



2021 Annual Groundwater Monitoring and Corrective Action Report and Semi- Annual Remedy Selection and Design Progress Report

for Compliance with the Coal Combustion
Residuals (CCR) Rule

Valmont Station

Public Service Company of Colorado

January 31, 2022



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Table of Abbreviations and Acronyms

Abbreviation	Definition
BTV	background threshold value
CCR	coal combustion residuals
COI	constituent of interest
EPA	Environmental Protection Agency
LCL	lower confidence limit
LCS	laboratory control samples
MS/MSD	matrix spike/duplicate
PSCo	Public Service Company of Colorado
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
UCL	upper confidence limit

Certification

2021 Groundwater Monitoring Annual Report for Valmont 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, 2023

31-JAN-2022



Summary of 40 CFR Section § 257.90(e)(6) Groundwater Monitoring System Requirements and Site-Specific Compliance at Valmont 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:		Landfill Status	Former Bottom Ash Impoundments Status	Former Settling Pond Status
§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.	Assessment Monitoring Program and Evaluation of Potential Remedies	Assessment Monitoring Program and Evaluation of Potential Remedies	Assessment 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.	Assessment Monitoring Program and Evaluation of Potential Remedies	Assessment Monitoring Program and Evaluation of Potential Remedies	Clean Closure Criteria Met Groundwater Sampling Complete*
§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):	Yes	Yes	Yes
§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. These SSIs are from the original triggering event.	• MW-1 - calcium, chloride • MW-3 - boron, calcium, sulfate, TDS • MW-4 - calcium, chloride, fluoride, pH, sulfate, TDS • MW-6 - calcium, chloride, TDS • MW-8 - calcium, chloride, sulfate, TDS	• MW-9 – boron, fluoride, sulfate, TDS • MW-10 (since abandoned) - boron, fluoride, sulfate, TDS • MW-11 - boron, fluoride, pH, sulfate, TDS • MW-12 - boron, calcium, pH, TDS	• MW-19B – boron, chloride
§257.90(e)(6)(iii)(B)	Provide the date when the assessment monitoring program was initiated for the CCR unit.	February 21-29, 2018	February 22-23, 2018	July 22, 2019
§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:	Yes	Yes	No
§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.	• MW-1 – molybdenum • MW-4 – lithium, molybdenum, • MW-8 – lithium • MW-13 - lithium, selenium • MW-14 – lithium, selenium • MW-15 – selenium • MW-16 – selenium • MW-21 – lithium, selenium • MW-25B – molybdenum • MW-28 – arsenic, lithium, selenium	• MW-11 – cobalt	N/A
§257.90(e)(6)(iv)(B)	Provide the date when the assessment of corrective measures was initiated for the CCR unit.	January 7, 2019	January 7, 2019	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.	Will be held 30 days prior to remedy selection	Will be held 30 days prior to remedy selection	N/A



§257.90(e)(6)(iv)(D)	<i>Provide the date when the assessment of corrective measures was completed for the CCR unit.</i>	June 6, 2019	June 6, 2019	N/A
§257.90(e)(6)(v)	<i>Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection.</i>	Evaluation of potential remedies ongoing	Evaluation of potential remedies ongoing	N/A
§257.90(e)(6)(vi)	<i>(vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.</i>	Evaluation of potential remedies ongoing	Source removal complete in September 2018 Evaluation of potential remedies ongoing	N/A

*Groundwater results are below groundwater protection standards. Final clean closure report will be published in early 2022.

1.0 Introduction

The U.S. Environmental Protection Agency's (EPA) final Coal Combustion Residuals (CCR) Rule establishes a comprehensive set of requirements for the management and disposal of CCR (or coal ash) in landfills and surface impoundments by electric utilities. Valmont Station, located in Boulder County, Colorado (**Figure 1**), is owned and operated by Public Service Company of Colorado (PSCo), an Xcel Energy Company. Valmont Station has four CCR units subject to the CCR Rule: the ash landfill, two former incised bottom ash impoundments, and a former ash settling pond (**Figure 2**). The Settling Pond was excavated in 2017 and both bottom ash impoundments were excavated in 2018; each were physically closed by removal of CCR, with ongoing groundwater monitoring.

In 2021, groundwater monitoring was conducted at Valmont to collect assessment monitoring samples at the landfill, former Bottom Ash Impoundments, and former Settling Pond as specified under Part 257.95. This Annual Groundwater Monitoring Report presents the sampling and analysis completed in 2021:

- The status of the groundwater monitoring program for the landfill at the end of 2021 is assessment monitoring, and evaluation of potential remedies.
- The status of the groundwater monitoring program for the (closed) Bottom Ash Impoundments at the end of 2021 is assessment monitoring, and evaluation of potential remedies.
- The status of the groundwater monitoring program for the (closed) Settling Pond at the end of 2021 is assessment monitoring.

2.0 Facility Description

Valmont Station was a coal-fired, steam turbine electric generating station that burned sub-bituminous, low-sulfur coal supplied by several mines in western Colorado. Valmont Station was retired from operations on September 30, 2017. During the active operations, two incised bottom ash impoundments (3A and 3B) were used for temporary storage of bottom ash prior to final disposition. Fly ash was dry handled and trucked either off site for beneficial use, or to the on-site ash landfill. The landfill is located adjacent to and north of Leggett Reservoir, and the former impoundments are to the southeast of Leggett Reservoir (**Figure 2**). During operations, the impoundments were periodically dredged, and the bottom ash disposed in the on-site landfill. Both ash impoundments were physically closed by final removal of all CCR, which was completed in September 2018; completion of CCR removal was certified by a Professional Engineer. The CCR waste removed during closure was disposed in the on-site landfill. The landfill is expected to be used for disposal of non-CCR waste beginning in 2023.

The former Settling Pond is located on the west side of Leggett Reservoir and was constructed in 1973 with a PVC liner (**Figure 2**). It was used for bottom ash settling from 1973 to 1980. The pond ceased receiving CCR prior to October 19, 2015 and therefore met the definition of

Inactive CCR Surface Impoundments that first became subject to the groundwater monitoring requirements under the Direct Final Rule effective October 4, 2016 (Extension Rule). The pond was physically closed by removal of all CCR and liner material, which was completed in July 2017; completion of CCR removal was certified by a Professional Engineer. After the April-May 2021 sampling event, the groundwater monitoring program conducted at the Settling Pond met the requirement for verification that groundwater monitoring concentrations do not exceed the GWPS established pursuant to 257.95(h) for constituents listed in the CCR Rule Appendix IV. Therefore, the Settling Pond meets the closure requirements of 40 CFR 257.102(c), completing the closure for the Settling Pond and groundwater sampling is no longer required. The final clean closure certification report will be published in early 2022.

The operation and monitoring of all the CCR units are described further in the Valmont Station Groundwater Monitoring System Certification (HDR, 2021).

2.1 Hydrogeology

2.1.1 Landfill

The ash landfill at Valmont Station is located on the flanks of Valmont Butte on weathered shale above the claystone consolidated bedrock Pierre Shale. The Pierre Shale is a claystone with interbeds of siltstone and discontinuous cemented layers of bedrock that is approximately 2,000 feet thick in this area. The thickness of weathered bedrock under the ash fill and over the bedrock varies from 5 to 15 feet. Due to the Pierre Shale thickness and low permeability, underlying formations do not receive significant recharge from above (Kumar and Associates, Inc., 2011). There is perched water beneath the landfill and coincident with the top of the Pierre Shale and the water surface of Leggett Reservoir. The shallow groundwater flow beneath the landfill follows the topography and is generally to the south-southeast in the eastern portion of the landfill, to the northeast in the northeastern portion of the landfill, and to the southwest under the western portion of the landfill (**Figure 2**), as compared with the regional, deeper water table that flows to the northwest (APEX, 2008; Xcel, 2009).

2.1.2 Impoundments

The groundwater levels in monitor wells around former impoundments 3A and 3B coincide with the fluctuation of the water levels in Leggett Reservoir. The reservoir and the groundwater surface around the impoundments are perched above the Pierre Shale.

2.1.3 Settling Pond

The former Settling Pond is located immediately west of the Leggett Reservoir embankment on alluvial sands and silts above weathered shale and the Pierre Shale. The groundwater levels in monitor wells around the Settling Pond indicate the shallow groundwater flow is generally to the northwest. Further hydrogeologic characterization of the site is provided in the Valmont Station Groundwater Monitoring System Certification (HDR, 2021).

2.2 Monitoring Well Network

2.2.1 Landfill

A total of 18 monitoring wells are in the landfill certified monitoring network for CCR compliance: two upgradient monitoring wells (MW-7 and MW-5) and 14 downgradient monitoring wells (MW-1, MW-3, MW-4, MW-6, MW-8, MW-13, MW-14, MW-15, MW-16, MW-21, MW-25B, MW-26, MW-27, and MW-28) (**Figure 2**). In addition, two existing wells (MW-2 and MW-24) are monitored for water levels only (**Figure 2**). The network is described in detail in the Groundwater Monitoring System Certification report (HDR, 2021).

Eight new landfill monitoring wells were installed in September 2021: MW-29, MW-30, MW-31, MW-32, MW-33A, MW-33B, MW-34, and MW-35. Wells MW-29 through MW-33B are located outside of Valmont's property boundary on the adjacent Valmont Butte property owned by the City of Boulder. PSCo notified the City of Boulder in 2021 of the findings that groundwater had the potential to be transporting contaminants under the City of Boulder property from the northeast area of the landfill. Wells on the Valmont Butte property were installed to help characterize offsite movement of constituents of concern (those constituents that exceed groundwater protection standards (GPS)), particularly to the north from the landfill. Wells MW-34 and MW-35 are located within the PSCo property boundary and were also installed to assess movement of constituents of concern and groundwater flow direction off the landfill. MW-33B and MW-34 are screened in consolidated shale and have groundwater elevations 10 to 40 feet deeper than the wells screened in weathered shale; therefore, these two wells may not be monitoring the same groundwater.

Groundwater flow is to the northeast in the northeastern portion of the landfill, flow is to the south-southeast within the southeastern portion of the facility and to the south-southwest at the western portion of the facility. Generally, groundwater flow is from the topographic high ridge area at the northwestern portion of the landfill and flows radially out towards topographic lows and towards Leggett Reservoir. Well locations MW-7 and MW-5 on the northwest side of the landfill are located upgradient of the landfill and serve as the background wells. Wells MW-1, MW-3, MW-4, MW-6, MW-14, and MW-15 monitor downgradient water quality along the southern waste boundary. Wells MW-13, MW-21, MW-27, and MW-28 monitor downgradient water quality along the waste boundary and the northeast property boundary. Wells MW-8, MW-16, MW-25B and MW-26 are located along the western property boundary to monitor for potential offsite movement of constituents of interest. Wells MW-2 and MW-24 are included in the monitoring network for water level measurement only in order to improve potentiometric surface mapping.

2.2.2 Impoundments

Four wells are in the monitoring network for CCR compliance of the (closed) bottom ash impoundments. The flow of groundwater in the immediate vicinity of the former impoundments (3A and 3B) appears to be controlled by the water level in Leggett Reservoir. Therefore, three wells (MW-9, MW-11, MW-12) comprising a multi-unit monitoring network for the two impoundments are located along the perimeter of the impoundments to serve as downgradient

wells (**Figure 2**). The well MW-1P was selected to serve as the background well based upon its location approximately 300 feet south of the impoundments and separation from the impoundments by Leggett Reservoir, as described in the Groundwater Monitoring System Certification report (HDR, 2021).

No wells associated with the former ash impoundment monitoring network were installed or abandoned in 2021.

2.2.3 Settling Pond

Four wells (MW-17, MW-18, MW-19B, MW-20) located around the perimeter of the (closed) Settling Pond comprise the certified monitoring network (**Figure 2**). The east side of the former pond is constrained by the Leggett reservoir embankment; thus, the four wells were sited around the other three sides of the pond to capture upgradient and downgradient conditions at the pond. The groundwater flow direction is towards the northwest; therefore MW-20 is the upgradient well that represents background water quality for the CCR unit.

No wells associated with the former Settling Pond monitoring network were installed or abandoned in 2021.

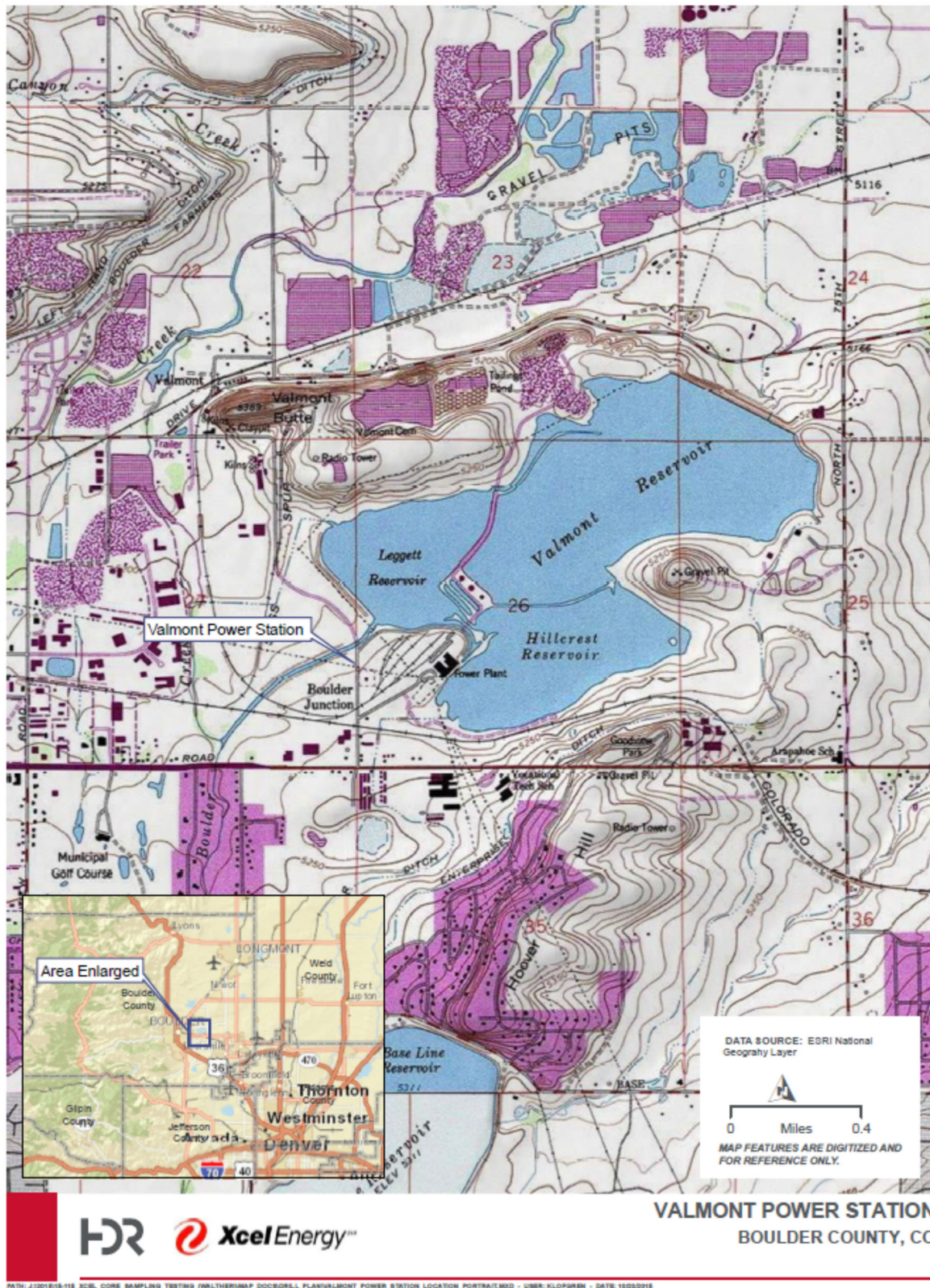


Figure 1. Vicinity map for Valmont Station.

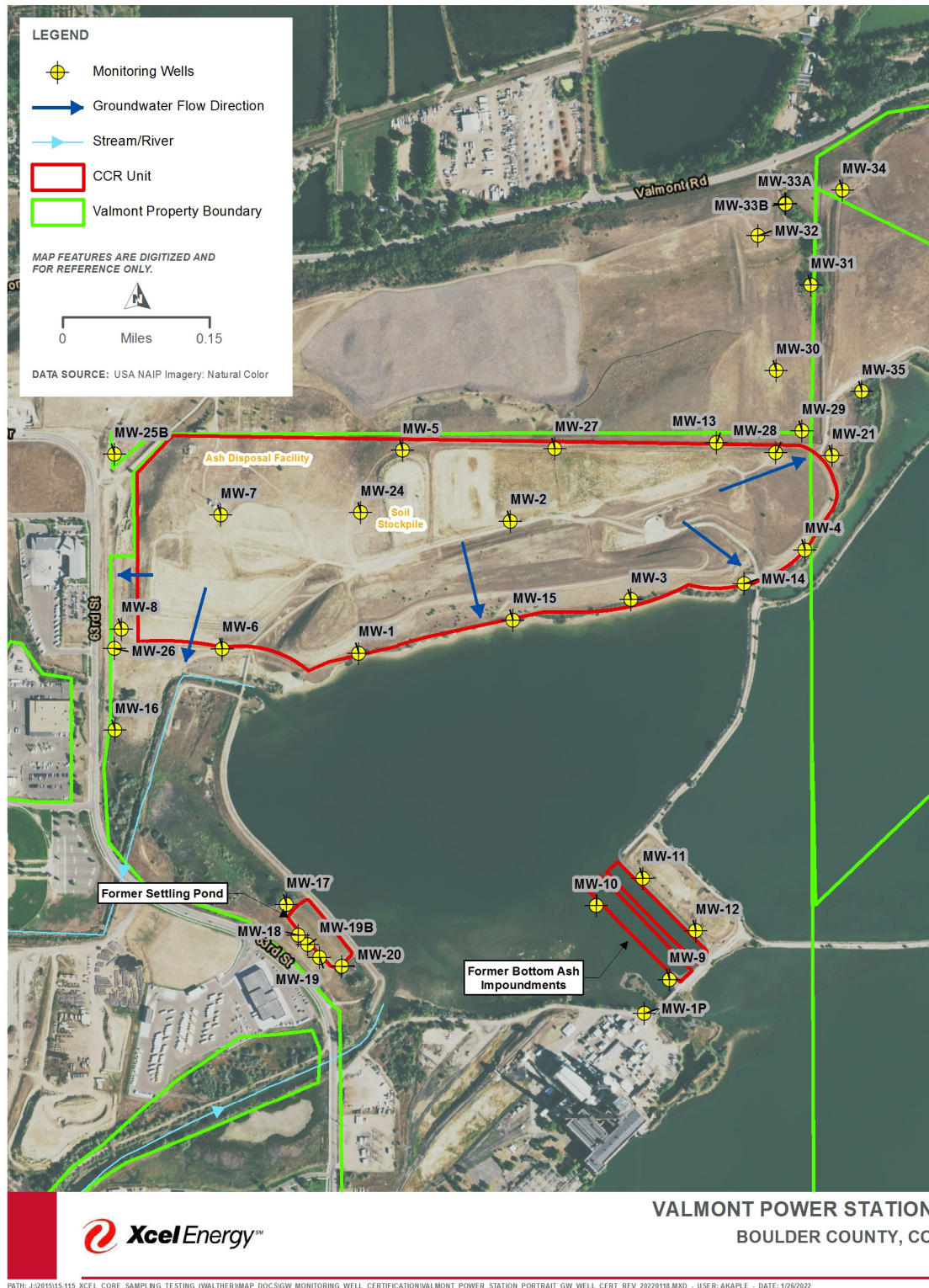


Figure 2. Valmont Station – CCR units and monitoring well location map.

3.0 Monitoring

3.1 Frequency

3.1.1 Landfill

Assessment monitoring continued in 2021 for the landfill. An annual assessment monitoring event was completed April 27 through May 14, 2021. Samples were collected from 16 monitoring wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-13, MW-14, MW-15, MW-16, MW-21, MW-25B, MW-26, MW-27, and MW-28).

On October 12-20, 2021, semi-annual assessment monitoring samples were collected from all landfill monitoring wells. Samples were collected from the certified monitoring network of wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-13, MW-14, MW-15, MW-16, MW-21, MW-25B, MW-26, MW-27, and MW-28) newly installed off-site characterization wells MW-29, MW-30, MW-31, MW-32, MW-33A, and MW-33B, and adjacent Valmont property wells MW-34 and MW-35. **Table 2** provides the well identification, number of samples collected, dates samples were collected in 2021, and the CCR Rule monitoring purpose. **Appendix A** provides the distinctions for the different types of monitoring events and the CCR Rule Part under which the monitoring event was conducted.

In addition to the monitoring well sampling described in **Table 2**, ten private wells offsite to the north of Valmont Road were sampled in December 2021 after PSCo received approvals from landowners.

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 Valmont Landfill (257.90(e)(3))

Monitoring Well I.D.	Well Location	Dates Monitored	CCR Rule Monitoring Purpose
MW-1	Downgradient	May 5, 2021	Annual Assessment Monitoring
		October 19, 2021	Semi-Annual Assessment Monitoring
MW-3	Downgradient	May 8, 2021	Annual Assessment Monitoring
		October 12, 2021	Semi-Annual Assessment Monitoring
MW-4	Downgradient	May 8, 2021	Annual Assessment Monitoring
		October 19, 2021	Semi-Annual Assessment Monitoring
MW-5	Upgradient / Background	May 13, 2021	Annual Assessment Monitoring
		October 20, 2021	Semi-Annual Assessment Monitoring
MW-6	Downgradient	May 6, 2021	Annual Assessment Monitoring
		October 19, 2021	Semi-Annual Assessment Monitoring
MW-7	Upgradient / Background	May 4, 2021	Annual Assessment Monitoring
		October 13, 2021	Semi-Annual Assessment Monitoring
MW-8	Downgradient	May 6, 2021	Annual Assessment Monitoring
		October 19, 2021	Semi-Annual Assessment Monitoring
MW-13	Downgradient	May 6, 2021	Annual Assessment Monitoring
		October 13, 2021	Semi-Annual Assessment Monitoring
		December 2, 2021	Release Characterization Assessment
MW-14	Downgradient	April 27, 2021	Annual Assessment Monitoring
		October 12, 2021	Semi-Annual Assessment Monitoring
MW-15	Downgradient	May 5, 2021	Annual Assessment Monitoring
		October 12, 2021	Semi-Annual Assessment Monitoring
MW-16	Downgradient	April 30, 2021	Annual Assessment Monitoring
		October 13, 2021	Semi-Annual Assessment Monitoring
MW-21	Downgradient	April 27, 2021	Annual Assessment Monitoring
		October 14, 2021	Semi-Annual Assessment Monitoring
		November 30, 2021	Release Characterization Assessment
MW-25B	Downgradient	May 14, 2021	Annual Assessment Monitoring
		October 15, 2021	Semi-Annual Assessment Monitoring
MW-26	Downgradient	May 5, 2021	Annual Assessment Monitoring

Table 2. Number and dates of groundwater samples collected for each well and the required monitoring programs for the Valmont Landfill (257.90(e)(3))

Monitoring Well I.D.	Well Location	Dates Monitored	CCR Rule Monitoring Purpose
		October 14, 2021	Semi-Annual Assessment Monitoring
MW-27	Downgradient	May 7, 2021	Annual Assessment Monitoring
		October 13, 2021	Semi-Annual Assessment Monitoring
		December 2, 2021	Release Characterization Assessment
MW-28	Downgradient	May 8, 2021	Annual Assessment Monitoring
		October 12, 2021	Semi-Annual Assessment Monitoring
		December 3, 2021	Release Characterization Assessment
MW-29	Downgradient	October 15, 2021	Release Characterization Assessment
		December 3, 2021	Release Characterization Assessment
MW-30*	Downgradient	October 20, 2021	Release Characterization Assessment
		November 29, 2021	Release Characterization Assessment
MW-31	Downgradient	October 18, 2021	Release Characterization Assessment
		December 1, 2021	Release Characterization Assessment
MW-32	Downgradient	October 15, 2021	Release Characterization Assessment
		December 1, 2021	Release Characterization Assessment
MW-33A	Downgradient	October 15, 2021	Release Characterization Assessment
		December 1, 2021	Release Characterization Assessment
MW-33B*	Downgradient	October 20, 2021	Release Characterization Assessment
		December 8, 2021	Release Characterization Assessment
MW-34*	Downgradient	October 20, 2021	Release Characterization Assessment
		December 8, 2021	Release Characterization Assessment
MW-35	Downgradient	October 15, 2021	Release Characterization Assessment
		December 2, 2021	Release Characterization Assessment

* Wells marked with an asterisk are completed in consolidated shale; groundwater elevations are 10-40 feet deeper than the weathered shale wells.

3.1.2 Bottom Ash Impoundments

Assessment monitoring continued in 2021 for the former bottom ash impoundments. An annual assessment monitoring event was completed April 26-May 13, 2021. Samples were collected from the monitoring network of wells (MW-1P, MW-9, MW-11, and MW-12).

During the October 13-14, 2021 semi-annual assessment monitoring event, samples were collected from the monitoring network of wells (MW-1P, MW-9, MW-11, and MW-12). **Table 3** provides the well identification, number of samples collected, dates samples were collected in

2021, and whether the sample was required by the detection monitoring or assessment monitoring programs (per (257.90(e)(3))).

Table 3. Number and dates of groundwater samples collected for each well and the required monitoring programs for the Valmont (Closed) Bottom Ash Impoundments (257.90(e)(3))			
Monitoring Well I.D.	Well Location	Dates Monitored	CCR Rule Monitoring Purpose
MW-1P	Upgradient/ Background	May 4, 2021	Annual Assessment Monitoring (Post-CCR Removal)
		October 13, 2021	Semi-Annual Assessment Monitoring (Post-CCR Removal)
MW-9	Downgradient	April 26, 2021	Annual Assessment Monitoring (Post-CCR Removal)
		October 14, 2021	Semi-Annual Assessment Monitoring (Post-CCR Removal)
MW-11	Downgradient	April 27, 2021	Annual Assessment Monitoring (Post-CCR Removal)
		October 14, 2021	Semi-Annual Assessment Monitoring (Post-CCR Removal)
MW-12	Downgradient	May 13, 2021	Annual Assessment Monitoring (Post-CCR Removal)
		October 14, 2021	Semi-Annual Assessment Monitoring (Post-CCR Removal)

3.1.3 Settling Pond

Assessment monitoring continued in 2021 for the (closed) settling pond. An annual assessment monitoring event was completed April 30, 2021 to sample all the monitoring wells around the pond for all Appendix III and IV constituents plus TSS (**Table 1**). Samples were collected from the monitoring network of wells (MW-17, MW-18, MW-19B, and MW-20). **Table 4** provides the well identification, number of samples collected, dates samples were collected in 2021, and whether the sample was required by the detection monitoring or assessment monitoring programs (per (257.90(e)(3))).

The results from the assessment monitoring conducted during the April 2021 sampling event met the closure requirements of 40 CFR 257.102(c); therefore, the Settling Pond is considered closed, and groundwater sampling is considered complete. The final clean closure certification report for the Settling Pond will be published in early 2022.

Table 4. Number and dates of groundwater samples collected in 2021 for each well and the required monitoring programs for the (closed) Valmont Settling Pond (257.90(e)(3))

Monitoring Well I.D.	Well Location	Dates Monitored	CCR Rule Monitoring Purpose
MW-17	Downgradient	April 30, 2021	Annual Assessment Monitoring (Post-CCR Removal)
MW-18	Downgradient	April 30, 2021	Annual Assessment Monitoring (Post-CCR Removal)
MW-19B	Downgradient	April 30, 2021	Annual Assessment Monitoring (Post-CCR Removal)
MW-20	Upgradient/ Background	April 30, 2021	Annual Assessment Monitoring (Post-CCR Removal)

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 submersible Geotech SS Geosub 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 Appendix III and Appendix IV COIs shown in **Appendix A** and listed in **Table 1**. Initial assessment monitoring, and subsequent annual assessment monitoring samples are analyzed for all Appendix IV COIs to determine what COIs are detected. The semi-annual assessment monitoring samples are analyzed for all Appendix III and detected Appendix IV COIs. The laboratory analyzed matrix spike/matrix spike duplicates at a rate of 5 percent, per laboratory quality control procedures.

At the landfill, release characterization wells MW-29 through MW-35 were installed in October 2021 and sampled in October and December 2021. These release characterization samples were analyzed for the three constituents of concern (COCs) that exceeded GPS in the monitoring wells in the northeastern area of the landfill (arsenic, lithium and selenium), and although not required by the CCR Rule, wells MW-29 through MW-35 were also sampled for general water quality parameters alkalinity, calcium, magnesium, potassium, sodium, sulfate, and total dissolved solids (TDS). The ten private wells north of Valmont Road were sampled in December 2021 and tested for alkalinity, calcium, chloride, lithium, magnesium, potassium, selenium, sodium, sulfate, and TDS as apart of release characterization.

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. Relative percent difference (RPD) results for field duplicate analyses were generally within the control limit criterion of 20%. Outliers were identified for metals (one instance), TSS (one instance) and radiochemistry (four instances). RPD results for lab duplicate analyses were all within the control limit criterion of 20%. Laboratory Control Sample (LCS)/LCS duplicates recoveries were generally within the control limit of 75-125%. Outliers were identified for radiochemistry (two instances). LCS/LCSD RPDs were within the 20% control limit. Matrix Spike/Duplicate (MS/MSD) recoveries were generally within the control limits. Outliers were identified for anions (seven instances). MS/MSD RPDs were generally within control limits. Outliers were identified for anions (two instances). Data analyses required minimal qualifications, and all data were usable, even when qualified.

4.0 Monitoring Results

4.1 Water Levels and Groundwater Flow Direction

4.1.1 Landfill

The water levels at monitoring wells were recorded during monitoring events and are shown in **Table 5**. The water levels and contour map (**Appendix B**) confirm that monitoring wells MW-7 and MW-5 are located upgradient of the ash landfill and are appropriate to represent background water quality. Groundwater flow under the landfill was generally to the south, southwest and west in the western portion of the landfill, and to the northeast, east, and southeast in the eastern portion of the landfill. MW-25B was dry during the April site-wide water level sweep. However, a water level measurement was made on May 14, 2021 prior to purging and sampling. Wells MW-29 through MW-35 were not installed until September of 2021.

