temp. 7.1 °C

IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	~~Yes~~ No	
-Were the seals on the outside of the cooler(s) signed & dated?	~~Yes~~ No	NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes ~~No~~	
-Were tamper/custody seals intact and uncompromised?	~~Yes~~ No	NA
3. Shippers' packing slip attached to the cooler(s)?	~~Yes~~ No	
4. Did custody papers accompany the sample(s)?	~~Yes~~ No	
5. Were the custody papers relinquished & signed in the appropriate place?	~~Yes~~ No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes ~~No~~	
7. Did all bottles arrive in good condition (Unbroken)?	~~Yes~~ No	
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	~~Yes~~ No	
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	~~Yes~~ No	
11. Sufficient quantity received to perform indicated analyses?	~~Yes~~ No	
12. Are these work share samples and all listed on the COC?	~~Yes~~ No	
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No	NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes No	
15. Were air bubbles >6 mm in any VOA vials? ● = Larger than this.	Yes No	NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes No	
17. Was a LL Hg or Me Hg trip blank present? _____	Yes No	

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-143113-1

Login Number: 143113
List Number: 1
Creator: Kramer, Julieann L

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143201-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche
Revision: 1

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Authorized for release by:
12/29/2020 12:56:42 PM
Betsy Sara, Project Manager II
(303)736-0189
Betsy.Sara@Eurofinset.com

Designee for

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-143201-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-143201-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

This report may include data with reporting limits (RLs) less than TestAmerica's standard reporting limit. These data and reporting limits are being used specifically to meet the needs of this project. Note that, data are not customarily reported to these levels without qualifiers, because they are inherently less reliable and potentially less defensible than the latest industry standards require.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 11/25/2020 at 3:30 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 9.9º C.

Limited sample volume was provided for the following samples: W-2 (280-143201-2), W-4 (280-143201-3).
280-143201-2: A 250mL plastic unpreserved bottle was received containing 125mL.
280-143201-3: A 1L plastic unpreserved bottle was received containing 350mL.

TOTAL RECOVERABLE METALS
Samples W-1 (280-143201-1), W-2 (280-143201-2) and W-4 (280-143201-3) were analyzed for Total Recoverable Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 11/30/2020 and 12/01/2020 and analyzed on 12/01/2020 and 12/02/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples W-1 (280-143201-1), W-2 (280-143201-2) and W-4 (280-143201-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/30/2020 and 12/01/2020 and analyzed on 12/01/2020, 12/02/2020 and 12/03/2020.

Samples W-1 (280-143201-1)[10X] and W-4 (280-143201-3)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-463443.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY
Samples W-1 (280-143201-1), W-2 (280-143201-2) and W-4 (280-143201-3) were analyzed for total mercury in accordance with EPA

Job ID: 280-143201-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

SW-846 Methods 7470A. The samples were prepared on 11/30/2020 and 12/01/2020 and analyzed on 11/30/2020 and 12/02/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-463446.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS

Samples W-1 (280-143201-1) and W-4 (280-143201-3) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 11/30/2020.

The results reported for the following sample does not concur with results previously reported for this site: W-4 (280-143201-3). Reanalysis was performed, and the result confirmed a higher result than historical.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Sample W-1 (280-143201-1) was analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 12/01/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CORROSIVITY (PH)

Samples W-1 (280-143201-1) and W-4 (280-143201-3) were analyzed for corrosivity (pH) in accordance with EPA SW-846 Method 9040B. The samples were analyzed on 12/01/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (28 DAYS)

Samples W-1 (280-143201-1), W-2 (280-143201-2) and W-4 (280-143201-3) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 12/04/2020, 12/05/2020 and 12/18/2020.

Chloride failed the recovery criteria low for the MS and MSD of sample 280-143037-2 in batch 280-519277. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples W-1 (280-143201-1)[10X], W-1 (280-143201-1)[500X], W-2 (280-143201-2)[100X], W-2 (280-143201-2)[5X], W-4 (280-143201-3)[10X] and W-4 (280-143201-3)[200X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

REVISION

Report has been revised to report Calcium for sample W-2 and to include the Total Suspended Solids (TSS) Method 2540D Laboratory Control Sample (LCS).

Detection Summary

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1 — Lab Sample ID: 280-143201-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.5		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0071		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.034		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	140		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cadmium	0.00050	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0018		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0041		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0016		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.78		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00036	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Lithium	2.1		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	800	J	1500	510	mg/L	500		9056A	Total/NA
Fluoride	3.2	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	25000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	66000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	51		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2 — Lab Sample ID: 280-143201-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0073		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.059		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Beryllium	0.00041	J	0.0010	0.00031	mg/L	1		6020A	Total Recoverable
Cadmium	0.00031	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable
Cobalt	0.0011		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.024		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0092	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0015		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.76		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Thallium	0.00050	J	0.0010	0.00020	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Client Sample ID: W-2 (Continued)
Lab Sample ID: 280-143201-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	1.1		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Calcium	430		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chloride	770		300	100	mg/L	100		9056A	Total/NA
Fluoride	2.0	J	2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	7900		500	100	mg/L	100		9056A	Total/NA

Client Sample ID: W-4
Lab Sample ID: 280-143201-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.040		0.025	0.011	mg/L	5		6020A	Total Recoverable
Calcium	400		5.0	2.9	mg/L	5		6020A	Total Recoverable
Cobalt	0.0076		0.0050	0.00095	mg/L	5		6020A	Total Recoverable
Chromium	0.0072	J	0.010	0.0049	mg/L	5		6020A	Total Recoverable
Molybdenum	0.11		0.050	0.0054	mg/L	5		6020A	Total Recoverable
Lithium	1.6		0.040	0.0083	mg/L	5		6020A	Total Recoverable
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	420		30	10	mg/L	10		9056A	Total/NA
Fluoride	6.0		5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	26000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	69000		1000	470	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143201-1	W-1	Water	11/25/20 11:45	11/25/20 15:30	
280-143201-2	W-2	Water	11/25/20 10:45	11/25/20 15:30	
280-143201-3	W-4	Water	11/25/20 11:15	11/25/20 15:30	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.5**		0.10	0.023	mg/L		11/30/20 14:00	12/01/20 22:02	1

Client Sample ID: W-2
Date Collected: 11/25/20 10:45
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.2**		0.10	0.023	mg/L		12/01/20 14:00	12/02/20 16:17	1

Client Sample ID: W-4
Date Collected: 11/25/20 11:15
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.1**		0.10	0.023	mg/L		12/01/20 14:00	12/02/20 16:21	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/20 14:00	12/01/20 18:30	1
Arsenic	**0.0071**		0.0050	0.00075	mg/L		11/30/20 14:00	12/01/20 18:30	1
Barium	**0.034**		0.0050	0.0022	mg/L		11/30/20 14:00	12/01/20 18:30	1
Beryllium	ND		0.010	0.0031	mg/L		11/30/20 14:00	12/02/20 16:00	10
Calcium	**140**		1.0	0.58	mg/L		11/30/20 14:00	12/01/20 18:30	1
Cadmium	**0.00050**	**J**	0.0010	0.00020	mg/L		11/30/20 14:00	12/01/20 18:30	1
Cobalt	**0.0018**		0.0010	0.00019	mg/L		11/30/20 14:00	12/01/20 18:30	1
Chromium	**0.0041**		0.0020	0.00098	mg/L		11/30/20 14:00	12/01/20 18:30	1
Molybdenum	**0.016**		0.010	0.0011	mg/L		11/30/20 14:00	12/01/20 18:30	1
Lead	**0.0016**		0.0010	0.00045	mg/L		11/30/20 14:00	12/01/20 18:30	1
Selenium	**0.78**		0.0050	0.00089	mg/L		11/30/20 14:00	12/01/20 18:30	1
Thallium	**0.00036**	**J**	0.0010	0.00020	mg/L		11/30/20 14:00	12/01/20 18:30	1
Lithium	**2.1**		0.080	0.017	mg/L		11/30/20 14:00	12/02/20 16:00	10

Client Sample ID: W-2
Date Collected: 11/25/20 10:45
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/01/20 14:00	12/03/20 12:43	1
Arsenic	**0.0073**		0.0050	0.00075	mg/L		12/01/20 14:00	12/03/20 12:43	1
Barium	**0.059**		0.0050	0.0022	mg/L		12/01/20 14:00	12/03/20 12:43	1
Beryllium	**0.00041**	**J**	0.0010	0.00031	mg/L		12/01/20 14:00	12/03/20 12:43	1
Cadmium	**0.00031**	**J**	0.0010	0.00020	mg/L		12/01/20 14:00	12/03/20 12:43	1
Cobalt	**0.0011**		0.0010	0.00019	mg/L		12/01/20 14:00	12/03/20 12:43	1
Chromium	**0.024**		0.0020	0.00098	mg/L		12/01/20 14:00	12/03/20 12:43	1
Molybdenum	**0.0092**	**J**	0.010	0.0011	mg/L		12/01/20 14:00	12/03/20 12:43	1
Lead	**0.0015**		0.0010	0.00045	mg/L		12/01/20 14:00	12/03/20 12:43	1
Selenium	**0.76**		0.0050	0.00089	mg/L		12/01/20 14:00	12/03/20 12:43	1
Thallium	**0.00050**	**J**	0.0010	0.00020	mg/L		12/01/20 14:00	12/03/20 12:43	1
Lithium	**1.1**		0.0080	0.0017	mg/L		12/01/20 14:00	12/03/20 12:43	1
Calcium	**430**		1.0	0.58	mg/L		12/01/20 14:00	12/03/20 12:43	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-4
Date Collected: 11/25/20 11:15
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010	0.0029	mg/L		12/01/20 14:00	12/03/20 12:48	5
Arsenic	ND		0.025	0.0038	mg/L		12/01/20 14:00	12/03/20 12:48	5
Barium	**0.040**		0.025	0.011	mg/L		12/01/20 14:00	12/03/20 12:48	5
Beryllium	ND		0.0050	0.0015	mg/L		12/01/20 14:00	12/03/20 12:48	5
Calcium	**400**		5.0	2.9	mg/L		12/01/20 14:00	12/03/20 12:48	5
Cadmium	ND		0.0050	0.00099	mg/L		12/01/20 14:00	12/03/20 12:48	5
Cobalt	**0.0076**		0.0050	0.00095	mg/L		12/01/20 14:00	12/03/20 12:48	5
Chromium	**0.0072**	**J**	0.010	0.0049	mg/L		12/01/20 14:00	12/03/20 12:48	5
Molybdenum	**0.11**		0.050	0.0054	mg/L		12/01/20 14:00	12/03/20 12:48	5
Lead	ND		0.0050	0.0023	mg/L		12/01/20 14:00	12/03/20 12:48	5
Selenium	ND		0.025	0.0045	mg/L		12/01/20 14:00	12/03/20 12:48	5
Thallium	ND		0.0050	0.0010	mg/L		12/01/20 14:00	12/03/20 12:48	5
Lithium	**1.6**		0.040	0.0083	mg/L		12/01/20 14:00	12/03/20 12:48	5

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/30/20 12:00	11/30/20 17:09	1

Client Sample ID: W-2
Date Collected: 11/25/20 10:45
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/01/20 12:00	12/02/20 13:52	1

Client Sample ID: W-4
Date Collected: 11/25/20 11:15
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/01/20 12:00	12/02/20 13:54	1

General Chemistry

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30
Lab Sample ID: 280-143201-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.4**	**HF**	0.1	0.1	SU			12/01/20 18:45	1
Temperature	**22.6**	**HF**	1.0	1.0	Degrees C			12/01/20 18:45	1
Chloride	**800**	**J**	1500	510	mg/L			12/04/20 02:48	500
Fluoride	**3.2**	**J**	5.0	1.7	mg/L			12/18/20 00:47	10
Sulfate	**25000**		2500	520	mg/L			12/04/20 02:48	500
Total Dissolved Solids (TDS)	**66000**		1000	470	mg/L			11/30/20 09:13	1
Total Suspended Solids	**51**		4.0	1.1	mg/L			12/01/20 07:43	1

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Client Sample ID: W-2
Lab Sample ID: 280-143201-2
Date Collected: 11/25/20 10:45
Matrix: Water
Date Received: 11/25/20 15:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	770		300	100	mg/L			12/04/20 03:21	100
Fluoride	2.0	J	2.5	0.83	mg/L			12/05/20 05:42	5
Sulfate	7900		500	100	mg/L			12/04/20 03:21	100

Client Sample ID: W-4
Lab Sample ID: 280-143201-3
Date Collected: 11/25/20 11:15
Matrix: Water
Date Received: 11/25/20 15:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU			12/01/20 18:42	1
Temperature	22.2	HF	1.0	1.0	Degrees C			12/01/20 18:42	1
Chloride	420		30	10	mg/L			12/04/20 04:26	10
Fluoride	6.0		5.0	1.7	mg/L			12/04/20 04:26	10
Sulfate	26000		1000	210	mg/L			12/05/20 05:59	200
Total Dissolved Solids (TDS)	69000		1000	470	mg/L			11/30/20 09:13	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-463239/1-A
Matrix: Water
Analysis Batch: 463493
Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		11/30/20 14:00	12/01/20 21:53	1

Lab Sample ID: LCS 240-463239/2-A
Matrix: Water
Analysis Batch: 463493
Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.983		mg/L		98	80 - 120

Lab Sample ID: 280-143201-1 MS
Matrix: Water
Analysis Batch: 463493
Client Sample ID: W-1
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	4.5		1.00	5.57	4	mg/L		110	75 - 125

Lab Sample ID: 280-143201-1 MSD
Matrix: Water
Analysis Batch: 463493
Client Sample ID: W-1
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	4.5		1.00	5.33	4	mg/L		86	75 - 125	4	20

Lab Sample ID: MB 240-463443/1-A
Matrix: Water
Analysis Batch: 463665
Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463443

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		12/01/20 14:00	12/02/20 11:01	1

Lab Sample ID: LCS 240-463443/2-A
Matrix: Water
Analysis Batch: 463665
Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463443

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.998		mg/L		100	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-463239/1-A
Matrix: Water
Analysis Batch: 463601
Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/20 14:00	12/01/20 18:25	1
Arsenic	ND		0.0050	0.00075	mg/L		11/30/20 14:00	12/01/20 18:25	1
Barium	ND		0.0050	0.0022	mg/L		11/30/20 14:00	12/01/20 18:25	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/20 14:00	12/01/20 18:25	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/20 14:00	12/01/20 18:25	1
Chromium	ND		0.0020	0.00098	mg/L		11/30/20 14:00	12/01/20 18:25	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-463239/1-A
Matrix: Water
Analysis Batch: 463601

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	ND		0.010	0.0011	mg/L		11/30/20 14:00	12/01/20 18:25	1
Lead	ND		0.0010	0.00045	mg/L		11/30/20 14:00	12/01/20 18:25	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/20 14:00	12/01/20 18:25	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/20 14:00	12/01/20 18:25	1
Calcium	ND		1.0	0.58	mg/L		11/30/20 14:00	12/01/20 18:25	1

Lab Sample ID: MB 240-463239/1-A
Matrix: Water
Analysis Batch: 463779

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00031	mg/L		11/30/20 14:00	12/02/20 15:51	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/20 14:00	12/02/20 15:51	1

Lab Sample ID: LCS 240-463239/3-A
Matrix: Water
Analysis Batch: 463601

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0916		mg/L		92	80 - 120
Arsenic	1.00	0.962		mg/L		96	80 - 120
Barium	1.00	0.927		mg/L		93	80 - 120
Cadmium	0.500	0.468		mg/L		94	80 - 120
Cobalt	0.500	0.489		mg/L		98	80 - 120
Chromium	0.500	0.478		mg/L		96	80 - 120
Molybdenum	0.500	0.481		mg/L		96	80 - 120
Lead	0.500	0.485		mg/L		97	80 - 120
Selenium	1.00	0.943		mg/L		94	80 - 120
Thallium	1.00	0.942		mg/L		94	80 - 120
Calcium	25.0	24.4		mg/L		98	80 - 120

Lab Sample ID: LCS 240-463239/3-A
Matrix: Water
Analysis Batch: 463779

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463239

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.500	0.477		mg/L		95	80 - 120
Lithium	0.500	0.527		mg/L		105	80 - 120

Lab Sample ID: MB 240-463443/1-A
Matrix: Water
Analysis Batch: 464000

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463443

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/01/20 14:00	12/03/20 12:38	1
Arsenic	ND		0.0050	0.00075	mg/L		12/01/20 14:00	12/03/20 12:38	1
Barium	ND		0.0050	0.0022	mg/L		12/01/20 14:00	12/03/20 12:38	1
Beryllium	ND		0.0010	0.00031	mg/L		12/01/20 14:00	12/03/20 12:38	1
Cadmium	ND		0.0010	0.00020	mg/L		12/01/20 14:00	12/03/20 12:38	1
Cobalt	ND		0.0010	0.00019	mg/L		12/01/20 14:00	12/03/20 12:38	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-463443/1-A
Matrix: Water
Analysis Batch: 464000

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463443

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0020	0.00098	mg/L		12/01/20 14:00	12/03/20 12:38	1
Molybdenum	ND		0.010	0.0011	mg/L		12/01/20 14:00	12/03/20 12:38	1
Lead	ND		0.0010	0.00045	mg/L		12/01/20 14:00	12/03/20 12:38	1
Selenium	ND		0.0050	0.00089	mg/L		12/01/20 14:00	12/03/20 12:38	1
Thallium	ND		0.0010	0.00020	mg/L		12/01/20 14:00	12/03/20 12:38	1
Lithium	ND		0.0080	0.0017	mg/L		12/01/20 14:00	12/03/20 12:38	1
Calcium	ND		1.0	0.58	mg/L		12/01/20 14:00	12/03/20 12:38	1

Lab Sample ID: LCS 240-463443/3-A
Matrix: Water
Analysis Batch: 464000

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463443

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0956		mg/L		96	80 - 120
Arsenic	1.00	0.961		mg/L		96	80 - 120
Barium	1.00	0.935		mg/L		94	80 - 120
Beryllium	0.500	0.487		mg/L		97	80 - 120
Cadmium	0.500	0.478		mg/L		96	80 - 120
Cobalt	0.500	0.495		mg/L		99	80 - 120
Chromium	0.500	0.506		mg/L		101	80 - 120
Molybdenum	0.500	0.478		mg/L		96	80 - 120
Lead	0.500	0.509		mg/L		102	80 - 120
Selenium	1.00	0.930		mg/L		93	80 - 120
Thallium	1.00	0.979		mg/L		98	80 - 120
Lithium	0.500	0.512		mg/L		102	80 - 120
Calcium	25.0	24.6		mg/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-463240/1-A
Matrix: Water
Analysis Batch: 463417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 463240

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/30/20 12:00	11/30/20 17:05	1

Lab Sample ID: LCS 240-463240/2-A
Matrix: Water
Analysis Batch: 463417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 463240

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00487		mg/L		97	80 - 120

Lab Sample ID: 280-143201-1 MS
Matrix: Water
Analysis Batch: 463417

Client Sample ID: W-1
Prep Type: Total/NA
Prep Batch: 463240

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.00103		mg/L		103	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 280-143201-1 MSD
Matrix: Water
Analysis Batch: 463417

Client Sample ID: W-1
Prep Type: Total/NA
Prep Batch: 463240

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.000997		mg/L		100	80 - 120	3	20