For the October 2021 assessment monitoring date, water levels were contoured (**Appendix B**). MW-17, MW-18, MW-19B, MW-20 are a part of the Former Settling Pond that was considered clean closed before the October 2021 sample date; therefore, there are no water levels for those wells. The following wells are screened in consolidated shale and groundwater elevations are 10 to 40 feet deeper than the other monitoring wells screened in weathered shale and are therefore not included on the potentiometric map: MW-30, MW-33B, and MW-34. Based on the well development forms, it was apparent that MW-29 October 2021 water level was not static and was still recovering from well development. Therefore, on the October 2021 contour map, the November water level was used for MW-29. Similar to observations from the City of Boulder's Valmont Butte Voluntary Cleanup Plan Implementation, the water levels indicate there



is a drainage pathway between MW-29 and MW-33A. This is reflected in the October 2021 groundwater contours.

Table 5. Groundwater elevations measured in 2021					
Well ID	TOC Elevation (ft amsl)	CCR Unit	Well Location Relative to CCR Units	Groundwater Elevation (ft amsl) Week of 4/26/2021	Groundwater Elevation (ft amsl) Week of 10/11/2021
MW-1	5234.27	Landfill	Downgradient	5223.86	5223.11
MW-1P	5234.38	Bottom Ash Pond	Background/ Upgradient	5224.54 – see Note 1	5223.18
MW-2	5289.56	Landfill	Water Level Only	5261.81	5257.06
MW-3	5233.52	Landfill	Downgradient	5225.18	5224.87
MW-4	5237.21	Landfill	Downgradient	5225.63	5225.45
MW-5	5292.10	Landfill	Background/ Upgradient	5243.79	5245.18
MW-6	5235.23	Landfill	Downgradient	5214.90	5213.63
MW-7	5299.46	Landfill	Background/ Upgradient	5262.26	5267.11
MW-8	5234.97	Landfill	Downgradient	5211.12	5211.27
MW-9	5234.25	Bottom Ash Pond	Downgradient	5223.82	5223.17
MW-11	5235.22	Bottom Ash Pond	Downgradient	5223.80	5223.15
MW-12	5235.05	Bottom Ash Pond	Downgradient	5223.81	5223.15
MW-13	5282.00	Landfill	Downgradient	5225.16	5230.91
MW-14	5233.53	Landfill	Downgradient	5225.22	5224.60
MW-15	5231.90	Landfill	Downgradient	5224.37	5224.32
MW-16	5219.92	Landfill	Downgradient	5208.92	5208.15
MW-17	5227.39	Settling Pond	Downgradient	5219.42	Note 2
MW-18	5231.58	Settling Pond	Downgradient	5219.93	Note 2
MW-19	5234.35	Settling Pond	Downgradient	5220.10	Note 2
MW-19B	5232.89	Settling Pond	Downgradient	5220.33	Note 2
MW-20	5230.99	Settling Pond	Background/ Upgradient	5222.36	Note 2
MW-21	5236.21	Landfill	Downgradient	5224.65	5224.99
MW-24	5295.50	Landfill	Water Level Only	5253.20	5257.90
MW-25B	5248.56	Landfill	Downgradient	5224.16 – see note 3	5225.19
MW-26	5227.74	Landfill	Downgradient	5208.67	5208.24
MW-27	5290.37	Landfill	Downgradient	5253.64	5254.47
MW-28	5271.23	Landfill	Downgradient	5220.41	5220.41
MW-29	5237.31	Landfill	Downgradient	Installed Sept. 2021	5212.16 – see note 4
MW-30*	5231.08	Landfill	Downgradient	Installed Sept. 2021	5166.31
MW-31	5215.40	Landfill	Downgradient	Installed Sept. 2021	5203.69
MW-32	5217.05	Landfill	Downgradient	Installed Sept. 2021	5191.61
MW-33A	5199.27	Landfill	Downgradient	Installed Sept. 2021	5188.16
MW-33B*	5199.62	Landfill	Downgradient	Installed Sept. 2021	5145.32
MW-34*	5232.27	Landfill	Downgradient	Installed Sept. 2021	5172.51
MW-35	5234.11	Landfill	Downgradient	Installed Sept. 2021	5222.07

Note 1: Water level in MW-1P was measured on May 4, 2021.

Note 2: Monitoring at the former Settling Pond met groundwater protection standards/closure criteria in April 2021 and sampling of the associated wells was no longer required for October 2021.

Note 3: MW-25B was dry during the April site-wide water level sweep, and the water level was measured on May 14, 2021 prior to purging and sampling.

Note 4: The first available static water level measurement in MW-29 was taken November 2021.

* Wells marked with an asterisk are completed in consolidated shale and are included here but not on the contour maps.

4.1.2 Bottom Ash Impoundments

The flow of groundwater in the downgradient wells immediately adjacent to the impoundments (MW-9, MW-11, and MW-12) and the upgradient well MW-1P are controlled by Leggett Reservoir water level, thus the water table is relatively flat at the impoundments. Well MW-1P is also influenced by the Leggett Reservoir, but is located approximately 300 feet south of the impoundments and therefore is located upgradient or at a side gradient but is sufficient to serve as the background well for the impoundments monitoring.

4.1.3 Settling Pond

The water levels and contour map (**Appendix B**) confirm that monitoring well MW-20 is located upgradient of the (closed) Settling Pond and is appropriate to represent background water quality for that CCR unit. Groundwater flow under the Settling Pond is generally to the north-northwest.

4.2 Water Quality

4.2.1 Landfill

As stipulated in the CCR Rule, eight rounds of background groundwater sampling and the first detection monitoring sampling were completed before October 17, 2017 for the landfill. Background threshold values were calculated, and the detection monitoring results were compared to BTVs. In January 2018, a determination was made that concentrations of several Appendix III COIs statistically significant increases (SSIs) over BTVs at all five downgradient wells (MW-1, MW-3, MW-4, MW-6, and MW-8). Therefore, these SSIs triggered the assessment monitoring program for the landfill, and the first two assessment monitoring sampling events were completed in 2018. In accordance with CCR Rule 257.95(h), GPS were established for each detected Appendix IV COI, and the assessment monitoring results were compared to the respective GPS values (Error! Reference source not found.). In October 2018, downgradient wells were found to have concentrations of lithium at statistically significant levels (SSLs) above the GPS. This triggered the requirement to conduct an assessment of corrective measures for the landfill, which was completed in June 2019. An update on progress towards remedy selection is provided in Section 5.0.

Table 6. Groundwater Protection Standards for Detected Appendix IV COIs for the Landfill 257.95(d)(3)

Constituent	Unit	MCL	BTV (UTL)	GPS
Fluoride	mg/l	4.00	0.787	4.00
Arsenic	mg/l	0.0100	0.00700	0.0100
Barium	mg/l	2.00	0.110	2.00
Beryllium	mg/l	0.00400	0.000720	0.00400

Table 6. Groundwater Protection Standards for Detected Appendix IV COIs for the Landfill 257.95(d)(3)

Constituent	Unit	MCL	BTV (UTL)	GPS
Cadmium	mg/l	0.00500	0.0310	0.0310
Chromium, Total	mg/l	0.100	0.0876	0.100
Cobalt	mg/l	0.00600*	0.00795	0.00795
Lead	mg/l	0.0150*	0.0228	0.0228
Lithium	mg/l	0.0400*	0.0830	0.0830
Molybdenum	mg/l	0.100*	0.0280	0.100
Radium-226-228	pci/l	5.0^	4.55	5.0
Selenium	mg/l	0.0500	0.0203	0.0500

*EPA adopted health-based value in place of MCL.

^Colorado Water Quality Regulation

Assessment monitoring has continued, and in April-May 2021, annual assessment monitoring samples were collected from the certified monitoring well network wells; all samples were analyzed for all Appendix III and Appendix IV COIs. Laboratory reports are provided in **Appendix C**. Statistics are completed after each sample event. The April-May results are consistent with prior sample events. The results indicate that there are downgradient wells with concentration exceedances of GPS for arsenic, lithium, and selenium; and there are SSLs in downgradient wells for arsenic, lithium, and selenium (**Table 7**). Downgradient well MW-28 has concentrations of arsenic at SSLs above GPS. Downgradient wells MW-4, MW-8, MW-13, MW-14, MW-21, and MW-28 have concentrations of lithium at SSLs above GPS. Downgradient wells MW-4, MW-13, MW-14, MW-21, and MW-28 have concentrations of selenium at SSLs above GPS.

In October 2021 the semi-annual assessment monitoring samples were collected and all samples were analyzed for Appendix III and detected Appendix IV COIs. Laboratory reports are provided in **Appendix C**. The results indicate that there are downgradient wells with concentration exceedances of GPS for arsenic, cobalt, fluoride, lead, lithium, and selenium; and there are SSLs in downgradient wells for arsenic, lithium, and selenium (**Table 7**). Downgradient well MW-28 has concentrations of arsenic at SSLs above GPS. Downgradient wells MW-4, MW-8, MW-13, MW-14, MW-21, and MW-28 have concentrations of lithium at SSLs above GPS. Downgradient wells MW-4, MW-13, MW-14, MW-21, and MW-28 have concentrations of selenium at SSLs above GPS.

Table 7. Landfill LCL Exceedances of GPS

Landfill	April/May 2021			October 2021		
	Arsenic (mg/l)	Lithium (mg/l)	Selenium (mg/l)	Arsenic (mg/l)	Lithium (mg/l)	Selenium (mg/l)
GPS (mg/l)	0.01	0.083	0.05	0.01	0.083	0.05
MW-4	-	0.204	0.230	-	0.204	0.228
MW-8	-	0.111	-	-	0.112	-

Table 7. Landfill LCL Exceedances of GPS						
Landfill	April/May 2021			October 2021		
	Arsenic (mg/l)	Lithium (mg/l)	Selenium (mg/l)	Arsenic (mg/l)	Lithium (mg/l)	Selenium (mg/l)
MW-13	-	0.0940	0.250	-	0.0970	0.275
MW-14	-	0.130	1.50	-	0.137	1.47
MW-15	-	-	-	-	-	0.122
MW-21	-	0.170	1.20	-	0.170	1.20
MW-28	0.0180	0.220	2.70	0.0220	0.230	2.80

Because of the GPS exceedances in the northeastern portion of the landfill and the potential for offsite migration to the north, PSCo notified the landowner to the north (City of Boulder) and installed monitoring wells on the Valmont Butte property in 2021.

Exceedance of GPS values were observed in wells MW-29, MW-30, MW-31, MW-32, MW-33A, MW-33B, MW-34 and MW-35 for one or more of the following constituents: arsenic, cobalt, fluoride, lithium, and/or selenium. GPS exceedances were consistent between the October and December 2021 sampling events. However, additional sample events are necessary to calculate the lower confidence limits (LCLs) and determine if the concentration exceedances are statistically significant. MW-33B and MW-34 are screened in consolidated shale and have groundwater elevations 10 to 40 feet deeper than the wells screened in weathered shale; therefore, these two wells may not be monitoring the same groundwater.

Because of the GPS exceedances in the Valmont Butte offsite monitoring wells north of the landfill, and the potential for migration north of Valmont Road towards private wells, PSCo immediately notified the landowners and requested access to sample their private wells. Ten private wells offsite to the north of Valmont Road were sampled in December 2021 after PSCo received approvals from landowners. Due to homeowner privacy, the laboratory reports for these samples are not provided herein.

For the potential for offsite plume migration on the western boundary, the groundwater flow and transport model indicated in 2020 that the lithium plume had not extended beyond the PSCo property boundary. The 2021 concentrations of lithium at MW-8 were similar to or less than prior year concentrations.

4.2.2 Bottom Ash Impoundments

As stipulated in the CCR Rule, eight rounds of background groundwater sampling and the first detection monitoring sampling were completed before October 17, 2017 for the ash impoundments. Background threshold values were calculated, and the detection monitoring results were compared to BTVs. In January 2018, a determination was made that concentrations of several Appendix III COIs statistically significant increases (SSIs) over BTVs at all four downgradient wells (MW-9, MW-10, MW-11, and MW-12). Therefore, these SSIs triggered the assessment monitoring program for the impoundments, and the first two assessment monitoring sampling events were completed in 2018. In accordance with CCR Rule

257.95(h), GPS were established for each detected Appendix IV COI, and the assessment monitoring results were compared to the respective GPS values (**Table 8**). In October 2018, downgradient wells were found to have concentrations of cobalt and molybdenum at statistically significant levels (SSLs) above the GPS. This triggered the requirement to conduct an assessment of corrective measures for the impoundments, which was completed in June 2019. An update on progress towards remedy selection is provided in Section 5.0. The CCR was removed from the impoundments in September 2018, completing physical closure with ongoing groundwater monitoring.

Table 8. Groundwater Protection Standards for Detected Appendix IV COIs for the Bottom Ash Impoundments 257.95(d)(3)

Constituent	Unit	MCL	BTV (UTL)	GPS
Fluoride	mg/l	4.00	1.30	4.00
Arsenic	mg/l	0.0100	0.0107	0.0107
Barium	mg/l	2.00	0.330	2.00
Cobalt	mg/l	0.00600*	0.00530	0.00600
Lead	mg/l	0.0150*	0.00327	0.0150
Lithium	mg/l	0.0400*	0.0176	0.0400
Molybdenum	mg/l	0.100*	0.0267	0.100
Radium-226-228	pci/l	5.0^	1.07	5.0

*EPA adopted health-based value in place of MCL.

^Colorado Water Quality Regulation.

Assessment monitoring has continued, and in April-May 2021, annual assessment monitoring samples were collected from the certified monitoring well network wells; all samples were analyzed for all Appendix III and Appendix IV COIs. Laboratory reports are provided in **Appendix C**. Statistics are completed after each sample event. To determine if the impoundments are meeting clean closure criteria, downgradient well concentration 95 percent upper confidence limits (UCLs) through the April-May 2021 assessment monitoring event were compared against GPS (**Table 9**). Downgradient well MW-9, MW-11, and MW-12 had (UCL) concentrations of cobalt at SSLs above GPS. Downgradient well MW-9 also had (UCL) concentrations of lithium and molybdenum at SSLs above GPS.

In October 2021 the semi-annual assessment monitoring samples were collected and all samples were analyzed for Appendix III and detected Appendix IV COIs. Laboratory reports are provided in **Appendix C**. MW-9, MW-11, and MW-12 had (UCL) concentrations of cobalt at SSLs above GPS. Downgradient well MW-9 had concentrations of molybdenum at an SSL above GPS. The concentrations at each well are showing declining trends post CCR removal.

Table 9. Impoundment UCLs that Exceed GPS					
Impoundments	April/May 2021			October 2021	
	Cobalt (mg/l)	Lithium (mg/l)	Molybdenum (mg/l)	Cobalt (mg/l)	Molybdenum (mg/l)
GPS (mg/l)	0.00600	0.0400	0.100	0.00600	0.100
MW-9	0.0128	0.0440	0.123	0.0120	0.121
MW-11	0.0270	-	-	0.0265	-
MW-12	0.0130	-	-	0.0123	-

In 2022, PSCo will continue to monitor groundwater at the impoundments in accordance with the assessment monitoring program and consistent with 257.93(e). While the source control has been completed through removal of the CCR, PSCo will continue to evaluate whether monitored natural attenuation (MNA) is sufficient to meet clean closure criteria in groundwater or if additional measures will be needed. In accordance with 257.97, PSCo will complete semi-annual progress reporting in 2022 to document the additional work completed towards remedy selection.

4.2.3 Settling Pond

As stipulated in the CCR Rule, eight rounds of background groundwater sampling and the first detection monitoring sampling were completed by April 17, 2019 for the former Settling Pond (May 24, 2019 for replacement well MW-19B). Background threshold values were calculated, and the detection monitoring results were compared to BTVs. In July 2019, a determination was made that concentrations of several Appendix III COIs statistically significant increases (SSIs) over BTVs at one downgradient well (MW-19B). Therefore, these SSIs triggered the assessment monitoring program for the former Settling Pond, and the first two assessment monitoring sampling events were completed in 2019. In accordance with CCR Rule 257.95(h), GPS were established for each detected Appendix IV COI (**Table 10**). In 2020, there were one-time concentration exceedances of GPS, but there were no SSL over GPS. Therefore, in accordance with CCR Rule 257.95(f), assessment monitoring continued in 2021.

Table 10. Groundwater Protection Standards for Detected Appendix IV COIs for the Settling Pond 257.95(d)(3)				
Constituent	Unit	MCL	BTV (UTL)	GPS
Fluoride	mg/l	4.00	3.27	4.00
Arsenic	mg/l	0.0100	0.000750	0.0107
Barium	mg/l	2.00	0.0266	2.00
Beryllium	mg/l	0.00400	0.000310	0.0040
Chromium	mg/l	0.00600*	0.00320	0.00600
Cobalt	mg/l	0.00600*	0.000200	0.0060
Lead	mg/l	0.0150*	0.000450	0.0150
Lithium	mg/l	0.0400*	0.0429	0.0400
Molybdenum	mg/l	0.100*	0.0310	0.100
Radium-226-228	pci/l	5.0^	0.705	5.0

*EPA adopted health-based value in place of MCL.

^Colorado Water Quality Regulation.

In April 2021, annual assessment monitoring samples were collected from wells MW-17, MW-18, MW-19B, and MW-20. Samples were analyzed for all Appendix III and Appendix IV COIs. Laboratory reports for the 2021 sample event are provided in **Appendix C**. In accordance with CCR Rule 257.95(e), downgradient well concentrations from the April-May 2021 assessment monitoring event were compared against background values, and some concentrations were found to be above background values. In accordance with CCR Rule 257.95(f), detected Appendix IV COI concentrations in downgradient wells were compared against GPS and no GPS exceedances were observed. The CCR Rule 40 CFR §257.102(c) states that removal and decontamination of the CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the GPS. Since the closed Settling Pond status is in assessment monitoring but has not triggered assessment of corrective measures, in accordance with §257.102(c) post-clean-out Appendix IV groundwater concentrations were compared to GPS and concentrations are below GPS in all wells. Therefore, the CCR unit has met the requirements of §257.102(c) *Closure by Removal of CCR*, is considered clean closed and groundwater monitoring is considered complete.

5.0 Remedy Selection Progress Update

The sections below provide the semi-annual progress report describing the progress towards remedy selection and design for the landfill and the ash impoundments in accordance with 257.97(a). Semiannual progress reports will be prepared and posted to the CCR website until a remedy is selected and documented in a final report.

5.1 Landfill

As described in *Groundwater Protection Standards and Determination of SSLs per 257.95(g)*, downgradient wells at the landfill were found to have concentrations of arsenic, lithium, and selenium at SSLs above the GPS (HDR, 2019c). Therefore, PSCo completed the *Conceptual Site Model and Assessment of Corrective Measures* on June 6, 2019 in accordance with CCR Rule 257.96. A groundwater flow and transport model was developed for the Valmont Landfill in Spring 2019 to support the corrective measures assessment. The groundwater model is described in the *Conceptual Site Model and Assessment of Corrective Measures* (HDR, 2019b). The objectives of the model are to simulate whether COCs in groundwater may have migrated beyond the property boundary and then evaluate the effectiveness of potential corrective measures in meeting the requirements and objectives of the remedy in accordance with 257.97. The modeling process is iterative and as initial model results are evaluated and additional site data is collected based on model results, the model requires updating and calibration with the new data.

With the installation of 8 new monitoring wells north of the Landfill and private well water level and sampling results in 2021, the model will be updated and recalibrated to incorporate the new data. Additionally, an ash depth study was completed between July 7, 2021 to August 20, 2021

consisting of 26 borings. The purpose was to evaluate to what extent saturated conditions are present within the landfill and obtain ash pore water samples. Saturated conditions were identified in some areas, and water levels collected during this event will be incorporated into the model to better understand the relationship of saturated ash to observed groundwater conditions. Overall, the initial model calibration to measured concentrations shows a good match and is acceptable as a starting point for predictive simulations, but the additional updates are necessary in order to more accurately predict and evaluate future conditions. However, PSCo has continued to develop model simulations for corrective measure alternatives. Specifically, the model simulates the extent of the COCs in groundwater and evaluates the effectiveness of each potential corrective measure to reduce groundwater concentrations over time with the goal of selecting the best remedy or combination of measures for implementation. For each corrective measure alternative simulated, the model evaluates:

- concentrations of COCs over time, transport directions and potential for movement offsite; and
- the time required for each alternative to “complete the remedy” (per 257.96(c)(2)).

In addition to groundwater model simulations, in 2021 PSCo developed and implemented the Permeable Reactive Barrier (PRB) Feasibility Study. The study evaluates the feasibility of a PRB via conventional trench, via injection wells, and via funnel and gate. The study design included an evaluation of the geotechnical characteristics of the substrate and geochemical bench testing of reagents with site groundwater. Initial results of bench scale PRB simulations shows promising reductions in some concentrations but insufficient reductions in other COI concentrations. Additional substrate options have been identified and an additional five bench scale simulations will be conducted starting in January 2022, with anticipated results in second quarter 2022. Updated results will determine if the proposed PRB will be an effective treatment method.

Remedy evaluation and model updates will continue in 2022, including incorporating sampling data from the newly installed offsite monitoring wells and the offsite private wells. In addition, PSCo will identify locations for additional off-site release characterization monitoring wells and after obtaining access permission from private landowners as needed, will install monitoring wells north of Valmont Road to further evaluate the extent of groundwater protection standard exceedances to the north.

Also in 2021, PSCo continued to evaluate the feasibility of removing ash from the landfill for an encapsulated beneficial use, contracted with HDR to develop potential ash removal design scenarios and phasing, and initiated discussions with the state regarding permitting. In addition, PSCo has been working with a contractor to evaluate ash removal and beneficial use feasibility. A final feasibility determination is expected approximately mid-year of 2022 and if favorable, the planning and permitting process will continue and construction schedules will be developed.

PSCo continues to proceed diligently through the process of further evaluating potential remedies, consistent with best practices and professional judgment. The following activities are anticipated to be completed or initiated in the next 6-month period for the landfill, but are subject to change based upon the iterative nature of the process, uncertainty about the results of each step, and interim findings:

- Evaluation of the additional five PRB study simulations in second quarter 2022.
- Continued development of the feasibility of ash removal for beneficial use as a viable source removal corrective measure.
- Continued communication with adjacent landowner regarding off-site migration.
- Evaluate the boundary of the groundwater model and incorporate additional data from the 8 new monitoring wells and off-site private wells.
- Continue semiannual groundwater assessment monitoring.

5.2 Impoundments

As described in *Groundwater Protection Standards and Determination of SSLs per 257.95(g)*, downgradient wells at the impoundments were found to have concentrations of cobalt and molybdenum at SSLs above the GPS. In response to these SSLs, the assessment of corrective measures completed on June 6, 2019 included evaluation of corrective measures for the impoundments in accordance with CCR Rule 257.96. The assessment evaluated three corrective measures for the impoundments: CCR source removal, monitored natural attenuation (MNA), and enhanced natural attenuation. Of these three, CCR source removal has already been implemented, having been completed in September 2018. Monitored attenuation is a recognized approach for attainment of groundwater protection standards, especially where the source has been removed, provided it can meet the remedy criteria, particularly timeliness.

As discussed in the *Conceptual Site Model and Assessment of Corrective Measures*, concentrations of CCR constituents that exceeded GPS (cobalt and molybdenum) are fairly low at the monitoring wells. The former impoundments are completely surrounded by the Leggett, Valmont, and Hillcrest reservoirs, which represent a constant hydraulic head that is expected to effectively limit the extent of impacts to groundwater immediately adjacent to the impoundments. PSCo continues assessment monitoring at the former impoundments to evaluate concentration trends of these COCs and to assess if the implemented corrective measures (source removal, combined with MNA) appears to be an effective remedy. The groundwater chemistry from 2019 and 2021 has decreasing concentrations of both cobalt and molybdenum in all three downgradient wells; therefore, groundwater chemistry is expected to further improve as a result of the source removal. Specifically, MW-9 and MW-12 both have single sample event concentrations of cobalt below the GPS in 2021, and overall downward trends. The concentration of molybdenum at MW-9 maintains an overall downward trend and the most recent concentration is equal to the GPS value. At the rate of concentration decline observed, it is estimated that all Appendix IV constituent concentrations will likely be below GPS within the next few years.

The following activities are proposed to be completed in the next 6-month period:

- Continued semiannual groundwater assessment monitoring.
- Continued evaluation of COC concentrations relative to GPS and background and general trends.

6.0 Summary

The following observations are based on CCR Rule compliance monitoring data collected during the 2021 and prior sample events:

Landfill

- A total of 18 wells in the certified monitoring network were monitored as part of the landfill monitoring for CCR compliance: two upgradient monitoring wells (MW-7 and MW-5), 14 downgradient monitoring wells (MW-1, MW-3, MW-4, MW-6, MW-8, MW-13, MW-14, MW-15, MW-16, MW-21, MW-25B, MW-26, MW-27 and MW-28, and two monitoring wells for water levels only (MW-2 and MW-24).
- Eight new wells were installed in 2021 for release characterization: MW-29, MW-30, MW-31, MW-32, MW-33A, MW-33B, MW-34, and MW-35).
- Assessment monitoring data from the landfill is statistically evaluated after each event and compared to background values and GPS.
- In April/May 2021, annual assessment monitoring samples were collected from the 16 landfill monitoring wells. Downgradient wells had concentrations of arsenic, lithium, and selenium at SSLs above GPS.
- In October 2021, semi-annual assessment monitoring samples were collected from all of the landfill monitoring wells in the certified network. Downgradient wells had concentrations of arsenic, lithium, and selenium at SSLs above GPS.
- In October and December 2021, the 8 new release characterization wells were sampled and analyzed for COCs and general water quality parameters.
- In December 2021 ten private wells north of Valmont Road were sampled and tested for lithium, selenium, and general water quality parameters as apart of release characterization.
- Valmont Station landfill status at the end of 2021 is assessment monitoring and evaluation of potential remedies.

(Closed) Bottom Ash Impoundments

- CCR waste was removed from the impoundments by September 2018. Groundwater monitoring continued in 2021 to evaluate the post-clean closure/corrective measures groundwater quality.
- Four wells are in the monitoring network for CCR compliance of the (closed) bottom ash impoundments: MW-1P serves as a background monitoring well and MW-9, MW-11, and MW-12 serve as downgradient wells. No wells associated with the former ash impoundment monitoring network were installed or abandoned in 2021.
- Assessment monitoring data from the bottom ash impoundments were statistically evaluated after each event and compared to background values and GPS.

- An annual assessment monitoring event was completed April-May 2021 to sample wells around the impoundments for all Appendix III and IV constituents plus TSS. The April results indicate that there are SSLs at downgradient wells for cobalt, lithium, and molybdenum; however, there are downward concentration trends at all wells for these COCs.
- During the October 2021 semi-annual assessment monitoring event, samples were collected from all of the impoundment monitoring wells for Appendix III and detected Appendix IV COIs plus TSS. Results in October 2021 show concentrations of cobalt, lithium, and molybdenum at SSLs above GPS with continued decreasing concentration trends. Valmont Station ash impoundments status at the end of 2021 is assessment monitoring to evaluate: 1) if clean closure criteria in groundwater have been met, 2) if the data trends indicates that MNA in addition to the previously completed source removal will be an effective remedy (concentration trends are decreasing), or 3) if additional evaluation of enhanced MNA is warranted.

(Closed) Settling Pond

- CCR waste was removed from the Settling Pond by July 21, 2017.
- Four wells (MW-17, MW-18, MW-19B, MW-20) located around the perimeter of the (closed) Settling Pond comprise the monitoring network. MW-20 serves as the background monitoring well and MW-17, MW-18, and MW-19B serve as downgradient wells. No wells were installed or abandoned in 2021.
- Assessment monitoring continued in 2021 for the (closed) Settling Pond. An annual assessment monitoring event was completed in April-May 2021 to sample the monitoring wells around the pond for all Appendix III and IV constituents plus TSS. There were no GPS exceedances during this event.
- In accordance with §257.102(c) post-clean-out Appendix IV groundwater concentrations were compared to GPS and concentrations are below GPS in all wells; therefore, the CCR unit is considered clean closed and will not require further groundwater sampling.
- Valmont Station Settling Pond status at the end of 2021 is closed. The CCR unit has met the requirements of §257.102(c) *Closure by Removal of CCR*, and groundwater monitoring is considered complete. The final clean closure certification report will be published in early 2022.

7.0 References

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HDR, 2015. Groundwater Sample Collection Standard Operating Procedure. October 28, 2015.

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HDR, 2019b. Conceptual Site Model and Assessment of Corrective Measures - Compliance with the Coal Combustion Residuals Rule Valmont Station. June 6, 2019.

HDR, 2019c. Groundwater Protection Standards and Determination of SSLs per 257.95(g). June 7, 2019.

HDR, 2021. Groundwater Monitoring Network Certification, Valmont Station. February 2021.

HDR, 2021. CCR Impoundment Closure Certification. January 13, 2022.

Xcel Energy, 2009. Valmont Station Coal Ash Disposal Facility Design and Operations Plan. January 2009.

Appendix A
Monitoring types to comply with specific
CCR Rule requirements

Monitoring types to comply with specific CCR Rule requirements			
Type of Monitoring	Description	CCR Rule Reference	Constituents Analyzed
Background Monitoring	Development of background water quality conditions for Appendix III and Appendix IV COIs	257.94(b)	Appendix III and IV and TSS
Detection Monitoring	Semi-annual detection monitoring for Appendix III COIs	257.94(c)	Appendix III
Assessment Monitoring	Detailed types below.	257.95	Detailed types below.
➤ Initial Assessment	Determining detected Appendix IV COIs	257.95(b)	Appendix IV
➤ Semi-Annual Assessment	Semi-annual assessment monitoring for Appendix III and detected Appendix IV COIs	257.95(d)	Appendix III and detected Appendix IV plus TSS
➤ Annual Assessment	Determining detected Appendix IV COIs on an annual basis. Starting in 2019 this will also count as the semi-annual sample event.	257.95(b)	Appendix III and all Appendix IV plus TSS
➤ Release Characterization Assessment	Occurs after detection of SSL above the GPS for the purpose of characterizing the nature and extent of the release.	257.95(g)(1)(iv)	Appendix III and detected Appendix IV plus TSS
➤ Corrective Action Assessment	Occurs after a facility has initiated corrective action. This is an PSCo designation (not in the Rule) added to Assessment Monitoring to differentiate that the samples were collected after the corrective action has been implemented.	N/A	Appendix III and detected Appendix IV plus TSS
Post-CCR Removal Monitoring	Occurs after the facility has been physically closed (e.g. all CCR waste removed from the impoundment). This is an PSCo designation added to other types of monitoring (e.g. Background Monitoring or Detection Monitoring).	N/A	Appendix III and/or Appendix IV as applicable plus TSS
Closure Confirmation Monitoring	Occurs after the facility has been closed (e.g. all CCR waste removed from the impoundment) in compliance with CCR Rule for certification of Clean Closure.	257.102	Appendix IV

Appendix B

Potentiometric Surface Maps



VALMONT POWER STATION
BOULDER COUNTY, CO



VALMONT POWER STATION
BOULDER COUNTY, CO

Appendix C

Laboratory Reports

ANALYTICAL REPORT

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

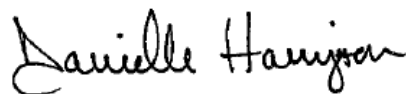
Laboratory Job ID: 280-148140-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
6/16/2021 11:48:12 AM

Danielle Harrington, Project Manager II
(303)736-0176

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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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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.
F2	MS/MSD RPD 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.