Lab Sample ID: MB 240-463446/1-A
Matrix: Water
Analysis Batch: 463810

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 463446

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/01/20 12:00	12/02/20 13:44	1

Lab Sample ID: LCS 240-463446/2-A
Matrix: Water
Analysis Batch: 463810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 463446

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00478		mg/L		96	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-518790/4
Matrix: Water
Analysis Batch: 518790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		99	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-519060/6
Matrix: Water
Analysis Batch: 519060

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/03/20 15:33	1
Fluoride	ND		0.50	0.17	mg/L			12/03/20 15:33	1
Sulfate	ND		5.0	1.0	mg/L			12/03/20 15:33	1

Lab Sample ID: LCS 280-519060/4
Matrix: Water
Analysis Batch: 519060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.5		mg/L		95	90 - 110
Fluoride	5.00	4.83		mg/L		97	90 - 110
Sulfate	100	95.3		mg/L		95	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-519060/5
Matrix: Water
Analysis Batch: 519060

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	95.2		mg/L		95	90 - 110	0	10
Fluoride			5.00	4.82		mg/L		96	90 - 110	0	10
Sulfate			100	94.7		mg/L		95	90 - 110	1	10

Lab Sample ID: MRL 280-519060/3
Matrix: Water
Analysis Batch: 519060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			5.00	4.00		mg/L		80	50 - 150
Fluoride			0.500	0.491	J	mg/L		98	50 - 150
Sulfate			5.00	4.35	J	mg/L		87	50 - 150

Lab Sample ID: MB 280-519277/6
Matrix: Water
Analysis Batch: 519277

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/04/20 18:51	1
Fluoride	ND		0.50	0.17	mg/L			12/04/20 18:51	1
Sulfate	ND		5.0	1.0	mg/L			12/04/20 18:51	1

Lab Sample ID: LCS 280-519277/4
Matrix: Water
Analysis Batch: 519277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			100	94.2		mg/L		94	90 - 110
Fluoride			5.00	4.82		mg/L		96	90 - 110
Sulfate			100	94.0		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-519277/5
Matrix: Water
Analysis Batch: 519277

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	94.1		mg/L		94	90 - 110	0	10
Fluoride			5.00	4.81		mg/L		96	90 - 110	0	10
Sulfate			100	94.0		mg/L		94	90 - 110	0	10

Lab Sample ID: MRL 280-519277/3
Matrix: Water
Analysis Batch: 519277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			5.00	3.95		mg/L		79	50 - 150
Fluoride			0.500	0.484	J	mg/L		97	50 - 150
Sulfate			5.00	4.26	J	mg/L		85	50 - 150

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-520835/6
Matrix: Water
Analysis Batch: 520835

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/17/20 15:02	1
Fluoride	ND		0.50	0.17	mg/L			12/17/20 15:02	1
Sulfate	ND		5.0	1.0	mg/L			12/17/20 15:02	1

Lab Sample ID: LCS 280-520835/4
Matrix: Water
Analysis Batch: 520835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.4		mg/L		98	90 - 110
Fluoride	5.00	4.96		mg/L		99	90 - 110
Sulfate	100	98.3		mg/L		98	90 - 110

Lab Sample ID: LCSD 280-520835/5
Matrix: Water
Analysis Batch: 520835

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.6		mg/L		99	90 - 110	0	10
Fluoride	5.00	5.09		mg/L		102	90 - 110	3	10
Sulfate	100	98.3		mg/L		98	90 - 110	0	10

Lab Sample ID: MRL 280-520835/3
Matrix: Water
Analysis Batch: 520835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	5.10		mg/L		102	50 - 150
Fluoride	0.500	0.509		mg/L		102	50 - 150
Sulfate	5.00	5.16		mg/L		103	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-518550/1
Matrix: Water
Analysis Batch: 518550

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			11/30/20 09:13	1

Lab Sample ID: LCS 280-518550/2
Matrix: Water
Analysis Batch: 518550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	478		mg/L		96	93 - 110

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-518665/1
Matrix: Water
Analysis Batch: 518665

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/01/20 07:43	1

Lab Sample ID: LCS 280-518665/2
Matrix: Water
Analysis Batch: 518665

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	92.0		mg/L		92	79 - 114		

QC Association Summary

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Metals

Prep Batch: 463239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total Recoverable	Water	3005A	
MB 240-463239/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-463239/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-463239/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-143201-1 MS	W-1	Total Recoverable	Water	3005A	
280-143201-1 MSD	W-1	Total Recoverable	Water	3005A	

Prep Batch: 463240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	7470A	
MB 240-463240/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-463240/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-143201-1 MS	W-1	Total/NA	Water	7470A	
280-143201-1 MSD	W-1	Total/NA	Water	7470A	

Analysis Batch: 463417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	7470A	463240
MB 240-463240/1-A	Method Blank	Total/NA	Water	7470A	463240
LCS 240-463240/2-A	Lab Control Sample	Total/NA	Water	7470A	463240
280-143201-1 MS	W-1	Total/NA	Water	7470A	463240
280-143201-1 MSD	W-1	Total/NA	Water	7470A	463240

Prep Batch: 463443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-2	W-2	Total Recoverable	Water	3005A	
280-143201-3	W-4	Total Recoverable	Water	3005A	
MB 240-463443/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-463443/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-463443/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 463446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-2	W-2	Total/NA	Water	7470A	
280-143201-3	W-4	Total/NA	Water	7470A	
MB 240-463446/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-463446/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 463493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total Recoverable	Water	6010C	463239
MB 240-463239/1-A	Method Blank	Total Recoverable	Water	6010C	463239
LCS 240-463239/2-A	Lab Control Sample	Total Recoverable	Water	6010C	463239
280-143201-1 MS	W-1	Total Recoverable	Water	6010C	463239
280-143201-1 MSD	W-1	Total Recoverable	Water	6010C	463239

Analysis Batch: 463601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total Recoverable	Water	6020A	463239
MB 240-463239/1-A	Method Blank	Total Recoverable	Water	6020A	463239
LCS 240-463239/3-A	Lab Control Sample	Total Recoverable	Water	6020A	463239

Metals

Analysis Batch: 463665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-2	W-2	Total Recoverable	Water	6010C	463443
280-143201-3	W-4	Total Recoverable	Water	6010C	463443
MB 240-463443/1-A	Method Blank	Total Recoverable	Water	6010C	463443
LCS 240-463443/2-A	Lab Control Sample	Total Recoverable	Water	6010C	463443

Analysis Batch: 463779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total Recoverable	Water	6020A	463239
MB 240-463239/1-A	Method Blank	Total Recoverable	Water	6020A	463239
LCS 240-463239/3-A	Lab Control Sample	Total Recoverable	Water	6020A	463239

Analysis Batch: 463810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-2	W-2	Total/NA	Water	7470A	463446
280-143201-3	W-4	Total/NA	Water	7470A	463446
MB 240-463446/1-A	Method Blank	Total/NA	Water	7470A	463446
LCS 240-463446/2-A	Lab Control Sample	Total/NA	Water	7470A	463446

Analysis Batch: 464000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-2	W-2	Total Recoverable	Water	6020A	463443
280-143201-3	W-4	Total Recoverable	Water	6020A	463443
MB 240-463443/1-A	Method Blank	Total Recoverable	Water	6020A	463443
LCS 240-463443/3-A	Lab Control Sample	Total Recoverable	Water	6020A	463443

General Chemistry

Analysis Batch: 518550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	SM 2540C	
280-143201-3	W-4	Total/NA	Water	SM 2540C	
MB 280-518550/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-518550/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 518665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	SM 2540D	
MB 280-518665/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-518665/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 518790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	9040B	
280-143201-3	W-4	Total/NA	Water	9040B	
LCS 280-518790/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 519060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	9056A	
280-143201-2	W-2	Total/NA	Water	9056A	
280-143201-3	W-4	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 519060 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-519060/6	Method Blank	Total/NA	Water	9056A	
LCS 280-519060/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-519060/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-519060/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 519277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-2	W-2	Total/NA	Water	9056A	
280-143201-3	W-4	Total/NA	Water	9056A	
MB 280-519277/6	Method Blank	Total/NA	Water	9056A	
LCS 280-519277/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-519277/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-519277/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 520835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	9056A	
MB 280-520835/6	Method Blank	Total/NA	Water	9056A	
LCS 280-520835/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-520835/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-520835/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-143201-1
Date Collected: 11/25/20 11:45
Matrix: Water
Date Received: 11/25/20 15:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463239	11/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463493	12/01/20 22:02	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463239	11/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			463779	12/02/20 16:00	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463239	11/30/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			463601	12/01/20 18:30	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463240	11/30/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463417	11/30/20 17:09	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518790	12/01/20 18:45	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	519060	12/04/20 02:48	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	520835	12/18/20 00:47	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	518550	11/30/20 09:13	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	518665	12/01/20 07:43	LEB	TAL DEN

Client Sample ID: W-2
Lab Sample ID: 280-143201-2
Date Collected: 11/25/20 10:45
Matrix: Water
Date Received: 11/25/20 15:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463443	12/01/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463665	12/02/20 16:17	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463443	12/01/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			464000	12/03/20 12:43	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463446	12/01/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463810	12/02/20 13:52	SLD	TAL CAN
Total/NA	Analysis	9056A		100	5 mL	5 mL	519060	12/04/20 03:21	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	519277	12/05/20 05:42	CJ	TAL DEN

Client Sample ID: W-4
Lab Sample ID: 280-143201-3
Date Collected: 11/25/20 11:15
Matrix: Water
Date Received: 11/25/20 15:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	463443	12/01/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			463665	12/02/20 16:21	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	463443	12/01/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		5			464000	12/03/20 12:48	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	463446	12/01/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			463810	12/02/20 13:54	SLD	TAL CAN
Total/NA	Analysis	9040B		1			518790	12/01/20 18:42	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	519060	12/04/20 04:26	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	519277	12/05/20 05:59	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	518550	11/30/20 09:13	JMH	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-143201-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	12-20-20
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #1
Client Contact: Molly Reeves	Phone: 7208386065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9761 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): ASAP			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appll+V, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226RSRa228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	N	D		
W-1	11/25/20	1145	G	Water			X	X	X	X	X	6	
~~W-2A~~ W-2	11/25/20	1045	G	Water								1	125 mL sample collected. Ask PM for Analysis
W-2B				Water									
W-3				Water									
W-4	11/25/20	1115	G	Water								1	350 mL sample collected. Ask PM for Analysis
W-5				Water									
W-6				Water									
W-7				Water									
W-8A				Water									
W-8B				Water									
MW-1				Water									

280-143201 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/25/20 1530	HDR		11/25/2020 1530	EFTADEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 102I21h-03 3D 11/25/2020

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-546853.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-143201-3
Address: 4101 Shuffel Street NW,	Due Date Requested: 12/4/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

S27

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 3 Total Metals (w/collision cell)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
W-4 (280-143201-3) SCM Confirmed	11/25/20	11:15 Mountain		Water			X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Scott R Hall	11/27/20 1402	ETA Drive		11-28-20 1030	ETC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 1299151	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: [illegible]

Cooler Received on 11-28-20 Opened on 11-28-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 14 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 0.3 °C Corrected Cooler Temp. 1.2 °C
   IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-143201-1

Login Number: 143201
List Number: 1
Creator: Paul, Ryan D

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Limited volume received.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143201-2
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
1/11/2021 3:42:38 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-143201-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-143201-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 11/25/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 9.9 C.

RADIUM-226 (GFPC)
The sample W-1 (280-143201-1) was prepared at a reduced aliquot due to yellow discoloration.

The method 9315 MS/MSD could not be performed, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228
The sample W-1 (280-143201-1) was prepared at a reduced aliquot due to yellow discoloration.

The method 9320 MS/MSD could not be performed, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226/RADIUM-228 (GFPC)
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-143201-1

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143201-1	W-1	Water	11/25/20 11:45	11/25/20 15:30	

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30

Lab Sample ID: 280-143201-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.00**		0.541	0.548	1.00	0.639	pCi/L	12/04/20 08:38	01/04/21 20:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.7*		*40 - 110*	*12/04/20 08:38*	*01/04/21 20:13*	*1*

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30

Lab Sample ID: 280-143201-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.623	U	0.448	0.451	1.00	0.691	pCi/L	12/04/20 09:41	01/04/21 09:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.7*		*40 - 110*	*12/04/20 09:41*	*01/04/21 09:10*	*1*
Y Carrier	*93.8*		*40 - 110*	*12/04/20 09:41*	*01/04/21 09:10*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30

Lab Sample ID: 280-143201-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.62**		0.702	0.710	5.00	0.691	pCi/L		01/06/21 21:17	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-490902/23-B
Matrix: Water
Analysis Batch: 493757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 490902

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2877	U	0.230	0.232	1.00	0.333	pCi/L	12/04/20 08:38	01/04/21 21:56	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.2*		*40 - 110*	*12/04/20 08:38*	*01/04/21 21:56*	*1*

Lab Sample ID: LCS 160-490902/1-A
Matrix: Water
Analysis Batch: 493835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 490902

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	10.43		1.46	1.00	0.472	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*75.4*		*40 - 110*

Lab Sample ID: LCSD 160-490902/2-A
Matrix: Water
Analysis Batch: 493911

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 490902

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	9.614		1.23	1.00	0.303	pCi/L	85	75 - 125	0.30	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*76.5*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-490903/23-A
Matrix: Water
Analysis Batch: 493835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 490903

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2343	U	0.244	0.245	1.00	0.398	pCi/L	12/04/20 09:41	01/04/21 09:12	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.2*		*40 - 110*	*12/04/20 09:41*	*01/04/21 09:12*	*1*
Y Carrier	*94.2*		*40 - 110*	*12/04/20 09:41*	*01/04/21 09:12*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-490903/1-A
Matrix: Water
Analysis Batch: 493723

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 490903

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			7.53	8.167		1.04	1.00	0.522	pCi/L	108	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*75.4*		*40 - 110*
Y Carrier	*90.1*		*40 - 110*

Lab Sample ID: LCSD 160-490903/2-A
Matrix: Water
Analysis Batch: 493723

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 490903

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			7.53	9.435		1.16	1.00	0.503	pCi/L	125	75 - 125	0.58	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*76.5*		*40 - 110*
Y Carrier	*87.1*		*40 - 110*

QC Association Summary

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Rad

Prep Batch: 490902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	PrecSep-21	
MB 160-490902/23-B	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-490902/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-490902/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 490903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143201-1	W-1	Total/NA	Water	PrecSep_0	
MB 160-490903/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-490903/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-490903/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Date Collected: 11/25/20 11:45
Date Received: 11/25/20 15:30

Lab Sample ID: 280-143201-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.36 mL	1.0 g	490902	12/04/20 08:38	KMP	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	493757	01/04/21 20:13	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.36 mL	1.0 g	490903	12/04/20 09:41	KMP	TAL SL
Total/NA	Analysis	9320		1			493723	01/04/21 09:10	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			494124	01/06/21 21:17	GRW	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-21
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-21
Kentucky (DW)	State	KY90125	12-31-20 *
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins Environment Testing America

Client Information	Sampler: TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #1
Client Contact: Molly Reeves	Phone: 7208386065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9761 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): ASAP			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli+V, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226RSRa228 combined	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	D	N	N	D		
W-1	11/25/20	1145	G	Water			X	X	X	X	X	6	
~~W-5A~~ W-2	11/25/20	1045	G	Water								1	125 mL sample collected. Ask PM for Analysis
W-2B				Water									
W-3				Water									
W-4	11/25/20	1115	G	Water								1	350 mL sample collected. Ask PM for Analysis
W-5				Water									
W-6				Water									
W-7				Water									
W-8A				Water									
W-8B				Water									
MW-1				Water									

280-143201 Chain of Custody

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/25/20 1530	HDR		11/25/2020 1530	EFTADEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 102I21h-03 3D 11/25/2020

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-548852.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-143201-2
Address: 13715 Rider Trail North,	Due Date Requested: 12/28/2020			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Ra226 (1/3) - SUB	9320_Ra228/PrecSep_0 Ra228 (2/3) - SUB	Ra226Ra228_GFPC/ Ra226/RA228 Calc (3/3) - SUB	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-1 (280-143201-1)	11/25/20	11:45 Mountain		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	11/27/2020 1353	ETADEW	FED EX		
2	Relinquished by: FED EX	Date/Time:	Company	Received by: [signature]	Date/Time: NOV 28 2020 0848	Company: EASTL
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-143201-2

Login Number: 143201
List Number: 1
Creator: Paul, Ryan D

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Limited volume received.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-143201-2

Login Number: 143201
List Number: 2
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis
List Creation: 11/28/20 10:10 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc
Job ID: 280-143201-2
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
280-143201-1	W-1	83.7
LCS 160-490902/1-A	Lab Control Sample	75.4
LCSD 160-490902/2-A	Lab Control Sample Dup	76.5
MB 160-490902/23-B	Method Blank	84.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
280-143201-1	W-1	83.7	93.8
LCS 160-490903/1-A	Lab Control Sample	75.4	90.1
LCSD 160-490903/2-A	Lab Control Sample Dup	76.5	87.1
MB 160-490903/23-A	Method Blank	84.2	94.2

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

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ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143502-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
1/14/2021 5:48:17 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-143502-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-143502-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 12/07/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 2.7º C, 3.1º C, 5.2º C, 5.3º C, 5.6º C and 6.0º C.

TOTAL RECOVERABLE METALS - METHOD 6010C/6020A
Due to high analyte concentrations or matrix interferences, several samples required dilution prior to analysis for Method 6020A. The reporting limits have been adjusted accordingly.

The following samples were received with insufficient preservation: W-2A (280-143502-1), W-3 (280-143502-2), W-5 (280-143502-3), W-7 (280-143502-4), MW-1B (280-143502-5), MW-2B (280-143502-6), MW-3 (280-143502-7), MW-4B (280-143502-8), MW-5 (280-143502-9), MW-6 (280-143502-10), MW-7-DUP (280-143502-11) and MW-2B-EB (280-143502-12). The samples had additional preservation provided.

The accuracy and precision of the Boron MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY- METHOD 7470A
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY
Sample W-7 was analyzed at dilutions due to high concentrations of target compounds. Associated results in the analytical report have been flagged with an “E”, as these are estimated values. These samples were also analyzed undiluted or at a lesser dilution in order to achieve the lowest possible reporting limits for each analyte. Reporting limits have been adjusted relative to the dilution required. Both results are reported.

Sample W-7 DUP, W-2A, and W-2B were analyzed at dilutions due to high concentrations of target compounds or matrix interferences for Fluoride and/or Sulfate. Associated results in the analytical report have been flagged with an “E”, as these are estimated values. These samples were also analyzed undiluted or at a lesser dilution in order to achieve the lowest possible reporting limits for each analyte. Reporting limits have been adjusted relative to the dilution required. Both results are reported.

Job ID: 280-143502-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Due to a required dilution, sample W-7 DUP, W-2A, and W-2B was analyzed past the EPA-recommended holding time for method 9056A; the original analysis of the undiluted sample was performed within holding time. The out-of-hold, diluted result is confirmed by the undiluted result. There is no impact on data usability.

Due to a required dilution, sample W-7 was analyzed past the EPA-recommended holding time for method 2540C Total Dissolved Solids; the original analysis of the undiluted sample was performed within holding time. The out-of-hold, diluted result is confirmed by the undiluted result. There is no impact on data usability.

MS/MSD analyses were performed on sample W-2A. The MS/MSD for Chloride method 9056A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The Sulfate sample duplicate analysis data performed on sample MW-2B-EB exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The sample W-7 DUP was analyzed at a 1x dilution and was over calibration range for Fluoride. The sample was reanalyzed at a higher dilution. The reanalysis was performed after the holding time had been exceeded, therefore, both results are being reported. Sample matrix interference is suspected due to the discrepancies between the results.

The sample W-2A was analyzed at a 10x dilution and was over calibration range for Sulfate. The sample W-2A was analyzed at a 1x dilution and was over calibration range for Fluoride. The sample was reanalyzed at a higher dilution. The reanalysis was performed after the holding time had been exceeded, therefore, both results are being reported. Sample matrix interference is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-2A
Lab Sample ID: 280-143502-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.6		0.10	0.023	mg/L	1		6010C	Total Recoverable
Calcium	160		10	5.8	mg/L	10		6020A	Total Recoverable
Cadmium	0.0043	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Cobalt	0.0072	J	0.010	0.0019	mg/L	10		6020A	Total Recoverable
Selenium	2.3		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.0044	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Lithium	4.2		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	820	F1	30	10	mg/L	10		9056A	Total/NA
Fluoride	170	J H	500	170	mg/L	1000		9056A	Total/NA
Fluoride	5800	E	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	43000	H	5000	1000	mg/L	1000		9056A	Total/NA
Sulfate	44000	E	50	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids (TDS)	130000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	88		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-3
Lab Sample ID: 280-143502-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.77		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0014	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.026		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	310		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00039	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.020		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.0045		0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.069		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	21	J	30	10	mg/L	10		9056A	Total/NA
Fluoride	0.73		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	1500		50	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids (TDS)	2300		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	7.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-5 — Lab Sample ID: 280-143502-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0016	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.030		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	270		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0043		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.032		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.012		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.48		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	450		30	10	mg/L	10		9056A	Total/NA
Fluoride	1.4		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	85000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	25000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	19		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7 — Lab Sample ID: 280-143502-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	6.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.017	J	0.050	0.0075	mg/L	10		6020A	Total Recoverable
Calcium	440		10	5.8	mg/L	10		6020A	Total Recoverable
Cadmium	0.0072	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Cobalt	0.017		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Selenium	1.4		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.011		0.010	0.0020	mg/L	10		6020A	Total Recoverable
Lithium	4.0		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	740		60	20	mg/L	20		9056A	Total/NA
Sulfate	41000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	67000	E	100	47	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids (TDS)	130000	H	1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	82		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-1B — Lab Sample ID: 280-143502-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.3		0.10	0.023	mg/L	1		6010C	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1B (Continued) — Lab Sample ID: 280-143502-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0081	J	0.050	0.0075	mg/L	10		6020A	Total Recoverable
Calcium	420		10	5.8	mg/L	10		6020A	Total Recoverable
Cadmium	0.0031	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Cobalt	0.038		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Selenium	0.75		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.0051	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Lithium	3.2		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	380		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.37	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	21000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	29000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	33		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2B — Lab Sample ID: 280-143502-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0081	J	0.050	0.0075	mg/L	10		6020A	Total Recoverable
Calcium	420		10	5.8	mg/L	10		6020A	Total Recoverable
Cobalt	0.025		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Selenium	1.9		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.012		0.010	0.0020	mg/L	10		6020A	Total Recoverable
Lithium	4.7		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	520		60	20	mg/L	20		9056A	Total/NA
Fluoride	0.99	J H	2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	31000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	100000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	24		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 280-143502-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Calcium	400		10	5.8	mg/L	10		6020A	Total Recoverable
Cadmium	0.017		0.010	0.0020	mg/L	10		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3 (Continued) — Lab Sample ID: 280-143502-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.043		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Selenium	0.46		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.0052	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Lithium	2.1		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	170		30	10	mg/L	10		9056A	Total/NA
Sulfate	39000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	120000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	27		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-4B — Lab Sample ID: 280-143502-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.56		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.018		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.022		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	550		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0025		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	2.6		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.44		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	190		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.25	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2700		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	5900		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	12		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 280-143502-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.024	J	0.050	0.022	mg/L	10		6020A	Total Recoverable
Calcium	350		10	5.8	mg/L	10		6020A	Total Recoverable
Selenium	0.20		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Lithium	3.3		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 280-143502-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	20.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	1800		300	100	mg/L	100		9056A	Total/NA
Fluoride	5.5		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	18000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	61000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	33		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 280-143502-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.011		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.0078		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	410		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00066	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.010		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.19		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	250		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.27	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	4100		250	52	mg/L	50		9056A	Total/NA
Total Dissolved Solids (TDS)	6400		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	11		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-7-DUP — Lab Sample ID: 280-143502-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	6.4		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0085	J	0.050	0.0075	mg/L	10		6020A	Total Recoverable
Calcium	440		10	5.8	mg/L	10		6020A	Total Recoverable
Cadmium	0.0057	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Cobalt	0.016		0.010	0.0019	mg/L	10		6020A	Total Recoverable
Selenium	1.4		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Thallium	0.0056	J	0.010	0.0020	mg/L	10		6020A	Total Recoverable
Lithium	4.0		0.080	0.017	mg/L	10		6020A	Total Recoverable
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	730		60	20	mg/L	20		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-7-DUP (Continued)
Lab Sample ID: 280-143502-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	360	E	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	43000		5000	1000	mg/L	1000		9056A	Total/NA
Total Dissolved Solids (TDS)	69000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	71		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-2B-EB
Lab Sample ID: 280-143502-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	4.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Suspended Solids	1.6	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143502-1	W-2A	Ground Water	12/02/20 15:00	12/07/20 16:38	
280-143502-2	W-3	Ground Water	12/05/20 09:15	12/07/20 16:38	
280-143502-3	W-5	Ground Water	12/04/20 11:00	12/07/20 16:38	
280-143502-4	W-7	Ground Water	12/04/20 15:30	12/07/20 16:38	
280-143502-5	MW-1B	Ground Water	12/03/20 09:15	12/07/20 16:38	
280-143502-6	MW-2B	Ground Water	12/02/20 15:40	12/07/20 16:38	
280-143502-7	MW-3	Ground Water	12/02/20 13:00	12/07/20 16:38	
280-143502-8	MW-4B	Ground Water	12/03/20 14:40	12/07/20 16:38	
280-143502-9	MW-5	Ground Water	12/03/20 16:15	12/07/20 16:38	
280-143502-10	MW-6	Ground Water	12/03/20 11:40	12/07/20 16:38	
280-143502-11	W-7-DUP	Ground Water	12/04/20 15:30	12/07/20 16:38	
280-143502-12	MW-2B-EB	Water	12/02/20 16:00	12/07/20 16:38	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 12/02/20 15:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 18:20	1

Client Sample ID: W-3
Date Collected: 12/05/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.77		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 18:24	1

Client Sample ID: W-5
Date Collected: 12/04/20 11:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.3		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 18:29	1

Client Sample ID: W-7
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.3		0.10	0.023	mg/L		12/14/20 14:00	12/15/20 10:04	1

Client Sample ID: MW-1B
Date Collected: 12/03/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.3		0.10	0.023	mg/L		12/14/20 14:00	12/15/20 10:09	1

Client Sample ID: MW-2B
Date Collected: 12/02/20 15:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.7		0.10	0.023	mg/L		12/14/20 14:00	12/15/20 10:24	1

Client Sample ID: MW-3
Date Collected: 12/02/20 13:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.2		0.10	0.023	mg/L		12/14/20 14:00	12/15/20 10:28	1

Client Sample ID: MW-4B
Date Collected: 12/03/20 14:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.56		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 18:33	1

Client Sample ID: MW-5
Date Collected: 12/03/20 16:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 18:37	1

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: MW-6
Date Collected: 12/03/20 11:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.1**		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 18:42	1

Client Sample ID: W-7-DUP
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**6.4**		0.10	0.023	mg/L		12/14/20 14:00	12/15/20 10:33	1

Client Sample ID: MW-2B-EB
Date Collected: 12/02/20 16:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 18:55	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-2A
Date Collected: 12/02/20 15:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/11/20 14:00	12/14/20 18:53	10
Arsenic	ND		0.050	0.0075	mg/L		12/11/20 14:00	12/14/20 18:53	10
Barium	ND		0.050	0.022	mg/L		12/11/20 14:00	12/14/20 18:53	10
Beryllium	ND		0.010	0.0031	mg/L		12/11/20 14:00	12/14/20 18:53	10
Calcium	**160**		10	5.8	mg/L		12/11/20 14:00	12/14/20 18:53	10
Cadmium	**0.0043**	**J**	0.010	0.0020	mg/L		12/11/20 14:00	12/14/20 18:53	10
Cobalt	**0.0072**	**J**	0.010	0.0019	mg/L		12/11/20 14:00	12/14/20 18:53	10
Chromium	ND		0.020	0.0098	mg/L		12/11/20 14:00	12/14/20 18:53	10
Molybdenum	ND		0.10	0.011	mg/L		12/11/20 14:00	12/14/20 18:53	10
Lead	ND		0.010	0.0045	mg/L		12/11/20 14:00	12/14/20 18:53	10
Selenium	**2.3**		0.050	0.0089	mg/L		12/11/20 14:00	12/14/20 18:53	10
Thallium	**0.0044**	**J**	0.010	0.0020	mg/L		12/11/20 14:00	12/14/20 18:53	10
Lithium	**4.2**		0.080	0.017	mg/L		12/11/20 14:00	12/14/20 18:53	10

Client Sample ID: W-3
Date Collected: 12/05/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/11/20 14:00	12/14/20 18:56	1
Arsenic	**0.0014**	**J**	0.0050	0.00075	mg/L		12/11/20 14:00	12/14/20 18:56	1
Barium	**0.026**		0.0050	0.0022	mg/L		12/11/20 14:00	12/14/20 18:56	1
Beryllium	ND		0.0010	0.00031	mg/L		12/11/20 14:00	12/14/20 18:56	1
Calcium	**310**		1.0	0.58	mg/L		12/11/20 14:00	12/14/20 18:56	1
Cadmium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 18:56	1
Cobalt	**0.00039**	**J**	0.0010	0.00019	mg/L		12/11/20 14:00	12/14/20 18:56	1
Chromium	ND		0.0020	0.00098	mg/L		12/11/20 14:00	12/14/20 18:56	1
Molybdenum	**0.020**		0.010	0.0011	mg/L		12/11/20 14:00	12/14/20 18:56	1
Lead	**0.0045**		0.0010	0.00045	mg/L		12/11/20 14:00	12/14/20 18:56	1
Selenium	**0.011**		0.0050	0.00089	mg/L		12/11/20 14:00	12/14/20 18:56	1
Thallium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 18:56	1
Lithium	**0.069**		0.0080	0.0017	mg/L		12/11/20 14:00	12/14/20 18:56	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-5
Date Collected: 12/04/20 11:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/11/20 14:00	12/14/20 18:58	1
Arsenic	**0.0016**	**J**	0.0050	0.00075	mg/L		12/11/20 14:00	12/14/20 18:58	1
Barium	**0.030**		0.0050	0.0022	mg/L		12/11/20 14:00	12/14/20 18:58	1
Beryllium	ND		0.0010	0.00031	mg/L		12/11/20 14:00	12/14/20 18:58	1
Calcium	**270**		1.0	0.58	mg/L		12/11/20 14:00	12/14/20 18:58	1
Cadmium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 18:58	1
Cobalt	**0.0043**		0.0010	0.00019	mg/L		12/11/20 14:00	12/14/20 18:58	1
Chromium	ND		0.0020	0.00098	mg/L		12/11/20 14:00	12/14/20 18:58	1
Molybdenum	**0.032**		0.010	0.0011	mg/L		12/11/20 14:00	12/14/20 18:58	1
Lead	ND		0.0010	0.00045	mg/L		12/11/20 14:00	12/14/20 18:58	1
Selenium	**0.012**		0.0050	0.00089	mg/L		12/11/20 14:00	12/14/20 18:58	1
Thallium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 18:58	1
Lithium	**0.48**		0.0080	0.0017	mg/L		12/11/20 14:00	12/14/20 18:58	1

Client Sample ID: W-7
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/14/20 14:00	12/15/20 13:12	10
Arsenic	**0.017**	**J**	0.050	0.0075	mg/L		12/14/20 14:00	12/15/20 13:12	10
Barium	ND		0.050	0.022	mg/L		12/14/20 14:00	12/15/20 13:12	10
Beryllium	ND		0.010	0.0031	mg/L		12/14/20 14:00	12/15/20 13:12	10
Calcium	**440**		10	5.8	mg/L		12/14/20 14:00	12/15/20 13:12	10
Cadmium	**0.0072**	**J**	0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:12	10
Cobalt	**0.017**		0.010	0.0019	mg/L		12/14/20 14:00	12/15/20 13:12	10
Chromium	ND		0.020	0.0098	mg/L		12/14/20 14:00	12/15/20 13:12	10
Molybdenum	ND		0.10	0.011	mg/L		12/14/20 14:00	12/15/20 13:12	10
Lead	ND		0.010	0.0045	mg/L		12/14/20 14:00	12/15/20 13:12	10
Selenium	**1.4**		0.050	0.0089	mg/L		12/14/20 14:00	12/15/20 13:12	10
Thallium	**0.011**		0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:12	10
Lithium	**4.0**		0.080	0.017	mg/L		12/14/20 14:00	12/15/20 13:12	10

Client Sample ID: MW-1B
Date Collected: 12/03/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/14/20 14:00	12/15/20 13:14	10
Arsenic	**0.0081**	**J**	0.050	0.0075	mg/L		12/14/20 14:00	12/15/20 13:14	10
Barium	ND		0.050	0.022	mg/L		12/14/20 14:00	12/15/20 13:14	10
Beryllium	ND		0.010	0.0031	mg/L		12/14/20 14:00	12/15/20 13:14	10
Calcium	**420**		10	5.8	mg/L		12/14/20 14:00	12/15/20 13:14	10
Cadmium	**0.0031**	**J**	0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:14	10
Cobalt	**0.038**		0.010	0.0019	mg/L		12/14/20 14:00	12/15/20 13:14	10
Chromium	ND		0.020	0.0098	mg/L		12/14/20 14:00	12/15/20 13:14	10
Molybdenum	ND		0.10	0.011	mg/L		12/14/20 14:00	12/15/20 13:14	10
Lead	ND		0.010	0.0045	mg/L		12/14/20 14:00	12/15/20 13:14	10
Selenium	**0.75**		0.050	0.0089	mg/L		12/14/20 14:00	12/15/20 13:14	10
Thallium	**0.0051**	**J**	0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:14	10
Lithium	**3.2**		0.080	0.017	mg/L		12/14/20 14:00	12/15/20 13:14	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-2B
Date Collected: 12/02/20 15:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/14/20 14:00	12/15/20 13:17	10
Arsenic	**0.0081**	**J**	0.050	0.0075	mg/L		12/14/20 14:00	12/15/20 13:17	10
Barium	ND		0.050	0.022	mg/L		12/14/20 14:00	12/15/20 13:17	10
Beryllium	ND		0.010	0.0031	mg/L		12/14/20 14:00	12/15/20 13:17	10
Calcium	**420**		10	5.8	mg/L		12/14/20 14:00	12/15/20 13:17	10
Cadmium	ND		0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:17	10
Cobalt	**0.025**		0.010	0.0019	mg/L		12/14/20 14:00	12/15/20 13:17	10
Chromium	ND		0.020	0.0098	mg/L		12/14/20 14:00	12/15/20 13:17	10
Molybdenum	ND		0.10	0.011	mg/L		12/14/20 14:00	12/15/20 13:17	10
Lead	ND		0.010	0.0045	mg/L		12/14/20 14:00	12/15/20 13:17	10
Selenium	**1.9**		0.050	0.0089	mg/L		12/14/20 14:00	12/15/20 13:17	10
Thallium	**0.012**		0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:17	10
Lithium	**4.7**		0.080	0.017	mg/L		12/14/20 14:00	12/15/20 13:17	10

Client Sample ID: MW-3
Date Collected: 12/02/20 13:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/14/20 14:00	12/15/20 13:19	10
Arsenic	ND		0.050	0.0075	mg/L		12/14/20 14:00	12/15/20 13:19	10
Barium	ND		0.050	0.022	mg/L		12/14/20 14:00	12/15/20 13:19	10
Beryllium	ND		0.010	0.0031	mg/L		12/14/20 14:00	12/15/20 13:19	10
Calcium	**400**		10	5.8	mg/L		12/14/20 14:00	12/15/20 13:19	10
Cadmium	**0.017**		0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:19	10
Cobalt	**0.043**		0.010	0.0019	mg/L		12/14/20 14:00	12/15/20 13:19	10
Chromium	ND		0.020	0.0098	mg/L		12/14/20 14:00	12/15/20 13:19	10
Molybdenum	ND		0.10	0.011	mg/L		12/14/20 14:00	12/15/20 13:19	10
Lead	ND		0.010	0.0045	mg/L		12/14/20 14:00	12/15/20 13:19	10
Selenium	**0.46**		0.050	0.0089	mg/L		12/14/20 14:00	12/15/20 13:19	10
Thallium	**0.0052**	**J**	0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:19	10
Lithium	**2.1**		0.080	0.017	mg/L		12/14/20 14:00	12/15/20 13:19	10

Client Sample ID: MW-4B
Date Collected: 12/03/20 14:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/11/20 14:00	12/14/20 19:01	1
Arsenic	**0.018**		0.0050	0.00075	mg/L		12/11/20 14:00	12/14/20 19:01	1
Barium	**0.022**		0.0050	0.0022	mg/L		12/11/20 14:00	12/14/20 19:01	1
Beryllium	ND		0.0010	0.00031	mg/L		12/11/20 14:00	12/14/20 19:01	1
Calcium	**550**		1.0	0.58	mg/L		12/11/20 14:00	12/14/20 19:01	1
Cadmium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 19:01	1
Cobalt	**0.0025**		0.0010	0.00019	mg/L		12/11/20 14:00	12/14/20 19:01	1
Chromium	ND		0.0020	0.00098	mg/L		12/11/20 14:00	12/14/20 19:01	1
Molybdenum	**0.016**		0.010	0.0011	mg/L		12/11/20 14:00	12/14/20 19:01	1
Lead	ND		0.0010	0.00045	mg/L		12/11/20 14:00	12/14/20 19:01	1
Selenium	**2.6**		0.0050	0.00089	mg/L		12/11/20 14:00	12/14/20 19:01	1
Thallium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 19:01	1
Lithium	**0.44**		0.0080	0.0017	mg/L		12/11/20 14:00	12/14/20 19:01	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-5
Date Collected: 12/03/20 16:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/11/20 14:00	12/14/20 19:03	10
Arsenic	ND		0.050	0.0075	mg/L		12/11/20 14:00	12/14/20 19:03	10
Barium	**0.024**	**J**	0.050	0.022	mg/L		12/11/20 14:00	12/14/20 19:03	10
Beryllium	ND		0.010	0.0031	mg/L		12/11/20 14:00	12/14/20 19:03	10
Calcium	**350**		10	5.8	mg/L		12/11/20 14:00	12/14/20 19:03	10
Cadmium	ND		0.010	0.0020	mg/L		12/11/20 14:00	12/14/20 19:03	10
Cobalt	ND		0.010	0.0019	mg/L		12/11/20 14:00	12/14/20 19:03	10
Chromium	ND		0.020	0.0098	mg/L		12/11/20 14:00	12/14/20 19:03	10
Molybdenum	ND		0.10	0.011	mg/L		12/11/20 14:00	12/14/20 19:03	10
Lead	ND		0.010	0.0045	mg/L		12/11/20 14:00	12/14/20 19:03	10
Selenium	**0.20**		0.050	0.0089	mg/L		12/11/20 14:00	12/14/20 19:03	10
Thallium	ND		0.010	0.0020	mg/L		12/11/20 14:00	12/14/20 19:03	10
Lithium	**3.3**		0.080	0.017	mg/L		12/11/20 14:00	12/14/20 19:03	10