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Job ID: 280-148140-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-148140-1

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 05/03/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.7° C, 2.0° C and 2.0° C.

TOTAL RECOVERABLE METALS- METHOD 6010C/6020A/7470A

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

GENERAL CHEMISTRY- VARIOUS

Several samples required to be prepped and/or analyzed at dilution for various methods. The reporting limits have been adjusted accordingly.

The analysis for Total Dissolved Solids Method 2540C for sample MW-9 was performed outside of hold due to more than half of the hold time expiring during transit. It is Eurofins TestAmerica's policy to analyze all samples within holding time, but when samples are received with less than half the hold time remaining, this cannot be guaranteed. Please note that the sample results should be considered estimated.

The analysis for Total Suspended Solids Method 2540D for all of the samples were performed outside of the prescribed hold time due to client request for analysis after hold time expiration. Please note that the sample results should be considered estimated.

MS/MSD analyses were performed on sample MW-18. The MS/MSD for Chloride and 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.

MS/MSD analyses were performed on sample MW-14. The MS/MSD for Sulfate and 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.

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

RADIUM-226 (GFPC)- METHOD 9315

Insufficient sample volume was available to perform a sample duplicate (DUP). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Job ID: 280-148140-1 (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-228- METHOD 9320

Radium-228 was detected in method blank MB 160-509265/23-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.

The radium-228 laboratory control sample and laboratory control sample duplicate (LCS/LCSD) associated with the following samples recovered at 74% in batch 160-509265: (LCS 160-509265/1-A) and (LCSD 160-509265/2-A). The limits in our LIMS system at (75-125%) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (61-138%) per method requirements. The LCS is within criteria and no further action is required.

The laboratory control sample (LCS) associated with the following samples recovered at 133% in batch 160-513943: MW-17, (160-42206-C-1-A) and (160-42206-B-1-B DU). The limits in our LIMS system at (75-125%) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (61-138%) per method requirements. The LCS is within criteria and no further action is required.

Insufficient sample volume was available to perform a sample duplicate (DUP). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

The Ba carrier recovery (9%) is outside the lower control limit (40%) for the laboratory control sample (LCS) associated with the following samples: MW-17 (280-148140-5), (160-42206-C-1-A) and (160-42206-B-1-B DU). Insufficient sample was available for re-analysis; therefore, the data have been reported.

During the in-growth process, the following samples needed to be filtered due to sediment present in the sample: MW-17. This is an indicator of matrix interference.

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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-11

Lab Sample ID: 280-148140-1

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	0.0037	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.084		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	160		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.013		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.014		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.017		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	73		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.7		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	490		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	17	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	1500		20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-18

Lab Sample ID: 280-148140-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.34		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0019	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	34		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00019	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	0.019		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.033		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	21.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	24	F2 F1	3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.9	F2 F1	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	240		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	15	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	760		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-19B

Lab Sample ID: 280-148140-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.0		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.00091	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-19B (Continued)

Lab Sample ID: 280-148140-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.068		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	45		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00039	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	0.058		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.017		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.017		0.0080	0.0017	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	21.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	73		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.9		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	250		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	730		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-21

Lab Sample ID: 280-148140-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.3		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0079		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.013		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	430		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00044	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0048	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	0.18		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	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	420		60	20	mg/L	20		9056A	Total/NA
Fluoride	0.69		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3100		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	1.2	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4900		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-17

Lab Sample ID: 280-148140-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.39		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.11		0.0050	0.0022	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-17 (Continued)

Lab Sample ID: 280-148140-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	52		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00043	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0066	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.0091		0.0080	0.0017	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	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	61		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.96		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	150		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	2.8	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	530		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-17D

Lab Sample ID: 280-148140-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.44		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.12		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	59		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00049	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0072	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.0091		0.0080	0.0017	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	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	61		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.96		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	150		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	1.6	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	500		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-16

Lab Sample ID: 280-148140-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.57		0.10	0.023	mg/L	1		6010C	Total Recoverable
Antimony	0.0019	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0015	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.041		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	44		1.0	0.58	mg/L	1		6020A	Total Recoverable
Molybdenum	0.031		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.047		0.0080	0.0017	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-16 (Continued)

Lab Sample ID: 280-148140-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	8.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	69		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.1		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	190		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	8.0	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	730		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-20

Lab Sample ID: 280-148140-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.39		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.021		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	38		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00028	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.023		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.029		0.0080	0.0017	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	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	68		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	2.8		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	210		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	29	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	710		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-14

Lab Sample ID: 280-148140-9

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
Arsenic	0.016		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.020		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	430		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00072	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0022		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0020	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	1.6		0.0050	0.00089	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	7.7	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	210		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.62	F1	0.50	0.17	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-14 (Continued)

Lab Sample ID: 280-148140-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	3100	F1	100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	7.6	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4700		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 280-148140-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	10		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.035		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	110		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0052		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.083		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.030		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	21.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	76		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.9		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	450		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	1300	H	20	9.4	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM2540 C	Total Dissolved Solids	SM18	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"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

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: 280-148140-1

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-148140-1	MW-11	Water	04/27/21 09:30	05/03/21 14:56	
280-148140-2	MW-18	Water	04/30/21 12:20	05/03/21 14:56	
280-148140-3	MW-19B	Water	04/30/21 09:30	05/03/21 14:56	
280-148140-4	MW-21	Water	04/27/21 11:50	05/03/21 14:56	
280-148140-5	MW-17	Water	04/30/21 13:50	05/03/21 14:56	
280-148140-6	MW-17D	Water	04/30/21 13:55	05/03/21 14:56	
280-148140-7	MW-16	Water	04/30/21 15:25	05/03/21 14:56	
280-148140-8	MW-20	Water	04/30/21 11:45	05/03/21 14:56	
280-148140-9	MW-14	Water	04/27/21 10:40	05/03/21 14:56	
280-148140-10	MW-9	Water	04/26/21 16:05	05/03/21 14:56	

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Client Sample ID: MW-11
Date Collected: 04/27/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 16:37	1

Client Sample ID: MW-18
Date Collected: 04/30/21 12:20
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.34		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 16:41	1

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.0		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 16:46	1

Client Sample ID: MW-21
Date Collected: 04/27/21 11:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.3		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 16:50	1

Client Sample ID: MW-17
Date Collected: 04/30/21 13:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.39		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 16:54	1

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.44		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 16:59	1

Client Sample ID: MW-16
Date Collected: 04/30/21 15:25
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.57		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 17:03	1

Client Sample ID: MW-20
Date Collected: 04/30/21 11:45
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.39		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 17:07	1

Client Sample ID: MW-14
Date Collected: 04/27/21 10:40
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.6		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 17:11	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 17:24	1

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

Client Sample ID: MW-11
Date Collected: 04/27/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 14:55	1
Arsenic	0.0037	J	0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 14:55	1
Barium	0.084		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 14:55	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 14:55	1
Calcium	160		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 14:55	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 14:55	1
Cobalt	0.013		0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 14:55	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 14:55	1
Molybdenum	0.014		0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 14:55	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 14:55	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 14:55	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 14:55	1
Lithium	0.017		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 14:55	1

Client Sample ID: MW-18
Date Collected: 04/30/21 12:20
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:03	1
Arsenic	0.0019	J	0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:03	1
Barium	0.029		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:03	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:03	1
Calcium	34		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:03	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:03	1
Cobalt	0.00019	J	0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:03	1
Chromium	0.0011	J	0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:03	1
Molybdenum	0.019		0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:03	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:03	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:03	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:03	1
Lithium	0.033		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:03	1

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:05	1
Arsenic	0.00091	J	0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:05	1
Barium	0.068		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:05	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:05	1
Calcium	45		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:05	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:05	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.00039	J	0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:05	1
Chromium	0.0011	J	0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:05	1
Molybdenum	0.058		0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:05	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:05	1
Selenium	0.017		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:05	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:05	1
Lithium	0.017		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:05	1

Client Sample ID: MW-21
Date Collected: 04/27/21 11:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:08	1
Arsenic	0.0079		0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:08	1
Barium	0.013		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:08	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:08	1
Calcium	430		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:08	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:08	1
Cobalt	0.00044	J	0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:08	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:08	1
Molybdenum	0.0048	J	0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:08	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:08	1
Selenium	1.1		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:08	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:08	1
Lithium	0.18		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:08	1

Client Sample ID: MW-17
Date Collected: 04/30/21 13:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:10	1
Arsenic	ND		0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:10	1
Barium	0.11		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:10	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:10	1
Calcium	52		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:10	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:10	1
Cobalt	0.00043	J	0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:10	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:10	1
Molybdenum	0.0066	J	0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:10	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:10	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:10	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:10	1
Lithium	0.0091		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:10	1

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:13	1
Arsenic	ND		0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:13	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.12		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:13	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:13	1
Calcium	59		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:13	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:13	1
Cobalt	0.00049	J	0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:13	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:13	1
Molybdenum	0.0072	J	0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:13	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:13	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:13	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:13	1
Lithium	0.0091		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:13	1

Client Sample ID: MW-16
Date Collected: 04/30/21 15:25
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0019	J	0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:15	1
Arsenic	0.0015	J	0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:15	1
Barium	0.041		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:15	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:15	1
Calcium	44		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:15	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:15	1
Cobalt	ND		0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:15	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:15	1
Molybdenum	0.031		0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:15	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:15	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:15	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:15	1
Lithium	0.047		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:15	1

Client Sample ID: MW-20
Date Collected: 04/30/21 11:45
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:18	1
Arsenic	ND		0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:18	1
Barium	0.021		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:18	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:18	1
Calcium	38		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:18	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:18	1
Cobalt	0.00028	J	0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:18	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:18	1
Molybdenum	0.023		0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:18	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:18	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:18	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:18	1
Lithium	0.029		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:18	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Client Sample ID: MW-14
Date Collected: 04/27/21 10:40
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:20	1
Arsenic	0.016		0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:20	1
Barium	0.020		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:20	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:20	1
Calcium	430		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:20	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:20	1
Cobalt	0.00072	J	0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:20	1
Chromium	0.0022		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:20	1
Molybdenum	0.0020	J	0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:20	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:20	1
Selenium	1.6		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:20	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:20	1
Lithium	0.15		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:20	1

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 15:23	1
Arsenic	ND		0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 15:23	1
Barium	0.035		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 15:23	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 15:23	1
Calcium	110		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 15:23	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:23	1
Cobalt	0.0052		0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 15:23	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 15:23	1
Molybdenum	0.083		0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 15:23	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 15:23	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 15:23	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 15:23	1
Lithium	0.030		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 15:23	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-11
Date Collected: 04/27/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 13:55	1

Client Sample ID: MW-18
Date Collected: 04/30/21 12:20
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 13:57	1

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 13:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-21
Date Collected: 04/27/21 11:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 14:01	1

Client Sample ID: MW-17
Date Collected: 04/30/21 13:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 14:03	1

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 14:05	1

Client Sample ID: MW-16
Date Collected: 04/30/21 15:25
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 14:11	1

Client Sample ID: MW-20
Date Collected: 04/30/21 11:45
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 14:13	1

Client Sample ID: MW-14
Date Collected: 04/27/21 10:40
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 14:15	1

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 14:17	1

General Chemistry

Client Sample ID: MW-11
Date Collected: 04/27/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1
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			05/04/21 16:29	1
Temperature	21.2	HF	1.0	1.0	Degrees C			05/04/21 16:29	1
Chloride	73		3.0	1.0	mg/L			05/24/21 19:06	1
Fluoride	1.7		0.50	0.17	mg/L			05/24/21 19:06	1
Sulfate	490		25	5.2	mg/L			05/24/21 19:20	5
Total Suspended Solids	17	H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	1500		20	9.4	mg/L			05/04/21 16:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

General Chemistry

Client Sample ID: MW-18
Date Collected: 04/30/21 12:20
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2
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			05/04/21 16:33	1
Temperature	21.5	HF	1.0	1.0	Degrees C			05/04/21 16:33	1
Chloride	24	F2 F1	3.0	1.0	mg/L			05/24/21 19:34	1
Fluoride	1.9	F2 F1	0.50	0.17	mg/L			05/24/21 19:34	1
Sulfate	240		25	5.2	mg/L			05/24/21 20:58	5
Total Suspended Solids	15	H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	760		10	4.7	mg/L			05/07/21 14:03	1

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
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			05/04/21 16:37	1
Temperature	21.1	HF	1.0	1.0	Degrees C			05/04/21 16:37	1
Chloride	73		3.0	1.0	mg/L			05/24/21 21:54	1
Fluoride	1.9		0.50	0.17	mg/L			05/24/21 21:54	1
Sulfate	250		25	5.2	mg/L			05/24/21 22:08	5
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	730		10	4.7	mg/L			05/07/21 14:03	1

Client Sample ID: MW-21
Date Collected: 04/27/21 11:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-4
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			05/04/21 16:41	1
Temperature	20.9	HF	1.0	1.0	Degrees C			05/04/21 16:41	1
Chloride	420		60	20	mg/L			05/24/21 22:36	20
Fluoride	0.69		0.50	0.17	mg/L			05/24/21 22:22	1
Sulfate	3100		100	21	mg/L			05/24/21 22:36	20
Total Suspended Solids	1.2	J H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	4900		40	19	mg/L			05/04/21 16:38	1

Client Sample ID: MW-17
Date Collected: 04/30/21 13:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5
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			05/04/21 16:44	1
Temperature	20.9	HF	1.0	1.0	Degrees C			05/04/21 16:44	1
Chloride	61		3.0	1.0	mg/L			05/24/21 22:50	1
Fluoride	0.96		0.50	0.17	mg/L			05/24/21 22:50	1
Sulfate	150		5.0	1.0	mg/L			05/24/21 22:50	1
Total Suspended Solids	2.8	J H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	530		10	4.7	mg/L			05/07/21 14:03	1

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
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			05/04/21 16:48	1
Temperature	21.0	HF	1.0	1.0	Degrees C			05/04/21 16:48	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

General Chemistry (Continued)

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	61		3.0	1.0	mg/L			05/24/21 23:46	1
Fluoride	0.96		0.50	0.17	mg/L			05/24/21 23:46	1
Sulfate	150		5.0	1.0	mg/L			05/24/21 23:46	1
Total Suspended Solids	1.6	J H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	500		10	4.7	mg/L			05/07/21 14:02	1

Client Sample ID: MW-16
Date Collected: 04/30/21 15:25
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7
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			05/04/21 16:52	1
Temperature	21.1	HF	1.0	1.0	Degrees C			05/04/21 16:52	1
Chloride	69		3.0	1.0	mg/L			05/25/21 00:14	1
Fluoride	1.1		0.50	0.17	mg/L			05/25/21 00:14	1
Sulfate	190		5.0	1.0	mg/L			05/25/21 00:14	1
Total Suspended Solids	8.0	H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	730		10	4.7	mg/L			05/07/21 14:03	1

Client Sample ID: MW-20
Date Collected: 04/30/21 11:45
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8
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			05/04/21 16:56	1
Temperature	21.3	HF	1.0	1.0	Degrees C			05/04/21 16:56	1
Chloride	68		3.0	1.0	mg/L			05/25/21 00:42	1
Fluoride	2.8		0.50	0.17	mg/L			05/25/21 00:42	1
Sulfate	210		25	5.2	mg/L			05/25/21 00:56	5
Total Suspended Solids	29	H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	710		10	4.7	mg/L			05/07/21 14:03	1

Client Sample ID: MW-14
Date Collected: 04/27/21 10:40
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9
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			05/04/21 16:59	1
Temperature	21.7	HF	1.0	1.0	Degrees C			05/04/21 16:59	1
Chloride	210		30	10	mg/L			05/25/21 02:34	10
Fluoride	0.62	F1	0.50	0.17	mg/L			05/25/21 01:10	1
Sulfate	3100	F1	100	21	mg/L			05/25/21 19:11	20
Total Suspended Solids	7.6	H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	4700		40	19	mg/L			05/04/21 16:38	1

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
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			05/04/21 17:26	1
Temperature	21.6	HF	1.0	1.0	Degrees C			05/04/21 17:26	1
Chloride	76		3.0	1.0	mg/L			05/24/21 18:38	1
Fluoride	1.9		0.50	0.17	mg/L			05/24/21 18:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

General Chemistry (Continued)

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	450		25	5.2	mg/L			05/24/21 18:52	5
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	1300	H	20	9.4	mg/L			05/04/21 16:38	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-11
Date Collected: 04/27/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.627		0.184	0.192	1.00	0.153	pCi/L	05/11/21 15:19	06/02/21 20:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	63.4		40 - 110					05/11/21 15:19	06/02/21 20:18	1

Client Sample ID: MW-18
Date Collected: 04/30/21 12:20
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.124	U	0.112	0.113	1.00	0.171	pCi/L	05/11/21 15:19	06/02/21 20:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.8		40 - 110					05/11/21 15:19	06/02/21 20:20	1

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0763	U	0.0994	0.0997	1.00	0.166	pCi/L	05/11/21 15:19	06/02/21 20:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.6		40 - 110					05/11/21 15:19	06/02/21 20:20	1

Client Sample ID: MW-21
Date Collected: 04/27/21 11:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.289		0.127	0.129	1.00	0.151	pCi/L	05/11/21 15:19	06/02/21 20:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					05/11/21 15:19	06/02/21 20:21	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-17
Date Collected: 04/30/21 13:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.295		0.136	0.139	1.00	0.160	pCi/L	05/11/21 15:19	06/02/21 20:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.8		40 - 110					05/11/21 15:19	06/02/21 20:21	1

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.209		0.111	0.112	1.00	0.136	pCi/L	05/11/21 15:19	06/02/21 20:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.7		40 - 110					05/11/21 15:19	06/02/21 20:21	1

Client Sample ID: MW-16
Date Collected: 04/30/21 15:25
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.213		0.123	0.125	1.00	0.162	pCi/L	05/11/21 15:19	06/02/21 20:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.9		40 - 110					05/11/21 15:19	06/02/21 20:21	1

Client Sample ID: MW-20
Date Collected: 04/30/21 11:45
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.111	U	0.104	0.104	1.00	0.160	pCi/L	05/11/21 15:19	06/02/21 20:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.6		40 - 110					05/11/21 15:19	06/02/21 20:21	1

Client Sample ID: MW-14
Date Collected: 04/27/21 10:40
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.441		0.210	0.213	1.00	0.248	pCi/L	05/12/21 13:58	06/03/21 07:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.2		40 - 110					05/12/21 13:58	06/03/21 07:37	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.178		0.105	0.106	1.00	0.136	pCi/L	05/11/21 15:19	06/02/21 20:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.6		40 - 110					05/11/21 15:19	06/02/21 20:22	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-11
Date Collected: 04/27/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.611	U	0.414	0.418	1.00	0.641	pCi/L	05/11/21 16:11	05/28/21 10:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	63.4		40 - 110					05/11/21 16:11	05/28/21 10:10	1
Y Carrier	75.1		40 - 110					05/11/21 16:11	05/28/21 10:10	1

Client Sample ID: MW-18
Date Collected: 04/30/21 12:20
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0964	U	0.364	0.364	1.00	0.635	pCi/L	05/11/21 16:11	05/28/21 10:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.8		40 - 110					05/11/21 16:11	05/28/21 10:11	1
Y Carrier	80.4		40 - 110					05/11/21 16:11	05/28/21 10:11	1

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0272	U	0.287	0.287	1.00	0.523	pCi/L	05/11/21 16:11	05/28/21 10:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.6		40 - 110					05/11/21 16:11	05/28/21 10:11	1
Y Carrier	78.9		40 - 110					05/11/21 16:11	05/28/21 10:11	1

Client Sample ID: MW-21
Date Collected: 04/27/21 11:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.456		0.281	0.284	1.00	0.426	pCi/L	05/11/21 16:11	05/28/21 10:11	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 9320 - Radium-228 (GFPC)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110	05/11/21 16:11	05/28/21 10:11	1
Y Carrier	80.4		40 - 110	05/11/21 16:11	05/28/21 10:11	1

Client Sample ID: MW-17
Date Collected: 04/30/21 13:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.866		0.308	0.318	1.00	0.414	pCi/L	06/02/21 08:56	06/11/21 09:52	1
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Ba Carrier	85.0		40 - 110	06/02/21 08:56	06/11/21 09:52	1				
Y Carrier	87.5		40 - 110	06/02/21 08:56	06/11/21 09:52	1				

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00288	U	0.256	0.256	1.00	0.464	pCi/L	05/11/21 16:11	05/28/21 10:13	1
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Ba Carrier	75.7		40 - 110	05/11/21 16:11	05/28/21 10:13	1				
Y Carrier	80.4		40 - 110	05/11/21 16:11	05/28/21 10:13	1				

Client Sample ID: MW-16
Date Collected: 04/30/21 15:25
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.158	U	0.338	0.339	1.00	0.582	pCi/L	05/11/21 16:11	05/28/21 10:14	1
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Ba Carrier	70.9		40 - 110	05/11/21 16:11	05/28/21 10:14	1				
Y Carrier	69.9		40 - 110	05/11/21 16:11	05/28/21 10:14	1				

Client Sample ID: MW-20
Date Collected: 04/30/21 11:45
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.245	U	0.361	0.361	1.00	0.605	pCi/L	05/11/21 16:11	05/28/21 10:14	1
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Ba Carrier	67.6		40 - 110	05/11/21 16:11	05/28/21 10:14	1				
Y Carrier	74.0		40 - 110	05/11/21 16:11	05/28/21 10:14	1				

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-14
Date Collected: 04/27/21 10:40
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.578		0.325	0.330	1.00	0.485	pCi/L	05/12/21 14:38	06/01/21 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.2		40 - 110					05/12/21 14:38	06/01/21 13:21	1
Y Carrier	88.2		40 - 110					05/12/21 14:38	06/01/21 13:21	1

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.469	U	0.342	0.345	1.00	0.537	pCi/L	05/11/21 16:11	05/28/21 10:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.6		40 - 110					05/11/21 16:11	05/28/21 10:15	1
Y Carrier	77.0		40 - 110					05/11/21 16:11	05/28/21 10:15	1

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

Client Sample ID: MW-11
Date Collected: 04/27/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.24		0.453	0.460	5.00	0.641	pCi/L		06/03/21 21:18	1

Client Sample ID: MW-18
Date Collected: 04/30/21 12:20
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.220	U	0.381	0.381	5.00	0.635	pCi/L		06/03/21 21:18	1

Client Sample ID: MW-19B
Date Collected: 04/30/21 09:30
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0491	U	0.304	0.304	5.00	0.523	pCi/L		06/03/21 21:18	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Client Sample ID: MW-21
Date Collected: 04/27/21 11:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.745		0.308	0.312	5.00	0.426	pCi/L		06/03/21 21:18	1

Client Sample ID: MW-17
Date Collected: 04/30/21 13:50
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.16		0.337	0.347	5.00	0.414	pCi/L		06/03/21 21:18	1

Client Sample ID: MW-17D
Date Collected: 04/30/21 13:55
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.212	U	0.279	0.279	5.00	0.464	pCi/L		06/03/21 21:18	1

Client Sample ID: MW-16
Date Collected: 04/30/21 15:25
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.371	U	0.360	0.361	5.00	0.582	pCi/L		06/03/21 21:18	1

Client Sample ID: MW-20
Date Collected: 04/30/21 11:45
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.356	U	0.376	0.376	5.00	0.605	pCi/L		06/03/21 21:18	1

Client Sample ID: MW-14
Date Collected: 04/27/21 10:40
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.02		0.387	0.393	5.00	0.485	pCi/L		06/03/21 21:24	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Client Sample ID: MW-9
Date Collected: 04/26/21 16:05
Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.647		0.358	0.361	5.00	0.537	pCi/L		06/03/21 21:18	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-484895/1-A
Matrix: Water
Analysis Batch: 485293

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 484895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		05/10/21 14:00	05/11/21 15:52	1

Lab Sample ID: LCS 240-484895/2-A
Matrix: Water
Analysis Batch: 485293

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 484895

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 240-484895/1-A
Matrix: Water
Analysis Batch: 485304

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 484895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/10/21 14:00	05/11/21 14:14	1
Arsenic	ND		0.0050	0.00075	mg/L		05/10/21 14:00	05/11/21 14:14	1
Barium	ND		0.0050	0.0022	mg/L		05/10/21 14:00	05/11/21 14:14	1
Beryllium	ND		0.0010	0.00031	mg/L		05/10/21 14:00	05/11/21 14:14	1
Calcium	ND		1.0	0.58	mg/L		05/10/21 14:00	05/11/21 14:14	1
Cadmium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 14:14	1
Cobalt	ND		0.0010	0.00019	mg/L		05/10/21 14:00	05/11/21 14:14	1
Chromium	ND		0.0020	0.00098	mg/L		05/10/21 14:00	05/11/21 14:14	1
Molybdenum	ND		0.010	0.0011	mg/L		05/10/21 14:00	05/11/21 14:14	1
Lead	ND		0.0010	0.00045	mg/L		05/10/21 14:00	05/11/21 14:14	1
Selenium	ND		0.0050	0.00089	mg/L		05/10/21 14:00	05/11/21 14:14	1
Thallium	ND		0.0010	0.00020	mg/L		05/10/21 14:00	05/11/21 14:14	1
Lithium	ND		0.0080	0.0017	mg/L		05/10/21 14:00	05/11/21 14:14	1

Lab Sample ID: LCS 240-484895/3-A
Matrix: Water
Analysis Batch: 485304

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 484895

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0969		mg/L		97	80 - 120
Arsenic	1.00	0.889		mg/L		89	80 - 120
Barium	1.00	0.914		mg/L		91	80 - 120
Beryllium	0.500	0.459		mg/L		92	80 - 120
Calcium	25.0	23.0		mg/L		92	80 - 120
Cadmium	0.500	0.473		mg/L		95	80 - 120
Cobalt	0.500	0.464		mg/L		93	80 - 120
Chromium	0.500	0.484		mg/L		97	80 - 120
Molybdenum	0.500	0.457		mg/L		91	80 - 120
Lead	0.500	0.491		mg/L		98	80 - 120
Selenium	1.00	0.880		mg/L		88	80 - 120
Thallium	1.00	0.954		mg/L		95	80 - 120
Lithium	0.500	0.466		mg/L		93	80 - 120

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-484896/1-A
Matrix: Water
Analysis Batch: 485326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484896

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/10/21 14:00	05/11/21 13:23	1

Lab Sample ID: LCS 240-484896/2-A
Matrix: Water
Analysis Batch: 485326

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.11		ug/L		102	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-534895/30
Matrix: Water
Analysis Batch: 534895

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: LCS 280-534895/56
Matrix: Water
Analysis Batch: 534895

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: 280-148140-10 DU
Matrix: Water
Analysis Batch: 534895

Client Sample ID: MW-9
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	7.7		SU		0.4	5
Temperature	21.6	HF	21.7		Degrees C		0.6	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-537278/6
Matrix: Water
Analysis Batch: 537278

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			05/24/21 17:42	1
Fluoride	ND		0.50	0.17	mg/L			05/24/21 17:42	1
Sulfate	ND		5.0	1.0	mg/L			05/24/21 17:42	1

Lab Sample ID: LCS 280-537278/4
Matrix: Water
Analysis Batch: 537278

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

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Lab Sample ID: LCS 280-537278/4

Matrix: Water

Analysis Batch: 537278

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	5.01		mg/L		100	90 - 110
Sulfate	100	100		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-537278/5

Matrix: Water

Analysis Batch: 537278

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	4.99		mg/L		100	90 - 110	0	10
Sulfate	100	100		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-537278/3

Matrix: Water

Analysis Batch: 537278

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	5.09		mg/L		102	50 - 150
Fluoride	0.500	0.562		mg/L		112	50 - 150
Sulfate	5.00	5.05		mg/L		101	50 - 150

Lab Sample ID: 280-148140-2 MS

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	24	F2 F1	50.0	85.3	F1	mg/L		123	80 - 120
Fluoride	1.9	F2 F1	5.00	6.59		mg/L		94	80 - 120

Lab Sample ID: 280-148140-2 MS

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	240		250	500		mg/L		105	80 - 120

Lab Sample ID: 280-148140-2 MSD

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	24	F2 F1	50.0	54.0	F2 F1	mg/L		61	80 - 120	45	20
Fluoride	1.9	F2 F1	5.00	4.28	F2 F1	mg/L		47	80 - 120	43	20

Lab Sample ID: 280-148140-2 MSD

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	240		250	495		mg/L		103	80 - 120	1	20

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Lab Sample ID: 280-148140-9 MS

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.62	F1	5.00	5.18		mg/L		91	80 - 120

Lab Sample ID: 280-148140-9 MS

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	210		500	731		mg/L		104	80 - 120

Lab Sample ID: 280-148140-9 MSD

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.62	F1	5.00	4.33	F1	mg/L		74	80 - 120	18	20

Lab Sample ID: 280-148140-9 MSD

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	210		500	761		mg/L		110	80 - 120	4	20

Lab Sample ID: 280-148140-2 DU

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	24	F2 F1	23.8		mg/L		0.1	15
Fluoride	1.9	F2 F1	1.92		mg/L		0.5	15

Lab Sample ID: 280-148140-2 DU

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	240		233		mg/L		2	15

Lab Sample ID: 280-148140-9 DU

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.62	F1	0.587		mg/L		5	15

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Lab Sample ID: 280-148140-9 DU

Matrix: Water

Analysis Batch: 537278

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	210		206		mg/L		3	15

Lab Sample ID: MB 280-537407/6

Matrix: Water

Analysis Batch: 537407

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			05/25/21 16:52	1

Lab Sample ID: LCS 280-537407/4

Matrix: Water

Analysis Batch: 537407

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	98.8		mg/L		99	90 - 110

Lab Sample ID: LCSD 280-537407/5

Matrix: Water

Analysis Batch: 537407

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	98.6		mg/L		99	90 - 110	0	10

Lab Sample ID: MRL 280-537407/3

Matrix: Water

Analysis Batch: 537407

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: 280-148140-9 MS

Matrix: Water

Analysis Batch: 537407

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	3100	F1	1000	3930		mg/L		83	80 - 120