Client Sample ID: MW-6
Date Collected: 12/03/20 11:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/11/20 14:00	12/14/20 19:11	1
Arsenic	**0.011**		0.0050	0.00075	mg/L		12/11/20 14:00	12/14/20 19:11	1
Barium	**0.0078**		0.0050	0.0022	mg/L		12/11/20 14:00	12/14/20 19:11	1
Beryllium	ND		0.0010	0.00031	mg/L		12/11/20 14:00	12/14/20 19:11	1
Calcium	**410**		1.0	0.58	mg/L		12/11/20 14:00	12/14/20 19:11	1
Cadmium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 19:11	1
Cobalt	**0.00066**	**J**	0.0010	0.00019	mg/L		12/11/20 14:00	12/14/20 19:11	1
Chromium	ND		0.0020	0.00098	mg/L		12/11/20 14:00	12/14/20 19:11	1
Molybdenum	**0.010**		0.010	0.0011	mg/L		12/11/20 14:00	12/14/20 19:11	1
Lead	ND		0.0010	0.00045	mg/L		12/11/20 14:00	12/14/20 19:11	1
Selenium	**1.1**		0.0050	0.00089	mg/L		12/11/20 14:00	12/14/20 19:11	1
Thallium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 19:11	1
Lithium	**0.19**		0.0080	0.0017	mg/L		12/11/20 14:00	12/14/20 19:11	1

Client Sample ID: W-7-DUP
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/14/20 14:00	12/15/20 13:22	10
Arsenic	**0.0085**	**J**	0.050	0.0075	mg/L		12/14/20 14:00	12/15/20 13:22	10
Barium	ND		0.050	0.022	mg/L		12/14/20 14:00	12/15/20 13:22	10
Beryllium	ND		0.010	0.0031	mg/L		12/14/20 14:00	12/15/20 13:22	10
Calcium	**440**		10	5.8	mg/L		12/14/20 14:00	12/15/20 13:22	10
Cadmium	**0.0057**	**J**	0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:22	10
Cobalt	**0.016**		0.010	0.0019	mg/L		12/14/20 14:00	12/15/20 13:22	10
Chromium	ND		0.020	0.0098	mg/L		12/14/20 14:00	12/15/20 13:22	10
Molybdenum	ND		0.10	0.011	mg/L		12/14/20 14:00	12/15/20 13:22	10
Lead	ND		0.010	0.0045	mg/L		12/14/20 14:00	12/15/20 13:22	10
Selenium	**1.4**		0.050	0.0089	mg/L		12/14/20 14:00	12/15/20 13:22	10
Thallium	**0.0056**	**J**	0.010	0.0020	mg/L		12/14/20 14:00	12/15/20 13:22	10
Lithium	**4.0**		0.080	0.017	mg/L		12/14/20 14:00	12/15/20 13:22	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: MW-2B-EB
Date Collected: 12/02/20 16:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/11/20 14:00	12/14/20 19:13	1
Arsenic	ND		0.0050	0.00075	mg/L		12/11/20 14:00	12/14/20 19:13	1
Barium	ND		0.0050	0.0022	mg/L		12/11/20 14:00	12/14/20 19:13	1
Beryllium	ND		0.0010	0.00031	mg/L		12/11/20 14:00	12/14/20 19:13	1
Calcium	ND		1.0	0.58	mg/L		12/11/20 14:00	12/14/20 19:13	1
Cadmium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 19:13	1
Cobalt	ND		0.0010	0.00019	mg/L		12/11/20 14:00	12/14/20 19:13	1
Chromium	ND		0.0020	0.00098	mg/L		12/11/20 14:00	12/14/20 19:13	1
Molybdenum	ND		0.010	0.0011	mg/L		12/11/20 14:00	12/14/20 19:13	1
Lead	ND		0.0010	0.00045	mg/L		12/11/20 14:00	12/14/20 19:13	1
Selenium	ND		0.0050	0.00089	mg/L		12/11/20 14:00	12/14/20 19:13	1
Thallium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 19:13	1
Lithium	ND		0.0080	0.0017	mg/L		12/11/20 14:00	12/14/20 19:13	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-2A
Date Collected: 12/02/20 15:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:43	1

Client Sample ID: W-3
Date Collected: 12/05/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:45	1

Client Sample ID: W-5
Date Collected: 12/04/20 11:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:51	1

Client Sample ID: W-7
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/14/20 13:00	12/14/20 17:16	1

Client Sample ID: MW-1B
Date Collected: 12/03/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/14/20 13:00	12/14/20 17:18	1

Client Sample ID: MW-2B
Date Collected: 12/02/20 15:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/14/20 13:00	12/14/20 17:20	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-3
Date Collected: 12/02/20 13:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/14/20 13:00	12/14/20 17:22	1

Client Sample ID: MW-4B
Date Collected: 12/03/20 14:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:53	1

Client Sample ID: MW-5
Date Collected: 12/03/20 16:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:55	1

Client Sample ID: MW-6
Date Collected: 12/03/20 11:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:57	1

Client Sample ID: W-7-DUP
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/14/20 13:00	12/14/20 17:24	1

Client Sample ID: MW-2B-EB
Date Collected: 12/02/20 16:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:59	1

General Chemistry

Client Sample ID: W-2A
Date Collected: 12/02/20 15:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU			12/08/20 22:20	1
Temperature	22.0	HF	1.0	1.0	Degrees C			12/08/20 22:20	1
Chloride	820	F1	30	10	mg/L			12/24/20 07:56	10
Fluoride	5800	E	0.50	0.17	mg/L			12/29/20 00:06	1
Fluoride	170	J H	500	170	mg/L			01/01/21 02:52	1000
Sulfate	44000	E	50	10	mg/L			12/24/20 07:56	10
Sulfate	43000	H	5000	1000	mg/L			01/01/21 02:52	1000
Total Dissolved Solids (TDS)	130000		1000	470	mg/L			12/09/20 07:45	1
Total Suspended Solids	88		4.0	1.1	mg/L			12/09/20 15:01	1

General Chemistry

Client Sample ID: W-3
Date Collected: 12/05/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU			12/08/20 22:16	1
Temperature	22.3	HF	1.0	1.0	Degrees C			12/08/20 22:16	1
Chloride	21	J	30	10	mg/L			12/24/20 02:24	10
Fluoride	0.73		0.50	0.17	mg/L			12/29/20 01:11	1
Sulfate	1500		50	10	mg/L			12/24/20 02:24	10
Total Dissolved Solids (TDS)	2300		100	47	mg/L			12/09/20 17:20	1
Total Suspended Solids	7.2		4.0	1.1	mg/L			12/11/20 11:20	1

Client Sample ID: W-5
Date Collected: 12/04/20 11:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU			12/08/20 21:31	1
Temperature	20.5	HF	1.0	1.0	Degrees C			12/08/20 21:31	1
Chloride	450		30	10	mg/L			12/24/20 03:01	10
Fluoride	1.4		0.50	0.17	mg/L			12/29/20 01:44	1
Sulfate	85000		2500	520	mg/L			12/24/20 03:19	500
Total Dissolved Solids (TDS)	25000		1000	470	mg/L			12/09/20 07:46	1
Total Suspended Solids	19		4.0	1.1	mg/L			12/10/20 07:41	1

Client Sample ID: W-7
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-4
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU			12/08/20 21:23	1
Temperature	21.3	HF	1.0	1.0	Degrees C			12/08/20 21:23	1
Chloride	740		60	20	mg/L			12/24/20 04:14	20
Fluoride	ND		0.50	0.17	mg/L			12/29/20 02:34	1
Sulfate	41000		5000	1000	mg/L			12/24/20 04:33	1000
Total Dissolved Solids (TDS)	67000	E	100	47	mg/L			12/09/20 17:20	1
Total Dissolved Solids (TDS)	130000	H	1000	470	mg/L			12/14/20 09:43	1
Total Suspended Solids	82		4.0	1.1	mg/L			12/10/20 07:41	1

Client Sample ID: MW-1B
Date Collected: 12/03/20 09:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-5
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			12/08/20 21:52	1
Temperature	20.6	HF	1.0	1.0	Degrees C			12/08/20 21:52	1
Chloride	380		30	10	mg/L			12/24/20 04:51	10
Fluoride	0.37	J	0.50	0.17	mg/L			12/29/20 03:06	1
Sulfate	21000		1000	210	mg/L			12/24/20 05:10	200
Total Dissolved Solids (TDS)	29000		1000	470	mg/L			12/10/20 18:47	1
Total Suspended Solids	33		4.0	1.1	mg/L			12/10/20 07:41	1

Client Sample ID: MW-2B
Date Collected: 12/02/20 15:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.0	HF	0.1	0.1	SU			12/08/20 21:34	1

General Chemistry (Continued)

Client Sample ID: MW-2B
Date Collected: 12/02/20 15:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-6
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature	20.4	HF	1.0	1.0	Degrees C			12/08/20 21:34	1
Chloride	520		60	20	mg/L			12/24/20 05:28	20
Fluoride	0.99	J H	2.5	0.83	mg/L			01/01/21 03:08	5
Sulfate	31000		5000	1000	mg/L			12/24/20 05:47	1000
Total Dissolved Solids (TDS)	100000		1000	470	mg/L			12/09/20 07:45	1
Total Suspended Solids	24		4.0	1.1	mg/L			12/09/20 15:01	1

Client Sample ID: MW-3
Date Collected: 12/02/20 13:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.8	HF	0.1	0.1	SU			12/08/20 21:37	1
Temperature	20.0	HF	1.0	1.0	Degrees C			12/08/20 21:37	1
Chloride	170		30	10	mg/L			12/24/20 06:05	10
Fluoride	ND		0.50	0.17	mg/L			12/29/20 04:45	1
Sulfate	39000		2500	520	mg/L			12/24/20 06:23	500
Total Dissolved Solids (TDS)	120000		1000	470	mg/L			12/09/20 07:45	1
Total Suspended Solids	27		4.0	1.1	mg/L			12/09/20 15:01	1

Client Sample ID: MW-4B
Date Collected: 12/03/20 14:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-8
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			12/08/20 21:41	1
Temperature	21.0	HF	1.0	1.0	Degrees C			12/08/20 21:41	1
Chloride	190		30	10	mg/L			12/24/20 06:42	10
Fluoride	0.25	J	0.50	0.17	mg/L			12/29/20 05:34	1
Sulfate	2700		500	100	mg/L			12/24/20 07:00	100
Total Dissolved Solids (TDS)	5900		40	19	mg/L			12/09/20 07:45	1
Total Suspended Solids	12		4.0	1.1	mg/L			12/10/20 07:41	1

Client Sample ID: MW-5
Date Collected: 12/03/20 16:15
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-9
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.1	HF	0.1	0.1	SU			12/08/20 21:48	1
Temperature	20.5	HF	1.0	1.0	Degrees C			12/08/20 21:48	1
Chloride	1800		300	100	mg/L			12/24/20 09:29	100
Fluoride	5.5		0.50	0.17	mg/L			12/29/20 06:07	1
Sulfate	18000		500	100	mg/L			12/24/20 09:29	100
Total Dissolved Solids (TDS)	61000		1000	470	mg/L			12/09/20 07:45	1
Total Suspended Solids	33		4.0	1.1	mg/L			12/10/20 07:41	1

Client Sample ID: MW-6
Date Collected: 12/03/20 11:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU			12/08/20 21:44	1
Temperature	20.8	HF	1.0	1.0	Degrees C			12/08/20 21:44	1
Chloride	250		30	10	mg/L			12/24/20 09:47	10

General Chemistry (Continued)

Client Sample ID: MW-6
Date Collected: 12/03/20 11:40
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-10
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.27**	**J**	0.50	0.17	mg/L			12/29/20 06:40	1
Sulfate	**4100**		250	52	mg/L			12/24/20 10:06	50
Total Dissolved Solids (TDS)	**6400**		40	19	mg/L			12/09/20 07:45	1
Total Suspended Solids	**11**		4.0	1.1	mg/L			12/10/20 07:41	1

Client Sample ID: W-7-DUP
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-11
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**6.8**	**HF**	0.1	0.1	SU			12/08/20 22:13	1
Temperature	**22.8**	**HF**	1.0	1.0	Degrees C			12/08/20 22:13	1
Chloride	**730**		60	20	mg/L			12/24/20 10:24	20
Fluoride	**360**	**E**	0.50	0.17	mg/L			12/29/20 08:02	1
Fluoride	ND	H	5.0	1.7	mg/L			01/04/21 16:20	10
Sulfate	**43000**		5000	1000	mg/L			12/24/20 10:43	1000
Total Dissolved Solids (TDS)	**69000**		1000	470	mg/L			12/09/20 17:20	1
Total Suspended Solids	**71**		4.0	1.1	mg/L			12/10/20 07:41	1

Client Sample ID: MW-2B-EB
Date Collected: 12/02/20 16:00
Date Received: 12/07/20 16:38
Lab Sample ID: 280-143502-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	**4.7**	**HF**	0.1	0.1	SU			12/09/20 21:24	1
Temperature	**21.0**	**HF**	1.0	1.0	Degrees C			12/09/20 21:24	1
Chloride	ND		3.0	1.0	mg/L			12/24/20 13:29	1
Fluoride	ND		0.50	0.17	mg/L			12/29/20 08:35	1
Sulfate	ND		5.0	1.0	mg/L			12/24/20 13:29	1
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/09/20 07:45	1
Total Suspended Solids	**1.6**	**J**	4.0	1.1	mg/L			12/09/20 15:01	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-465088/1-A
Matrix: Water
Analysis Batch: 465458

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		12/11/20 14:00	12/14/20 17:38	1

Lab Sample ID: LCS 240-465088/2-A
Matrix: Water
Analysis Batch: 465458

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.952		mg/L		95	80 - 120

Lab Sample ID: MB 240-465311/1-A
Matrix: Water
Analysis Batch: 465541

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465311

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		12/14/20 14:00	12/15/20 09:35	1

Lab Sample ID: LCS 240-465311/2-A
Matrix: Water
Analysis Batch: 465541

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465311

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.976		mg/L		98	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-465088/1-A
Matrix: Water
Analysis Batch: 465468

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/11/20 14:00	12/14/20 18:22	1
Arsenic	ND		0.0050	0.00075	mg/L		12/11/20 14:00	12/14/20 18:22	1
Barium	ND		0.0050	0.0022	mg/L		12/11/20 14:00	12/14/20 18:22	1
Beryllium	ND		0.0010	0.00031	mg/L		12/11/20 14:00	12/14/20 18:22	1
Calcium	ND		1.0	0.58	mg/L		12/11/20 14:00	12/14/20 18:22	1
Cadmium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 18:22	1
Cobalt	ND		0.0010	0.00019	mg/L		12/11/20 14:00	12/14/20 18:22	1
Chromium	ND		0.0020	0.00098	mg/L		12/11/20 14:00	12/14/20 18:22	1
Molybdenum	ND		0.010	0.0011	mg/L		12/11/20 14:00	12/14/20 18:22	1
Lead	ND		0.0010	0.00045	mg/L		12/11/20 14:00	12/14/20 18:22	1
Selenium	ND		0.0050	0.00089	mg/L		12/11/20 14:00	12/14/20 18:22	1
Thallium	ND		0.0010	0.00020	mg/L		12/11/20 14:00	12/14/20 18:22	1
Lithium	ND		0.0080	0.0017	mg/L		12/11/20 14:00	12/14/20 18:22	1

Lab Sample ID: LCS 240-465088/3-A
Matrix: Water
Analysis Batch: 465468

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0974		mg/L		97	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-465088/3-A
Matrix: Water
Analysis Batch: 465468

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.03		mg/L		103	80 - 120
Barium	1.00	0.971		mg/L		97	80 - 120
Beryllium	0.500	0.511		mg/L		102	80 - 120
Calcium	25.0	24.8		mg/L		99	80 - 120
Cadmium	0.500	0.489		mg/L		98	80 - 120
Cobalt	0.500	0.493		mg/L		99	80 - 120
Chromium	0.500	0.486		mg/L		97	80 - 120
Molybdenum	0.500	0.498		mg/L		100	80 - 120
Lead	0.500	0.514		mg/L		103	80 - 120
Selenium	1.00	0.974		mg/L		97	80 - 120
Thallium	1.00	0.995		mg/L		100	80 - 120
Lithium	0.500	0.492		mg/L		98	80 - 120

Lab Sample ID: MB 240-465311/1-A
Matrix: Water
Analysis Batch: 465573

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465311

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		12/14/20 14:00	12/15/20 12:46	1
Arsenic	ND		0.0050	0.00075	mg/L		12/14/20 14:00	12/15/20 12:46	1
Barium	ND		0.0050	0.0022	mg/L		12/14/20 14:00	12/15/20 12:46	1
Beryllium	ND		0.0010	0.00031	mg/L		12/14/20 14:00	12/15/20 12:46	1
Calcium	ND		1.0	0.58	mg/L		12/14/20 14:00	12/15/20 12:46	1
Cadmium	ND		0.0010	0.00020	mg/L		12/14/20 14:00	12/15/20 12:46	1
Cobalt	ND		0.0010	0.00019	mg/L		12/14/20 14:00	12/15/20 12:46	1
Chromium	ND		0.0020	0.00098	mg/L		12/14/20 14:00	12/15/20 12:46	1
Molybdenum	ND		0.010	0.0011	mg/L		12/14/20 14:00	12/15/20 12:46	1
Lead	ND		0.0010	0.00045	mg/L		12/14/20 14:00	12/15/20 12:46	1
Selenium	ND		0.0050	0.00089	mg/L		12/14/20 14:00	12/15/20 12:46	1
Thallium	ND		0.0010	0.00020	mg/L		12/14/20 14:00	12/15/20 12:46	1
Lithium	ND		0.0080	0.0017	mg/L		12/14/20 14:00	12/15/20 12:46	1

Lab Sample ID: LCS 240-465311/3-A
Matrix: Water
Analysis Batch: 465573

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465311

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0923		mg/L		92	80 - 120
Arsenic	1.00	0.920		mg/L		92	80 - 120
Barium	1.00	0.923		mg/L		92	80 - 120
Beryllium	0.500	0.475		mg/L		95	80 - 120
Calcium	25.0	23.8		mg/L		95	80 - 120
Cadmium	0.500	0.471		mg/L		94	80 - 120
Cobalt	0.500	0.461		mg/L		92	80 - 120
Chromium	0.500	0.475		mg/L		95	80 - 120
Molybdenum	0.500	0.456		mg/L		91	80 - 120
Lead	0.500	0.475		mg/L		95	80 - 120
Selenium	1.00	0.910		mg/L		91	80 - 120
Thallium	1.00	0.920		mg/L		92	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-465311/3-A
Matrix: Water
Analysis Batch: 465573

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465311

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.463		mg/L		93	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-465089/1-A
Matrix: Water
Analysis Batch: 465479

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 465089

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/11/20 12:00	12/14/20 16:18	1

Lab Sample ID: LCS 240-465089/2-A
Matrix: Water
Analysis Batch: 465479

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465089

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00506		mg/L		101	80 - 120

Lab Sample ID: MB 240-465314/1-A
Matrix: Water
Analysis Batch: 465479

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 465314

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/14/20 13:00	12/14/20 17:01	1

Lab Sample ID: LCS 240-465314/2-A
Matrix: Water
Analysis Batch: 465479

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465314

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00479		mg/L		96	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-519813/4
Matrix: Water
Analysis Batch: 519813

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Lab Sample ID: 280-143502-4 DU
Matrix: Ground Water
Analysis Batch: 519813

Client Sample ID: W-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	6.8	HF	6.8		SU		0.7	5
Temperature	21.3	HF	20.8		Degrees C		2	10

Method: 9040B - pH (Continued)

Lab Sample ID: LCS 280-519904/4
Matrix: Water
Analysis Batch: 519904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-521495/13
Matrix: Water
Analysis Batch: 521495

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/23/20 00:03	1
Sulfate	ND		5.0	1.0	mg/L			12/23/20 00:03	1

Lab Sample ID: LCS 280-521495/11
Matrix: Water
Analysis Batch: 521495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	97.8		mg/L		98	90 - 110
Sulfate	100	94.4		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-521495/12
Matrix: Water
Analysis Batch: 521495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.7		mg/L		99	90 - 110	1	10
Sulfate	100	94.8		mg/L		95	90 - 110	0	10

Lab Sample ID: MRL 280-521495/10
Matrix: Water
Analysis Batch: 521495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.74		mg/L		95	50 - 150
Sulfate	5.00	4.50	J	mg/L		90	50 - 150

Lab Sample ID: 280-143502-1 MS
Matrix: Ground Water
Analysis Batch: 521495

Client Sample ID: W-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	820	F1	500	1410		mg/L		118	80 - 120

Lab Sample ID: 280-143502-1 MSD
Matrix: Ground Water
Analysis Batch: 521495

Client Sample ID: W-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	820	F1	500	1420	F1	mg/L		121	80 - 120	1	20

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 280-143502-12 MS
Matrix: Water
Analysis Batch: 521495

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	ND		50.0	58.9		mg/L		118	80 - 120		
Sulfate	ND		50.0	59.2		mg/L		118	80 - 120		

Lab Sample ID: 280-143502-12 MSD
Matrix: Water
Analysis Batch: 521495

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		50.0	59.8		mg/L		120	80 - 120	1	20
Sulfate	ND		50.0	59.3		mg/L		119	80 - 120	0	20

Lab Sample ID: 280-143502-1 DU
Matrix: Ground Water
Analysis Batch: 521495

Client Sample ID: W-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	820	F1	820		mg/L		0.4	15

Lab Sample ID: 280-143502-12 DU
Matrix: Water
Analysis Batch: 521495

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	ND		ND		mg/L		NC	15
Sulfate	ND		ND		mg/L		NC	15

Lab Sample ID: MB 280-521965/6
Matrix: Water
Analysis Batch: 521965

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/28/20 21:22	1
Fluoride	ND		0.50	0.17	mg/L			12/28/20 21:22	1
Sulfate	ND		5.0	1.0	mg/L			12/28/20 21:22	1

Lab Sample ID: LCS 280-521965/4
Matrix: Water
Analysis Batch: 521965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	100	98.4		mg/L		98	90 - 110		
Fluoride	5.00	5.14		mg/L		103	90 - 110		
Sulfate	100	100		mg/L		100	90 - 110		

Lab Sample ID: LCSD 280-521965/5
Matrix: Water
Analysis Batch: 521965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.3		mg/L		98	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-521965/5
Matrix: Water
Analysis Batch: 521965

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride			5.00	5.14		mg/L		103	90 - 110	0	10
Sulfate			100	100		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-521965/3
Matrix: Water
Analysis Batch: 521965

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.96		mg/L		99	50 - 150		
Fluoride			0.500	0.513		mg/L		103	50 - 150		
Sulfate			5.00	4.95	J	mg/L		99	50 - 150		

Lab Sample ID: 280-143502-12 MS
Matrix: Water
Analysis Batch: 521965

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	ND		50.0	50.9		mg/L		102	80 - 120		
Fluoride	ND		5.00	4.20		mg/L		84	80 - 120		
Sulfate	2.0	J	50.0	50.3		mg/L		97	80 - 120		

Lab Sample ID: 280-143502-12 MSD
Matrix: Water
Analysis Batch: 521965

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		50.0	51.4		mg/L		103	80 - 120	1	20
Fluoride	ND		5.00	4.26		mg/L		85	80 - 120	1	20
Sulfate	2.0	J	50.0	51.0		mg/L		98	80 - 120	1	20

Lab Sample ID: 280-143502-12 DU
Matrix: Water
Analysis Batch: 521965

Client Sample ID: MW-2B-EB
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	ND			ND		mg/L				NC	15
Fluoride	ND			ND		mg/L				NC	15
Sulfate	2.0	J		1.19	J F5	mg/L				49	15

Lab Sample ID: MB 280-522233/13
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/30/20 22:59	1
Fluoride	ND		0.50	0.17	mg/L			12/30/20 22:59	1
Sulfate	ND		5.0	1.0	mg/L			12/30/20 22:59	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-522233/11
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	99.4		mg/L		99	90 - 110
Fluoride	5.00	4.91		mg/L		98	90 - 110
Sulfate	100	97.2		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-522233/12
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	99.4		mg/L		99	90 - 110	0	10
Fluoride	5.00	4.94		mg/L		99	90 - 110	1	10
Sulfate	100	97.4		mg/L		97	90 - 110	0	10

Lab Sample ID: MRL 280-522233/10
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.04		mg/L		81	50 - 150
Fluoride	0.500	0.471	J	mg/L		94	50 - 150
Sulfate	5.00	4.33	J	mg/L		87	50 - 150

Lab Sample ID: MB 280-522508/6
Matrix: Water
Analysis Batch: 522508

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			01/04/21 15:42	1
Sulfate	ND		5.0	1.0	mg/L			01/04/21 15:42	1

Lab Sample ID: LCS 280-522508/4
Matrix: Water
Analysis Batch: 522508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.2		mg/L		98	90 - 110
Sulfate	100	98.1		mg/L		98	90 - 110

Lab Sample ID: LCSD 280-522508/5
Matrix: Water
Analysis Batch: 522508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	98.3		mg/L		98	90 - 110	0	10
Sulfate	100	98.1		mg/L		98	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-522508/3
Matrix: Water
Analysis Batch: 522508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.88		mg/L		98	50 - 150
Sulfate	5.00	5.05		mg/L		101	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-519740/1
Matrix: Water
Analysis Batch: 519740

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/09/20 07:45	1

Lab Sample ID: LCS 280-519740/2
Matrix: Water
Analysis Batch: 519740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	488		mg/L		98	93 - 110

Lab Sample ID: MB 280-519741/1
Matrix: Water
Analysis Batch: 519741

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/09/20 07:46	1

Lab Sample ID: LCS 280-519741/2
Matrix: Water
Analysis Batch: 519741

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	482		mg/L		96	93 - 110

Lab Sample ID: 280-143502-3 DU
Matrix: Ground Water
Analysis Batch: 519741

Client Sample ID: W-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	25000		23300		mg/L		5	10

Lab Sample ID: MB 280-519859/3
Matrix: Water
Analysis Batch: 519859

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/09/20 17:20	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 280-519859/1
Matrix: Water
Analysis Batch: 519859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			501	511		mg/L		102	93 - 110		

Lab Sample ID: LCSD 280-519859/2
Matrix: Water
Analysis Batch: 519859

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids (TDS)			501	502		mg/L		100	93 - 110	2	20

Lab Sample ID: MB 280-520027/2
Matrix: Water
Analysis Batch: 520027

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/10/20 18:47	1

Lab Sample ID: LCS 280-520027/1
Matrix: Water
Analysis Batch: 520027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			501	500		mg/L		100	93 - 110		

Lab Sample ID: MB 280-520330/1
Matrix: Water
Analysis Batch: 520330

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/14/20 09:43	1

Lab Sample ID: LCS 280-520330/2
Matrix: Water
Analysis Batch: 520330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids (TDS)			501	487		mg/L		97	93 - 110		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-519830/1
Matrix: Water
Analysis Batch: 519830

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/09/20 15:01	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 280-519830/2
Matrix: Water
Analysis Batch: 519830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	104		mg/L		104	79 - 114

Lab Sample ID: LCSD 280-519830/20
Matrix: Water
Analysis Batch: 519830

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	105		mg/L		105	79 - 114	1	20

Lab Sample ID: MB 280-519916/1
Matrix: Water
Analysis Batch: 519916

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/10/20 07:41	1

Lab Sample ID: LCS 280-519916/2
Matrix: Water
Analysis Batch: 519916

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	112		mg/L		112	79 - 114

Lab Sample ID: MB 280-520114/1
Matrix: Water
Analysis Batch: 520114

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/11/20 11:20	1

Lab Sample ID: LCS 280-520114/2
Matrix: Water
Analysis Batch: 520114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	103		mg/L		103	79 - 114

Lab Sample ID: LCSD 280-520114/3
Matrix: Water
Analysis Batch: 520114

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	104		mg/L		104	79 - 114	1	20

Metals

Prep Batch: 465088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total Recoverable	Ground Water	3005A	
280-143502-2	W-3	Total Recoverable	Ground Water	3005A	
280-143502-3	W-5	Total Recoverable	Ground Water	3005A	
280-143502-8	MW-4B	Total Recoverable	Ground Water	3005A	
280-143502-9	MW-5	Total Recoverable	Ground Water	3005A	
280-143502-10	MW-6	Total Recoverable	Ground Water	3005A	
280-143502-12	MW-2B-EB	Total Recoverable	Water	3005A	
MB 240-465088/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-465088/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-465088/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 465089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	7470A	
280-143502-2	W-3	Total/NA	Ground Water	7470A	
280-143502-3	W-5	Total/NA	Ground Water	7470A	
280-143502-8	MW-4B	Total/NA	Ground Water	7470A	
280-143502-9	MW-5	Total/NA	Ground Water	7470A	
280-143502-10	MW-6	Total/NA	Ground Water	7470A	
280-143502-12	MW-2B-EB	Total/NA	Water	7470A	
MB 240-465089/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-465089/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 465311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-4	W-7	Total Recoverable	Ground Water	3005A	
280-143502-5	MW-1B	Total Recoverable	Ground Water	3005A	
280-143502-6	MW-2B	Total Recoverable	Ground Water	3005A	
280-143502-7	MW-3	Total Recoverable	Ground Water	3005A	
280-143502-11	W-7-DUP	Total Recoverable	Ground Water	3005A	
MB 240-465311/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-465311/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-465311/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 465314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-4	W-7	Total/NA	Ground Water	7470A	
280-143502-5	MW-1B	Total/NA	Ground Water	7470A	
280-143502-6	MW-2B	Total/NA	Ground Water	7470A	
280-143502-7	MW-3	Total/NA	Ground Water	7470A	
280-143502-11	W-7-DUP	Total/NA	Ground Water	7470A	
MB 240-465314/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-465314/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 465458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total Recoverable	Ground Water	6010C	465088
280-143502-2	W-3	Total Recoverable	Ground Water	6010C	465088
280-143502-3	W-5	Total Recoverable	Ground Water	6010C	465088
280-143502-8	MW-4B	Total Recoverable	Ground Water	6010C	465088
280-143502-9	MW-5	Total Recoverable	Ground Water	6010C	465088

Metals (Continued)

Analysis Batch: 465458 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-10	MW-6	Total Recoverable	Ground Water	6010C	465088
280-143502-12	MW-2B-EB	Total Recoverable	Water	6010C	465088
MB 240-465088/1-A	Method Blank	Total Recoverable	Water	6010C	465088
LCS 240-465088/2-A	Lab Control Sample	Total Recoverable	Water	6010C	465088

Analysis Batch: 465468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total Recoverable	Ground Water	6020A	465088
280-143502-2	W-3	Total Recoverable	Ground Water	6020A	465088
280-143502-3	W-5	Total Recoverable	Ground Water	6020A	465088
280-143502-8	MW-4B	Total Recoverable	Ground Water	6020A	465088
280-143502-9	MW-5	Total Recoverable	Ground Water	6020A	465088
280-143502-10	MW-6	Total Recoverable	Ground Water	6020A	465088
280-143502-12	MW-2B-EB	Total Recoverable	Water	6020A	465088
MB 240-465088/1-A	Method Blank	Total Recoverable	Water	6020A	465088
LCS 240-465088/3-A	Lab Control Sample	Total Recoverable	Water	6020A	465088

Analysis Batch: 465479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	7470A	465089
280-143502-2	W-3	Total/NA	Ground Water	7470A	465089
280-143502-3	W-5	Total/NA	Ground Water	7470A	465089
280-143502-4	W-7	Total/NA	Ground Water	7470A	465314
280-143502-5	MW-1B	Total/NA	Ground Water	7470A	465314
280-143502-6	MW-2B	Total/NA	Ground Water	7470A	465314
280-143502-7	MW-3	Total/NA	Ground Water	7470A	465314
280-143502-8	MW-4B	Total/NA	Ground Water	7470A	465089
280-143502-9	MW-5	Total/NA	Ground Water	7470A	465089
280-143502-10	MW-6	Total/NA	Ground Water	7470A	465089
280-143502-11	W-7-DUP	Total/NA	Ground Water	7470A	465314
280-143502-12	MW-2B-EB	Total/NA	Water	7470A	465089
MB 240-465089/1-A	Method Blank	Total/NA	Water	7470A	465089
MB 240-465314/1-A	Method Blank	Total/NA	Water	7470A	465314
LCS 240-465089/2-A	Lab Control Sample	Total/NA	Water	7470A	465089
LCS 240-465314/2-A	Lab Control Sample	Total/NA	Water	7470A	465314

Analysis Batch: 465541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-4	W-7	Total Recoverable	Ground Water	6010C	465311
280-143502-5	MW-1B	Total Recoverable	Ground Water	6010C	465311
280-143502-6	MW-2B	Total Recoverable	Ground Water	6010C	465311
280-143502-7	MW-3	Total Recoverable	Ground Water	6010C	465311
280-143502-11	W-7-DUP	Total Recoverable	Ground Water	6010C	465311
MB 240-465311/1-A	Method Blank	Total Recoverable	Water	6010C	465311
LCS 240-465311/2-A	Lab Control Sample	Total Recoverable	Water	6010C	465311

Analysis Batch: 465573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-4	W-7	Total Recoverable	Ground Water	6020A	465311
280-143502-5	MW-1B	Total Recoverable	Ground Water	6020A	465311
280-143502-6	MW-2B	Total Recoverable	Ground Water	6020A	465311

Metals (Continued)

Analysis Batch: 465573 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-7	MW-3	Total Recoverable	Ground Water	6020A	465311
280-143502-11	W-7-DUP	Total Recoverable	Ground Water	6020A	465311
MB 240-465311/1-A	Method Blank	Total Recoverable	Water	6020A	465311
LCS 240-465311/3-A	Lab Control Sample	Total Recoverable	Water	6020A	465311

General Chemistry

Analysis Batch: 519740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	SM 2540C	
280-143502-6	MW-2B	Total/NA	Ground Water	SM 2540C	
280-143502-7	MW-3	Total/NA	Ground Water	SM 2540C	
280-143502-8	MW-4B	Total/NA	Ground Water	SM 2540C	
280-143502-9	MW-5	Total/NA	Ground Water	SM 2540C	
280-143502-10	MW-6	Total/NA	Ground Water	SM 2540C	
280-143502-12	MW-2B-EB	Total/NA	Water	SM 2540C	
MB 280-519740/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-519740/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 519741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-3	W-5	Total/NA	Ground Water	SM 2540C	
MB 280-519741/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-519741/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-143502-3 DU	W-5	Total/NA	Ground Water	SM 2540C	

Analysis Batch: 519813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	9040B	
280-143502-2	W-3	Total/NA	Ground Water	9040B	
280-143502-3	W-5	Total/NA	Ground Water	9040B	
280-143502-4	W-7	Total/NA	Ground Water	9040B	
280-143502-5	MW-1B	Total/NA	Ground Water	9040B	
280-143502-6	MW-2B	Total/NA	Ground Water	9040B	
280-143502-7	MW-3	Total/NA	Ground Water	9040B	
280-143502-8	MW-4B	Total/NA	Ground Water	9040B	
280-143502-9	MW-5	Total/NA	Ground Water	9040B	
280-143502-10	MW-6	Total/NA	Ground Water	9040B	
280-143502-11	W-7-DUP	Total/NA	Ground Water	9040B	
LCS 280-519813/4	Lab Control Sample	Total/NA	Water	9040B	
280-143502-4 DU	W-7	Total/NA	Ground Water	9040B	

Analysis Batch: 519830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	SM 2540D	
280-143502-6	MW-2B	Total/NA	Ground Water	SM 2540D	
280-143502-7	MW-3	Total/NA	Ground Water	SM 2540D	
280-143502-12	MW-2B-EB	Total/NA	Water	SM 2540D	
MB 280-519830/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-519830/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-519830/20	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

General Chemistry

Analysis Batch: 519859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-2	W-3	Total/NA	Ground Water	SM 2540C	
280-143502-4	W-7	Total/NA	Ground Water	SM 2540C	
280-143502-11	W-7-DUP	Total/NA	Ground Water	SM 2540C	
MB 280-519859/3	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-519859/1	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 280-519859/2	Lab Control Sample Dup	Total/NA	Water	SM 2540C	

Analysis Batch: 519904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-12	MW-2B-EB	Total/NA	Water	9040B	
LCS 280-519904/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 519916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-3	W-5	Total/NA	Ground Water	SM 2540D	
280-143502-4	W-7	Total/NA	Ground Water	SM 2540D	
280-143502-5	MW-1B	Total/NA	Ground Water	SM 2540D	
280-143502-8	MW-4B	Total/NA	Ground Water	SM 2540D	
280-143502-9	MW-5	Total/NA	Ground Water	SM 2540D	
280-143502-10	MW-6	Total/NA	Ground Water	SM 2540D	
280-143502-11	W-7-DUP	Total/NA	Ground Water	SM 2540D	
MB 280-519916/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-519916/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 520027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-5	MW-1B	Total/NA	Ground Water	SM 2540C	
MB 280-520027/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-520027/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 520114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-2	W-3	Total/NA	Ground Water	SM 2540D	
MB 280-520114/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-520114/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-520114/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 520330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-4	W-7	Total/NA	Ground Water	SM 2540C	
MB 280-520330/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-520330/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 521495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	9056A	
280-143502-2	W-3	Total/NA	Ground Water	9056A	
280-143502-3	W-5	Total/NA	Ground Water	9056A	
280-143502-3	W-5	Total/NA	Ground Water	9056A	
280-143502-4	W-7	Total/NA	Ground Water	9056A	
280-143502-4	W-7	Total/NA	Ground Water	9056A	