Lab Sample ID: 280-148140-9 MSD

Matrix: Water

Analysis Batch: 537407

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	3100	F1	1000	3850	F1	mg/L		75	80 - 120	2	20

Lab Sample ID: 280-148140-9 DU

Matrix: Water

Analysis Batch: 537407

Client Sample ID: MW-14

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	3100	F1	3020		mg/L		3	15

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Lab Sample ID: MB 280-536493/1
Matrix: Water
Analysis Batch: 536493

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			05/18/21 09:31	1

Lab Sample ID: LCS 280-536493/2
Matrix: Water
Analysis Batch: 536493

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	85.6		mg/L		86	79 - 114

Lab Sample ID: 280-148140-1 DU
Matrix: Water
Analysis Batch: 536493

Client Sample ID: MW-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	17	H	16.4		mg/L		5	10

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: MB 280-534888/1
Matrix: Water
Analysis Batch: 534888

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			05/04/21 16:38	1

Lab Sample ID: LCS 280-534888/2
Matrix: Water
Analysis Batch: 534888

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	528		mg/L		105	88 - 114

Lab Sample ID: MB 280-535365/1
Matrix: Water
Analysis Batch: 535365

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			05/07/21 14:02	1

Lab Sample ID: LCS 280-535365/2
Matrix: Water
Analysis Batch: 535365

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	529		mg/L		106	88 - 114

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: SM2540 C - Total Dissolved Solids (Continued)

Lab Sample ID: 280-148140-6 DU
Matrix: Water
Analysis Batch: 535365

Client Sample ID: MW-17D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	500		512		mg/L		2	10

Lab Sample ID: MB 280-535366/1
Matrix: Water
Analysis Batch: 535366

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			05/07/21 14:03	1

Lab Sample ID: LCS 280-535366/2
Matrix: Water
Analysis Batch: 535366

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	521		mg/L		104	88 - 114

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-509259/23-A
Matrix: Water
Analysis Batch: 512429

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 509259

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03527	U	0.102	0.102	1.00	0.191	pCi/L	05/11/21 15:19	06/02/21 20:22	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	55.0		40 - 110	05/11/21 15:19	06/02/21 20:22	1

Lab Sample ID: LCS 160-509259/1-A
Matrix: Water
Analysis Batch: 512453

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509259

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.3	10.45		1.15	1.00	0.147	pCi/L	92	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	74.5		40 - 110

Lab Sample ID: LCSD 160-509259/2-A
Matrix: Water
Analysis Batch: 512453

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 509259

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.3	11.65		1.25	1.00	0.146	pCi/L	103	75 - 125	0.50	1

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Lab Sample ID: LCSD 160-509259/2-A
Matrix: Water
Analysis Batch: 512453

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 509259

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	78.7		40 - 110

Lab Sample ID: MB 160-509356/24-A
Matrix: Water
Analysis Batch: 512601

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 509356

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.09182	U	0.126	0.126	1.00	0.213	pCi/L	05/12/21 13:58	06/03/21 07:43	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110					05/12/21 13:58	06/03/21 07:43	1

Lab Sample ID: LCS 160-509356/1-A
Matrix: Water
Analysis Batch: 512655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509356

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.3	12.11		1.38	1.00	0.215	pCi/L	107	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	80.5		40 - 110						

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-509265/23-A
Matrix: Water
Analysis Batch: 512212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 509265

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7171		0.442	0.447	1.00	0.672	pCi/L	05/11/21 16:11	05/28/21 10:16	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	55.0		40 - 110					05/11/21 16:11	05/28/21 10:16	1
Y Carrier	80.0		40 - 110					05/11/21 16:11	05/28/21 10:16	1

Lab Sample ID: LCS 160-509265/1-A
Matrix: Water
Analysis Batch: 512204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509265

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.68	7.124		0.975	1.00	0.524	pCi/L	74	75 - 125

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Lab Sample ID: LCS 160-509265/1-A
Matrix: Water
Analysis Batch: 512204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509265

LCS LCS			
Carrier	%Yield	Qualifier	Limits
Ba Carrier	74.5		40 - 110
Y Carrier	75.1		40 - 110

Lab Sample ID: LCSD 160-509265/2-A
Matrix: Water
Analysis Batch: 512204

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 509265

Total												
Analyte	Spike Added	LCSD Result	LCSD Qual	Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit	
Radium-228	9.68	7.152		0.955	1.00	0.459	pCi/L	74	75 - 125	0.01	1	

LCSD LCSD			
Carrier	%Yield	Qualifier	Limits
Ba Carrier	78.7		40 - 110
Y Carrier	76.6		40 - 110

Lab Sample ID: MB 160-509365/24-A
Matrix: Water
Analysis Batch: 512418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 509365

Count											
Analyte	MB Result	MB Qualifier	Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac	
Radium-228	-0.1657	U	0.240	0.240	1.00	0.465	pCi/L	05/12/21 14:38	06/01/21 13:19	1	

MB MB						
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110	05/12/21 14:38	06/01/21 13:19	1
Y Carrier	87.1		40 - 110	05/12/21 14:38	06/01/21 13:19	1

Lab Sample ID: LCS 160-509365/1-A
Matrix: Water
Analysis Batch: 512417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509365

Total												
Analyte	Spike Added	LCS Result	LCS Qual	Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits			
Radium-228	9.67	8.961		1.10	1.00	0.434	pCi/L	93	75 - 125			

LCS LCS			
Carrier	%Yield	Qualifier	Limits
Ba Carrier	80.5		40 - 110
Y Carrier	89.0		40 - 110

Lab Sample ID: MB 160-512445/22-A
Matrix: Water
Analysis Batch: 513784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 512445

Count											
Analyte	MB Result	MB Qualifier	Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac	
Radium-228	-0.1047	U	0.267	0.267	1.00	0.498	pCi/L	06/02/21 08:56	06/11/21 09:57	1	

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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

Lab Sample ID: MB 160-512445/22-A
Matrix: Water
Analysis Batch: 513784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 512445

	MB	MB	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	76.6		40 - 110
Y Carrier	86.7		40 - 110

Prepared	Analyzed	Dil Fac
06/02/21 08:56	06/11/21 09:57	1
06/02/21 08:56	06/11/21 09:57	1

Lab Sample ID: LCS 160-512445/1-A
Matrix: Water
Analysis Batch: 513943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 512445

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.64	12.82	*	3.52	1.00	4.09	pCi/L	133	75 - 125

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	9.35	X	40 - 110
Y Carrier	86.0		40 - 110

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Metals

Prep Batch: 484895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total Recoverable	Water	3005A	
280-148140-2	MW-18	Total Recoverable	Water	3005A	
280-148140-3	MW-19B	Total Recoverable	Water	3005A	
280-148140-4	MW-21	Total Recoverable	Water	3005A	
280-148140-5	MW-17	Total Recoverable	Water	3005A	
280-148140-6	MW-17D	Total Recoverable	Water	3005A	
280-148140-7	MW-16	Total Recoverable	Water	3005A	
280-148140-8	MW-20	Total Recoverable	Water	3005A	
280-148140-9	MW-14	Total Recoverable	Water	3005A	
280-148140-10	MW-9	Total Recoverable	Water	3005A	
MB 240-484895/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-484895/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-484895/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 484896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	7470A	
280-148140-2	MW-18	Total/NA	Water	7470A	
280-148140-3	MW-19B	Total/NA	Water	7470A	
280-148140-4	MW-21	Total/NA	Water	7470A	
280-148140-5	MW-17	Total/NA	Water	7470A	
280-148140-6	MW-17D	Total/NA	Water	7470A	
280-148140-7	MW-16	Total/NA	Water	7470A	
280-148140-8	MW-20	Total/NA	Water	7470A	
280-148140-9	MW-14	Total/NA	Water	7470A	
280-148140-10	MW-9	Total/NA	Water	7470A	
MB 240-484896/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-484896/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 485293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total Recoverable	Water	6010C	484895
280-148140-2	MW-18	Total Recoverable	Water	6010C	484895
280-148140-3	MW-19B	Total Recoverable	Water	6010C	484895
280-148140-4	MW-21	Total Recoverable	Water	6010C	484895
280-148140-5	MW-17	Total Recoverable	Water	6010C	484895
280-148140-6	MW-17D	Total Recoverable	Water	6010C	484895
280-148140-7	MW-16	Total Recoverable	Water	6010C	484895
280-148140-8	MW-20	Total Recoverable	Water	6010C	484895
280-148140-9	MW-14	Total Recoverable	Water	6010C	484895
280-148140-10	MW-9	Total Recoverable	Water	6010C	484895
MB 240-484895/1-A	Method Blank	Total Recoverable	Water	6010C	484895
LCS 240-484895/2-A	Lab Control Sample	Total Recoverable	Water	6010C	484895

Analysis Batch: 485304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total Recoverable	Water	6020A	484895
280-148140-2	MW-18	Total Recoverable	Water	6020A	484895
280-148140-3	MW-19B	Total Recoverable	Water	6020A	484895
280-148140-4	MW-21	Total Recoverable	Water	6020A	484895
280-148140-5	MW-17	Total Recoverable	Water	6020A	484895

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Metals (Continued)

Analysis Batch: 485304 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-6	MW-17D	Total Recoverable	Water	6020A	484895
280-148140-7	MW-16	Total Recoverable	Water	6020A	484895
280-148140-8	MW-20	Total Recoverable	Water	6020A	484895
280-148140-9	MW-14	Total Recoverable	Water	6020A	484895
280-148140-10	MW-9	Total Recoverable	Water	6020A	484895
MB 240-484895/1-A	Method Blank	Total Recoverable	Water	6020A	484895
LCS 240-484895/3-A	Lab Control Sample	Total Recoverable	Water	6020A	484895

Analysis Batch: 485326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	7470A	484896
280-148140-2	MW-18	Total/NA	Water	7470A	484896
280-148140-3	MW-19B	Total/NA	Water	7470A	484896
280-148140-4	MW-21	Total/NA	Water	7470A	484896
280-148140-5	MW-17	Total/NA	Water	7470A	484896
280-148140-6	MW-17D	Total/NA	Water	7470A	484896
280-148140-7	MW-16	Total/NA	Water	7470A	484896
280-148140-8	MW-20	Total/NA	Water	7470A	484896
280-148140-9	MW-14	Total/NA	Water	7470A	484896
280-148140-10	MW-9	Total/NA	Water	7470A	484896
MB 240-484896/1-A	Method Blank	Total/NA	Water	7470A	484896
LCS 240-484896/2-A	Lab Control Sample	Total/NA	Water	7470A	484896

General Chemistry

Analysis Batch: 534888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	SM2540 C	
280-148140-4	MW-21	Total/NA	Water	SM2540 C	
280-148140-9	MW-14	Total/NA	Water	SM2540 C	
280-148140-10	MW-9	Total/NA	Water	SM2540 C	
MB 280-534888/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-534888/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 534895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	9040B	
280-148140-2	MW-18	Total/NA	Water	9040B	
280-148140-3	MW-19B	Total/NA	Water	9040B	
280-148140-4	MW-21	Total/NA	Water	9040B	
280-148140-5	MW-17	Total/NA	Water	9040B	
280-148140-6	MW-17D	Total/NA	Water	9040B	
280-148140-7	MW-16	Total/NA	Water	9040B	
280-148140-8	MW-20	Total/NA	Water	9040B	
280-148140-9	MW-14	Total/NA	Water	9040B	
280-148140-10	MW-9	Total/NA	Water	9040B	
LCS 280-534895/30	Lab Control Sample	Total/NA	Water	9040B	
LCS 280-534895/56	Lab Control Sample	Total/NA	Water	9040B	
280-148140-10 DU	MW-9	Total/NA	Water	9040B	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

General Chemistry

Analysis Batch: 535365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-6	MW-17D	Total/NA	Water	SM2540 C	
MB 280-535365/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-535365/2	Lab Control Sample	Total/NA	Water	SM2540 C	
280-148140-6 DU	MW-17D	Total/NA	Water	SM2540 C	

Analysis Batch: 535366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-2	MW-18	Total/NA	Water	SM2540 C	
280-148140-3	MW-19B	Total/NA	Water	SM2540 C	
280-148140-5	MW-17	Total/NA	Water	SM2540 C	
280-148140-7	MW-16	Total/NA	Water	SM2540 C	
280-148140-8	MW-20	Total/NA	Water	SM2540 C	
MB 280-535366/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-535366/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 536493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	SM 2540D	
280-148140-2	MW-18	Total/NA	Water	SM 2540D	
280-148140-3	MW-19B	Total/NA	Water	SM 2540D	
280-148140-4	MW-21	Total/NA	Water	SM 2540D	
280-148140-5	MW-17	Total/NA	Water	SM 2540D	
280-148140-6	MW-17D	Total/NA	Water	SM 2540D	
280-148140-7	MW-16	Total/NA	Water	SM 2540D	
280-148140-8	MW-20	Total/NA	Water	SM 2540D	
280-148140-9	MW-14	Total/NA	Water	SM 2540D	
280-148140-10	MW-9	Total/NA	Water	SM 2540D	
MB 280-536493/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-536493/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-148140-1 DU	MW-11	Total/NA	Water	SM 2540D	

Analysis Batch: 537278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	9056A	
280-148140-1	MW-11	Total/NA	Water	9056A	
280-148140-2	MW-18	Total/NA	Water	9056A	
280-148140-2	MW-18	Total/NA	Water	9056A	
280-148140-3	MW-19B	Total/NA	Water	9056A	
280-148140-3	MW-19B	Total/NA	Water	9056A	
280-148140-4	MW-21	Total/NA	Water	9056A	
280-148140-4	MW-21	Total/NA	Water	9056A	
280-148140-5	MW-17	Total/NA	Water	9056A	
280-148140-6	MW-17D	Total/NA	Water	9056A	
280-148140-7	MW-16	Total/NA	Water	9056A	
280-148140-8	MW-20	Total/NA	Water	9056A	
280-148140-8	MW-20	Total/NA	Water	9056A	
280-148140-9	MW-14	Total/NA	Water	9056A	
280-148140-9	MW-14	Total/NA	Water	9056A	
280-148140-10	MW-9	Total/NA	Water	9056A	
280-148140-10	MW-9	Total/NA	Water	9056A	
MB 280-537278/6	Method Blank	Total/NA	Water	9056A	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

General Chemistry (Continued)

Analysis Batch: 537278 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-537278/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-537278/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-537278/3	Lab Control Sample	Total/NA	Water	9056A	
280-148140-2 MS	MW-18	Total/NA	Water	9056A	
280-148140-2 MS	MW-18	Total/NA	Water	9056A	
280-148140-2 MSD	MW-18	Total/NA	Water	9056A	
280-148140-2 MSD	MW-18	Total/NA	Water	9056A	
280-148140-9 MS	MW-14	Total/NA	Water	9056A	
280-148140-9 MS	MW-14	Total/NA	Water	9056A	
280-148140-9 MSD	MW-14	Total/NA	Water	9056A	
280-148140-9 MSD	MW-14	Total/NA	Water	9056A	
280-148140-2 DU	MW-18	Total/NA	Water	9056A	
280-148140-2 DU	MW-18	Total/NA	Water	9056A	
280-148140-9 DU	MW-14	Total/NA	Water	9056A	
280-148140-9 DU	MW-14	Total/NA	Water	9056A	

Analysis Batch: 537407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-9	MW-14	Total/NA	Water	9056A	
MB 280-537407/6	Method Blank	Total/NA	Water	9056A	
LCS 280-537407/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-537407/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-537407/3	Lab Control Sample	Total/NA	Water	9056A	
280-148140-9 MS	MW-14	Total/NA	Water	9056A	
280-148140-9 MSD	MW-14	Total/NA	Water	9056A	
280-148140-9 DU	MW-14	Total/NA	Water	9056A	

Rad

Prep Batch: 509259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	PrecSep-21	
280-148140-2	MW-18	Total/NA	Water	PrecSep-21	
280-148140-3	MW-19B	Total/NA	Water	PrecSep-21	
280-148140-4	MW-21	Total/NA	Water	PrecSep-21	
280-148140-5	MW-17	Total/NA	Water	PrecSep-21	
280-148140-6	MW-17D	Total/NA	Water	PrecSep-21	
280-148140-7	MW-16	Total/NA	Water	PrecSep-21	
280-148140-8	MW-20	Total/NA	Water	PrecSep-21	
280-148140-10	MW-9	Total/NA	Water	PrecSep-21	
MB 160-509259/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-509259/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-509259/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 509265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-1	MW-11	Total/NA	Water	PrecSep_0	
280-148140-2	MW-18	Total/NA	Water	PrecSep_0	
280-148140-3	MW-19B	Total/NA	Water	PrecSep_0	
280-148140-4	MW-21	Total/NA	Water	PrecSep_0	
280-148140-6	MW-17D	Total/NA	Water	PrecSep_0	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Rad (Continued)

Prep Batch: 509265 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-7	MW-16	Total/NA	Water	PrecSep_0	
280-148140-8	MW-20	Total/NA	Water	PrecSep_0	
280-148140-10	MW-9	Total/NA	Water	PrecSep_0	
MB 160-509265/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-509265/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-509265/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 509356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-9	MW-14	Total/NA	Water	PrecSep-21	
MB 160-509356/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-509356/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 509365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-9	MW-14	Total/NA	Water	PrecSep_0	
MB 160-509365/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-509365/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 512445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148140-5	MW-17	Total/NA	Water	PrecSep_0	
MB 160-512445/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-512445/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-11

Date Collected: 04/27/21 09:30

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-1

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 16:37	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 14:55	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 13:55	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:29	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/24/21 19:06	SRH	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	537278	05/24/21 19:20	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	534888	05/04/21 16:38	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.08 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512453	06/02/21 20:18	AK	TAL SL
Total/NA	Prep	PrecSep_0			1000.08 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512204	05/28/21 10:10	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

Client Sample ID: MW-18

Date Collected: 04/30/21 12:20

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-2

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 16:41	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:03	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 13:57	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:33	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/24/21 19:34	SRH	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	537278	05/24/21 20:58	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	535366	05/07/21 14:03	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.76 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512429	06/02/21 20:20	AK	TAL SL
Total/NA	Prep	PrecSep_0			1000.76 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512204	05/28/21 10:11	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-19B

Lab Sample ID: 280-148140-3

Date Collected: 04/30/21 09:30

Matrix: Water

Date Received: 05/03/21 14:56

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 16:46	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:05	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 13:59	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:37	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/24/21 21:54	SRH	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	537278	05/24/21 22:08	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	535366	05/07/21 14:03	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.84 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512429	06/02/21 20:20	AK	TAL SL
Total/NA	Prep	PrecSep_0			1000.84 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512204	05/28/21 10:11	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

Client Sample ID: MW-21

Lab Sample ID: 280-148140-4

Date Collected: 04/27/21 11:50

Matrix: Water

Date Received: 05/03/21 14:56

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 16:50	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:08	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 14:01	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:41	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/24/21 22:22	SRH	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	537278	05/24/21 22:36	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	534888	05/04/21 16:38	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.14 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512429	06/02/21 20:21	AK	TAL SL
Total/NA	Prep	PrecSep_0			1000.14 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512204	05/28/21 10:11	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

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Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-17

Date Collected: 04/30/21 13:50

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-5

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 16:54	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:10	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 14:03	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:44	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/24/21 22:50	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	535366	05/07/21 14:03	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.60 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512429	06/02/21 20:21	AK	TAL SL
Total/NA	Prep	PrecSep_0			1001.00 mL	1.0 g	512445	06/02/21 08:56	MJ	TAL SL
Total/NA	Analysis	9320		1	1.0 mL	1.0 mL	513943	06/11/21 09:52	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

Client Sample ID: MW-17D

Date Collected: 04/30/21 13:55

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-6

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 16:59	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:13	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 14:05	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:48	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/24/21 23:46	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	535365	05/07/21 14:02	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.72 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512429	06/02/21 20:21	AK	TAL SL
Total/NA	Prep	PrecSep_0			1000.72 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512204	05/28/21 10:13	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

Client Sample ID: MW-16

Date Collected: 04/30/21 15:25

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 17:03	KLC	TAL CAN

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Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-16

Date Collected: 04/30/21 15:25

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-7

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:15	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 14:11	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:52	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/25/21 00:14	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	535366	05/07/21 14:03	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			999.48 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512429	06/02/21 20:21	AK	TAL SL
Total/NA	Prep	PrecSep_0			999.48 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512204	05/28/21 10:14	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

Client Sample ID: MW-20

Date Collected: 04/30/21 11:45

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-8

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 17:07	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:18	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 14:13	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:56	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/25/21 00:42	SRH	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	537278	05/25/21 00:56	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	535366	05/07/21 14:03	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.78 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	512429	06/02/21 20:21	AK	TAL SL
Total/NA	Prep	PrecSep_0			1000.78 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512204	05/28/21 10:14	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	TAL SL

Client Sample ID: MW-14

Date Collected: 04/27/21 10:40

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 17:11	KLC	TAL CAN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Client Sample ID: MW-14

Date Collected: 04/27/21 10:40

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-9

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:20	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 14:15	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 16:59	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/25/21 01:10	SRH	TAL DEN
Total/NA	Analysis	9056A		10	10 mL	10 mL	537278	05/25/21 02:34	SRH	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	537407	05/25/21 19:11	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	534888	05/04/21 16:38	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.75 mL	1.0 g	509356	05/12/21 13:58	LAR	TAL SL
Total/NA	Analysis	9315		1			512655	06/03/21 07:37	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.75 mL	1.0 g	509365	05/12/21 14:38	LAR	TAL SL
Total/NA	Analysis	9320		1			512417	06/01/21 13:21	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512663	06/03/21 21:24	GRW	TAL SL

Client Sample ID: MW-9

Date Collected: 04/26/21 16:05

Date Received: 05/03/21 14:56

Lab Sample ID: 280-148140-10

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	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			485293	05/11/21 17:24	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	484895	05/10/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			485304	05/11/21 15:23	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	484896	05/10/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			485326	05/11/21 14:17	SLD	TAL CAN
Total/NA	Analysis	9040B		1			534895	05/04/21 17:26	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	537278	05/24/21 18:38	SRH	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	537278	05/24/21 18:52	SRH	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	534888	05/04/21 16:38	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.75 mL	1.0 g	509259	05/11/21 15:19	LAR	TAL SL
Total/NA	Analysis	9315		1			512429	06/02/21 20:22	AK	TAL SL
Total/NA	Prep	PrecSep_0			1000.75 mL	1.0 g	509265	05/11/21 16:11	LAR	TAL SL
Total/NA	Analysis	9320		1			512212	05/28/21 10:15	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			512661	06/03/21 21:18	GRW	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

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
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	01-12-22
West Virginia DEP	State	210	12-31-21

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-23
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	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21
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	04-01-22
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	03-01-22
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193	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

Chain of Custody Record

Denver
#280
 Carrier Tracking No. (S)



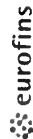
Environment Testing
 America

Client Information		Lab PM: Harrington, Danielle M	
Client Contact: Molly Reeves		Phone: 832-418-3307	
Company: HDR Inc		E-Mail: Danielle.Harrington@Eurofins.com	
Address: 9781 S. Meridian Blvd Suite 400		COC No: 280-103098-29694.3	
City: Englewood		Page: Page 3 of 3	
State, Zip: CO, 80112		Job #:	
Phone: 734-263-7138(Tel)			
Email: Molly.Reeves@hdrinc.com			
Project Name: Xcel Energy GW CCR Monitoring - Valmont			
Site, Colorado: Landfill Wells			

Analysis Requested				Preservation Codes:	
Due Date Requested:	TAT Requested (days):	PO #:	WO #:	Project #:	SSOW#:
		DEN-018		28014379	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=ore/sediment, BT=tissue, AA=air)	Field Filtered Sample (Yes or No)
MW-11	4/27/21	0930	G	WATER	Field Filtered Sample (Yes or No)
MW-18	4/30/21	1220	G	WATER	Field Filtered Sample (Yes or No)
MW-190	4/30/21	0930	G	WATER	Field Filtered Sample (Yes or No)
MW-21	4/27/21	1150	G	WATER	Field Filtered Sample (Yes or No)
MW-17	4/30/21	1350	G	WATER	Field Filtered Sample (Yes or No)
MW-170	4/30/21	1355	G	WATER	Field Filtered Sample (Yes or No)
MW-160	4/30/21	1525	G	WATER	Field Filtered Sample (Yes or No)
MW-20	4/30/21	1145	G	WATER	Field Filtered Sample (Yes or No)
MW-14	4/27/21	1040	G	WATER	Field Filtered Sample (Yes or No)
MW-9	4/26/21	1605	G	WATER	Field Filtered Sample (Yes or No)

Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	
Deliverable Requested: I, II, III, IV, Other (specify) _____	
Empty Kit Relinquished by: _____ Date: _____	
Relinquished by: <i>[Signature]</i> Date: 05-03-2021 / 1455	
Relinquished by: _____ Date/Time: _____	
Relinquished by: _____ Date/Time: _____	
Custody Seals Intact: ☐ Yes ☐ No	
Custody Seal No.: _____	
Cooler Temperature(s) °C and Other Remarks: 16/13/16 18/11 C/F 10.4	

Chain of Custody Record



Environment Testing
America



Client Information (Sub Contract Lab)		Sampler: Lab PM: Harrington, Danielle M		Carrier Tracking No(s):		COC No: 280-566508.1					
Client Contact: Shipping/Receiving		Phone:		State of Origin: Colorado		Page: Page 1 of 2					
Company: TestAmerica Laboratories, Inc.		E-Mail: Danielle.Harrington@Eurofins.com		Accreditations Required (See note): DoD - A2LA		Job #: 280-148140-1					
Address: 13715 Rider Trail North, Earth City, MO, 63045		Due Date Requested: 6/1/2021		Analysis Requested		Preservation Codes:					
City: Earth City		TAT Requested (days):		9315, Ra226/PreSep, 21 Radium-226 (1/3)		A - HCL					
State, Zip: MO, 63045		PO #:		9320, Ra228/PreSep, 0 Radium-228 (2/3)		B - NaOH					
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:		Ra226Ra228, GFC/ (MOD) Local Method		C - Zn Acetate					
Email:		Project #:		Field Filtered Sample (Yes or No)		D - Nitric Acid					
Project Name: Xcel Energy GW CCR Monitoring - Valmont		28014379		Perform MS/MSD (Yes or No)		E - NaHSO4					
Site: Xcel Energy CCR - Valmont Station		SSOW#:		Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		F - MeOH					
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315, Ra226/PreSep, 21 Radium-226 (1/3)	9320, Ra228/PreSep, 0 Radium-228 (2/3)	Ra226Ra228, GFC/ (MOD) Local Method	Total Number of Containers	Special Instructions/Note:
MW-11 (280-148140-1)	4/27/21	09:30 Mountain		Water			X	X	X	2	
MW-18 (280-148140-2)	4/30/21	12:20 Mountain		Water			X	X	X	2	
MW-19B (280-148140-3)	4/30/21	09:30 Mountain		Water			X	X	X	2	
MW-21 (280-148140-4)	4/27/21	11:50 Mountain		Water			X	X	X	2	
MW-17 (280-148140-5)	4/30/21	13:50 Mountain		Water			X	X	X	2	
MW-17D (280-148140-6)	4/30/21	13:55 Mountain		Water			X	X	X	2	
MW-16 (280-148140-7)	4/30/21	15:25 Mountain		Water			X	X	X	2	
MW-20 (280-148140-8)	4/30/21	11:45 Mountain		Water			X	X	X	2	
MW-14 (280-148140-9)	4/27/21	10:40 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica											
Possible Hazard Identification											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 4											
Empty Kit Relinquished by:											
Date:											
Time:											
Relinquished by:											
Date/Time:											
Relinquished by:											
Date/Time:											
Relinquished by:											
Date/Time:											
Custody Seals Intact: ☐ Yes ☐ No											
Custody Seal No.:											
Cooler Temperature(s) °C and Other Remarks:											
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months Special Instructions/QC Requirements:											
Received by: FEDEX Date/Time: 5/4/21 13:30 Company: FEDEX Received by: Michelle Kevinty Date/Time: 5/5/2021 09:05 Company: FEA STL											

Client Information (Sub Contract Lab)		Lab PM: Harrington, Danielle M		Carrier Tracking No(s): 280-56508.2	
Client Contact: Shipping/Receiving Company		Phone: E-Mail: Danielle.Harrington@Eurofinset.com		State of Origin: Colorado	
TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Page 2 of 2	
Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:		Due Date Requested: 6/1/2021 TAT Requested (days): PO #: WO #: Project #: 28014379 SSOW#:		Job #: 280-148140-1	
Project Name: Xcel Energy GW CCR Monitoring - Valmont Site: Xcel Energy CCR - Valmont Station		Sample Date 4/26/21		Total Number of Containers 2	
Sample Identification - Client ID (Lab ID)		Sample Time 16:05 Mountain		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (1/3)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFPc/ (MOD) Local Method		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (Specify)	
Special Instructions/Note:		Total Number of Containers		Special Instructions/Note:	
MW-9 (280-148140-10)		Matrix (W=water, S=solid, O=water, BT=Tissue, AA=Air)		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:	
9315_Ra226/PreSep_21 Radium-226 (					

Chain of Custody Record



Environment Testing
 America

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):		COC No:
Client Contact: Shipping/Receiving		Phone:	Harrington, Danielle M	State of Origin: Colorado		280-566509.1
Company: TestAmerica Laboratories, Inc.		E-Mail: Danielle.Harrington@Eurofins.com		Page 1 of 2		
Address: 4101 Shuffel Street NW, North Canton State, Zip: OH, 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) Email:		Accreditations Required (See note) DoD - A2LA		Job #: 280-148140-1		
Due Date Requested: 6/1/2021		Analysis Requested		Preservation Codes:		
TAT Requested (days):		Perform MS/MSD (Yes or No)		6020A/3005A (MOD) 13 Total Metals (w/collision cell)		
PO #:		Field Filtered Sample (Yes or No)		6010C/3005A (MOD) Boron		
WO #:		Sample Date		7470A/7470A Prep Mercury		
Project #: 28014379		Sample Time		Total Number of Containers		
Site: Xcel Energy CCR - Valmont Station		Sample Type (C=comp, G=grab)		Special Instructions/Note:		
		Matrix (view, solid, on-water, oil, BT=issue A-AH)				
		Preservation Code:				
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		
MW-11 (280-148140-1)		4/27/21		09:30 Mountain		Use Collision Cell
MW-18 (280-148140-2)		4/30/21		12:20 Mountain		Use Collision Cell
MW-19B (280-148140-3)		4/30/21		09:30 Mountain		Use Collision Cell
MW-21 (280-148140-4)		4/27/21		11:50 Mountain		Use Collision Cell
MW-17 (280-148140-5)		4/30/21		13:50 Mountain		Use Collision Cell
MW-17D (280-148140-6)		4/30/21		15:25 Mountain		Use Collision Cell
MW-16 (280-148140-7)		4/30/21		11:45 Mountain		Use Collision Cell
MW-20 (280-148140-8)		4/30/21		10:40 Mountain		Use Collision Cell
MW-14 (280-148140-9)		4/27/21				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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify)
 Primary Deliverable Rank: 4
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *Paul* Date: *5/4/21* Company: _____
 Relinquished by: _____ Date: _____ Company: _____
 Relinquished by: _____ Date: _____ Company: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No
 Cooler Temperature(s) °C and Other Remarks:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
 Special Instructions/QC Requirements:

Method of Shipment: _____
 Date: _____
 Relinquished by: _____ Date: *5/6/21* Company: *E+H*
 Relinquished by: _____ Date: _____ Company: _____
 Relinquished by: _____ Date: _____ Company: _____

Phone: 303-736-0100 Fax: 303-431-7171

Ver: 11/01/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative				Login # : _____	
Canton Facility					
Client <u>ETA</u>		Site Name _____		Cooler unpacked by: <u>Matt</u>	
Cooler Received on <u>5-6-21</u>		Opened on <u>5-7-21</u>			
FedEx: 1 st Grd <u>Exp</u> UPS FAS Clipper		Client Drop Off TestAmerica Courier		Other _____	
Receipt After-hours: Drop-off Date/Time			Storage Location		
TestAmerica Cooler # <u>13A</u>		Foam Box Client Cooler Box Other _____			
Packing material used: <u>Bubble</u> Wrap Foam Plastic Bag None Other _____					
COOLANT: <u>Wet Ice</u> Blue Ice Dry Ice Water <u>None</u>					
1. Cooler temperature upon receipt ☐ See Multiple Cooler Form					
IR GUN# IR-11 (CF +0.1 °C)		Observed Cooler Temp. <u>13.5</u> °C		Corrected Cooler Temp. <u>13-C</u> °C	
IR GUN #IR-12 (CF +0.2 °C)		Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> ☒ 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 NA					
-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# <u>HC022887</u>					
14. Were VOAs on the COC? ☒ Yes ☐ No					
15. Were air bubbles >6 mm in any VOA vials? ☒ Yes ☐ No NA					
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ ☒ Yes ☐ No					
17. Was a LL Hg or Me Hg trip blank present? _____ ☒ Yes ☐ No					
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____					
Concerning _____					

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page		Samples processed by: _____
_____ _____ _____ _____		
19. SAMPLE CONDITION		
Sample(s) _____ were received after the recommended holding time had expired.		
Sample(s) _____ were received in a broken container.		
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)		
20. SAMPLE PRESERVATION		
Sample(s) _____ were further preserved in the laboratory.		
Time preserved: _____ Preservative(s) added/Lot number(s): _____		
VOA Sample Preservation - Date/Time VOAs Frozen: _____		

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-148140-1

Login Number: 148140

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Rystrom, Joshua R

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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: 280-148140-1

Login Number: 148140

List Number: 2

Creator: Johns, Mary

List Source: Eurofins TestAmerica, St. Louis

List Creation: 05/05/21 03:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
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 $<6\text{mm}$ (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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148140-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)					
Lab Sample ID	Client Sample ID	Ba (40-110)					
280-148140-1	MW-11	63.4					
280-148140-2	MW-18	62.8					
280-148140-3	MW-19B	73.6					
280-148140-4	MW-21	85.0					
280-148140-5	MW-17	71.8					
280-148140-6	MW-17D	75.7					
280-148140-7	MW-16	70.9					
280-148140-8	MW-20	67.6					
280-148140-9	MW-14	71.2					
280-148140-10	MW-9	79.6					
LCS 160-509259/1-A	Lab Control Sample	74.5					
LCS 160-509356/1-A	Lab Control Sample	80.5					
LCSD 160-509259/2-A	Lab Control Sample Dup	78.7					
MB 160-509259/23-A	Method Blank	55.0					
MB 160-509356/24-A	Method Blank	76.9					
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)				
280-148140-1	MW-11	63.4	75.1				
280-148140-2	MW-18	62.8	80.4				
280-148140-3	MW-19B	73.6	78.9				
280-148140-4	MW-21	85.0	80.4				
280-148140-5	MW-17	85.0	87.5				
280-148140-6	MW-17D	75.7	80.4				
280-148140-7	MW-16	70.9	69.9				
280-148140-8	MW-20	67.6	74.0				
280-148140-9	MW-14	71.2	88.2				
280-148140-10	MW-9	79.6	77.0				
LCS 160-509265/1-A	Lab Control Sample	74.5	75.1				
LCS 160-509365/1-A	Lab Control Sample	80.5	89.0				
LCS 160-512445/1-A	Lab Control Sample	9.35 X	86.0				
LCSD 160-509265/2-A	Lab Control Sample Dup	78.7	76.6				
MB 160-509265/23-A	Method Blank	55.0	80.0				
MB 160-509365/24-A	Method Blank	76.9	87.1				
MB 160-512445/22-A	Method Blank	76.6	86.7				
Tracer/Carrier Legend							
Ba = Ba Carrier							
Y = Y Carrier							

ANALYTICAL REPORT

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

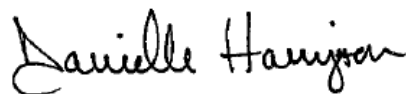
Laboratory Job ID: 280-148490-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
6/21/2021 2:48:32 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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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
B	Compound was found in the blank and sample.
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, and the absolute difference between results is < the upper reporting limits for both.
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.

Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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)

Eurofins TestAmerica, Denver

Definitions/Glossary

Client: HDR Inc

Job ID: 280-148490-1

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Job ID: 280-148490-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-148490-1

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 05/11/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 0.5° C, 0.7° C, 1.0° C and 2.7° C.

TOTAL RECOVERABLE METALS- Method 6010C/6020A/7470A

The accuracy and precision of the Calcium MS/MSD performed on sample MW-28 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

Several samples required dilution or prepped at a dilution prior to analysis for various methods. The reporting limits have been adjusted accordingly.

The analysis for Total Suspended Solids Method 2540D for samples MW-7, MW-26, MW-1P, MW-15, and MW-1 was performed outside of hold due to more than half of the hold time expiring during transit. It is Eurofins TestAmerica's policy to analyze all samples within holding time, but when samples are received with less than half the hold time remaining, this cannot be guaranteed. Please note that the sample results should be considered estimated.

The analysis for Total Dissolved Solids Method 2540C for samples MW-7 and MW-1P was performed outside of hold due to more than half of the hold time expiring during transit. It is Eurofins TestAmerica's policy to analyze all samples within holding time, but when samples are received with less than half the hold time remaining, this cannot be guaranteed. Please note that the sample results should be considered estimated.

Total Dissolved Solids was detected in the method blank above the project established reporting limit, however, the requested reporting limit is below Eurofins TestAmerica's standard reporting limit and, therefore, no corrective action has been taken for this anomaly. It must be noted that results reported below Eurofins TestAmerica's standard reporting limits may result in false positive/false negative results, less accurate quantitation and potential misidentification at the lower concentrations.

Total Dissolved Solids (TDS) exceeded the RPD limit for the duplicate of sample 280-148083-8. Refer to the QC report for details.

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Job ID: 280-148490-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

MS/MSD and sample duplicate analyses were performed on sample MW-28. The Fluoride MS/MSD and sample duplicate 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 MW-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.

The Total Dissolved Solids sample duplicate analysis data associated with QC batch 280-535909 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.

Method SM 2540C: The drying oven used in association with analytical batch 280-536186 was outside the acceptance range. The Standard Operating Procedure (SOP) states the oven must read 180 +/- 2 degrees. The original reading of the oven over the course of analysis was 178 degree with a correction factor of -2 degrees. The corrected temperature was 176 degree which is outside the range. All associated QC has passed; therefore, corrective action was not performed.

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

RADIUM-226 (GFPC)- Method 9315

Method 9315: Radium-226 Batch 514777: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) associated with the following samples have Ba carrier recovery (0.31% / 0.62%) outside of the lower QC limit (40%). The low Ba carrier recovery is causing the LCS/LCSD to have a Ra-226 spike recovery (803% / 701%) outside the upper QC limit (75%). This deficiency appears to be isolated to the LCS/LCSD. The method blank and sample results are all within criteria. There is insufficient volume to re-analyze, therefore the data have been reported with this narrative.

Method 9315: Radium-226 Batch 514777: The Radium-226 laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery associated with the following sample is outside the upper QC limit of (125%) indicating a potential positive bias for that analyte. This analyte was not observed above the RL in the associated samples; therefore the sample data is not adversely affected by this excursion. The data have been reported with this narrative. (LCS 160-514777/1-A) and (LCSD 160-514777/2-A)

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

RADIUM-228- Method 9320

The following samples were prepared at a reduced aliquot due to matrix: MW-28. The reporting limits have been adjusted accordingly.

Radium-228 was detected in method blank MB 160-513612/21-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. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

Methods 904.0, 9320: Radium-228 prep batch 160-513612: The Ra-228 laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery associated with the following samples is outside the upper QC limit of (125%), due to low Ba carrier recoveries, indicating a potential positive bias for that analyte. This analyte was not observed above the RL in the associated Method Blank; therefore the sample data is not adversely affected by this excursion. The data have been reported with this narrative.

Methods 904.0, 9320: Radium-228 prep batch 160-513612: The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) associated with the following samples have spike recoveries (4395% / 1395%) above the upper QC limit, due to low Barium recoveries. During preparation, the analyst noted issues with the Barium sulfate pellet. The deficiency appears to be isolated to the LCS/LCSD. There is insufficient volume to re-analyze, therefore the data have been reported with this narrative.

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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-3

Lab Sample ID: 280-148490-1

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
Barium	0.012		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	460		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00090	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
Selenium	0.0013	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.071		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	20.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	49		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	2400		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	9.6		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	3800		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-28

Lab Sample ID: 280-148490-2

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	0.029		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.014		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	500		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	0.0013	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Selenium	2.8		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.24		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	20.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	67		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.20	J F1	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3400		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	18		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	7400		100	47	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 280-148490-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.1		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0021	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-4 (Continued)

Lab Sample ID: 280-148490-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.016		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	360		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.0010		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	0.012		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Lead	0.00055	J	0.0010	0.00045	mg/L	1		6020A	Total
									Recoverable
Selenium	0.20		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	19.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	480		150	51	mg/L	50		9056A	Total/NA
Fluoride	4.0		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	5700		250	52	mg/L	50		9056A	Total/NA
Total Suspended Solids	52		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	9600	H	1000	470	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-13D

Lab Sample ID: 280-148490-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.1		0.10	0.023	mg/L	1		6010C	Total
									Recoverable
Arsenic	0.00075	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.021		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	490		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00081	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Chromium	0.0025		0.0020	0.00098	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.0036	J	0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.27		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Lithium	0.097		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	20.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	71		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.69		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2300		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	6.8		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4000		40	19	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-27

Lab Sample ID: 280-148490-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.058	J	0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.074		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	45		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0011	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0031	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0039	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.026		0.0080	0.0017	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	19.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	21		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.69		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	48		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	4.0		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	440		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-13

Lab Sample ID: 280-148490-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.1		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	0.021		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	480		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00091	J	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	0.0034	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.23		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.097		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	20.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	71		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.70		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2200		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	7.6		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4100		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 280-148490-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.27		0.10	0.023	mg/L	1		6010C	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-7 (Continued)

Lab Sample ID: 280-148490-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.026		0.0050	0.0022	mg/L	1		6020A	Total
Calcium	48		1.0	0.58	mg/L	1		6020A	Recoverable
Cobalt	0.00036	J	0.0010	0.00019	mg/L	1		6020A	Total
Chromium	0.0013	J	0.0020	0.00098	mg/L	1		6020A	Recoverable
Molybdenum	0.0026	J	0.010	0.0011	mg/L	1		6020A	Total
Lead	0.00093	J	0.0010	0.00045	mg/L	1		6020A	Recoverable
Selenium	0.0037	J	0.0050	0.00089	mg/L	1		6020A	Total
Lithium	0.037		0.0080	0.0017	mg/L	1		6020A	Recoverable
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	53		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	130		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	12	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	640	H	10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-26

Lab Sample ID: 280-148490-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.63		0.10	0.023	mg/L	1		6010C	Total
Barium	0.012		0.0050	0.0022	mg/L	1		6020A	Recoverable
Calcium	450		1.0	0.58	mg/L	1		6020A	Total
Cobalt	0.00048	J	0.0010	0.00019	mg/L	1		6020A	Recoverable
Selenium	0.0023	J	0.0050	0.00089	mg/L	1		6020A	Total
Lithium	0.070		0.0080	0.0017	mg/L	1		6020A	Recoverable
pH adj. to 25 deg C	7.2	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	210		60	20	mg/L	20		9056A	Total/NA
Sulfate	2000		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	4.8	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	3400		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-1P

Lab Sample ID: 280-148490-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.1		0.10	0.023	mg/L	1		6010C	Total
Arsenic	0.0012	J	0.0050	0.00075	mg/L	1		6020A	Recoverable
Barium	0.086		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-1P (Continued)

Lab Sample ID: 280-148490-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	130		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00028	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0085	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.00093	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.011		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	19.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	56		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.54		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	190		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	2.4	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	760	H	10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 280-148490-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.36		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.024		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	300		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00054	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0014	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.014		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.051		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	20.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	490		30	10	mg/L	10		9056A	Total/NA
Sulfate	850		50	10	mg/L	10		9056A	Total/NA
Total Suspended Solids	85		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	2300	B	20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 280-148490-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.94		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	430		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0039		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0017	J	0.0020	0.00098	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-8 (Continued)

Lab Sample ID: 280-148490-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00053	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Selenium	0.0036	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.13		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	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	310		60	20	mg/L	20		9056A	Total/NA
Sulfate	2800		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	34		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4600	B	40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-15

Lab Sample ID: 280-148490-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.48		0.10	0.023	mg/L	1		6010C	Total Recoverable
Arsenic	0.0015	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.018		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	170		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00042	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0021		0.0020	0.00098	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0036	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.13		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.046		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	21.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	90		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.66		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	1200		50	10	mg/L	10		9056A	Total/NA
Total Suspended Solids	9.2	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	2200	B	20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-1

Lab Sample ID: 280-148490-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.47		0.10	0.023	mg/L	1		6010C	Total Recoverable
Barium	0.031		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	73		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00027	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.017		0.010	0.0011	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-1 (Continued)

Lab Sample ID: 280-148490-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.034		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	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	70		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.33	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	320		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	6.4	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	930	B	20	9.4	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM2540 C	Total Dissolved Solids	SM18	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"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

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: 280-148490-1

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-148490-1	MW-3	Water	05/08/21 17:50	05/11/21 17:29	
280-148490-2	MW-28	Water	05/08/21 13:10	05/11/21 17:29	
280-148490-3	MW-4	Water	05/08/21 09:10	05/11/21 17:29	
280-148490-4	MW-13D	Water	05/06/21 17:55	05/11/21 17:29	
280-148490-5	MW-27	Water	05/07/21 14:35	05/11/21 17:29	
280-148490-6	MW-13	Water	05/06/21 17:45	05/11/21 17:29	
280-148490-7	MW-7	Water	05/04/21 12:20	05/11/21 17:29	
280-148490-8	MW-26	Water	05/05/21 10:55	05/11/21 17:29	
280-148490-9	MW-1P	Water	05/04/21 14:05	05/11/21 17:29	
280-148490-10	MW-6	Water	05/06/21 11:10	05/11/21 17:29	
280-148490-11	MW-8	Water	05/06/21 09:50	05/11/21 17:29	
280-148490-12	MW-15	Water	05/05/21 14:50	05/11/21 17:29	
280-148490-13	MW-1	Water	05/05/21 11:45	05/11/21 17:29	

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-3
Date Collected: 05/08/21 17:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.5		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:01	1

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:22	1

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:27	1

Client Sample ID: MW-13D
Date Collected: 05/06/21 17:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:31	1

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.058	J	0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:44	1

Client Sample ID: MW-13
Date Collected: 05/06/21 17:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:48	1

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.27		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:53	1

Client Sample ID: MW-26
Date Collected: 05/05/21 10:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.63		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 21:57	1

Client Sample ID: MW-1P
Date Collected: 05/04/21 14:05
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 22:01	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-6
Date Collected: 05/06/21 11:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.36		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 22:06	1

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.94		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 22:10	1

Client Sample ID: MW-15
Date Collected: 05/05/21 14:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.48		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 22:14	1

Client Sample ID: MW-1
Date Collected: 05/05/21 11:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.47		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 22:19	1

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

Client Sample ID: MW-3
Date Collected: 05/08/21 17:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 10:31	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 10:31	1
Barium	0.012		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 10:31	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 10:31	1
Calcium	460		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 10:31	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 10:31	1
Cobalt	0.00090	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 10:31	1
Chromium	0.0011	J	0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 10:31	1
Molybdenum	ND		0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 10:31	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 12:34	1
Selenium	0.0013	J	0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 10:31	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 12:34	1
Lithium	0.071		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 10:31	1

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 10:33	1
Arsenic	0.029		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 10:33	1
Barium	0.014		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 10:33	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 10:33	1
Calcium	500		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 10:33	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 10:33	1
Cobalt	0.00067	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 10:33	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0013	J	0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 10:33	1
Molybdenum	ND		0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 10:33	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 12:37	1
Selenium	2.8		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 10:33	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 12:37	1
Lithium	0.24		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 10:33	1

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:19	1
Arsenic	0.0021	J	0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:19	1
Barium	0.016		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:19	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:19	1
Calcium	360		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:19	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:19	1
Cobalt	0.0010		0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:19	1
Chromium	0.0017	J	0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:19	1
Molybdenum	0.012		0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:19	1
Lead	0.00055	J	0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 12:51	1
Selenium	0.20		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:19	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 12:51	1
Lithium	0.19		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:19	1

Client Sample ID: MW-13D
Date Collected: 05/06/21 17:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:21	1
Arsenic	0.00075	J	0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:21	1
Barium	0.021		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:21	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:21	1
Calcium	490		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:21	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:21	1
Cobalt	0.00081	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:21	1
Chromium	0.0025		0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:21	1
Molybdenum	0.0036	J	0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:21	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:04	1
Selenium	0.27		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:21	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:04	1
Lithium	0.097		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:21	1

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:24	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:24	1
Barium	0.074		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:24	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:24	1
Calcium	45		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:24	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:24	1
Cobalt	ND		0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:24	1
Chromium	0.0011	J	0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:24	1
Molybdenum	0.0031	J	0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:24	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:06	1
Selenium	0.0039	J	0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:24	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:06	1
Lithium	0.026		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:24	1

Client Sample ID: MW-13
Date Collected: 05/06/21 17:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:26	1
Arsenic	0.0026	J	0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:26	1
Barium	0.021		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:26	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:26	1
Calcium	480		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:26	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:26	1
Cobalt	0.00091	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:26	1
Chromium	0.0010	J	0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:26	1
Molybdenum	0.0034	J	0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:26	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:09	1
Selenium	0.23		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:26	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:09	1
Lithium	0.097		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:26	1

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:34	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:34	1
Barium	0.026		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:34	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:34	1
Calcium	48		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:34	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:34	1
Cobalt	0.00036	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:34	1
Chromium	0.0013	J	0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:34	1
Molybdenum	0.0026	J	0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:34	1
Lead	0.00093	J	0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:11	1
Selenium	0.0037	J	0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:34	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:11	1
Lithium	0.037		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-26
Date Collected: 05/05/21 10:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:36	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:36	1
Barium	0.012		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:36	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:36	1
Calcium	450		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:36	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:36	1
Cobalt	0.00048	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:36	1
Chromium	ND		0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:36	1
Molybdenum	ND		0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:36	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:14	1
Selenium	0.0023	J	0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:36	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:14	1
Lithium	0.070		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:36	1

Client Sample ID: MW-1P
Date Collected: 05/04/21 14:05
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:39	1
Arsenic	0.0012	J	0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:39	1
Barium	0.086		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:39	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:39	1
Calcium	130		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:39	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:39	1
Cobalt	0.00028	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:39	1
Chromium	ND		0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:39	1
Molybdenum	0.0085	J	0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:39	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:16	1
Selenium	0.00093	J	0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:39	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:16	1
Lithium	0.011		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:39	1

Client Sample ID: MW-6
Date Collected: 05/06/21 11:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:41	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:41	1
Barium	0.024		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:41	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:41	1
Calcium	300		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:41	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:41	1
Cobalt	0.00054	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:41	1
Chromium	ND		0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:41	1
Molybdenum	0.0014	J	0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:41	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:19	1
Selenium	0.014		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:41	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:19	1
Lithium	0.051		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:41	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:44	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:44	1
Barium	0.017		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:44	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:44	1
Calcium	430		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:44	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:44	1
Cobalt	0.0039		0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:44	1
Chromium	0.0017	J	0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:44	1
Molybdenum	ND		0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:44	1
Lead	0.00053	J	0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:21	1
Selenium	0.0036	J	0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:44	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:21	1
Lithium	0.13		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:44	1

Client Sample ID: MW-15
Date Collected: 05/05/21 14:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:46	1
Arsenic	0.0015	J	0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:46	1
Barium	0.018		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:46	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:46	1
Calcium	170		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:46	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:46	1
Cobalt	0.00042	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:46	1
Chromium	0.0021		0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:46	1
Molybdenum	0.0036	J	0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:46	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:24	1
Selenium	0.13		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:46	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:24	1
Lithium	0.046		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:46	1

Client Sample ID: MW-1
Date Collected: 05/05/21 11:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 11:49	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 11:49	1
Barium	0.031		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 11:49	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 11:49	1
Calcium	73		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 11:49	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 11:49	1
Cobalt	0.00027	J	0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 11:49	1
Chromium	ND		0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 11:49	1
Molybdenum	0.017		0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 11:49	1
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 13:26	1
Selenium	ND		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 11:49	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 13:26	1
Lithium	0.034		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 11:49	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-3
Date Collected: 05/08/21 17:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 13:34	1

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 13:40	1

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 13:59	1

Client Sample ID: MW-13D
Date Collected: 05/06/21 17:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:01	1

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:03	1

Client Sample ID: MW-13
Date Collected: 05/06/21 17:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:26	1

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:28	1

Client Sample ID: MW-26
Date Collected: 05/05/21 10:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:30	1

Client Sample ID: MW-1P
Date Collected: 05/04/21 14:05
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:32	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-6
Date Collected: 05/06/21 11:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:34	1

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:36	1

Client Sample ID: MW-15
Date Collected: 05/05/21 14:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:38	1

Client Sample ID: MW-1
Date Collected: 05/05/21 11:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 14:40	1

General Chemistry

Client Sample ID: MW-3
Date Collected: 05/08/21 17:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1
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			05/12/21 11:03	1
Temperature	20.5	HF	1.0	1.0	Degrees C			05/12/21 11:03	1
Chloride	49		3.0	1.0	mg/L			06/01/21 17:34	1
Fluoride	ND		0.50	0.17	mg/L			06/01/21 17:34	1
Sulfate	2400		100	21	mg/L			06/01/21 17:48	20
Total Suspended Solids	9.6		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	3800		40	19	mg/L			05/12/21 14:06	1

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
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			05/12/21 11:16	1
Temperature	20.1	HF	1.0	1.0	Degrees C			05/12/21 11:16	1
Chloride	67		3.0	1.0	mg/L			06/01/21 18:02	1
Fluoride	0.20	J F1	0.50	0.17	mg/L			06/01/21 18:02	1
Sulfate	3400		100	21	mg/L			06/02/21 19:44	20
Total Suspended Solids	18		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	7400		100	47	mg/L			05/12/21 14:06	1

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
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			05/12/21 11:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

General Chemistry (Continued)

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature	19.7	HF	1.0	1.0	Degrees C			05/12/21 11:20	1
Chloride	480		150	51	mg/L			06/01/21 20:36	50
Fluoride	4.0		0.50	0.17	mg/L			06/01/21 20:22	1
Sulfate	5700		250	52	mg/L			06/01/21 20:36	50
Total Suspended Solids	52		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	9600	H	1000	470	mg/L			05/26/21 14:28	1

Client Sample ID: MW-13D
Date Collected: 05/06/21 17:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4
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			05/12/21 11:24	1
Temperature	20.0	HF	1.0	1.0	Degrees C			05/12/21 11:24	1
Chloride	71		3.0	1.0	mg/L			06/01/21 20:50	1
Fluoride	0.69		0.50	0.17	mg/L			06/01/21 20:50	1
Sulfate	2300		100	21	mg/L			06/02/21 20:03	20
Total Suspended Solids	6.8		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	4000		40	19	mg/L			05/12/21 14:06	1

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
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			05/12/21 11:28	1
Temperature	19.9	HF	1.0	1.0	Degrees C			05/12/21 11:28	1
Chloride	21		3.0	1.0	mg/L			06/01/21 22:14	1
Fluoride	0.69		0.50	0.17	mg/L			06/01/21 22:14	1
Sulfate	48		5.0	1.0	mg/L			06/01/21 22:14	1
Total Suspended Solids	4.0		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	440		40	19	mg/L			05/12/21 14:06	1

Client Sample ID: MW-13
Date Collected: 05/06/21 17:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6
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			05/12/21 11:33	1
Temperature	20.4	HF	1.0	1.0	Degrees C			05/12/21 11:33	1
Chloride	71		3.0	1.0	mg/L			06/01/21 21:18	1
Fluoride	0.70		0.50	0.17	mg/L			06/01/21 21:18	1
Sulfate	2200		100	21	mg/L			06/01/21 21:32	20
Total Suspended Solids	7.6		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	4100		40	19	mg/L			05/12/21 14:06	1

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
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			05/12/21 11:36	1
Temperature	19.9	HF	1.0	1.0	Degrees C			05/12/21 11:36	1
Chloride	53		3.0	1.0	mg/L			06/01/21 16:38	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

General Chemistry (Continued)

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.38	J	0.50	0.17	mg/L			06/01/21 16:38	1
Sulfate	130		5.0	1.0	mg/L			06/01/21 16:38	1
Total Suspended Solids	12	H	4.0	1.1	mg/L			05/12/21 12:16	1
Total Dissolved Solids (TDS)	640	H	10	4.7	mg/L			05/14/21 14:23	1

Client Sample ID: MW-26
Date Collected: 05/05/21 10:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8
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			05/12/21 11:40	1
Temperature	19.6	HF	1.0	1.0	Degrees C			05/12/21 11:40	1
Chloride	210		60	20	mg/L			06/01/21 23:24	20
Fluoride	ND		0.50	0.17	mg/L			06/01/21 23:10	1
Sulfate	2000		100	21	mg/L			06/01/21 23:24	20
Total Suspended Solids	4.8	H	4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	3400		40	19	mg/L			05/12/21 14:06	1

Client Sample ID: MW-1P
Date Collected: 05/04/21 14:05
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9
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			05/12/21 11:44	1
Temperature	19.9	HF	1.0	1.0	Degrees C			05/12/21 11:44	1
Chloride	56		3.0	1.0	mg/L			06/01/21 17:06	1
Fluoride	0.54		0.50	0.17	mg/L			06/01/21 17:06	1
Sulfate	190		5.0	1.0	mg/L			06/01/21 17:06	1
Total Suspended Solids	2.4	J H	4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	760	H	10	4.7	mg/L			05/19/21 10:45	1

Client Sample ID: MW-6
Date Collected: 05/06/21 11:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10
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			05/12/21 11:53	1
Temperature	20.6	HF	1.0	1.0	Degrees C			05/12/21 11:53	1
Chloride	490		30	10	mg/L			06/01/21 23:52	10
Fluoride	ND		0.50	0.17	mg/L			06/01/21 23:38	1
Sulfate	850		50	10	mg/L			06/01/21 23:52	10
Total Suspended Solids	85		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	2300	B	20	9.4	mg/L			05/12/21 16:28	1

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
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			05/12/21 11:56	1
Temperature	20.9	HF	1.0	1.0	Degrees C			05/12/21 11:56	1
Chloride	310		60	20	mg/L			06/02/21 00:20	20
Fluoride	ND		0.50	0.17	mg/L			06/02/21 00:06	1
Sulfate	2800		100	21	mg/L			06/02/21 00:20	20

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

General Chemistry (Continued)

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	34		4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	4600	B	40	19	mg/L			05/12/21 16:28	1

Client Sample ID: MW-15
Date Collected: 05/05/21 14:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12
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			05/12/21 12:03	1
Temperature	21.7	HF	1.0	1.0	Degrees C			05/12/21 12:03	1
Chloride	90		3.0	1.0	mg/L			06/02/21 01:02	1
Fluoride	0.66		0.50	0.17	mg/L			06/02/21 01:02	1
Sulfate	1200		50	10	mg/L			06/02/21 01:16	10
Total Suspended Solids	9.2	H	4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	2200	B	20	9.4	mg/L			05/12/21 16:28	1

Client Sample ID: MW-1
Date Collected: 05/05/21 11:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-13
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			05/12/21 12:07	1
Temperature	21.0	HF	1.0	1.0	Degrees C			05/12/21 12:07	1
Chloride	70		3.0	1.0	mg/L			06/02/21 01:30	1
Fluoride	0.33	J	0.50	0.17	mg/L			06/02/21 01:30	1
Sulfate	320		25	5.2	mg/L			06/02/21 01:44	5
Total Suspended Solids	6.4	H	4.0	1.1	mg/L			05/13/21 13:23	1
Total Dissolved Solids (TDS)	930	B	20	9.4	mg/L			05/12/21 16:28	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-3
Date Collected: 05/08/21 17:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.390		0.249	0.251	1.00	0.339	pCi/L	05/19/21 10:54	06/10/21 21:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					05/19/21 10:54	06/10/21 21:45	1

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.706	*	0.240	0.248	1.00	0.242	pCi/L	06/18/21 12:28	06/18/21 14:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		40 - 110					06/18/21 12:28	06/18/21 14:56	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.629		0.384	0.388	1.00	0.509	pCi/L	05/19/21 10:54	06/11/21 15:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.1		40 - 110					05/19/21 10:54	06/11/21 15:07	1

Client Sample ID: MW-13D
Date Collected: 05/06/21 17:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.112	U	0.153	0.153	1.00	0.258	pCi/L	05/19/21 10:54	06/16/21 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	48.0		40 - 110					05/19/21 10:54	06/16/21 17:52	1

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.121	U	0.156	0.156	1.00	0.259	pCi/L	05/19/21 10:54	06/11/21 15:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.0		40 - 110					05/19/21 10:54	06/11/21 15:07	1