General Chemistry (Continued)

Analysis Batch: 521495 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-5	MW-1B	Total/NA	Ground Water	9056A	
280-143502-5	MW-1B	Total/NA	Ground Water	9056A	
280-143502-6	MW-2B	Total/NA	Ground Water	9056A	
280-143502-6	MW-2B	Total/NA	Ground Water	9056A	
280-143502-7	MW-3	Total/NA	Ground Water	9056A	
280-143502-7	MW-3	Total/NA	Ground Water	9056A	
280-143502-8	MW-4B	Total/NA	Ground Water	9056A	
280-143502-8	MW-4B	Total/NA	Ground Water	9056A	
280-143502-9	MW-5	Total/NA	Ground Water	9056A	
280-143502-10	MW-6	Total/NA	Ground Water	9056A	
280-143502-10	MW-6	Total/NA	Ground Water	9056A	
280-143502-11	W-7-DUP	Total/NA	Ground Water	9056A	
280-143502-11	W-7-DUP	Total/NA	Ground Water	9056A	
280-143502-12	MW-2B-EB	Total/NA	Water	9056A	
MB 280-521495/13	Method Blank	Total/NA	Water	9056A	
LCS 280-521495/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-521495/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-521495/10	Lab Control Sample	Total/NA	Water	9056A	
280-143502-1 MS	W-2A	Total/NA	Ground Water	9056A	
280-143502-1 MSD	W-2A	Total/NA	Ground Water	9056A	
280-143502-12 MS	MW-2B-EB	Total/NA	Water	9056A	
280-143502-12 MSD	MW-2B-EB	Total/NA	Water	9056A	
280-143502-1 DU	W-2A	Total/NA	Ground Water	9056A	
280-143502-12 DU	MW-2B-EB	Total/NA	Water	9056A	

Analysis Batch: 521965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	9056A	
280-143502-2	W-3	Total/NA	Ground Water	9056A	
280-143502-3	W-5	Total/NA	Ground Water	9056A	
280-143502-4	W-7	Total/NA	Ground Water	9056A	
280-143502-5	MW-1B	Total/NA	Ground Water	9056A	
280-143502-7	MW-3	Total/NA	Ground Water	9056A	
280-143502-8	MW-4B	Total/NA	Ground Water	9056A	
280-143502-9	MW-5	Total/NA	Ground Water	9056A	
280-143502-10	MW-6	Total/NA	Ground Water	9056A	
280-143502-11	W-7-DUP	Total/NA	Ground Water	9056A	
280-143502-12	MW-2B-EB	Total/NA	Water	9056A	
MB 280-521965/6	Method Blank	Total/NA	Water	9056A	
LCS 280-521965/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-521965/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-521965/3	Lab Control Sample	Total/NA	Water	9056A	
280-143502-12 MS	MW-2B-EB	Total/NA	Water	9056A	
280-143502-12 MSD	MW-2B-EB	Total/NA	Water	9056A	
280-143502-12 DU	MW-2B-EB	Total/NA	Water	9056A	

Analysis Batch: 522233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-1	W-2A	Total/NA	Ground Water	9056A	
280-143502-6	MW-2B	Total/NA	Ground Water	9056A	
MB 280-522233/13	Method Blank	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 522233 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-522233/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-522233/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-522233/10	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 522508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143502-11	W-7-DUP	Total/NA	Ground Water	9056A	
MB 280-522508/6	Method Blank	Total/NA	Water	9056A	
LCS 280-522508/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-522508/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-522508/3	Lab Control Sample	Total/NA	Water	9056A	

Client Sample ID: W-2A
Date Collected: 12/02/20 15:00
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465458	12/14/20 18:20	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			465468	12/14/20 18:53	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465089	12/11/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 16:43	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 22:20	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	521495	12/24/20 07:56	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	522233	01/01/21 02:52	JMB	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 00:06	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	519740	12/09/20 07:45	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519830	12/09/20 15:01	LEB	TAL DEN

Client Sample ID: W-3
Date Collected: 12/05/20 09:15
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465458	12/14/20 18:24	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			465468	12/14/20 18:56	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465089	12/11/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 16:45	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 22:16	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	521495	12/24/20 02:24	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 01:11	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	519859	12/09/20 17:20	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	520114	12/11/20 11:20	LEB	TAL DEN

Client Sample ID: W-5
Date Collected: 12/04/20 11:00
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465458	12/14/20 18:29	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			465468	12/14/20 18:58	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465089	12/11/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 16:51	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:31	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	521495	12/24/20 03:01	CJ	TAL DEN

Client Sample ID: W-5
Date Collected: 12/04/20 11:00
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		500	5 mL	5 mL	521495	12/24/20 03:19	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 01:44	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	519741	12/09/20 07:46	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519916	12/10/20 07:41	LEB	TAL DEN

Client Sample ID: W-7
Date Collected: 12/04/20 15:30
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465541	12/15/20 10:04	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			465573	12/15/20 13:12	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465314	12/14/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 17:16	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:23	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	521495	12/24/20 04:14	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	521495	12/24/20 04:33	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 02:34	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	519859	12/09/20 17:20	SVC	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	520330	12/14/20 09:43	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519916	12/10/20 07:41	LEB	TAL DEN

Client Sample ID: MW-1B
Date Collected: 12/03/20 09:15
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465541	12/15/20 10:09	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			465573	12/15/20 13:14	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465314	12/14/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 17:18	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:52	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	521495	12/24/20 04:51	CJ	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	521495	12/24/20 05:10	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 03:06	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	520027	12/10/20 18:47	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519916	12/10/20 07:41	LEB	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-2B
Lab Sample ID: 280-143502-6
Date Collected: 12/02/20 15:40
Matrix: Ground Water
Date Received: 12/07/20 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465541	12/15/20 10:24	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			465573	12/15/20 13:17	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465314	12/14/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 17:20	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:34	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	521495	12/24/20 05:28	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	521495	12/24/20 05:47	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	522233	01/01/21 03:08	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	519740	12/09/20 07:45	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519830	12/09/20 15:01	LEB	TAL DEN

Client Sample ID: MW-3
Lab Sample ID: 280-143502-7
Date Collected: 12/02/20 13:00
Matrix: Ground Water
Date Received: 12/07/20 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465541	12/15/20 10:28	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			465573	12/15/20 13:19	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465314	12/14/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 17:22	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:37	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	521495	12/24/20 06:05	CJ	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	521495	12/24/20 06:23	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 04:45	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	519740	12/09/20 07:45	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519830	12/09/20 15:01	LEB	TAL DEN

Client Sample ID: MW-4B
Lab Sample ID: 280-143502-8
Date Collected: 12/03/20 14:40
Matrix: Ground Water
Date Received: 12/07/20 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465458	12/14/20 18:33	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			465468	12/14/20 19:01	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465089	12/11/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 16:53	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:41	CJ	TAL DEN

Client Sample ID: MW-4B
Date Collected: 12/03/20 14:40
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		10	5 mL	5 mL	521495	12/24/20 06:42	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	521495	12/24/20 07:00	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 05:34	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	519740	12/09/20 07:45	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519916	12/10/20 07:41	LEB	TAL DEN

Client Sample ID: MW-5
Date Collected: 12/03/20 16:15
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-9
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465458	12/14/20 18:37	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			465468	12/14/20 19:03	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465089	12/11/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 16:55	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:48	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	521495	12/24/20 09:29	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 06:07	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	519740	12/09/20 07:45	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519916	12/10/20 07:41	LEB	TAL DEN

Client Sample ID: MW-6
Date Collected: 12/03/20 11:40
Date Received: 12/07/20 16:38

Lab Sample ID: 280-143502-10
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465458	12/14/20 18:42	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			465468	12/14/20 19:11	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465089	12/11/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 16:57	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 21:44	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	521495	12/24/20 09:47	CJ	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	521495	12/24/20 10:06	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 06:40	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	519740	12/09/20 07:45	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519916	12/10/20 07:41	LEB	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-7-DUP
Lab Sample ID: 280-143502-11
Date Collected: 12/04/20 15:30
Matrix: Ground Water
Date Received: 12/07/20 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465541	12/15/20 10:33	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465311	12/14/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			465573	12/15/20 13:22	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465314	12/14/20 13:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 17:24	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519813	12/08/20 22:13	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	521495	12/24/20 10:24	CJ	TAL DEN
Total/NA	Analysis	9056A		1000	5 mL	5 mL	521495	12/24/20 10:43	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 08:02	JMB	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	522508	01/04/21 16:20	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	519859	12/09/20 17:20	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519916	12/10/20 07:41	LEB	TAL DEN

Client Sample ID: MW-2B-EB
Lab Sample ID: 280-143502-12
Date Collected: 12/02/20 16:00
Matrix: Water
Date Received: 12/07/20 16:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			465458	12/14/20 18:55	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	465088	12/11/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			465468	12/14/20 19:13	KLC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	465089	12/11/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			465479	12/14/20 16:59	SLD	TAL CAN
Total/NA	Analysis	9040B		1			519904	12/09/20 21:24	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521495	12/24/20 13:29	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	521965	12/29/20 08:35	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	519740	12/09/20 07:45	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	519830	12/09/20 15:01	LEB	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-143502-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	01-05-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Ground Water	Temperature
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	12-20-20
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

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Client Information	Sampler: TS/CK	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #1
Client Contact: Molly Reeves	Phone: 7208356065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 1 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): ASAP			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: CO, 80112	PO #: DEN-018			
Phone: 734-263-7138(Tel)	WO #:			
Email: Molly.Reeves@hdrinc.com	Project #: 28014376			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	SSOW#:			
Site: Colorado				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appl+W, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315_Ra226, 9320_Ra228, Ra226/Ra228 combined	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	D	N	N	D		
W-1				Water									
W-2A	12/2/20	1500	G	Water			X	X	X	X	X	6	
W-2B				Water									
W-3	12/3/20	0915	G	Water			X	X	X	X	X	6	
W-4				Water									
W-5	12/4/20	1100	G	Water			X	X	X	X	X	6	
W-6				Water									
W-7	12/4/20	1530	G	Water			X	X	X	X	X	6	
W-8A				Water									
W-8B				Water									
MW-1B	12/3/20	0915	G	Water			X	X	X	X	X	6	

260-143502 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 12/7/20 1638	Company: HDR	Received by:	Date/Time: 12/7/20 1638	Company: ETADEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.9C, 3.4C, 3.0C, 6.3C, 5.5C, 5.6C IR#11 CF-0.3C

Ver: 01/16/2019

Deliver #280

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: DJ/CK	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No: #1
Client Contact: Molly Reeves	Phone: 7205356063	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page: 2 of 2
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Englewood	TAT Requested (days): ASAP			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			Other:
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appendix IV, 7470A Hg	9040B pH, 9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315, Ra226, 9320_Ra228, Ra226/Ra228 combined										Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D										X	
MW-2 B	12/2/20	1540	G	Water			X	X	X	X	X										6	
MW-3	12/2/20	1300	G	Water			X	X	X	X	X										6	
MW-4 B	12/3/20	1440	G	Water			X	X	X	X	X										6	
MW-5	12/3/20	1615	G	Water			X	X	X	X	X										6	
MW-6	12/3/20	1140	G	Water			X	X	X	X	X										6	
MW-7 -DUP	12/4/20	1530	G	Water			X	X	X	X	X										6	
MW-26 -EB	12/2/20	1600	G	Water			X	X	X	X	X										6	
				Water																		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	12/7/20 1658	HDR		12/7/20 1638	ETA Denver
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-549863.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-143502-1
Address: 4101 Shuffel Street NW.	Due Date Requested: 12/14/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SU6	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
W-2A (280-143502-1)	12/2/20	15:00 Mountain		Water			X	X	X	3	Use Collision Cell
W-3 (280-143502-2)	12/5/20	09:15 Mountain		Water			X	X	X	3	Use Collision Cell
W-6 (280-143502-3)	12/4/20	11:00 Mountain		Water			X	X	X	3	Use Collision Cell
W-7 (280-143502-4)	12/4/20	15:30 Mountain		Water			X	X	X	3	Use Collision Cell
MW-1B (280-143502-5)	12/3/20	09:15 Mountain		Water			X	X	X	3	Use Collision Cell
MW-2B (280-143502-6)	12/2/20	15:40 Mountain		Water			X	X	X	3	Use Collision Cell
MW-3 (280-143502-7)	12/2/20	13:00 Mountain		Water			X	X	X	3	Use Collision Cell
MW-4B (280-143502-8)	12/3/20	14:40 Mountain		Water			X	X	X	3	Use Collision Cell
MW-5 (280-143502-9)	12/3/20	16:15 Mountain		Water			X	X	X	3	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 12/8/2020 1520	Company	Received by:	Date/Time: 12-9-20 1110	Company: ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

1/14/2021

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-549863.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-143502-1
Address: 4101 Shuffel Street NW,	Due Date Requested: 12/14/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A 13 Total Metals (w/collision cell) - SUB	6010C/3005A (MOD) Boron	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-6 (280-143502-10)	12/3/20	11:40 Mountain		Water			X	X	X	1	Use Collision Cell
MW-7-DUP (280-143502-11)	12/4/20	15:30 Mountain		Water			X	X	X	1	Use Collision Cell
MW-26-EB (280-143502-12)	12/2/20	16:00 Mountain		Water			X	X	X	1	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	12/8/2020 1320			12-9-20 1110	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Site Name _____ Cooler unpacked by: Tammy Roger

Cooler Received on 12-9-20 Opened on 12-10-20

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box ~~Client Cooler~~ Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 8.5 °C Corrected Cooler Temp. 9.4 °C

IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⇦ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-143502-1

Login Number: 143502
List Number: 1
Creator: Kramer, Julieann L

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-143771-1
Client Project/Site: Xcel Energy GW CCR Monitoring - Comanche

For:
HDR Inc
1670 Broadway, Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves

Danielle Harrington

Authorized for release by:
1/14/2021 5:12:51 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-143771-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-143771-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/14/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.5 C.

Please note, sample W-4 and W-2B were received with limited volume. The samples were logged to get the most analyses out of the bottles.

The container labels for the following sample did not match the information listed on the Chain-of-Custody (COC): W-2B (280-143771-2). The container labels state a sample collection time of 10:50, while the COC states 10:30. The sample was logged per the COC.

DISSOLVED METALS - Method 6010C/6020A

Due to matrix interferences, samples W-1 (280-143771-1), W-2B (280-143771-2), W-4 (280-143771-3), and W-6 (280-143771-4) required dilution prior to analysis for Method 6020A. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS- Method 6010C/6020A

Due to matrix interferences, samples W-1 (280-143771-1), W-2B (280-143771-2), W-4 (280-143771-3), and W-6 (280-143771-4) required dilution prior to analysis for Method 6020A. The reporting limits have been adjusted accordingly.

The accuracy and precision of the Calcium MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for Calcium method 6020A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED MERCURY

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 280-143771-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

TOTAL MERCURY
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY- VARIOUS
Samples W-1 (280-143771-1), W-2B (280-143771-2), W-4 (280-143771-3), and W-6 (280-143771-4) required dilution prior to analysis for Method 9056A. The reporting limits have been adjusted accordingly.

Sample W-2B was analyzed at dilutions due to high concentrations of target compounds or matrix interferences for Sulfate. Associated results in the analytical report have been flagged with an “E”, as these are estimated values. These samples were also analyzed undiluted or at a lesser dilution in order to achieve the lowest possible reporting limits for each analyte. Reporting limits have been adjusted relative to the dilution required. Both results are reported.

Due to a required dilution, sample W-2B was analyzed past the EPA-recommended holding time for method 9056A; the original analysis of the undiluted sample was performed within holding time. The out-of-hold, diluted result is confirmed by the undiluted result. There is no impact on data usability.

The Total Suspended Solids sample duplicate analysis data associated with QC batch 280- 520799 exhibited RPD data outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Laboratory generated MS/MSD analysis data have been provided. The MS/MSD for Fluoride method 9056A exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The accuracy and precision of the Chloride and Sulfate MS/MSD performed on a laboratory generated sample could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1 — Lab Sample ID: 280-143771-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.2		0.10	0.023	mg/L	1		6010C	Total Recoverable
Boron	4.1		0.10	0.023	mg/L	1		6010C	Dissolved
Arsenic	0.010	J	0.050	0.0075	mg/L	10		6020A	Total Recoverable
Calcium	150		10	5.8	mg/L	10		6020A	Total Recoverable
Molybdenum	0.019	J	0.10	0.011	mg/L	10		6020A	Total Recoverable
Selenium	0.75		0.050	0.0089	mg/L	10		6020A	Total Recoverable
Lithium	2.0		0.080	0.017	mg/L	10		6020A	Total Recoverable
Arsenic	0.0098	J	0.050	0.0075	mg/L	10		6020A	Dissolved
Calcium	120		10	5.8	mg/L	10		6020A	Dissolved
Molybdenum	0.018	J	0.10	0.011	mg/L	10		6020A	Dissolved
Selenium	0.74		0.050	0.0089	mg/L	10		6020A	Dissolved
Lithium	2.0		0.080	0.017	mg/L	10		6020A	Dissolved
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	740		30	10	mg/L	10		9056A	Total/NA
Fluoride	3.2	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	27000		2500	520	mg/L	500		9056A	Total/NA
Total Dissolved Solids (TDS)	75000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	19		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-2B — Lab Sample ID: 280-143771-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Boron	4.4		0.10	0.023	mg/L	1		6010C	Dissolved
Antimony	0.012	J	0.040	0.011	mg/L	20		6020A	Total Recoverable
Barium	0.072	J	0.10	0.045	mg/L	20		6020A	Total Recoverable
Calcium	230		20	12	mg/L	20		6020A	Total Recoverable
Cobalt	0.039		0.020	0.0038	mg/L	20		6020A	Total Recoverable
Molybdenum	0.038	J	0.20	0.022	mg/L	20		6020A	Total Recoverable
Selenium	0.97		0.10	0.018	mg/L	20		6020A	Total Recoverable
Lithium	4.8		0.16	0.033	mg/L	20		6020A	Total Recoverable
Arsenic	0.024	J	0.10	0.015	mg/L	20		6020A	Dissolved
Calcium	120		20	12	mg/L	20		6020A	Dissolved
Cobalt	0.040		0.020	0.0038	mg/L	20		6020A	Dissolved
Molybdenum	0.040	J	0.20	0.022	mg/L	20		6020A	Dissolved
Antimony	0.012	J	0.040	0.011	mg/L	20		6020A	Dissolved
Selenium	1.0		0.10	0.018	mg/L	20		6020A	Dissolved
Lithium	4.9		0.16	0.033	mg/L	20		6020A	Dissolved
Mercury	0.00013	J	0.00020	0.00013	mg/L	1		7470A	Total/NA
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-2B (Continued) — Lab Sample ID: 280-143771-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	20.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	910		30	10	mg/L	10		9056A	Total/NA
Fluoride	2.9	J	5.0	1.7	mg/L	10		9056A	Total/NA
Sulfate	68000	H	2500	520	mg/L	500		9056A	Total/NA
Sulfate	63000	E	50	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids (TDS)	180000		1000	470	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	570		10	2.8	mg/L	1		SM 2540D	Total/NA