Client Sample ID: MW-13
Date Collected: 05/06/21 17:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.411		0.206	0.209	1.00	0.248	pCi/L	05/19/21 10:54	06/11/21 15:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					05/19/21 10:54	06/11/21 15:08	1

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.250	U	0.193	0.194	1.00	0.284	pCi/L	05/19/21 10:54	06/11/21 15:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110					05/19/21 10:54	06/11/21 15:10	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-26
Date Collected: 05/05/21 10:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.450		0.228	0.231	1.00	0.289	pCi/L	05/19/21 10:54	06/11/21 15:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.4		40 - 110					05/19/21 10:54	06/11/21 15:10	1

Client Sample ID: MW-1P
Date Collected: 05/04/21 14:05
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0276	U	0.139	0.139	1.00	0.270	pCi/L	05/19/21 10:54	06/11/21 15:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.9		40 - 110					05/19/21 10:54	06/11/21 15:10	1

Client Sample ID: MW-6
Date Collected: 05/06/21 11:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.426		0.197	0.200	1.00	0.219	pCi/L	05/19/21 10:54	06/11/21 15:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110					05/19/21 10:54	06/11/21 15:10	1

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.504		0.240	0.244	1.00	0.284	pCi/L	05/19/21 10:54	06/11/21 15:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.6		40 - 110					05/19/21 10:54	06/11/21 15:27	1

Client Sample ID: MW-15
Date Collected: 05/05/21 14:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.236	U	0.172	0.174	1.00	0.245	pCi/L	05/19/21 10:54	06/11/21 17:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.9		40 - 110					05/19/21 10:54	06/11/21 17:05	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-1
Date Collected: 05/05/21 11:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0388	U	0.108	0.108	1.00	0.196	pCi/L	05/19/21 10:54	06/16/21 17:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					05/19/21 10:54	06/16/21 17:52	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-3
Date Collected: 05/08/21 17:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.958		0.326	0.338	1.00	0.439	pCi/L	05/19/21 11:50	06/10/21 13:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					05/19/21 11:50	06/10/21 13:38	1
Y Carrier	89.3		40 - 110					05/19/21 11:50	06/10/21 13:38	1

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.39	*	0.516	0.531	1.00	0.726	pCi/L	06/10/21 08:39	06/15/21 09:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		40 - 110					06/10/21 08:39	06/15/21 09:42	1
Y Carrier	84.1		40 - 110					06/10/21 08:39	06/15/21 09:42	1

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.64		0.587	0.606	1.00	0.777	pCi/L	05/19/21 11:50	06/10/21 13:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.1		40 - 110					05/19/21 11:50	06/10/21 13:38	1
Y Carrier	87.5		40 - 110					05/19/21 11:50	06/10/21 13:38	1

Client Sample ID: MW-13D
Date Collected: 05/06/21 17:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.383	U	0.415	0.417	1.00	0.679	pCi/L	05/19/21 11:50	06/10/21 13:38	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 9320 - Radium-228 (GFPC)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	48.0		40 - 110	05/19/21 11:50	06/10/21 13:38	1
Y Carrier	89.7		40 - 110	05/19/21 11:50	06/10/21 13:38	1

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.175	U	0.271	0.272	1.00	0.456	pCi/L	05/19/21 11:50	06/10/21 13:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.0		40 - 110					05/19/21 11:50	06/10/21 13:38	1
Y Carrier	89.0		40 - 110					05/19/21 11:50	06/10/21 13:38	1

Client Sample ID: MW-13
Date Collected: 05/06/21 17:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.614		0.298	0.303	1.00	0.433	pCi/L	05/19/21 11:50	06/10/21 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					05/19/21 11:50	06/10/21 13:39	1
Y Carrier	87.9		40 - 110					05/19/21 11:50	06/10/21 13:39	1

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.294	U	0.268	0.270	1.00	0.431	pCi/L	05/19/21 11:50	06/10/21 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110					05/19/21 11:50	06/10/21 13:39	1
Y Carrier	88.2		40 - 110					05/19/21 11:50	06/10/21 13:39	1

Client Sample ID: MW-26
Date Collected: 05/05/21 10:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.442		0.286	0.288	1.00	0.437	pCi/L	05/19/21 11:50	06/10/21 13:39	1
Carrier	%Yield	Qualifier						Prepared	Analyzed	Dil Fac
Ba Carrier	81.4		Limits					05/19/21 11:50	06/10/21 13:39	1
Y Carrier	88.6		40 - 110					05/19/21 11:50	06/10/21 13:39	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-1P
Date Collected: 05/04/21 14:05
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.582		0.306	0.310	1.00	0.453	pCi/L	05/19/21 11:50	06/10/21 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.9		40 - 110					05/19/21 11:50	06/10/21 13:39	1
Y Carrier	88.6		40 - 110					05/19/21 11:50	06/10/21 13:39	1

Client Sample ID: MW-6
Date Collected: 05/06/21 11:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.18		0.330	0.348	1.00	0.408	pCi/L	05/19/21 11:50	06/10/21 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		40 - 110					05/19/21 11:50	06/10/21 13:39	1
Y Carrier	88.6		40 - 110					05/19/21 11:50	06/10/21 13:39	1

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.57		0.447	0.470	1.00	0.581	pCi/L	05/19/21 11:50	06/10/21 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.6		40 - 110					05/19/21 11:50	06/10/21 13:39	1
Y Carrier	89.0		40 - 110					05/19/21 11:50	06/10/21 13:39	1

Client Sample ID: MW-15
Date Collected: 05/05/21 14:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.186	U	0.242	0.243	1.00	0.402	pCi/L	05/19/21 11:50	06/10/21 13:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.9		40 - 110					05/19/21 11:50	06/10/21 13:39	1
Y Carrier	90.1		40 - 110					05/19/21 11:50	06/10/21 13:39	1

Client Sample ID: MW-1
Date Collected: 05/05/21 11:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.491	U	0.355	0.358	1.00	0.556	pCi/L	05/19/21 11:50	06/10/21 13:41	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110	05/19/21 11:50	06/10/21 13:41	1
Y Carrier	90.5		40 - 110	05/19/21 11:50	06/10/21 13:41	1

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

Client Sample ID: MW-3
Date Collected: 05/08/21 17:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.35		0.410	0.421	5.00	0.439	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-28
Date Collected: 05/08/21 13:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.09		0.569	0.586	5.00	0.726	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-4
Date Collected: 05/08/21 09:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.27		0.701	0.720	5.00	0.777	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-13D
Date Collected: 05/06/21 17:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.495	U	0.442	0.444	5.00	0.679	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-27
Date Collected: 05/07/21 14:35
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.296	U	0.313	0.314	5.00	0.456	pCi/L		06/17/21 13:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-13
Date Collected: 05/06/21 17:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.03		0.362	0.368	5.00	0.433	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-7
Date Collected: 05/04/21 12:20
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.545		0.330	0.332	5.00	0.431	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-26
Date Collected: 05/05/21 10:55
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.892		0.366	0.369	5.00	0.437	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-1P
Date Collected: 05/04/21 14:05
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.609		0.336	0.340	5.00	0.453	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-6
Date Collected: 05/06/21 11:10
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.61		0.384	0.401	5.00	0.408	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-8
Date Collected: 05/06/21 09:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.07		0.507	0.530	5.00	0.581	pCi/L		06/17/21 13:50	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Client Sample ID: MW-15
Date Collected: 05/05/21 14:50
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.422		0.297	0.299	5.00	0.402	pCi/L		06/17/21 13:50	1

Client Sample ID: MW-1
Date Collected: 05/05/21 11:45
Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.530	U	0.371	0.374	5.00	0.556	pCi/L		06/17/21 13:50	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-486067/1-A
Matrix: Water
Analysis Batch: 486514

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 486067

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		05/17/21 14:00	05/18/21 20:53	1

Lab Sample ID: LCS 240-486067/2-A
Matrix: Water
Analysis Batch: 486514

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 486067

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: 280-148490-1 MS
Matrix: Water
Analysis Batch: 486514

Client Sample ID: MW-3
Prep Type: Total Recoverable
Prep Batch: 486067

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.5		1.00	2.50		mg/L		105	75 - 125

Lab Sample ID: 280-148490-1 MSD
Matrix: Water
Analysis Batch: 486514

Client Sample ID: MW-3
Prep Type: Total Recoverable
Prep Batch: 486067

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	1.5		1.00	2.51		mg/L		106	75 - 125	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-486067/1-A
Matrix: Water
Analysis Batch: 486400

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 486067

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/17/21 14:00	05/18/21 10:53	1
Arsenic	ND		0.0050	0.00075	mg/L		05/17/21 14:00	05/18/21 10:53	1
Barium	ND		0.0050	0.0022	mg/L		05/17/21 14:00	05/18/21 10:53	1
Beryllium	ND		0.0010	0.00031	mg/L		05/17/21 14:00	05/18/21 10:53	1
Calcium	ND		1.0	0.58	mg/L		05/17/21 14:00	05/18/21 10:53	1
Cadmium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/18/21 10:53	1
Cobalt	ND		0.0010	0.00019	mg/L		05/17/21 14:00	05/18/21 10:53	1
Chromium	ND		0.0020	0.00098	mg/L		05/17/21 14:00	05/18/21 10:53	1
Molybdenum	ND		0.010	0.0011	mg/L		05/17/21 14:00	05/18/21 10:53	1
Selenium	ND		0.0050	0.00089	mg/L		05/17/21 14:00	05/18/21 10:53	1
Lithium	ND		0.0080	0.0017	mg/L		05/17/21 14:00	05/18/21 10:53	1

Lab Sample ID: MB 240-486067/1-A
Matrix: Water
Analysis Batch: 486677

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 486067

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0010	0.00045	mg/L		05/17/21 14:00	05/19/21 12:29	1
Thallium	ND		0.0010	0.00020	mg/L		05/17/21 14:00	05/19/21 12:29	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Lab Sample ID: LCS 240-486067/3-A

Matrix: Water

Analysis Batch: 486400

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 486067

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0969		mg/L		97	80 - 120
Arsenic	1.00	0.918		mg/L		92	80 - 120
Barium	1.00	0.896		mg/L		90	80 - 120
Beryllium	0.500	0.471		mg/L		94	80 - 120
Calcium	25.0	23.0		mg/L		92	80 - 120
Cadmium	0.500	0.463		mg/L		93	80 - 120
Cobalt	0.500	0.474		mg/L		95	80 - 120
Chromium	0.500	0.468		mg/L		94	80 - 120
Molybdenum	0.500	0.461		mg/L		92	80 - 120
Selenium	1.00	0.916		mg/L		92	80 - 120
Lithium	0.500	0.480		mg/L		96	80 - 120

Lab Sample ID: LCS 240-486067/3-A

Matrix: Water

Analysis Batch: 486677

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 486067

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.500	0.507		mg/L		101	80 - 120
Thallium	1.00	0.998		mg/L		100	80 - 120

Lab Sample ID: 280-148490-2 MS

Matrix: Water

Analysis Batch: 486400

Client Sample ID: MW-28

Prep Type: Total Recoverable

Prep Batch: 486067

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.100	0.0969		mg/L		97	75 - 125
Arsenic	0.029		1.00	1.00		mg/L		97	75 - 125
Barium	0.014		1.00	0.911		mg/L		90	75 - 125
Beryllium	ND		0.500	0.476		mg/L		95	75 - 125
Calcium	500		25.0	509	4	mg/L		25	75 - 125
Cadmium	ND		0.500	0.443		mg/L		89	75 - 125
Cobalt	0.00067	J	0.500	0.488		mg/L		97	75 - 125
Chromium	0.0013	J	0.500	0.446		mg/L		89	75 - 125
Molybdenum	ND		0.500	0.484		mg/L		97	75 - 125
Selenium	2.8		1.00	3.62		mg/L		87	75 - 125
Lithium	0.24		0.500	0.721		mg/L		96	75 - 125

Lab Sample ID: 280-148490-2 MS

Matrix: Water

Analysis Batch: 486677

Client Sample ID: MW-28

Prep Type: Total Recoverable

Prep Batch: 486067

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	ND		0.500	0.487		mg/L		97	75 - 125
Thallium	ND		1.00	0.954		mg/L		95	75 - 125

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Lab Sample ID: 280-148490-2 MSD

Matrix: Water

Analysis Batch: 486400

Client Sample ID: MW-28

Prep Type: Total Recoverable

Prep Batch: 486067

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.100	0.0975		mg/L		98	75 - 125	1	20
Arsenic	0.029		1.00	1.02		mg/L		99	75 - 125	1	20
Barium	0.014		1.00	0.908		mg/L		89	75 - 125	0	20
Beryllium	ND		0.500	0.479		mg/L		96	75 - 125	1	20
Calcium	500		25.0	512	4	mg/L		39	75 - 125	1	20
Cadmium	ND		0.500	0.443		mg/L		89	75 - 125	0	20
Cobalt	0.00067	J	0.500	0.492		mg/L		98	75 - 125	1	20
Chromium	0.0013	J	0.500	0.452		mg/L		90	75 - 125	2	20
Molybdenum	ND		0.500	0.488		mg/L		98	75 - 125	1	20
Selenium	2.8		1.00	3.69		mg/L		93	75 - 125	2	20
Lithium	0.24		0.500	0.712		mg/L		95	75 - 125	1	20

Lab Sample ID: 280-148490-2 MSD

Matrix: Water

Analysis Batch: 486677

Client Sample ID: MW-28

Prep Type: Total Recoverable

Prep Batch: 486067

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	ND		0.500	0.473		mg/L		95	75 - 125	3	20
Thallium	ND		1.00	0.931		mg/L		93	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-486073/1-A

Matrix: Water

Analysis Batch: 486492

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 486073

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/17/21 14:00	05/18/21 13:25	1

Lab Sample ID: LCS 240-486073/2-A

Matrix: Water

Analysis Batch: 486492

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 486073

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.67		ug/L		93	80 - 120

Lab Sample ID: 280-148490-1 MS

Matrix: Water

Analysis Batch: 486492

Client Sample ID: MW-3

Prep Type: Total/NA

Prep Batch: 486073

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		1.00	0.979		ug/L		98	80 - 120

Lab Sample ID: 280-148490-1 MSD

Matrix: Water

Analysis Batch: 486492

Client Sample ID: MW-3

Prep Type: Total/NA

Prep Batch: 486073

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		1.00	0.871		ug/L		87	80 - 120	12	20

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 9040B - pH

Lab Sample ID: LCS 280-535911/4

Matrix: Water

Analysis Batch: 535911

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: 280-148490-1 DU

Matrix: Water

Analysis Batch: 535911

Client Sample ID: MW-3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.2	HF	7.2		SU		0.4	5
Temperature	20.5	HF	20.4		Degrees C		0.2	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-538116/14

Matrix: Water

Analysis Batch: 538116

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			06/01/21 15:23	1
Fluoride	ND		0.50	0.17	mg/L			06/01/21 15:23	1
Sulfate	ND		5.0	1.0	mg/L			06/01/21 15:23	1

Lab Sample ID: LCS 280-538116/12

Matrix: Water

Analysis Batch: 538116

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	104		mg/L		104	90 - 110
Fluoride	5.00	5.32		mg/L		106	90 - 110
Sulfate	100	103		mg/L		103	90 - 110

Lab Sample ID: LCSD 280-538116/13

Matrix: Water

Analysis Batch: 538116

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	104		mg/L		104	90 - 110	0	10
Fluoride	5.00	5.29		mg/L		106	90 - 110	1	10
Sulfate	100	103		mg/L		103	90 - 110	0	10

Lab Sample ID: MRL 280-538116/11

Matrix: Water

Analysis Batch: 538116

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	4.64		mg/L		93	50 - 150
Fluoride	0.500	0.443	J	mg/L		89	50 - 150
Sulfate	5.00	4.40	J	mg/L		88	50 - 150

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Lab Sample ID: 280-148490-2 MS

Matrix: Water

Analysis Batch: 538116

Client Sample ID: MW-28

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	67		50.0	119		mg/L		103	80 - 120
Fluoride	0.20	J F1	5.00	4.53		mg/L		87	80 - 120

Lab Sample ID: 280-148490-2 MSD

Matrix: Water

Analysis Batch: 538116

Client Sample ID: MW-28

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	67		50.0	114		mg/L		93	80 - 120	5	20
Fluoride	0.20	J F1	5.00	4.07	F1	mg/L		77	80 - 120	11	20

Lab Sample ID: 280-148490-5 MS

Matrix: Water

Analysis Batch: 538116

Client Sample ID: MW-27

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	21		50.0	73.1		mg/L		105	80 - 120
Fluoride	0.69		5.00	5.05		mg/L		87	80 - 120
Sulfate	48		50.0	99.4		mg/L		103	80 - 120

Lab Sample ID: 280-148490-5 MSD

Matrix: Water

Analysis Batch: 538116

Client Sample ID: MW-27

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	21		50.0	75.4		mg/L		110	80 - 120	3	20
Fluoride	0.69		5.00	5.22		mg/L		91	80 - 120	3	20
Sulfate	48		50.0	102		mg/L		107	80 - 120	2	20

Lab Sample ID: 280-148490-2 DU

Matrix: Water

Analysis Batch: 538116

Client Sample ID: MW-28

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	67		67.4		mg/L		0.1	15
Fluoride	0.20	J F1	0.285	J F5	mg/L		35	15

Lab Sample ID: 280-148490-5 DU

Matrix: Water

Analysis Batch: 538116

Client Sample ID: MW-27

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	21		20.5		mg/L		0	15
Fluoride	0.69		0.687		mg/L		0.7	15
Sulfate	48		47.9		mg/L		0.09	15

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Lab Sample ID: MB 280-538250/6
Matrix: Water
Analysis Batch: 538250

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			06/02/21 14:22	1

Lab Sample ID: LCS 280-538250/4
Matrix: Water
Analysis Batch: 538250

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	93.6		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-538250/5
Matrix: Water
Analysis Batch: 538250

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	93.8		mg/L		94	90 - 110	0	10

Lab Sample ID: MRL 280-538250/3
Matrix: Water
Analysis Batch: 538250

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	4.13	J	mg/L		83	50 - 150

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

Lab Sample ID: MB 280-535880/1
Matrix: Water
Analysis Batch: 535880

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			05/12/21 12:16	1

Lab Sample ID: LCS 280-535880/2
Matrix: Water
Analysis Batch: 535880

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	86.0		mg/L		86	79 - 114

Lab Sample ID: LCSD 280-535880/3
Matrix: Water
Analysis Batch: 535880

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	83.2		mg/L		83	79 - 114	3	20

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Lab Sample ID: 280-148490-7 DU
Matrix: Water
Analysis Batch: 535880

Client Sample ID: MW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	12	H	14.0	F5	mg/L		12	10

Lab Sample ID: MB 280-536058/1
Matrix: Water
Analysis Batch: 536058

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			05/13/21 13:23	1

Lab Sample ID: LCS 280-536058/2
Matrix: Water
Analysis Batch: 536058

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	95.2		mg/L		95	79 - 114

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: MB 280-535909/1
Matrix: Water
Analysis Batch: 535909

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			05/12/21 14:06	1

Lab Sample ID: LCS 280-535909/2
Matrix: Water
Analysis Batch: 535909

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	459		mg/L		92	88 - 114

Lab Sample ID: MB 280-535936/1
Matrix: Water
Analysis Batch: 535936

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)	6.00	J	10	4.7	mg/L			05/12/21 16:28	1

Lab Sample ID: LCS 280-535936/2
Matrix: Water
Analysis Batch: 535936

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	88 - 114

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: SM2540 C - Total Dissolved Solids (Continued)

Lab Sample ID: MB 280-536186/1
Matrix: Water
Analysis Batch: 536186

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			05/14/21 14:23	1

Lab Sample ID: LCS 280-536186/2
Matrix: Water
Analysis Batch: 536186

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	88 - 114

Lab Sample ID: LCSD 280-536186/3
Matrix: Water
Analysis Batch: 536186

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	500		mg/L		100	88 - 114	3	20

Lab Sample ID: MB 280-536667/1
Matrix: Water
Analysis Batch: 536667

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			05/19/21 10:45	1

Lab Sample ID: LCS 280-536667/2
Matrix: Water
Analysis Batch: 536667

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	88 - 114

Lab Sample ID: MB 280-537323/1
Matrix: Water
Analysis Batch: 537323

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			05/25/21 08:14	1

Lab Sample ID: LCS 280-537323/2
Matrix: Water
Analysis Batch: 537323

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	489		mg/L		98	88 - 114

Lab Sample ID: MB 280-537551/1
Matrix: Water
Analysis Batch: 537551

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			05/26/21 14:28	1

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: LCS 280-537551/2
Matrix: Water
Analysis Batch: 537551

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)	505	493		mg/L		98	88 - 114

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-510465/23-A
Matrix: Water
Analysis Batch: 513943

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 510465

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1049	U	0.135	0.135	1.00	0.225	pCi/L	05/19/21 10:54	06/11/21 22:03	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					05/19/21 10:54	06/11/21 22:03	1

Lab Sample ID: LCS 160-510465/1-A
Matrix: Water
Analysis Batch: 513624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 510465

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.3	9.501		1.33	1.00	0.420	pCi/L	84	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	71.2		40 - 110						

Lab Sample ID: MB 160-514777/4-A
Matrix: Water
Analysis Batch: 514753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 514777

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01490	U	0.0943	0.0943	1.00	0.199	pCi/L	06/18/21 12:28	06/18/21 14:56	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.3		40 - 110					06/18/21 12:28	06/18/21 14:56	1

Lab Sample ID: LCS 160-514777/1-A
Matrix: Water
Analysis Batch: 514753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 514777

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.3	91.05	*	36.3	1.00	37.6	pCi/L	803	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	0.31	X	40 - 110						

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Lab Sample ID: LCSD 160-514777/2-A
Matrix: Water
Analysis Batch: 514753

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 514777

Analyte		Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226		11.3	79.47	*	23.8	1.00	20.7	pCi/L	701	75 - 125	0.19	1
	LCSD	LCSD										
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	0.62	X	40 - 110									

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-510471/23-A
Matrix: Water
Analysis Batch: 514231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 510471

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1366	U	0.217	0.218	1.00	0.368	pCi/L	05/19/21 11:50	06/10/21 13:43	1
	MB	MB								
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	85.3		40 - 110							
Y Carrier	90.5		40 - 110							
								Prepared	Analyzed	Dil Fac
								05/19/21 11:50	06/10/21 13:43	1
								05/19/21 11:50	06/10/21 13:43	1

Lab Sample ID: LCS 160-510471/1-A
Matrix: Water
Analysis Batch: 513624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 510471

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228		9.64	8.531		1.09	1.00	0.499	pCi/L	89	75 - 125
	LCS	LCS								
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	71.2		40 - 110							
Y Carrier	89.0		40 - 110							

Lab Sample ID: MB 160-513612/21-A
Matrix: Water
Analysis Batch: 514296

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513612

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5489		0.349	0.353	1.00	0.540	pCi/L	06/10/21 08:39	06/15/21 09:54	1
	MB	MB								
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	76.3		40 - 110							
Y Carrier	89.3		40 - 110							
								Prepared	Analyzed	Dil Fac
								06/10/21 08:39	06/15/21 09:54	1
								06/10/21 08:39	06/15/21 09:54	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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

Lab Sample ID: LCS 160-513612/1-A

Matrix: Water

Analysis Batch: 514291

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 513612

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228		9.62	423.0	*	108	1.00	119	pCi/L	4395	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	0.31	X	40 - 110
Y Carrier	84.9		40 - 110

Lab Sample ID: LCSD 160-513612/2-A

Matrix: Water

Analysis Batch: 514291

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 513612

Analyte		Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228		9.62	134.3	*	45.2	1.00	55.3	pCi/L	1395	75 - 125	1.89	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	0.62	X	40 - 110
Y Carrier	81.1		40 - 110

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Metals

Prep Batch: 486067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total Recoverable	Water	3005A	
280-148490-2	MW-28	Total Recoverable	Water	3005A	
280-148490-3	MW-4	Total Recoverable	Water	3005A	
280-148490-4	MW-13D	Total Recoverable	Water	3005A	
280-148490-5	MW-27	Total Recoverable	Water	3005A	
280-148490-6	MW-13	Total Recoverable	Water	3005A	
280-148490-7	MW-7	Total Recoverable	Water	3005A	
280-148490-8	MW-26	Total Recoverable	Water	3005A	
280-148490-9	MW-1P	Total Recoverable	Water	3005A	
280-148490-10	MW-6	Total Recoverable	Water	3005A	
280-148490-11	MW-8	Total Recoverable	Water	3005A	
280-148490-12	MW-15	Total Recoverable	Water	3005A	
280-148490-13	MW-1	Total Recoverable	Water	3005A	
MB 240-486067/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-486067/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-486067/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-148490-1 MS	MW-3	Total Recoverable	Water	3005A	
280-148490-1 MSD	MW-3	Total Recoverable	Water	3005A	
280-148490-2 MS	MW-28	Total Recoverable	Water	3005A	
280-148490-2 MSD	MW-28	Total Recoverable	Water	3005A	

Prep Batch: 486073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	7470A	
280-148490-2	MW-28	Total/NA	Water	7470A	
280-148490-3	MW-4	Total/NA	Water	7470A	
280-148490-4	MW-13D	Total/NA	Water	7470A	
280-148490-5	MW-27	Total/NA	Water	7470A	
280-148490-6	MW-13	Total/NA	Water	7470A	
280-148490-7	MW-7	Total/NA	Water	7470A	
280-148490-8	MW-26	Total/NA	Water	7470A	
280-148490-9	MW-1P	Total/NA	Water	7470A	
280-148490-10	MW-6	Total/NA	Water	7470A	
280-148490-11	MW-8	Total/NA	Water	7470A	
280-148490-12	MW-15	Total/NA	Water	7470A	
280-148490-13	MW-1	Total/NA	Water	7470A	
MB 240-486073/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-486073/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-148490-1 MS	MW-3	Total/NA	Water	7470A	
280-148490-1 MSD	MW-3	Total/NA	Water	7470A	

Analysis Batch: 486400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total Recoverable	Water	6020A	486067
280-148490-2	MW-28	Total Recoverable	Water	6020A	486067
280-148490-3	MW-4	Total Recoverable	Water	6020A	486067
280-148490-4	MW-13D	Total Recoverable	Water	6020A	486067
280-148490-5	MW-27	Total Recoverable	Water	6020A	486067
280-148490-6	MW-13	Total Recoverable	Water	6020A	486067
280-148490-7	MW-7	Total Recoverable	Water	6020A	486067
280-148490-8	MW-26	Total Recoverable	Water	6020A	486067

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Metals (Continued)

Analysis Batch: 486400 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-9	MW-1P	Total Recoverable	Water	6020A	486067
280-148490-10	MW-6	Total Recoverable	Water	6020A	486067
280-148490-11	MW-8	Total Recoverable	Water	6020A	486067
280-148490-12	MW-15	Total Recoverable	Water	6020A	486067
280-148490-13	MW-1	Total Recoverable	Water	6020A	486067
MB 240-486067/1-A	Method Blank	Total Recoverable	Water	6020A	486067
LCS 240-486067/3-A	Lab Control Sample	Total Recoverable	Water	6020A	486067
280-148490-2 MS	MW-28	Total Recoverable	Water	6020A	486067
280-148490-2 MSD	MW-28	Total Recoverable	Water	6020A	486067

Analysis Batch: 486492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	7470A	486073
280-148490-2	MW-28	Total/NA	Water	7470A	486073
280-148490-3	MW-4	Total/NA	Water	7470A	486073
280-148490-4	MW-13D	Total/NA	Water	7470A	486073
280-148490-5	MW-27	Total/NA	Water	7470A	486073
280-148490-6	MW-13	Total/NA	Water	7470A	486073
280-148490-7	MW-7	Total/NA	Water	7470A	486073
280-148490-8	MW-26	Total/NA	Water	7470A	486073
280-148490-9	MW-1P	Total/NA	Water	7470A	486073
280-148490-10	MW-6	Total/NA	Water	7470A	486073
280-148490-11	MW-8	Total/NA	Water	7470A	486073
280-148490-12	MW-15	Total/NA	Water	7470A	486073
280-148490-13	MW-1	Total/NA	Water	7470A	486073
MB 240-486073/1-A	Method Blank	Total/NA	Water	7470A	486073
LCS 240-486073/2-A	Lab Control Sample	Total/NA	Water	7470A	486073
280-148490-1 MS	MW-3	Total/NA	Water	7470A	486073
280-148490-1 MSD	MW-3	Total/NA	Water	7470A	486073

Analysis Batch: 486514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total Recoverable	Water	6010C	486067
280-148490-2	MW-28	Total Recoverable	Water	6010C	486067
280-148490-3	MW-4	Total Recoverable	Water	6010C	486067
280-148490-4	MW-13D	Total Recoverable	Water	6010C	486067
280-148490-5	MW-27	Total Recoverable	Water	6010C	486067
280-148490-6	MW-13	Total Recoverable	Water	6010C	486067
280-148490-7	MW-7	Total Recoverable	Water	6010C	486067
280-148490-8	MW-26	Total Recoverable	Water	6010C	486067
280-148490-9	MW-1P	Total Recoverable	Water	6010C	486067
280-148490-10	MW-6	Total Recoverable	Water	6010C	486067
280-148490-11	MW-8	Total Recoverable	Water	6010C	486067
280-148490-12	MW-15	Total Recoverable	Water	6010C	486067
280-148490-13	MW-1	Total Recoverable	Water	6010C	486067
MB 240-486067/1-A	Method Blank	Total Recoverable	Water	6010C	486067
LCS 240-486067/2-A	Lab Control Sample	Total Recoverable	Water	6010C	486067
280-148490-1 MS	MW-3	Total Recoverable	Water	6010C	486067
280-148490-1 MSD	MW-3	Total Recoverable	Water	6010C	486067

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Metals

Analysis Batch: 486677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total Recoverable	Water	6020A	486067
280-148490-2	MW-28	Total Recoverable	Water	6020A	486067
280-148490-3	MW-4	Total Recoverable	Water	6020A	486067
280-148490-4	MW-13D	Total Recoverable	Water	6020A	486067
280-148490-5	MW-27	Total Recoverable	Water	6020A	486067
280-148490-6	MW-13	Total Recoverable	Water	6020A	486067
280-148490-7	MW-7	Total Recoverable	Water	6020A	486067
280-148490-8	MW-26	Total Recoverable	Water	6020A	486067
280-148490-9	MW-1P	Total Recoverable	Water	6020A	486067
280-148490-10	MW-6	Total Recoverable	Water	6020A	486067
280-148490-11	MW-8	Total Recoverable	Water	6020A	486067
280-148490-12	MW-15	Total Recoverable	Water	6020A	486067
280-148490-13	MW-1	Total Recoverable	Water	6020A	486067
MB 240-486067/1-A	Method Blank	Total Recoverable	Water	6020A	486067
LCS 240-486067/3-A	Lab Control Sample	Total Recoverable	Water	6020A	486067
280-148490-2 MS	MW-28	Total Recoverable	Water	6020A	486067
280-148490-2 MSD	MW-28	Total Recoverable	Water	6020A	486067