Client Sample ID: W-4 — Lab Sample ID: 280-143771-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Calcium	110		20	12	mg/L	20		6020A	Total Recoverable
Cobalt	0.0063	J	0.020	0.0038	mg/L	20		6020A	Total Recoverable
Molybdenum	0.10	J	0.20	0.022	mg/L	20		6020A	Total Recoverable
Lithium	1.5		0.16	0.033	mg/L	20		6020A	Total Recoverable
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	400		60	20	mg/L	20		9056A	Total/NA
Fluoride	7.8	J	10	3.3	mg/L	20		9056A	Total/NA
Sulfate	27000		1000	210	mg/L	200		9056A	Total/NA
Total Dissolved Solids (TDS)	70000		1000	470	mg/L	1		SM 2540C	Total/NA

Client Sample ID: W-6 — Lab Sample ID: 280-143771-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	7.7		0.10	0.023	mg/L	1		6010C	Total Recoverable
Boron	7.4		0.10	0.023	mg/L	1		6010C	Dissolved
Arsenic	0.0038	J	0.010	0.0015	mg/L	2		6020A	Total Recoverable
Barium	0.079		0.010	0.0045	mg/L	2		6020A	Total Recoverable
Calcium	270		2.0	1.2	mg/L	2		6020A	Total Recoverable
Cadmium	0.00068	J	0.0020	0.00039	mg/L	2		6020A	Total Recoverable
Cobalt	0.0019	J	0.0020	0.00038	mg/L	2		6020A	Total Recoverable
Chromium	0.0037	J	0.0040	0.0020	mg/L	2		6020A	Total Recoverable
Molybdenum	0.42		0.020	0.0022	mg/L	2		6020A	Total Recoverable
Lead	0.0025		0.0020	0.00090	mg/L	2		6020A	Total Recoverable
Selenium	0.0071	J	0.010	0.0018	mg/L	2		6020A	Total Recoverable
Lithium	0.11		0.016	0.0033	mg/L	2		6020A	Total Recoverable
Arsenic	0.0019	J	0.010	0.0015	mg/L	2		6020A	Dissolved
Barium	0.018		0.010	0.0045	mg/L	2		6020A	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-6 (Continued)
Lab Sample ID: 280-143771-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	180		2.0	1.2	mg/L	2		6020A	Dissolved
Cadmium	0.00058	J	0.0020	0.00039	mg/L	2		6020A	Dissolved
Cobalt	0.00059	J	0.0020	0.00038	mg/L	2		6020A	Dissolved
Molybdenum	0.40		0.020	0.0022	mg/L	2		6020A	Dissolved
Selenium	0.0066	J	0.010	0.0018	mg/L	2		6020A	Dissolved
Lithium	0.12		0.016	0.0033	mg/L	2		6020A	Dissolved
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	150		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.77		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3600		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	6000		100	47	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	110		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-143771-1	W-1	Water	12/11/20 12:50	12/14/20 09:26	
280-143771-2	W-2B	Water	12/11/20 10:30	12/14/20 09:26	
280-143771-3	W-4	Water	12/11/20 14:00	12/14/20 09:26	
280-143771-4	W-6	Water	12/11/20 13:30	12/14/20 09:26	

Method: 6010C - Metals (ICP) - Total Recoverable

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.2		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 20:31	1

Client Sample ID: W-2B
Date Collected: 12/11/20 10:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.3		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 20:40	1

Client Sample ID: W-4
Date Collected: 12/11/20 14:00
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.7		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 20:48	1

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7.7		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 20:53	1

Method: 6010C - Metals (ICP) - Dissolved

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.1		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 20:35	1

Client Sample ID: W-2B
Date Collected: 12/11/20 10:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 20:44	1

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7.4		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 21:06	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020	0.0057	mg/L		12/18/20 14:00	12/23/20 12:10	10
Arsenic	0.010	J	0.050	0.0075	mg/L		12/18/20 14:00	12/23/20 12:10	10
Barium	ND		0.050	0.022	mg/L		12/18/20 14:00	12/23/20 12:10	10
Beryllium	ND		0.010	0.0031	mg/L		12/18/20 14:00	12/23/20 12:10	10
Calcium	150		10	5.8	mg/L		12/18/20 14:00	12/23/20 12:10	10
Cadmium	ND		0.010	0.0020	mg/L		12/18/20 14:00	12/23/20 12:10	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		0.010	0.0019	mg/L		12/18/20 14:00	12/23/20 12:10	10
Chromium	ND		0.020	0.0098	mg/L		12/18/20 14:00	12/23/20 12:10	10
Molybdenum	**0.019**	**J**	0.10	0.011	mg/L		12/18/20 14:00	12/23/20 12:10	10
Lead	ND		0.010	0.0045	mg/L		12/18/20 14:00	12/23/20 12:10	10
Selenium	**0.75**		0.050	0.0089	mg/L		12/18/20 14:00	12/23/20 12:10	10
Thallium	ND		0.010	0.0020	mg/L		12/18/20 14:00	12/23/20 12:10	10
Lithium	**2.0**		0.080	0.017	mg/L		12/18/20 14:00	12/23/20 12:10	10

Client Sample ID: W-2B
Date Collected: 12/11/20 10:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.012**	**J**	0.040	0.011	mg/L		12/18/20 14:00	12/23/20 12:15	20
Arsenic	ND		0.10	0.015	mg/L		12/18/20 14:00	12/23/20 12:15	20
Barium	**0.072**	**J**	0.10	0.045	mg/L		12/18/20 14:00	12/23/20 12:15	20
Beryllium	ND		0.020	0.0061	mg/L		12/18/20 14:00	12/23/20 12:15	20
Calcium	**230**		20	12	mg/L		12/18/20 14:00	12/23/20 12:15	20
Cadmium	ND		0.020	0.0039	mg/L		12/18/20 14:00	12/23/20 12:15	20
Cobalt	**0.039**		0.020	0.0038	mg/L		12/18/20 14:00	12/23/20 12:15	20
Chromium	ND		0.040	0.020	mg/L		12/18/20 14:00	12/23/20 12:15	20
Molybdenum	**0.038**	**J**	0.20	0.022	mg/L		12/18/20 14:00	12/23/20 12:15	20
Lead	ND		0.020	0.0090	mg/L		12/18/20 14:00	12/23/20 12:15	20
Selenium	**0.97**		0.10	0.018	mg/L		12/18/20 14:00	12/23/20 12:15	20
Thallium	ND		0.020	0.0040	mg/L		12/18/20 14:00	12/23/20 12:15	20
Lithium	**4.8**		0.16	0.033	mg/L		12/18/20 14:00	12/23/20 12:15	20

Client Sample ID: W-4
Date Collected: 12/11/20 14:00
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.040	0.011	mg/L		12/18/20 14:00	12/23/20 12:20	20
Arsenic	ND		0.10	0.015	mg/L		12/18/20 14:00	12/23/20 12:20	20
Barium	ND		0.10	0.045	mg/L		12/18/20 14:00	12/23/20 12:20	20
Beryllium	ND		0.020	0.0061	mg/L		12/18/20 14:00	12/23/20 12:20	20
Calcium	**110**		20	12	mg/L		12/18/20 14:00	12/23/20 12:20	20
Cadmium	ND		0.020	0.0039	mg/L		12/18/20 14:00	12/23/20 12:20	20
Cobalt	**0.0063**	**J**	0.020	0.0038	mg/L		12/18/20 14:00	12/23/20 12:20	20
Chromium	ND		0.040	0.020	mg/L		12/18/20 14:00	12/23/20 12:20	20
Molybdenum	**0.10**	**J**	0.20	0.022	mg/L		12/18/20 14:00	12/23/20 12:20	20
Lead	ND		0.020	0.0090	mg/L		12/18/20 14:00	12/23/20 12:20	20
Selenium	ND		0.10	0.018	mg/L		12/18/20 14:00	12/23/20 12:20	20
Thallium	ND		0.020	0.0040	mg/L		12/18/20 14:00	12/23/20 12:20	20
Lithium	**1.5**		0.16	0.033	mg/L		12/18/20 14:00	12/23/20 12:20	20

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0040	0.0011	mg/L		12/18/20 14:00	12/23/20 13:10	2
Arsenic	**0.0038**	**J**	0.010	0.0015	mg/L		12/18/20 14:00	12/23/20 13:10	2

Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.079**		0.010	0.0045	mg/L		12/18/20 14:00	12/23/20 13:10	2
Beryllium	ND		0.0020	0.00061	mg/L		12/18/20 14:00	12/23/20 13:10	2
Calcium	**270**		2.0	1.2	mg/L		12/18/20 14:00	12/23/20 13:10	2
Cadmium	**0.00068**	**J**	0.0020	0.00039	mg/L		12/18/20 14:00	12/23/20 13:10	2
Cobalt	**0.0019**	**J**	0.0020	0.00038	mg/L		12/18/20 14:00	12/23/20 13:10	2
Chromium	**0.0037**	**J**	0.0040	0.0020	mg/L		12/18/20 14:00	12/23/20 13:10	2
Molybdenum	**0.42**		0.020	0.0022	mg/L		12/18/20 14:00	12/23/20 13:10	2
Lead	**0.0025**		0.0020	0.00090	mg/L		12/18/20 14:00	12/23/20 13:10	2
Selenium	**0.0071**	**J**	0.010	0.0018	mg/L		12/18/20 14:00	12/23/20 13:10	2
Thallium	ND		0.0020	0.00040	mg/L		12/18/20 14:00	12/23/20 13:10	2
Lithium	**0.11**		0.016	0.0033	mg/L		12/18/20 14:00	12/23/20 13:10	2

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0098**	**J**	0.050	0.0075	mg/L		12/18/20 14:00	12/23/20 12:13	10
Barium	ND		0.050	0.022	mg/L		12/18/20 14:00	12/23/20 12:13	10
Beryllium	ND		0.010	0.0031	mg/L		12/18/20 14:00	12/23/20 12:13	10
Calcium	**120**		10	5.8	mg/L		12/18/20 14:00	12/23/20 12:13	10
Cadmium	ND		0.010	0.0020	mg/L		12/18/20 14:00	12/23/20 12:13	10
Cobalt	ND		0.010	0.0019	mg/L		12/18/20 14:00	12/23/20 12:13	10
Chromium	ND		0.020	0.0098	mg/L		12/18/20 14:00	12/23/20 12:13	10
Molybdenum	**0.018**	**J**	0.10	0.011	mg/L		12/18/20 14:00	12/23/20 12:13	10
Lead	ND		0.010	0.0045	mg/L		12/18/20 14:00	12/23/20 12:13	10
Antimony	ND		0.020	0.0057	mg/L		12/18/20 14:00	12/23/20 12:13	10
Selenium	**0.74**		0.050	0.0089	mg/L		12/18/20 14:00	12/23/20 12:13	10
Lithium	**2.0**		0.080	0.017	mg/L		12/18/20 14:00	12/23/20 12:13	10
Thallium	ND		0.010	0.0020	mg/L		12/18/20 14:00	12/23/20 12:13	10

Client Sample ID: W-2B
Date Collected: 12/11/20 10:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.024**	**J**	0.10	0.015	mg/L		12/18/20 14:00	12/23/20 12:18	20
Barium	ND		0.10	0.045	mg/L		12/18/20 14:00	12/23/20 12:18	20
Beryllium	ND		0.020	0.0061	mg/L		12/18/20 14:00	12/23/20 12:18	20
Calcium	**120**		20	12	mg/L		12/18/20 14:00	12/23/20 12:18	20
Cadmium	ND		0.020	0.0039	mg/L		12/18/20 14:00	12/23/20 12:18	20
Cobalt	**0.040**		0.020	0.0038	mg/L		12/18/20 14:00	12/23/20 12:18	20
Chromium	ND		0.040	0.020	mg/L		12/18/20 14:00	12/23/20 12:18	20
Molybdenum	**0.040**	**J**	0.20	0.022	mg/L		12/18/20 14:00	12/23/20 12:18	20
Lead	ND		0.020	0.0090	mg/L		12/18/20 14:00	12/23/20 12:18	20
Antimony	**0.012**	**J**	0.040	0.011	mg/L		12/18/20 14:00	12/23/20 12:18	20
Selenium	**1.0**		0.10	0.018	mg/L		12/18/20 14:00	12/23/20 12:18	20
Lithium	**4.9**		0.16	0.033	mg/L		12/18/20 14:00	12/23/20 12:18	20
Thallium	ND		0.020	0.0040	mg/L		12/18/20 14:00	12/23/20 12:18	20

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0019**	**J**	0.010	0.0015	mg/L		12/18/20 14:00	12/23/20 13:13	2
Barium	**0.018**		0.010	0.0045	mg/L		12/18/20 14:00	12/23/20 13:13	2
Beryllium	ND		0.0020	0.00061	mg/L		12/18/20 14:00	12/23/20 13:13	2
Calcium	**180**		2.0	1.2	mg/L		12/18/20 14:00	12/23/20 13:13	2
Cadmium	**0.00058**	**J**	0.0020	0.00039	mg/L		12/18/20 14:00	12/23/20 13:13	2
Cobalt	**0.00059**	**J**	0.0020	0.00038	mg/L		12/18/20 14:00	12/23/20 13:13	2
Chromium	ND		0.0040	0.0020	mg/L		12/18/20 14:00	12/23/20 13:13	2
Molybdenum	**0.40**		0.020	0.0022	mg/L		12/18/20 14:00	12/23/20 13:13	2
Lead	ND		0.0020	0.00090	mg/L		12/18/20 14:00	12/23/20 13:13	2
Antimony	ND		0.0040	0.0011	mg/L		12/18/20 14:00	12/23/20 13:13	2
Selenium	**0.0066**	**J**	0.010	0.0018	mg/L		12/18/20 14:00	12/23/20 13:13	2
Lithium	**0.12**		0.016	0.0033	mg/L		12/18/20 14:00	12/23/20 13:13	2
Thallium	ND		0.0020	0.00040	mg/L		12/18/20 14:00	12/23/20 13:13	2

Method: 7470A - Mercury (CVAA)

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 14:39	1

Client Sample ID: W-2B
Date Collected: 12/11/20 10:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00013**	**J**	0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 14:43	1

Client Sample ID: W-4
Date Collected: 12/11/20 14:00
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 14:51	1

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 14:54	1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 14:41	1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: W-2B
Date Collected: 12/11/20 10:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 14:45	1

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 14:56	1

General Chemistry

Client Sample ID: W-1
Date Collected: 12/11/20 12:50
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU			12/21/20 19:27	1
Temperature	20.3	HF	1.0	1.0	Degrees C			12/21/20 19:27	1
Chloride	740		30	10	mg/L			12/31/20 17:05	10
Fluoride	3.2	J	5.0	1.7	mg/L			12/31/20 17:05	10
Sulfate	27000		2500	520	mg/L			12/31/20 17:21	500
Total Dissolved Solids (TDS)	75000		1000	470	mg/L			12/16/20 10:40	1
Total Suspended Solids	19		4.0	1.1	mg/L			12/17/20 08:57	1

Client Sample ID: W-2B
Date Collected: 12/11/20 10:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.2	HF	0.1	0.1	SU			12/21/20 20:36	1
Temperature	20.7	HF	1.0	1.0	Degrees C			12/21/20 20:36	1
Chloride	910		30	10	mg/L			12/31/20 17:54	10
Fluoride	2.9	J	5.0	1.7	mg/L			12/31/20 17:54	10
Sulfate	63000	E	50	10	mg/L			12/31/20 17:54	10
Sulfate	68000	H	2500	520	mg/L			01/13/21 12:00	500
Total Dissolved Solids (TDS)	180000		1000	470	mg/L			12/16/20 10:40	1
Total Suspended Solids	570		10	2.8	mg/L			12/17/20 08:57	1

Client Sample ID: W-4
Date Collected: 12/11/20 14:00
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU			12/21/20 19:42	1
Temperature	19.3	HF	1.0	1.0	Degrees C			12/21/20 19:42	1
Chloride	400		60	20	mg/L			12/31/20 21:07	20
Fluoride	7.8	J	10	3.3	mg/L			12/31/20 21:07	20
Sulfate	27000		1000	210	mg/L			12/31/20 21:24	200
Total Dissolved Solids (TDS)	70000		1000	470	mg/L			12/16/20 10:40	1

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26
Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU			12/21/20 20:39	1

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry (Continued)

Client Sample ID: W-6
Date Collected: 12/11/20 13:30
Date Received: 12/14/20 09:26

Lab Sample ID: 280-143771-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature	20.4	HF	1.0	1.0	Degrees C			12/21/20 20:39	1
Chloride	150		3.0	1.0	mg/L			12/31/20 21:40	1
Fluoride	0.77		0.50	0.17	mg/L			12/31/20 21:40	1
Sulfate	3600		500	100	mg/L			12/31/20 22:13	100
Total Dissolved Solids (TDS)	6000		100	47	mg/L			12/16/20 10:40	1
Total Suspended Solids	110		4.0	1.1	mg/L			12/17/20 08:57	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-466047/1-A
Matrix: Water
Analysis Batch: 466493

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 466047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		12/18/20 14:00	12/21/20 18:57	1

Lab Sample ID: LCS 240-466047/2-A
Matrix: Water
Analysis Batch: 466493

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 466047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.01		mg/L		101	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-466047/1-A
Matrix: Water
Analysis Batch: 466815

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 466047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		12/18/20 14:00	12/23/20 12:00	1
Barium	ND		0.0050	0.0022	mg/L		12/18/20 14:00	12/23/20 12:00	1
Beryllium	ND		0.0010	0.00031	mg/L		12/18/20 14:00	12/23/20 12:00	1
Calcium	ND		1.0	0.58	mg/L		12/18/20 14:00	12/23/20 12:00	1
Cadmium	ND		0.0010	0.00020	mg/L		12/18/20 14:00	12/23/20 12:00	1
Cobalt	ND		0.0010	0.00019	mg/L		12/18/20 14:00	12/23/20 12:00	1
Chromium	ND		0.0020	0.00098	mg/L		12/18/20 14:00	12/23/20 12:00	1
Molybdenum	ND		0.010	0.0011	mg/L		12/18/20 14:00	12/23/20 12:00	1
Antimony	ND		0.0020	0.00057	mg/L		12/18/20 14:00	12/23/20 12:00	1
Lead	ND		0.0010	0.00045	mg/L		12/18/20 14:00	12/23/20 12:00	1
Selenium	ND		0.0050	0.00089	mg/L		12/18/20 14:00	12/23/20 12:00	1
Lithium	ND		0.0080	0.0017	mg/L		12/18/20 14:00	12/23/20 12:00	1
Thallium	ND		0.0010	0.00020	mg/L		12/18/20 14:00	12/23/20 12:00	1

Lab Sample ID: LCS 240-466047/3-A
Matrix: Water
Analysis Batch: 466815

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 466047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.948		mg/L		95	80 - 120
Barium	1.00	0.981		mg/L		98	80 - 120
Beryllium	0.500	0.504		mg/L		101	80 - 120
Calcium	25.0	26.0		mg/L		104	80 - 120
Cadmium	0.500	0.483		mg/L		97	80 - 120
Cobalt	0.500	0.476		mg/L		95	80 - 120
Chromium	0.500	0.494		mg/L		99	80 - 120
Molybdenum	0.500	0.496		mg/L		99	80 - 120
Antimony	0.100	0.0935		mg/L		93	80 - 120
Lead	0.500	0.496		mg/L		99	80 - 120
Selenium	1.00	0.967		mg/L		97	80 - 120
Lithium	0.500	0.454		mg/L		91	80 - 120
Thallium	1.00	0.931		mg/L		93	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-466051/1-A
Matrix: Water
Analysis Batch: 466580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 466051