General Chemistry

Analysis Batch: 535880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-7	MW-7	Total/NA	Water	SM 2540D	
MB 280-535880/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-535880/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-535880/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
280-148490-7 DU	MW-7	Total/NA	Water	SM 2540D	

Analysis Batch: 535909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	SM2540 C	
280-148490-2	MW-28	Total/NA	Water	SM2540 C	
280-148490-4	MW-13D	Total/NA	Water	SM2540 C	
280-148490-5	MW-27	Total/NA	Water	SM2540 C	
280-148490-6	MW-13	Total/NA	Water	SM2540 C	
280-148490-8	MW-26	Total/NA	Water	SM2540 C	
MB 280-535909/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-535909/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 535911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	9040B	
280-148490-2	MW-28	Total/NA	Water	9040B	
280-148490-3	MW-4	Total/NA	Water	9040B	
280-148490-4	MW-13D	Total/NA	Water	9040B	
280-148490-5	MW-27	Total/NA	Water	9040B	
280-148490-6	MW-13	Total/NA	Water	9040B	
280-148490-7	MW-7	Total/NA	Water	9040B	
280-148490-8	MW-26	Total/NA	Water	9040B	
280-148490-9	MW-1P	Total/NA	Water	9040B	
280-148490-10	MW-6	Total/NA	Water	9040B	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

General Chemistry (Continued)

Analysis Batch: 535911 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-11	MW-8	Total/NA	Water	9040B	
280-148490-12	MW-15	Total/NA	Water	9040B	
280-148490-13	MW-1	Total/NA	Water	9040B	
LCS 280-535911/4	Lab Control Sample	Total/NA	Water	9040B	
280-148490-1 DU	MW-3	Total/NA	Water	9040B	

Analysis Batch: 535936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-10	MW-6	Total/NA	Water	SM2540 C	
280-148490-11	MW-8	Total/NA	Water	SM2540 C	
280-148490-12	MW-15	Total/NA	Water	SM2540 C	
280-148490-13	MW-1	Total/NA	Water	SM2540 C	
MB 280-535936/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-535936/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 536058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	SM 2540D	
280-148490-2	MW-28	Total/NA	Water	SM 2540D	
280-148490-3	MW-4	Total/NA	Water	SM 2540D	
280-148490-4	MW-13D	Total/NA	Water	SM 2540D	
280-148490-5	MW-27	Total/NA	Water	SM 2540D	
280-148490-6	MW-13	Total/NA	Water	SM 2540D	
280-148490-8	MW-26	Total/NA	Water	SM 2540D	
280-148490-9	MW-1P	Total/NA	Water	SM 2540D	
280-148490-10	MW-6	Total/NA	Water	SM 2540D	
280-148490-11	MW-8	Total/NA	Water	SM 2540D	
280-148490-12	MW-15	Total/NA	Water	SM 2540D	
280-148490-13	MW-1	Total/NA	Water	SM 2540D	
MB 280-536058/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-536058/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 536186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-7	MW-7	Total/NA	Water	SM2540 C	
MB 280-536186/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-536186/2	Lab Control Sample	Total/NA	Water	SM2540 C	
LCSD 280-536186/3	Lab Control Sample Dup	Total/NA	Water	SM2540 C	

Analysis Batch: 536667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-9	MW-1P	Total/NA	Water	SM2540 C	
MB 280-536667/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-536667/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 537323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-537323/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-537323/2	Lab Control Sample	Total/NA	Water	SM2540 C	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

General Chemistry

Analysis Batch: 537551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-3	MW-4	Total/NA	Water	SM2540 C	
MB 280-537551/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-537551/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 538116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	9056A	
280-148490-1	MW-3	Total/NA	Water	9056A	
280-148490-2	MW-28	Total/NA	Water	9056A	
280-148490-3	MW-4	Total/NA	Water	9056A	
280-148490-3	MW-4	Total/NA	Water	9056A	
280-148490-4	MW-13D	Total/NA	Water	9056A	
280-148490-5	MW-27	Total/NA	Water	9056A	
280-148490-6	MW-13	Total/NA	Water	9056A	
280-148490-6	MW-13	Total/NA	Water	9056A	
280-148490-7	MW-7	Total/NA	Water	9056A	
280-148490-8	MW-26	Total/NA	Water	9056A	
280-148490-8	MW-26	Total/NA	Water	9056A	
280-148490-9	MW-1P	Total/NA	Water	9056A	
280-148490-10	MW-6	Total/NA	Water	9056A	
280-148490-10	MW-6	Total/NA	Water	9056A	
280-148490-11	MW-8	Total/NA	Water	9056A	
280-148490-11	MW-8	Total/NA	Water	9056A	
280-148490-12	MW-15	Total/NA	Water	9056A	
280-148490-12	MW-15	Total/NA	Water	9056A	
280-148490-13	MW-1	Total/NA	Water	9056A	
280-148490-13	MW-1	Total/NA	Water	9056A	
MB 280-538116/14	Method Blank	Total/NA	Water	9056A	
LCS 280-538116/12	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-538116/13	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-538116/11	Lab Control Sample	Total/NA	Water	9056A	
280-148490-2 MS	MW-28	Total/NA	Water	9056A	
280-148490-2 MSD	MW-28	Total/NA	Water	9056A	
280-148490-5 MS	MW-27	Total/NA	Water	9056A	
280-148490-5 MSD	MW-27	Total/NA	Water	9056A	
280-148490-2 DU	MW-28	Total/NA	Water	9056A	
280-148490-5 DU	MW-27	Total/NA	Water	9056A	

Analysis Batch: 538250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-2	MW-28	Total/NA	Water	9056A	
280-148490-4	MW-13D	Total/NA	Water	9056A	
MB 280-538250/6	Method Blank	Total/NA	Water	9056A	
LCS 280-538250/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-538250/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-538250/3	Lab Control Sample	Total/NA	Water	9056A	

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Rad

Prep Batch: 510465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	PrecSep-21	
280-148490-3	MW-4	Total/NA	Water	PrecSep-21	
280-148490-4	MW-13D	Total/NA	Water	PrecSep-21	
280-148490-5	MW-27	Total/NA	Water	PrecSep-21	
280-148490-6	MW-13	Total/NA	Water	PrecSep-21	
280-148490-7	MW-7	Total/NA	Water	PrecSep-21	
280-148490-8	MW-26	Total/NA	Water	PrecSep-21	
280-148490-9	MW-1P	Total/NA	Water	PrecSep-21	
280-148490-10	MW-6	Total/NA	Water	PrecSep-21	
280-148490-11	MW-8	Total/NA	Water	PrecSep-21	
280-148490-12	MW-15	Total/NA	Water	PrecSep-21	
280-148490-13	MW-1	Total/NA	Water	PrecSep-21	
MB 160-510465/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-510465/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 510471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-1	MW-3	Total/NA	Water	PrecSep_0	
280-148490-3	MW-4	Total/NA	Water	PrecSep_0	
280-148490-4	MW-13D	Total/NA	Water	PrecSep_0	
280-148490-5	MW-27	Total/NA	Water	PrecSep_0	
280-148490-6	MW-13	Total/NA	Water	PrecSep_0	
280-148490-7	MW-7	Total/NA	Water	PrecSep_0	
280-148490-8	MW-26	Total/NA	Water	PrecSep_0	
280-148490-9	MW-1P	Total/NA	Water	PrecSep_0	
280-148490-10	MW-6	Total/NA	Water	PrecSep_0	
280-148490-11	MW-8	Total/NA	Water	PrecSep_0	
280-148490-12	MW-15	Total/NA	Water	PrecSep_0	
280-148490-13	MW-1	Total/NA	Water	PrecSep_0	
MB 160-510471/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-510471/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 513612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-2	MW-28	Total/NA	Water	PrecSep_0	
MB 160-513612/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-513612/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-513612/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 514777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148490-2	MW-28	Total/NA	Water	PrecSep-21	
MB 160-514777/4-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-514777/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-514777/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-3

Date Collected: 05/08/21 17:50

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-1

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:01	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 10:31	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 12:34	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 13:34	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:03	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 17:34	JMB	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	538116	06/01/21 17:48	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	535909	05/12/21 14:06	LEB	TAL DEN
Total/NA	Prep	PrecSep-21			1001.83 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513624	06/10/21 21:45	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1001.83 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:38	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Client Sample ID: MW-28

Date Collected: 05/08/21 13:10

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-2

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:22	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 10:33	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 12:37	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 13:40	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:16	QJB	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	538250	06/02/21 19:44	JMB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 18:02	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	10 mL	100 mL	535909	05/12/21 14:06	LEB	TAL DEN
Total/NA	Prep	PrecSep-21			751.16 mL	1.0 g	514777	06/18/21 12:28	JEC	TAL SL
Total/NA	Analysis	9315		1			514753	06/18/21 14:56	ANW	TAL SL
Total/NA	Prep	PrecSep_0			751.16 mL	1.0 g	513612	06/10/21 08:39	MJ	TAL SL
Total/NA	Analysis	9320		1			514291	06/15/21 09:42	AK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

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Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-4

Date Collected: 05/08/21 09:10

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-3

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:27	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:19	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 12:51	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 13:59	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:20	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 20:22	JMB	TAL DEN
Total/NA	Analysis	9056A		50	10 mL	10 mL	538116	06/01/21 20:36	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	1 mL	100 mL	537551	05/26/21 14:28	LRB	TAL DEN
Total/NA	Prep	PrecSep-21			501.05 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513943	06/11/21 15:07	ANW	TAL SL
Total/NA	Prep	PrecSep_0			501.05 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:38	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Client Sample ID: MW-13D

Date Collected: 05/06/21 17:55

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-4

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:31	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:21	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:04	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:01	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:24	QJB	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	538250	06/02/21 20:03	JMB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 20:50	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	535909	05/12/21 14:06	LEB	TAL DEN
Total/NA	Prep	PrecSep-21			1001.81 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			514500	06/16/21 17:52	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1001.81 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:38	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

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Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-27

Date Collected: 05/07/21 14:35

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-5

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:44	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:24	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:06	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:03	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:28	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 22:14	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	535909	05/12/21 14:06	LEB	TAL DEN
Total/NA	Prep	PrecSep-21			1000.13 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513943	06/11/21 15:07	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.13 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:38	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Client Sample ID: MW-13

Date Collected: 05/06/21 17:45

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-6

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:48	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:26	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:09	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:26	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:33	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 21:18	JMB	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	538116	06/01/21 21:32	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	535909	05/12/21 14:06	LEB	TAL DEN
Total/NA	Prep	PrecSep-21			1000.40 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513943	06/11/21 15:08	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.40 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:39	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-7

Date Collected: 05/04/21 12:20

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-7

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:53	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:34	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:11	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:28	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:36	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 16:38	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	535880	05/12/21 12:16	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	536186	05/14/21 14:23	LRB	TAL DEN
Total/NA	Prep	PrecSep-21			1000.70 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513784	06/11/21 15:10	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.70 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:39	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Client Sample ID: MW-26

Date Collected: 05/05/21 10:55

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-8

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 21:57	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:36	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:14	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:30	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:40	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 23:10	JMB	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	538116	06/01/21 23:24	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	535909	05/12/21 14:06	LEB	TAL DEN
Total/NA	Prep	PrecSep-21			1000.18 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513784	06/11/21 15:10	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.18 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:39	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-1P

Date Collected: 05/04/21 14:05

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-9

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 22:01	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:39	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:16	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:32	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:44	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 17:06	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	536667	05/19/21 10:45	LRB	TAL DEN
Total/NA	Prep	PrecSep-21			1001.58 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513784	06/11/21 15:10	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1001.58 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:39	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Client Sample ID: MW-6

Date Collected: 05/06/21 11:10

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-10

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 22:06	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:41	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:19	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:34	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:53	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/01/21 23:38	JMB	TAL DEN
Total/NA	Analysis	9056A		10	10 mL	10 mL	538116	06/01/21 23:52	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	535936	05/12/21 16:28	LRB	TAL DEN
Total/NA	Prep	PrecSep-21			1000.34 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513784	06/11/21 15:10	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.34 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:39	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-8

Date Collected: 05/06/21 09:50

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-11

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 22:10	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:44	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:21	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:36	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 11:56	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/02/21 00:06	JMB	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	538116	06/02/21 00:20	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	535936	05/12/21 16:28	LRB	TAL DEN
Total/NA	Prep	PrecSep-21			1000.38 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			513784	06/11/21 15:27	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.38 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:39	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Client Sample ID: MW-15

Date Collected: 05/05/21 14:50

Date Received: 05/11/21 17:29

Lab Sample ID: 280-148490-12

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 22:14	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:46	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:24	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:38	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 12:03	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/02/21 01:02	JMB	TAL DEN
Total/NA	Analysis	9056A		10	10 mL	10 mL	538116	06/02/21 01:16	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	535936	05/12/21 16:28	LRB	TAL DEN
Total/NA	Prep	PrecSep-21			1000.97 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	513943	06/11/21 17:05	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.97 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			513624	06/10/21 13:39	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Client Sample ID: MW-1

Lab Sample ID: 280-148490-13

Date Collected: 05/05/21 11:45

Matrix: Water

Date Received: 05/11/21 17:29

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	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			486514	05/18/21 22:19	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486400	05/18/21 11:49	DTN	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486067	05/17/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			486677	05/19/21 13:26	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486073	05/17/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			486492	05/18/21 14:40	SLD	TAL CAN
Total/NA	Analysis	9040B		1			535911	05/12/21 12:07	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538116	06/02/21 01:30	JMB	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	538116	06/02/21 01:44	JMB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536058	05/13/21 13:23	JMH	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	535936	05/12/21 16:28	LRB	TAL DEN
Total/NA	Prep	PrecSep-21			750.27 mL	1.0 g	510465	05/19/21 10:54	MJ	TAL SL
Total/NA	Analysis	9315		1			514500	06/16/21 17:52	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.27 mL	1.0 g	510471	05/19/21 11:50	MJ	TAL SL
Total/NA	Analysis	9320		1			514231	06/10/21 13:41	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514711	06/17/21 13:50	GRW	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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
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	01-12-22
West Virginia DEP	State	210	12-31-21

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-23
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	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21
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	04-01-22
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	03-01-22
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193	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	06-14-22
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Eurofins TestAmerica, Denver

Chain of Custody Record

Denver
#280

eurofins
Environment Testing
America

Client Information		Sampler JACOB MARRAS		Lab PM Harrington, Danielle M	COC No 280-103098-29694.3
Client Contact Molly Reeves		Phone 303-863-7030		E-Mail Danielle.Harrington@Eurofins.com	Page Page 3 of 3
Company HDR Inc		Address 9781 S. Meridian Blvd Suite 400		Job #	
City Englewood		State Zip CO. 80112		Analysis Requested	
Phone 734-263-7138(Tel)		PO # DEN-018		Preservation Codes:	
Email Molly.Reeves@hdrinc.com		WO #		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Project Name Xcel Energy GW CCR Monitoring - Valmont		Project # 28014379		Barcode 280-148490 Chain of Custody	
Site Colorado Landfill Wells		SSOW#		Total Number of Containers	
Sample Identification		Sample Date		Sample Time	
MW-3	05-08-2021	1750	G	WATER	
MW-28	05-08-2021	1310	G	WATER	
MW-4	05-08-2021	0910	G	WATER	
MW-13D	05-06-2021	1755	G	WATER	
MW-27	05-08-2021	1435	G	WATER	
MW-13	05-06-2021	1745	G	WATER	
MW-7	05-04-2021	1220	G	WATER	
MW-26	05-05-2021	1055	G	WATER	
MW-1P	05-04-2021	1405	G	WATER	
MW-6	05-06-2021	1110	G	WATER	
MW-8	05-06-2021	0950	G	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)	
Deliverable Requested: I, II, III, IV, Other (specify)		☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months		Special Instructions/Note:	
Empty Kit Relinquished by		Date:		Method of Shipment	
Relinquished by John Morrow		Date/Time 05-11-2021/1235		Company HDR	
Relinquished by		Date/Time		Company	
Relinquished by		Date/Time		Company	
Custody Seal Intact: ☒ Yes ☐ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks	
1650461, 1650462, 1650427, 1650428		01030423		F04 FRI	

[illegible]

Chain of Custody Record



Environment Testing
 America



Client Information (Sub Contract Lab)		Lab PM: Harrington, Danielle M		Carrier Tracking No(s): 280-568086.1	
Client Contact: Shipping/Receiving		Phone: Danielle.Harrington@Eurofinset.com		Page: Page 1 of 2	
Company: TestAmerica Laboratories, Inc.		Address: 13715 Rider Trail North, Earth City, MO. 63045		Job #: 280-148490-1	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		PO #: WO #:		Preservation Codes:	
Email:		Project #: 28014379		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 - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Site: Xcel Energy CCR - Valmont Station		SSOW#:		Other:	
Due Date Requested: 6/9/2021		TAT Requested (days):		Analysis Requested	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Sample Date		Sample Time		Matrix (W=water, S=solid, O=oil, BT=Tissue, AA=Air)	
Sample Date		Sample Time		Preservation Code:	
Sample Date		Sample Time		Field Filtered Sample (Yes or No)	
Sample Date		Sample Time		Perform MS/MSD (Yes or No)	
Sample Date		Sample Time		9315_Ra226/PreSep_21 Radium-226 (1/3)	
Sample Date		Sample Time		9320_Ra228/PreSep_0 Radium-228 (2/3)	
Sample Date		Sample Time		Ra226Ra228_GFP/ (MOD) Local Method	
Sample Date		Sample Time		Total Number of containers	
Sample Date		Sample Time		Special Instructions/Note:	
MW-3 (280-148490-1)		5/8/21 17:50 Mountain		Water	
MW-28 (280-148490-2)		5/8/21 13:10 Mountain		Water	
MW-4 (280-148490-3)		5/8/21 09:10 Mountain		Water	
MW-13D (280-148490-4)		5/6/21 17:55 Mountain		Water	
MW-27 (280-148490-5)		5/7/21 14:35 Mountain		Water	
MW-13 (280-148490-6)		5/6/21 17:45 Mountain		Water	
MW-7 (280-148490-7)		5/4/21 12:20 Mountain		Water	
MW-26 (280-148490-8)		5/5/21 10:55 Mountain		Water	
MW-1P (280-148490-9)		5/4/21 14:05 Mountain		Water	
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 4					
Empty Kit Relinquished by:					
Date:					
Relinquished by:					
Date/Time: 5/13/21 1320					
Relinquished by:					
Date/Time:					
Relinquished by:					
Date/Time:					
Custody Seals Intact: ☐ Yes ☒ No					
Custody Seal No.:					
Cooler Temperature(s) °C and Other Remarks:					
Received by: <i>Michaela K...</i> Date/Time: 5/14/2021 10:10 Company: <i>ETA</i>					
Received by: <i>Michaela K...</i> Date/Time: 5/14/2021 10:10 Company: <i>ETA</i>					
Received by: <i>Michaela K...</i> Date/Time: 5/14/2021 10:10 Company: <i>ETA</i>					

Client Information (Sub Contract Lab)			Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact:			Phone:		Harrington, Danielle M				280-568086.2	
Shipping/Receiving			E-Mail:		Danielle.Harrington@Eurofins.com		State of Origin:		Page:	
Company:			TestAmerica Laboratories, Inc.				Colorado		Page 2 of 2	
Address:			13715 Rider Trail North,				Job #:		280-148490-1	
City:			Earth City				Preservation Codes:		A - HCL M - Hexane B - NaOH N - None O - AsNaO2 C - Zn Acetate D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid I - Ice J - DI Water U - Acetone V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
State, Zip:			MO, 63045				Other:			
Phone:			314-298-8566(Tel) 314-298-8757(Fax)				Total Number of containers			
Email:										
Project Name:			Xcel Energy GW CCR Monitoring - Valmont				Special Instructions/Note:			
Site:			Xcel Energy CCR - Valmont Station							

Analysis Requested				Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=other)		Preservation Code:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		9315_Ra226/PreSep_21 Radium-226 (1/3)		9320_Ra228/PreSep_0 Radium-228 (2/3)		Ra226Ra228_GFP/ (MOD) Local Method	
Due Date Requested:				6/9/2021		TAT Requested (days):																			
PO #:																									
WO #:																									
Project #:				28014379																					
SSOW#:																									
MW-6 (280-148490-10)				5/6/21		11:10		Mountain		Water															
MW-8 (280-148490-11)				5/6/21		09:50		Mountain		Water															
MW-15 (280-148490-12)				5/5/21		14:50		Mountain		Water															
MW-1 (280-148490-13)				5/5/21		11:45		Mountain		Water															

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/ests/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)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 4		Time:	
Empty Kit Relinquished by:		Date:	
Relinquished by: <i>Paul J. 2</i>		Date/Time: 5/15/21 1320	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seal No.:		Custody Seal No.:	
☐ Yes ☐ No		☐ Yes ☐ No	

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

Chain of Custody Record



Environment Testing
America



Client Information (Sub Contract Lab)		Sampler: Harrington, Danielle M		Lab PM: Harrington, Danielle M		Carrier Tracking No(s): 280-568085.1		COC No: 280-568085.1	
Client Contact:		Phone:		E-Mail: Danielle.Harrington@Eurofins.com		State of Origin: Colorado		Page: Page 1 of 2	
Shipping/Receiving		Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD - A2LA		Job #:		Job #:	
Address: 4101 Shuffel Street NW, .		City: North Canton		State: OH, 44720		Phone: 330-497-9396(Tel) 330-497-0772(Fax)		Email:	
Project Name: Xcel Energy GW CCR Monitoring - Valmont		Project #: 28014379		SSOW#:		Due Date Requested: 6/9/2021		TAT Requested (days):	
Site: Xcel Energy CCR - Valmont Station		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix (W=Water, S=Solid, O=Waste/Oil, AT=Asph, A=Air)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix (W=Water, S=Solid, O=Waste/Oil, AT=Asph, A=Air)	
MW-3 (280-148490-1)		5/8/21		17:50 Mountain		Water		Field Filtered Sample (Yes or No)	
MW-28 (280-148490-2)		5/8/21		13:10 Mountain		Water		6020A/3005A (MOD) Boron	
MW-4 (280-148490-3)		5/8/21		09:10 Mountain		Water		7470A/7470A Prep Mercury	
MW-13D (280-148490-4)		5/6/21		17:55 Mountain		Water		6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
MW-27 (280-148490-5)		5/7/21		14:35 Mountain		Water		Perform MS/MSD (Yes or No)	
MW-13 (280-148490-6)		5/6/21		17:45 Mountain		Water		Field Filtered Sample (Yes or No)	
MW-7 (280-148490-7)		5/4/21		12:20 Mountain		Water		6020A/3005A (MOD) Boron	
MW-26 (280-148490-8)		5/5/21		10:55 Mountain		Water		7470A/7470A Prep Mercury	
MW-1P (280-148490-9)		5/4/21		14:05 Mountain		Water		6020A/3005A (MOD) 13 Total Metals (w/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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification		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)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Time: Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date/Time: 5/13/21 1410	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
Δ Yes Δ No			

Ver: 11/01/2020

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : _____

Canton Facility

Client ETA Denver Site Name _____ Cooler unpacked by: **MJS ETA CANTON**

Cooler Received on MAY 14 2021 Opened on MAY 14 2021

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: Water Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
 IR GUN# IR-11 (CF +0.1 °C) Observed Cooler Temp. 11.7 °C Corrected Cooler Temp. 11.8 °C
 IR GUN #IR-12 (CF +0.2 °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# HC022887
 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

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: 280-148490-1

Login Number: 148490

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Dubicki, Adam L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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: 280-148490-1

Login Number: 148490

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

List Creation: 05/14/21 02:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148490-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
280-148490-1	MW-3	82.6	
280-148490-2	MW-28	81.0	
280-148490-3	MW-4	84.1	
280-148490-4	MW-13D	48.0	
280-148490-5	MW-27	79.0	
280-148490-6	MW-13	83.2	
280-148490-7	MW-7	80.8	
280-148490-8	MW-26	81.4	
280-148490-9	MW-1P	79.9	
280-148490-10	MW-6	85.6	
280-148490-11	MW-8	70.6	
280-148490-12	MW-15	85.9	
280-148490-13	MW-1	87.7	
LCS 160-510465/1-A	Lab Control Sample	71.2	
LCS 160-514777/1-A	Lab Control Sample	0.31 X	
LCSD 160-514777/2-A	Lab Control Sample Dup	0.62 X	
MB 160-510465/23-A	Method Blank	85.3	
MB 160-514777/4-A	Method Blank	76.3	
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)
280-148490-1	MW-3	82.6	89.3
280-148490-2	MW-28	81.0	84.1
280-148490-3	MW-4	84.1	87.5
280-148490-4	MW-13D	48.0	89.7
280-148490-5	MW-27	79.0	89.0
280-148490-6	MW-13	83.2	87.9
280-148490-7	MW-7	80.8	88.2
280-148490-8	MW-26	81.4	88.6
280-148490-9	MW-1P	79.9	88.6
280-148490-10	MW-6	85.6	88.6
280-148490-11	MW-8	70.6	89.0
280-148490-12	MW-15	85.9	90.1
280-148490-13	MW-1	87.7	90.5
LCS 160-510471/1-A	Lab Control Sample	71.2	89.0
LCS 160-513612/1-A	Lab Control Sample	0.31 X	84.9
LCSD 160-513612/2-A	Lab Control Sample Dup	0.62 X	81.1
MB 160-510471/23-A	Method Blank	85.3	90.5
MB 160-513612/21-A	Method Blank	76.3	89.3
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

Eurofins TestAmerica, Denver

ANALYTICAL REPORT

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

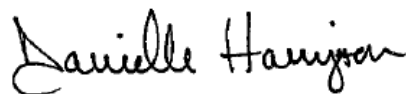
Laboratory Job ID: 280-148646-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
6/17/2021 3:44:27 PM

Danielle Harrington, Project Manager II
(303)736-0176

Danielle.Harrington@Eurofinset.com

LINKS

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

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

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Definitions/Glossary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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.

Rad

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

Glossary

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Job ID: 280-148646-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-148646-1

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 05/14/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.7 C.

Please note, there was no Rad analysis volume received for sample MW-5. Analysis and containers were added to reflect what was received.

TOTAL RECOVERABLE METALS - Method 6010C/6020A/7470A

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

GENERAL CHEMISTRY- VARIOUS ANALYSES

Several samples required a dilution or prepped at a dilution prior to analysis for various analyses. The reporting limits have been adjusted accordingly.

Method SM 2540C: The analysis volume selected for the following sample produced a base result greater than 200mg before calculation of the final result: (280-148634-J-1) and (280-148634-J-1 DU). Therefore it is flagged with a "E". The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines.

Method SM 2540C: The drying oven used in association with analytical batch 280-536298 was outside the acceptance range. The Standard Operating Procedure (SOP) states the oven must read 180 +/- 2 degrees. The original reading of the oven over the course of analysis was 178 degree with a correction factor of -2 degrees. The corrected temperature was 176 degree which is outside the range. All associated QC has passed; therefore, corrective action wasn't performed.