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		12/18/20 12:00	12/21/20 17:31	1

Lab Sample ID: LCS 240-466051/2-A
Matrix: Water
Analysis Batch: 466580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 466051

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00556		mg/L		111	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-521468/4
Matrix: Water
Analysis Batch: 521468

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH adj. to 25 deg C	7.00	7.0		SU		101	99 - 101

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-522233/13
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	1.0	mg/L			12/30/20 22:59	1
Fluoride	ND		0.50	0.17	mg/L			12/30/20 22:59	1
Sulfate	ND		5.0	1.0	mg/L			12/30/20 22:59	1

Lab Sample ID: LCS 280-522233/11
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	99.4		mg/L		99	90 - 110
Fluoride	5.00	4.91		mg/L		98	90 - 110
Sulfate	100	97.2		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-522233/12
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	99.4		mg/L		99	90 - 110	0	10
Fluoride	5.00	4.94		mg/L		99	90 - 110	1	10
Sulfate	100	97.4		mg/L		97	90 - 110	0	10

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-522233/10
Matrix: Water
Analysis Batch: 522233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.04		mg/L		81	50 - 150
Fluoride	0.500	0.471	J	mg/L		94	50 - 150
Sulfate	5.00	4.33	J	mg/L		87	50 - 150

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-520669/1
Matrix: Water
Analysis Batch: 520669

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/16/20 10:40	1

Lab Sample ID: LCS 280-520669/2
Matrix: Water
Analysis Batch: 520669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	485		mg/L		97	93 - 110

Lab Sample ID: 280-143771-4 DU
Matrix: Water
Analysis Batch: 520669

Client Sample ID: W-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	6000		5630		mg/L		6	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-520799/1
Matrix: Water
Analysis Batch: 520799

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/17/20 08:57	1

Lab Sample ID: LCS 280-520799/2
Matrix: Water
Analysis Batch: 520799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	100		mg/L		100	79 - 114

Metals

Prep Batch: 466047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Dissolved	Water	3005A	
280-143771-1	W-1	Total Recoverable	Water	3005A	
280-143771-2	W-2B	Dissolved	Water	3005A	
280-143771-2	W-2B	Total Recoverable	Water	3005A	
280-143771-3	W-4	Total Recoverable	Water	3005A	
280-143771-4	W-6	Dissolved	Water	3005A	
280-143771-4	W-6	Total Recoverable	Water	3005A	
MB 240-466047/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-466047/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-466047/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 466051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Dissolved	Water	7470A	
280-143771-1	W-1	Total/NA	Water	7470A	
280-143771-2	W-2B	Dissolved	Water	7470A	
280-143771-2	W-2B	Total/NA	Water	7470A	
280-143771-3	W-4	Total/NA	Water	7470A	
280-143771-4	W-6	Dissolved	Water	7470A	
280-143771-4	W-6	Total/NA	Water	7470A	
MB 240-466051/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-466051/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 466493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Dissolved	Water	6010C	466047
280-143771-1	W-1	Total Recoverable	Water	6010C	466047
280-143771-2	W-2B	Dissolved	Water	6010C	466047
280-143771-2	W-2B	Total Recoverable	Water	6010C	466047
280-143771-3	W-4	Total Recoverable	Water	6010C	466047
280-143771-4	W-6	Dissolved	Water	6010C	466047
280-143771-4	W-6	Total Recoverable	Water	6010C	466047
MB 240-466047/1-A	Method Blank	Total Recoverable	Water	6010C	466047
LCS 240-466047/2-A	Lab Control Sample	Total Recoverable	Water	6010C	466047

Analysis Batch: 466580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Dissolved	Water	7470A	466051
280-143771-1	W-1	Total/NA	Water	7470A	466051
280-143771-2	W-2B	Dissolved	Water	7470A	466051
280-143771-2	W-2B	Total/NA	Water	7470A	466051
280-143771-3	W-4	Total/NA	Water	7470A	466051
280-143771-4	W-6	Dissolved	Water	7470A	466051
280-143771-4	W-6	Total/NA	Water	7470A	466051
MB 240-466051/1-A	Method Blank	Total/NA	Water	7470A	466051
LCS 240-466051/2-A	Lab Control Sample	Total/NA	Water	7470A	466051

Analysis Batch: 466815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Dissolved	Water	6020A	466047
280-143771-1	W-1	Total Recoverable	Water	6020A	466047

Metals (Continued)

Analysis Batch: 466815 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-2	W-2B	Dissolved	Water	6020A	466047
280-143771-2	W-2B	Total Recoverable	Water	6020A	466047
280-143771-3	W-4	Total Recoverable	Water	6020A	466047
280-143771-4	W-6	Dissolved	Water	6020A	466047
280-143771-4	W-6	Total Recoverable	Water	6020A	466047
MB 240-466047/1-A	Method Blank	Total Recoverable	Water	6020A	466047
LCS 240-466047/3-A	Lab Control Sample	Total Recoverable	Water	6020A	466047

General Chemistry

Analysis Batch: 520669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Total/NA	Water	SM 2540C	
280-143771-2	W-2B	Total/NA	Water	SM 2540C	
280-143771-3	W-4	Total/NA	Water	SM 2540C	
280-143771-4	W-6	Total/NA	Water	SM 2540C	
MB 280-520669/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-520669/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-143771-4 DU	W-6	Total/NA	Water	SM 2540C	

Analysis Batch: 520799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Total/NA	Water	SM 2540D	
280-143771-2	W-2B	Total/NA	Water	SM 2540D	
280-143771-4	W-6	Total/NA	Water	SM 2540D	
MB 280-520799/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-520799/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 521468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Total/NA	Water	9040B	
280-143771-2	W-2B	Total/NA	Water	9040B	
280-143771-3	W-4	Total/NA	Water	9040B	
280-143771-4	W-6	Total/NA	Water	9040B	
LCS 280-521468/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 522233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-1	W-1	Total/NA	Water	9056A	
280-143771-1	W-1	Total/NA	Water	9056A	
280-143771-2	W-2B	Total/NA	Water	9056A	
280-143771-3	W-4	Total/NA	Water	9056A	
280-143771-3	W-4	Total/NA	Water	9056A	
280-143771-4	W-6	Total/NA	Water	9056A	
280-143771-4	W-6	Total/NA	Water	9056A	
MB 280-522233/13	Method Blank	Total/NA	Water	9056A	
LCS 280-522233/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-522233/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-522233/10	Lab Control Sample	Total/NA	Water	9056A	

QC Association Summary

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

General Chemistry

Analysis Batch: 523286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-143771-2	W-2B	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1
Lab Sample ID: 280-143771-1
Date Collected: 12/11/20 12:50
Matrix: Water
Date Received: 12/14/20 09:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Dissolved	Analysis	6010C		1			466493	12/21/20 20:35	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			466493	12/21/20 20:31	WKD	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Dissolved	Analysis	6020A		10			466815	12/23/20 12:13	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		10			466815	12/23/20 12:10	DSH	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	466051	12/18/20 12:00	MRL	TAL CAN
Dissolved	Analysis	7470A		1			466580	12/21/20 14:41	SLD	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	466051	12/18/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			466580	12/21/20 14:39	SLD	TAL CAN
Total/NA	Analysis	9040B		1			521468	12/21/20 19:27	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	522233	12/31/20 17:05	JMB	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	522233	12/31/20 17:21	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	520669	12/16/20 10:40	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	520799	12/17/20 08:57	JMH	TAL DEN

Client Sample ID: W-2B
Lab Sample ID: 280-143771-2
Date Collected: 12/11/20 10:30
Matrix: Water
Date Received: 12/14/20 09:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Dissolved	Analysis	6010C		1			466493	12/21/20 20:44	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			466493	12/21/20 20:40	WKD	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Dissolved	Analysis	6020A		20			466815	12/23/20 12:18	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			466815	12/23/20 12:15	DSH	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	466051	12/18/20 12:00	MRL	TAL CAN
Dissolved	Analysis	7470A		1			466580	12/21/20 14:45	SLD	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	466051	12/18/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			466580	12/21/20 14:43	SLD	TAL CAN
Total/NA	Analysis	9040B		1			521468	12/21/20 20:36	CJ	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	522233	12/31/20 17:54	JMB	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	523286	01/13/21 12:00	CJ	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	520669	12/16/20 10:40	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	520799	12/17/20 08:57	JMH	TAL DEN

Lab Chronicle

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-4
Lab Sample ID: 280-143771-3
Date Collected: 12/11/20 14:00
Matrix: Water
Date Received: 12/14/20 09:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			466493	12/21/20 20:48	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		20			466815	12/23/20 12:20	DSH	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	466051	12/18/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			466580	12/21/20 14:51	SLD	TAL CAN
Total/NA	Analysis	9040B		1			521468	12/21/20 19:42	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	522233	12/31/20 21:07	JMB	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	522233	12/31/20 21:24	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	520669	12/16/20 10:40	JMH	TAL DEN

Client Sample ID: W-6
Lab Sample ID: 280-143771-4
Date Collected: 12/11/20 13:30
Matrix: Water
Date Received: 12/14/20 09:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Dissolved	Analysis	6010C		1			466493	12/21/20 21:06	WKD	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			466493	12/21/20 20:53	WKD	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Dissolved	Analysis	6020A		2			466815	12/23/20 13:13	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	466047	12/18/20 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		2			466815	12/23/20 13:10	DSH	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	466051	12/18/20 12:00	MRL	TAL CAN
Dissolved	Analysis	7470A		1			466580	12/21/20 14:56	SLD	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	466051	12/18/20 12:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			466580	12/21/20 14:54	SLD	TAL CAN
Total/NA	Analysis	9040B		1			521468	12/21/20 20:39	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	522233	12/31/20 21:40	JMB	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	522233	12/31/20 22:13	JMB	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	520669	12/16/20 10:40	JMH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	520799	12/17/20 08:57	JMH	TAL DEN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: HDR Inc
Job ID: 280-143771-1
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-21
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-21
Illinois	NELAP	004498	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-21
Kentucky (UST)	State	112225	02-23-21
Kentucky (WW)	State	KY98016	12-31-20
Minnesota	NELAP	OH00048	12-31-20
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-21
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-24-21
Pennsylvania	NELAP	68-00340	08-31-21
Texas	NELAP	T104704517-18-10	08-31-21
USDA	US Federal Programs	P330-18-00281	09-17-21
Virginia	NELAP	010101	09-14-21
Washington	State	C971	01-12-21
West Virginia DEP	State	210	12-31-20

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

280-143771 Chain of Custody

Client Information	Sampler: TS	Lab PM: Bandy, Darlene F	Carrier Tracking No(s):	COC No:
Client Contact: Molly Reeves	Phone: 7208386065	E-Mail: Darlene.Bandy@Eurofinset.com		Page: Page:
Company: HDR Inc				Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112				
Phone: 734-263-7138(Tel)	PO #: DEN-018			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			

Analysis Requested

Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/waste, Air, Tissue, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - Total Dissolved Solids (TDS)	6010C Boron, 6020A Appli+Hy, 7470A Hg	9056A_28D Anions (Cl, F, SO4)	2540D - Total Suspended Solids	9315, Ra226, 9320, Ra228, Ra226&Ra228 combined	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	N	N	D	X	
W-1	12/11/20	1250	G	Water	X		X	X	X	X	X	6	Filtered metals
W-2A				Water									
W-2B	12/11/20	1030	G	Water	X		X	X	X	X	X	6	Filtered metals
W-3				Water									
W-4	12/11/20	1400	G	Water									Ask PM for analysis
W-5				Water									
W-6	12/11/20	1330	G	Water	X		X	X	X	X	X	6	Filtered metals
W-7				Water									
W-8A				Water									
W-8B				Water									
MW-1				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment

	Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
1		12/14/20 0926	HDR		12/14/2020 0926	TAL Denver
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3C IR#9 CF+0.2C

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

Denver #280

eurofins | Environment Testing America

Client Information	Sampler: TS	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-102213-30342.1 #2
Client Contact: Molly Reeves	Phone: 720-838 6065	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin:	Page: Page 1 of 2
Company: HDR Inc	PWSID:	Analysis Requested		Job #:
Address: 9781 S. Meridian Blvd Suite 400	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Englewood	TAT Requested (days): ASAP			
State, Zip: CO, 80112	Compliance Project: Δ Yes Δ No			
Phone: 734-263-7138(Tel)	PO #: DEN-020			
Email: Molly.Reeves@hdrinc.com	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Colorado	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	300.0 - Alkalinity	6020A - 3 Total Metals - Mg, K, Na	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	N	D	X	
W-1	12/11/20	1250	G	Water	X	X	X	2	Filtered metals
W-2A				Water					
W-2B	12/11/20	1030	G	Water	X	X	X	2	Filtered metals
W-3				Water					
W-4	12/11/20	1400	G	Water				1	Ask PM for analysis
W-5				Water					
W-6	12/11/20	1330	G	Water	X	X	X	2	Filtered metals
W-7				Water					
W-8A				Water					
W-8B				Water					
MW-1				Water					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 12/14/20 0926	Company: HDR	Received by:	Date/Time: 12/14/20 0926	Company: TAL Denver
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 3.3C IR#9 CF+0.2C

>143771 Login
M: Harrington, Danielle M
Company: IDW Inc

Date/Time Received: 12/14/20 0926 dropoff

EST/MST PDT/PST OTHER State: CO

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR)

Temp 3.3C	IR# 9	Temp	IR#	Temp	IR#	Temp	IR#
CF +0.2C	Initials KH	CF	Initials	CF	Initials	CF	Initials
Date 12/14/20		Date		Date		Date	

Initials KH

N/A Yes No

☐ ☑ ☐ 1a. For suspected radiological coolers, is activity <100 CPM above background? (β/γ CPM) Bkg: ____ Reading: ____

☐ ☐ ☑ 1b. For all coolers, is radioactivity at or below background? (γ µR/hr) Bkg: 20 Reading: 20

☐ ☐ ☑ 2a. Is a custody seal present on the cooler?

☑ ☐ ☐ 2b. If yes, is the cooler's custody seal intact?

☐ ☑ ☐ 2c. Do cooler or samples appear to not have been compromised or tampered with?

☐ ☑ ☐ 3a. Were samples received on ice?

☐ ☑ ☐ 3b. Is cooler temperature acceptable?

☐ ☑ ☐ 3c. Has temperature been recorded?

☐ ☑ ☐ 4. Is COC present; filled out in ink and legible; and filled out with all pertinent information?

☐ ☑ ☐ 5. Is the Field Sampler's name present on the COC?

☐ ☐ ☑ 6a. Are there no discrepancies between the **sample IDs** and/or **collection date and time** on the containers and the COC? COC Containers

☐ ☑ ☐ 6b. Are there no discrepancies between the container types and those listed on the COC? W-28 1030 1050

☐ ☑ ☐ 7. Are samples received within Holding Time?

☐ ☑ ☐ 8. Do sample containers have legible labels?

☐ ☑ ☐ 9. Are all sample containers intact (not broken or leaking)?

☐ ☑ ☐ 10a. Are appropriate sample containers used? W-4 Received (1) 1L Plastic Unpreserved with ~350mL sample and comment "See PM for analysis"

☐ ☐ ☑ 10b. Are sample bottles completely filled? (Perchlorate bottles ≥ 1/3 head space)

☐ ☐ ☑ 10c. Is sufficient vol. for all requested analyses, incl. any requested MS/MSDs provided?

☐ ☑ ☐ 11. No splitting or compositing of samples required?

☑ ☐ ☐ 12. Do all VOA sample vials have no headspace or bubbles >6 mm (1/4") in diameter?

☑ ☐ ☐ 13. Were VOA vials labeled as preserved? ☐ HCl ☐ 0-6°C ☐ Sodium Thiosulfate ☐ Ascorbic Acid ☐ Other

☐ ☑ ☐ 14. Are all samples single phase? (i.e., no multiphasic samples are present.)

Initials KH

Login Checks:

☑ ☐ ☐ 15. Was a Priority Form completed for any short holds or quick TATs?

☐ ☑ ☐ 16. Were any tests logged for subcontract?

☐ ☐ ☑ 17. Were special archiving instructions and login instructions indicated in the Project Notes?

Note Archive Requirements: ____

☐ ☐ ☑ 18. Were multiple Series logged for this job?

Initials KH

Labeling and Storage Checks:

Quarantined: ☐ Yes ☑ No

pH Checks Required? ☐ Yes ☑ No Residual chlorine check required: ☐ Yes ☑ No

☑ ☐ ☐ 19. Was Sample Preservation verified and found to be correct? (excluding VOA, Oil & Grease, and TOC volumes)

☑ ☐ ☐ 20. Was Residual Chlorine checked and noted on the CUR if present?

☐ ☑ ☐ 21. If subcontract work was requested, was volume placed on sub shelf?

☑ ☐ ☐ 22. Were Terracore/Encores/CoreNOnes delivered to VOA lab?

☐ ☑ ☐ 23. Did the sample ID on TA label match the client's sample ID on container?

☑ ☐ ☐ 24. Were stickers for special archiving instructions affixed to each box?

☐ ☑ ☐ 25. Have the following been recorded on the CoC? Received By, Date, Time, Temperature, and IR Gun Used?

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

9.0189

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-550871.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #: 280-143771-3
Address: 4101 Shuffel Street NW.	Due Date Requested: 12/23/2020			
City: North Canton	TAT Requested (days):			
State, Zip: OH, 44720				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: Xcel Energy GW CCR Monitoring - Comanche	Project #: 28014376			
Site: Xcel Energy CCR - Comanche Station	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil/Waste, Air, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 3 Total Metals (w/collision cell)	6020A/FIELD_FLTRD (MOD) 3 Total Metals (w/collision cell)	Total Number of containers	Special Instructions/Note:
			Preservation Code:							5271
W-1 (280-143771-1)	12/11/20	12:50 Mountain		Water			X	X	3	Use Collision Cell
W-2B (280-143771-2)	12/11/20	10:30 Mountain		Water			X	X	3	Use Collision Cell
W-4 (280-143771-3)	12/11/20	14:00 Mountain		Water			X		1	Use Collision Cell
W-6 (280-143771-4)	12/11/20	13:30 Mountain		Water			X	X	3	Use Collision Cell

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Neil Doe	12/16/2020 1700				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Alex Ott	12/17/21 12:30	ETAL

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: Alex M

Cooler Received on 12/17/20 Opened on 12/17/20

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # _____ Foam Box ~~Client Cooler~~ Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam ~~Plastic Bag~~ None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice ~~Water~~ ~~None~~

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-11 (CF +0.9 °C) Observed Cooler Temp. 8.0 °C Corrected Cooler Temp. 8.9 °C

IR GUN #IR-12 (CF +0.5°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	(No)
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	(Y)	(N)
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	(Yes)	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC907861
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⇐ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-143771-1

Login Number: 143771
List Number: 1
Creator: Petunin, Peter

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Refer to Job Narrative for details.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Method requires headspace.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	