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

RADIUM-226 (GFPC)- Method 9315

Insufficient sample volume was available to perform a sample duplicate (DUP). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

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

RADIUM-228- Method 9320

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Job ID: 280-148646-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Insufficient sample volume was available to perform a sample duplicate (DUP). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Client Sample ID: MW-5

Lab Sample ID: 280-148646-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.2		0.10	0.023	mg/L	1		6010C	Total
Arsenic	0.00089	J	0.0050	0.00075	mg/L	1		6020A	Recoverable Total
Barium	0.016		0.0050	0.0022	mg/L	1		6020A	Recoverable Total
Beryllium	0.00050	J	0.0010	0.00031	mg/L	1		6020A	Recoverable Total
Calcium	71		1.0	0.58	mg/L	1		6020A	Recoverable Total
Cobalt	0.00082	J	0.0010	0.00019	mg/L	1		6020A	Recoverable Total
Chromium	0.0016	J	0.0020	0.00098	mg/L	1		6020A	Recoverable Total
Molybdenum	0.0037	J	0.010	0.0011	mg/L	1		6020A	Recoverable Total
Selenium	0.0054		0.0050	0.00089	mg/L	1		6020A	Recoverable Total
Thallium	0.00020	J	0.0010	0.00020	mg/L	1		6020A	Recoverable Total
Lithium	0.055		0.0080	0.0017	mg/L	1		6020A	Recoverable Total
pH adj. to 25 deg C	7.8	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	26		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.33	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	340		50	10	mg/L	10		9056A	Total/NA
Total Suspended Solids	26		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	890		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 280-148646-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	6.1		0.10	0.023	mg/L	1		6010C	Total
Arsenic	0.0065		0.0050	0.00075	mg/L	1		6020A	Recoverable Total
Barium	0.17		0.0050	0.0022	mg/L	1		6020A	Recoverable Total
Calcium	87		1.0	0.58	mg/L	1		6020A	Recoverable Total
Cobalt	0.0058		0.0010	0.00019	mg/L	1		6020A	Recoverable Total
Molybdenum	0.0066	J	0.010	0.0011	mg/L	1		6020A	Recoverable Total
Lithium	0.0039	J	0.0080	0.0017	mg/L	1		6020A	Recoverable Total
pH adj. to 25 deg C	7.6	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	36		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.83		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	70		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	28		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	630		10	4.7	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Client Sample ID: MW-25B

Lab Sample ID: 280-148646-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Boron	0.58		0.10	0.023	mg/L	1			6010C	Total
Antimony	0.00058	J	0.0020	0.00057	mg/L	1			6020A	Recoverable Total
Arsenic	0.0033	J	0.0050	0.00075	mg/L	1			6020A	Recoverable Total
Barium	0.021		0.0050	0.0022	mg/L	1			6020A	Recoverable Total
Beryllium	0.00063	J	0.0010	0.00031	mg/L	1			6020A	Recoverable Total
Calcium	130		1.0	0.58	mg/L	1			6020A	Recoverable Total
Cobalt	0.00054	J	0.0010	0.00019	mg/L	1			6020A	Recoverable Total
Molybdenum	0.089		0.010	0.0011	mg/L	1			6020A	Recoverable Total
Selenium	0.0046	J	0.0050	0.00089	mg/L	1			6020A	Recoverable Total
Thallium	0.00042	J	0.0010	0.00020	mg/L	1			6020A	Recoverable Total
Lithium	0.047		0.0080	0.0017	mg/L	1			6020A	Recoverable Total
pH adj. to 25 deg C	7.7	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	110		3.0	1.0	mg/L	1			9056A	Total/NA
Fluoride	0.41	J	0.50	0.17	mg/L	1			9056A	Total/NA
Sulfate	610		25	5.2	mg/L	5			9056A	Total/NA
Total Suspended Solids	6.4		4.0	1.1	mg/L	1			SM 2540D	Total/NA
Total Dissolved Solids (TDS)	1400		40	19	mg/L	1			SM2540 C	Total/NA

Client Sample ID: MW-25BEB

Lab Sample ID: 280-148646-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1			9040B	Total/NA
Temperature	20.6	HF	1.0	1.0	Degrees C	1			9040B	Total/NA
Total Dissolved Solids (TDS)	8.0	J	10	4.7	mg/L	1			SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM2540 C	Total Dissolved Solids	SM18	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"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

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: 280-148646-1

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-148646-1	MW-5	Water	05/13/21 13:10	05/14/21 14:55	
280-148646-2	MW-12	Water	05/13/21 16:35	05/14/21 14:55	
280-148646-3	MW-25B	Water	05/14/21 12:05	05/14/21 14:55	
280-148646-4	MW-25BEB	Water	05/14/21 12:40	05/14/21 14:55	

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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

Client Sample ID: MW-5
Date Collected: 05/13/21 13:10
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.2		0.10	0.023	mg/L		05/20/21 14:00	05/21/21 19:42	1

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.1		0.10	0.023	mg/L		05/20/21 14:00	05/21/21 20:02	1

Client Sample ID: MW-25B
Date Collected: 05/14/21 12:05
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.58		0.10	0.023	mg/L		05/20/21 14:00	05/21/21 20:06	1

Client Sample ID: MW-25BEB
Date Collected: 05/14/21 12:40
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		05/20/21 14:00	05/21/21 20:11	1

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

Client Sample ID: MW-5
Date Collected: 05/13/21 13:10
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/20/21 14:00	05/21/21 13:31	1
Arsenic	0.00089	J	0.0050	0.00075	mg/L		05/20/21 14:00	05/21/21 13:31	1
Barium	0.016		0.0050	0.0022	mg/L		05/20/21 14:00	05/21/21 13:31	1
Beryllium	0.00050	J	0.0010	0.00031	mg/L		05/20/21 14:00	05/21/21 13:31	1
Calcium	71		1.0	0.58	mg/L		05/20/21 14:00	05/21/21 13:31	1
Cadmium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:31	1
Cobalt	0.00082	J	0.0010	0.00019	mg/L		05/20/21 14:00	05/21/21 13:31	1
Chromium	0.0016	J	0.0020	0.00098	mg/L		05/20/21 14:00	05/21/21 13:31	1
Molybdenum	0.0037	J	0.010	0.0011	mg/L		05/20/21 14:00	05/21/21 13:31	1
Lead	ND		0.0010	0.00045	mg/L		05/20/21 14:00	05/21/21 13:31	1
Selenium	0.0054		0.0050	0.00089	mg/L		05/20/21 14:00	05/21/21 13:31	1
Thallium	0.00020	J	0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:31	1
Lithium	0.055		0.0080	0.0017	mg/L		05/20/21 14:00	05/21/21 13:31	1

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/20/21 14:00	05/21/21 13:34	1
Arsenic	0.0065		0.0050	0.00075	mg/L		05/20/21 14:00	05/21/21 13:34	1
Barium	0.17		0.0050	0.0022	mg/L		05/20/21 14:00	05/21/21 13:34	1
Beryllium	ND		0.0010	0.00031	mg/L		05/20/21 14:00	05/21/21 13:34	1
Calcium	87		1.0	0.58	mg/L		05/20/21 14:00	05/21/21 13:34	1
Cadmium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:34	1
Cobalt	0.0058		0.0010	0.00019	mg/L		05/20/21 14:00	05/21/21 13:34	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0020	0.00098	mg/L		05/20/21 14:00	05/21/21 13:34	1
Molybdenum	0.0066	J	0.010	0.0011	mg/L		05/20/21 14:00	05/21/21 13:34	1
Lead	ND		0.0010	0.00045	mg/L		05/20/21 14:00	05/21/21 13:34	1
Selenium	ND		0.0050	0.00089	mg/L		05/20/21 14:00	05/21/21 13:34	1
Thallium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:34	1
Lithium	0.0039	J	0.0080	0.0017	mg/L		05/20/21 14:00	05/21/21 13:34	1

Client Sample ID: MW-25B
Date Collected: 05/14/21 12:05
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00058	J	0.0020	0.00057	mg/L		05/20/21 14:00	05/21/21 13:46	1
Arsenic	0.0033	J	0.0050	0.00075	mg/L		05/20/21 14:00	05/21/21 13:46	1
Barium	0.021		0.0050	0.0022	mg/L		05/20/21 14:00	05/21/21 13:46	1
Beryllium	0.00063	J	0.0010	0.00031	mg/L		05/20/21 14:00	05/21/21 13:46	1
Calcium	130		1.0	0.58	mg/L		05/20/21 14:00	05/21/21 13:46	1
Cadmium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:46	1
Cobalt	0.00054	J	0.0010	0.00019	mg/L		05/20/21 14:00	05/21/21 13:46	1
Chromium	ND		0.0020	0.00098	mg/L		05/20/21 14:00	05/21/21 13:46	1
Molybdenum	0.089		0.010	0.0011	mg/L		05/20/21 14:00	05/21/21 13:46	1
Lead	ND		0.0010	0.00045	mg/L		05/20/21 14:00	05/21/21 13:46	1
Selenium	0.0046	J	0.0050	0.00089	mg/L		05/20/21 14:00	05/21/21 13:46	1
Thallium	0.00042	J	0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:46	1
Lithium	0.047		0.0080	0.0017	mg/L		05/20/21 14:00	05/21/21 13:46	1

Client Sample ID: MW-25BEB
Date Collected: 05/14/21 12:40
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/20/21 14:00	05/21/21 13:48	1
Arsenic	ND		0.0050	0.00075	mg/L		05/20/21 14:00	05/21/21 13:48	1
Barium	ND		0.0050	0.0022	mg/L		05/20/21 14:00	05/21/21 13:48	1
Beryllium	ND		0.0010	0.00031	mg/L		05/20/21 14:00	05/21/21 13:48	1
Calcium	ND		1.0	0.58	mg/L		05/20/21 14:00	05/21/21 13:48	1
Cadmium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:48	1
Cobalt	ND		0.0010	0.00019	mg/L		05/20/21 14:00	05/21/21 13:48	1
Chromium	ND		0.0020	0.00098	mg/L		05/20/21 14:00	05/21/21 13:48	1
Molybdenum	ND		0.010	0.0011	mg/L		05/20/21 14:00	05/21/21 13:48	1
Lead	ND		0.0010	0.00045	mg/L		05/20/21 14:00	05/21/21 13:48	1
Selenium	ND		0.0050	0.00089	mg/L		05/20/21 14:00	05/21/21 13:48	1
Thallium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:48	1
Lithium	ND		0.0080	0.0017	mg/L		05/20/21 14:00	05/21/21 13:48	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-5
Date Collected: 05/13/21 13:10
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/20/21 14:00	05/21/21 10:25	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/20/21 14:00	05/21/21 10:27	1

Client Sample ID: MW-25B
Date Collected: 05/14/21 12:05
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/20/21 14:00	05/21/21 10:29	1

Client Sample ID: MW-25BEB
Date Collected: 05/14/21 12:40
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/20/21 14:00	05/21/21 10:31	1

General Chemistry

Client Sample ID: MW-5
Date Collected: 05/13/21 13:10
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-1
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			05/17/21 12:40	1
Temperature	19.6	HF	1.0	1.0	Degrees C			05/17/21 12:40	1
Chloride	26		3.0	1.0	mg/L			06/07/21 23:56	1
Fluoride	0.33	J	0.50	0.17	mg/L			06/07/21 23:56	1
Sulfate	340		50	10	mg/L			06/08/21 00:10	10
Total Suspended Solids	26		4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	890		10	4.7	mg/L			05/15/21 11:33	1

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
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			05/17/21 12:45	1
Temperature	19.5	HF	1.0	1.0	Degrees C			05/17/21 12:45	1
Chloride	36		3.0	1.0	mg/L			06/08/21 00:24	1
Fluoride	0.83		0.50	0.17	mg/L			06/08/21 00:24	1
Sulfate	70		5.0	1.0	mg/L			06/08/21 00:24	1
Total Suspended Solids	28		4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	630		10	4.7	mg/L			05/15/21 11:33	1

Client Sample ID: MW-25B
Date Collected: 05/14/21 12:05
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3
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			05/17/21 12:51	1
Temperature	18.9	HF	1.0	1.0	Degrees C			05/17/21 12:51	1
Chloride	110		3.0	1.0	mg/L			06/08/21 00:52	1
Fluoride	0.41	J	0.50	0.17	mg/L			06/08/21 00:52	1
Sulfate	610		25	5.2	mg/L			06/08/21 01:06	5
Total Suspended Solids	6.4		4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	1400		40	19	mg/L			05/15/21 11:33	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

General Chemistry

Client Sample ID: MW-25BEB
Date Collected: 05/14/21 12:40
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-4
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			05/18/21 17:01	1
Temperature	20.6	HF	1.0	1.0	Degrees C			05/18/21 17:01	1
Chloride	ND		3.0	1.0	mg/L			06/08/21 01:48	1
Fluoride	ND		0.50	0.17	mg/L			06/08/21 01:48	1
Sulfate	ND		5.0	1.0	mg/L			06/08/21 01:48	1
Total Suspended Solids	ND		4.0	1.1	mg/L			05/18/21 09:31	1
Total Dissolved Solids (TDS)	8.0	J	10	4.7	mg/L			05/15/21 11:33	1

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00260	U	0.116	0.116	1.00	0.231	pCi/L	05/21/21 09:12	06/16/21 18:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110					05/21/21 09:12	06/16/21 18:23	1

Client Sample ID: MW-25B
Date Collected: 05/14/21 12:05
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0382	U	0.0993	0.0993	1.00	0.184	pCi/L	05/21/21 09:12	06/16/21 18:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.1		40 - 110					05/21/21 09:12	06/16/21 18:23	1

Client Sample ID: MW-25BEB
Date Collected: 05/14/21 12:40
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0895	U	0.0995	0.0998	1.00	0.239	pCi/L	05/21/21 09:12	06/16/21 18:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					05/21/21 09:12	06/16/21 18:23	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.756		0.306	0.313	1.00	0.420	pCi/L	05/21/21 10:05	06/14/21 10:11	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Method: 9320 - Radium-228 (GFPC)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.7		40 - 110	05/21/21 10:05	06/14/21 10:11	1
Y Carrier	84.1		40 - 110	05/21/21 10:05	06/14/21 10:11	1

Client Sample ID: MW-25B
Date Collected: 05/14/21 12:05
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.545		0.275	0.279	1.00	0.400	pCi/L	05/21/21 10:05	06/14/21 10:11	1
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Ba Carrier	90.1		40 - 110	05/21/21 10:05	06/14/21 10:11	1				
Y Carrier	87.1		40 - 110	05/21/21 10:05	06/14/21 10:11	1				

Client Sample ID: MW-25BEB
Date Collected: 05/14/21 12:40
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0937	U	0.277	0.277	1.00	0.479	pCi/L	05/21/21 10:05	06/14/21 09:44	1
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Ba Carrier	83.2		40 - 110	05/21/21 10:05	06/14/21 09:44	1				
Y Carrier	84.9		40 - 110	05/21/21 10:05	06/14/21 09:44	1				

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

Client Sample ID: MW-12
Date Collected: 05/13/21 16:35
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.753		0.327	0.334	5.00	0.420	pCi/L		06/17/21 14:01	1

Client Sample ID: MW-25B
Date Collected: 05/14/21 12:05
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.583		0.292	0.296	5.00	0.400	pCi/L		06/17/21 14:01	1

Client Sample ID: MW-25BEB
Date Collected: 05/14/21 12:40
Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00419	U	0.294	0.294	5.00	0.479	pCi/L		06/17/21 14:01	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-486701/1-A
Matrix: Water
Analysis Batch: 487007

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 486701

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.023	mg/L		05/20/21 14:00	05/21/21 19:25	1

Lab Sample ID: LCS 240-486701/2-A
Matrix: Water
Analysis Batch: 487007

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 486701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.971		mg/L		97	80 - 120

Lab Sample ID: 280-148646-1 MS
Matrix: Water
Analysis Batch: 487007

Client Sample ID: MW-5
Prep Type: Total Recoverable
Prep Batch: 486701

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.2		1.00	2.29		mg/L		107	75 - 125

Lab Sample ID: 280-148646-1 MSD
Matrix: Water
Analysis Batch: 487007

Client Sample ID: MW-5
Prep Type: Total Recoverable
Prep Batch: 486701

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1.2		1.00	2.21		mg/L		98	75 - 125	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-486701/1-A
Matrix: Water
Analysis Batch: 487021

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 486701

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/20/21 14:00	05/21/21 13:26	1
Arsenic	ND		0.0050	0.00075	mg/L		05/20/21 14:00	05/21/21 13:26	1
Barium	ND		0.0050	0.0022	mg/L		05/20/21 14:00	05/21/21 13:26	1
Beryllium	ND		0.0010	0.00031	mg/L		05/20/21 14:00	05/21/21 13:26	1
Calcium	ND		1.0	0.58	mg/L		05/20/21 14:00	05/21/21 13:26	1
Cadmium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:26	1
Cobalt	ND		0.0010	0.00019	mg/L		05/20/21 14:00	05/21/21 13:26	1
Chromium	ND		0.0020	0.00098	mg/L		05/20/21 14:00	05/21/21 13:26	1
Molybdenum	ND		0.010	0.0011	mg/L		05/20/21 14:00	05/21/21 13:26	1
Lead	ND		0.0010	0.00045	mg/L		05/20/21 14:00	05/21/21 13:26	1
Selenium	ND		0.0050	0.00089	mg/L		05/20/21 14:00	05/21/21 13:26	1
Thallium	ND		0.0010	0.00020	mg/L		05/20/21 14:00	05/21/21 13:26	1
Lithium	ND		0.0080	0.0017	mg/L		05/20/21 14:00	05/21/21 13:26	1

Lab Sample ID: LCS 240-486701/3-A
Matrix: Water
Analysis Batch: 487021

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 486701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0980		mg/L		98	80 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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

Lab Sample ID: LCS 240-486701/3-A

Matrix: Water

Analysis Batch: 487021

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 486701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.935		mg/L		93	80 - 120
Barium	1.00	0.934		mg/L		93	80 - 120
Beryllium	0.500	0.470		mg/L		94	80 - 120
Calcium	25.0	23.8		mg/L		95	80 - 120
Cadmium	0.500	0.469		mg/L		94	80 - 120
Cobalt	0.500	0.496		mg/L		99	80 - 120
Chromium	0.500	0.478		mg/L		96	80 - 120
Molybdenum	0.500	0.472		mg/L		94	80 - 120
Lead	0.500	0.484		mg/L		97	80 - 120
Selenium	1.00	0.899		mg/L		90	80 - 120
Thallium	1.00	0.971		mg/L		97	80 - 120
Lithium	0.500	0.496		mg/L		99	80 - 120

Lab Sample ID: 280-148646-2 MS

Matrix: Water

Analysis Batch: 487021

Client Sample ID: MW-12

Prep Type: Total Recoverable

Prep Batch: 486701

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.100	0.0997		mg/L		100	75 - 125
Arsenic	0.0065		1.00	0.967		mg/L		96	75 - 125
Barium	0.17		1.00	1.12		mg/L		94	75 - 125
Beryllium	ND		0.500	0.460		mg/L		92	75 - 125
Calcium	87		25.0	110		mg/L		94	75 - 125
Cadmium	ND		0.500	0.464		mg/L		93	75 - 125
Cobalt	0.0058		0.500	0.501		mg/L		99	75 - 125
Chromium	ND		0.500	0.465		mg/L		93	75 - 125
Molybdenum	0.0066	J	0.500	0.486		mg/L		96	75 - 125
Lead	ND		0.500	0.474		mg/L		95	75 - 125
Selenium	ND		1.00	0.920		mg/L		92	75 - 125
Thallium	ND		1.00	0.949		mg/L		95	75 - 125
Lithium	0.0039	J	0.500	0.478		mg/L		95	75 - 125

Lab Sample ID: 280-148646-2 MSD

Matrix: Water

Analysis Batch: 487021

Client Sample ID: MW-12

Prep Type: Total Recoverable

Prep Batch: 486701

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	ND		0.100	0.0986		mg/L		99	75 - 125	1	20
Arsenic	0.0065		1.00	0.979		mg/L		97	75 - 125	1	20
Barium	0.17		1.00	1.12		mg/L		95	75 - 125	0	20
Beryllium	ND		0.500	0.458		mg/L		92	75 - 125	0	20
Calcium	87		25.0	108		mg/L		86	75 - 125	2	20
Cadmium	ND		0.500	0.468		mg/L		94	75 - 125	1	20
Cobalt	0.0058		0.500	0.505		mg/L		100	75 - 125	1	20
Chromium	ND		0.500	0.470		mg/L		94	75 - 125	1	20
Molybdenum	0.0066	J	0.500	0.497		mg/L		98	75 - 125	2	20
Lead	ND		0.500	0.471		mg/L		94	75 - 125	1	20
Selenium	ND		1.00	0.924		mg/L		92	75 - 125	0	20
Thallium	ND		1.00	0.946		mg/L		95	75 - 125	0	20

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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

Lab Sample ID: 280-148646-2 MSD

Matrix: Water

Analysis Batch: 487021

Client Sample ID: MW-12

Prep Type: Total Recoverable

Prep Batch: 486701

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.0039	J	0.500	0.486		mg/L		96	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-486754/1-A

Matrix: Water

Analysis Batch: 487149

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 486754

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		05/20/21 14:00	05/21/21 10:01	1

Lab Sample ID: LCS 240-486754/2-A

Matrix: Water

Analysis Batch: 487149

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 486754

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.99		ug/L		100	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-536427/4

Matrix: Water

Analysis Batch: 536427

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 280-536675/27

Matrix: Water

Analysis Batch: 536675

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 280-538883/6

Matrix: Water

Analysis Batch: 538883

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			06/07/21 14:17	1
Fluoride	ND		0.50	0.17	mg/L			06/07/21 14:17	1
Sulfate	ND		5.0	1.0	mg/L			06/07/21 14:17	1

Lab Sample ID: LCS 280-538883/4

Matrix: Water

Analysis Batch: 538883

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

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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

Lab Sample ID: LCS 280-538883/4

Matrix: Water

Analysis Batch: 538883

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	5.50		mg/L		110	90 - 110
Sulfate	100	99.4		mg/L		99	90 - 110

Lab Sample ID: LCSD 280-538883/5

Matrix: Water

Analysis Batch: 538883

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
Fluoride	5.00	5.48		mg/L		110	90 - 110	0	10
Sulfate	100	99.4		mg/L		99	90 - 110	0	10

Lab Sample ID: MRL 280-538883/3

Matrix: Water

Analysis Batch: 538883

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	4.64		mg/L		93	50 - 150
Fluoride	0.500	0.486	J	mg/L		97	50 - 150
Sulfate	5.00	4.54	J	mg/L		91	50 - 150

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

Lab Sample ID: MB 280-536493/1

Matrix: Water

Analysis Batch: 536493

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			05/18/21 09:31	1

Lab Sample ID: LCS 280-536493/2

Matrix: Water

Analysis Batch: 536493

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	85.6		mg/L		86	79 - 114

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: MB 280-536298/1

Matrix: Water

Analysis Batch: 536298

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			05/15/21 11:33	1

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Method: SM2540 C - Total Dissolved Solids (Continued)

Lab Sample ID: LCS 280-536298/2
Matrix: Water
Analysis Batch: 536298

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	458		mg/L		92	88 - 114

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-510755/23-A
Matrix: Water
Analysis Batch: 514553

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 510755

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03676	U	0.102	0.102	1.00	0.188	pCi/L	05/21/21 09:12	06/16/21 18:13	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110					05/21/21 09:12	06/16/21 18:13	1

Lab Sample ID: LCS 160-510755/1-A
Matrix: Water
Analysis Batch: 514499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 510755

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.3	10.29		1.18	1.00	0.195	pCi/L	91	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	93.7		40 - 110						

Lab Sample ID: LCSD 160-510755/2-A
Matrix: Water
Analysis Batch: 514499

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 510755

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.3	10.43		1.21	1.00	0.232	pCi/L	92	75 - 125	0.06	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	86.8		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-510823/23-A
Matrix: Water
Analysis Batch: 514232

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 510823

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2133	U	0.232	0.232	1.00	0.379	pCi/L	05/21/21 10:05	06/14/21 09:44	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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

Lab Sample ID: MB 160-510823/23-A

Matrix: Water

Analysis Batch: 514232

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 510823

		MB	MB			
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110	05/21/21 10:05	06/14/21 09:44	1
Y Carrier	88.2		40 - 110	05/21/21 10:05	06/14/21 09:44	1

Lab Sample ID: LCS 160-510823/1-A

Matrix: Water

Analysis Batch: 514248

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 510823

		Spike	LCS	LCS	Total				%Rec.		
Analyte		Added	Result	Qual	Uncert.	RL	MDC	Unit	%Rec	Limits	
Radium-228		9.63	11.21		1.27	1.00	0.371	pCi/L	116	75 - 125	

		LCS	LCS		
Carrier	%Yield	Qualifier	Limits		
Ba Carrier	93.7		40 - 110		
Y Carrier	86.4		40 - 110		

Lab Sample ID: LCSD 160-510823/2-A

Matrix: Water

Analysis Batch: 514248

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 510823

		Spike	LCSD	LCSD	Total				%Rec.			RER
Analyte		Added	Result	Qual	Uncert.	RL	MDC	Unit	%Rec	Limits	RER	Limit
Radium-228		9.63	10.96		1.27	1.00	0.437	pCi/L	114	75 - 125	0.10	1

		LCSD	LCSD		
Carrier	%Yield	Qualifier	Limits		
Ba Carrier	86.8		40 - 110		
Y Carrier	84.1		40 - 110		

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Metals

Prep Batch: 486701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total Recoverable	Water	3005A	
280-148646-2	MW-12	Total Recoverable	Water	3005A	
280-148646-3	MW-25B	Total Recoverable	Water	3005A	
280-148646-4	MW-25BEB	Total Recoverable	Water	3005A	
MB 240-486701/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-486701/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-486701/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-148646-1 MS	MW-5	Total Recoverable	Water	3005A	
280-148646-1 MSD	MW-5	Total Recoverable	Water	3005A	
280-148646-2 MS	MW-12	Total Recoverable	Water	3005A	
280-148646-2 MSD	MW-12	Total Recoverable	Water	3005A	

Prep Batch: 486754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total/NA	Water	7470A	
280-148646-2	MW-12	Total/NA	Water	7470A	
280-148646-3	MW-25B	Total/NA	Water	7470A	
280-148646-4	MW-25BEB	Total/NA	Water	7470A	
MB 240-486754/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-486754/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 487007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total Recoverable	Water	6010C	486701
280-148646-2	MW-12	Total Recoverable	Water	6010C	486701
280-148646-3	MW-25B	Total Recoverable	Water	6010C	486701
280-148646-4	MW-25BEB	Total Recoverable	Water	6010C	486701
MB 240-486701/1-A	Method Blank	Total Recoverable	Water	6010C	486701
LCS 240-486701/2-A	Lab Control Sample	Total Recoverable	Water	6010C	486701
280-148646-1 MS	MW-5	Total Recoverable	Water	6010C	486701
280-148646-1 MSD	MW-5	Total Recoverable	Water	6010C	486701

Analysis Batch: 487021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total Recoverable	Water	6020A	486701
280-148646-2	MW-12	Total Recoverable	Water	6020A	486701
280-148646-3	MW-25B	Total Recoverable	Water	6020A	486701
280-148646-4	MW-25BEB	Total Recoverable	Water	6020A	486701
MB 240-486701/1-A	Method Blank	Total Recoverable	Water	6020A	486701
LCS 240-486701/3-A	Lab Control Sample	Total Recoverable	Water	6020A	486701
280-148646-2 MS	MW-12	Total Recoverable	Water	6020A	486701
280-148646-2 MSD	MW-12	Total Recoverable	Water	6020A	486701

Analysis Batch: 487149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total/NA	Water	7470A	486754
280-148646-2	MW-12	Total/NA	Water	7470A	486754
280-148646-3	MW-25B	Total/NA	Water	7470A	486754
280-148646-4	MW-25BEB	Total/NA	Water	7470A	486754
MB 240-486754/1-A	Method Blank	Total/NA	Water	7470A	486754
LCS 240-486754/2-A	Lab Control Sample	Total/NA	Water	7470A	486754

Eurofins TestAmerica, Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

General Chemistry

Analysis Batch: 536298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total/NA	Water	SM2540 C	
280-148646-2	MW-12	Total/NA	Water	SM2540 C	
280-148646-3	MW-25B	Total/NA	Water	SM2540 C	
280-148646-4	MW-25BEB	Total/NA	Water	SM2540 C	
MB 280-536298/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-536298/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 536427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total/NA	Water	9040B	
280-148646-2	MW-12	Total/NA	Water	9040B	
280-148646-3	MW-25B	Total/NA	Water	9040B	
LCS 280-536427/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 536493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total/NA	Water	SM 2540D	
280-148646-2	MW-12	Total/NA	Water	SM 2540D	
280-148646-3	MW-25B	Total/NA	Water	SM 2540D	
280-148646-4	MW-25BEB	Total/NA	Water	SM 2540D	
MB 280-536493/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-536493/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 536675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-4	MW-25BEB	Total/NA	Water	9040B	
LCS 280-536675/27	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 538883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-1	MW-5	Total/NA	Water	9056A	
280-148646-1	MW-5	Total/NA	Water	9056A	
280-148646-2	MW-12	Total/NA	Water	9056A	
280-148646-3	MW-25B	Total/NA	Water	9056A	
280-148646-3	MW-25B	Total/NA	Water	9056A	
280-148646-4	MW-25BEB	Total/NA	Water	9056A	
MB 280-538883/6	Method Blank	Total/NA	Water	9056A	
LCS 280-538883/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-538883/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-538883/3	Lab Control Sample	Total/NA	Water	9056A	

Rad

Prep Batch: 510755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-2	MW-12	Total/NA	Water	PrecSep-21	
280-148646-3	MW-25B	Total/NA	Water	PrecSep-21	
280-148646-4	MW-25BEB	Total/NA	Water	PrecSep-21	
MB 160-510755/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-510755/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-510755/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Eurofins TestAmerica, Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Rad

Prep Batch: 510823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-148646-2	MW-12	Total/NA	Water	PrecSep_0	
280-148646-3	MW-25B	Total/NA	Water	PrecSep_0	
280-148646-4	MW-25BEB	Total/NA	Water	PrecSep_0	
MB 160-510823/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-510823/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-510823/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Client Sample ID: MW-5

Date Collected: 05/13/21 13:10

Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-1

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	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			487007	05/21/21 19:42	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			487021	05/21/21 13:31	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486754	05/20/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			487149	05/21/21 10:25	SLD	TAL CAN
Total/NA	Analysis	9040B		1			536427	05/17/21 12:40	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538883	06/07/21 23:56	CJ	TAL DEN
Total/NA	Analysis	9056A		10	10 mL	10 mL	538883	06/08/21 00:10	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	536298	05/15/21 11:33	JMH	TAL DEN

Client Sample ID: MW-12

Date Collected: 05/13/21 16:35

Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-2

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	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			487007	05/21/21 20:02	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			487021	05/21/21 13:34	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486754	05/20/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			487149	05/21/21 10:27	SLD	TAL CAN
Total/NA	Analysis	9040B		1			536427	05/17/21 12:45	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538883	06/08/21 00:24	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	536298	05/15/21 11:33	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1000.60 mL	1.0 g	510755	05/21/21 09:12	MJ	TAL SL
Total/NA	Analysis	9315		1			514499	06/16/21 18:23	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.60 mL	1.0 g	510823	05/21/21 10:05	MJ	TAL SL
Total/NA	Analysis	9320		1			514248	06/14/21 10:11	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514712	06/17/21 14:01	GRW	TAL SL

Client Sample ID: MW-25B

Date Collected: 05/14/21 12:05

Date Received: 05/14/21 14:55

Lab Sample ID: 280-148646-3

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	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			487007	05/21/21 20:06	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			487021	05/21/21 13:46	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486754	05/20/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			487149	05/21/21 10:29	SLD	TAL CAN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Client Sample ID: MW-25B

Lab Sample ID: 280-148646-3

Date Collected: 05/14/21 12:05

Matrix: Water

Date Received: 05/14/21 14:55

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			536427	05/17/21 12:51	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538883	06/08/21 00:52	CJ	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	538883	06/08/21 01:06	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	536298	05/15/21 11:33	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			1001.59 mL	1.0 g	510755	05/21/21 09:12	MJ	TAL SL
Total/NA	Analysis	9315		1			514499	06/16/21 18:23	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1001.59 mL	1.0 g	510823	05/21/21 10:05	MJ	TAL SL
Total/NA	Analysis	9320		1			514248	06/14/21 10:11	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514712	06/17/21 14:01	GRW	TAL SL

Client Sample ID: MW-25BEB

Lab Sample ID: 280-148646-4

Date Collected: 05/14/21 12:40

Matrix: Water

Date Received: 05/14/21 14:55

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	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			487007	05/21/21 20:11	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	486701	05/20/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			487021	05/21/21 13:48	DTN	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	486754	05/20/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			487149	05/21/21 10:31	SLD	TAL CAN
Total/NA	Analysis	9040B		1			536675	05/18/21 17:01	QJB	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	538883	06/08/21 01:48	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	536493	05/18/21 09:31	LRB	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	536298	05/15/21 11:33	JMH	TAL DEN
Total/NA	Prep	PrecSep-21			999.54 mL	1.0 g	510755	05/21/21 09:12	MJ	TAL SL
Total/NA	Analysis	9315		1			514499	06/16/21 18:23	ANW	TAL SL
Total/NA	Prep	PrecSep_0			999.54 mL	1.0 g	510823	05/21/21 10:05	MJ	TAL SL
Total/NA	Analysis	9320		1			514232	06/14/21 09:44	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			514712	06/17/21 14:01	GRW	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

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-21
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-21
Iowa	State	421	06-01-21
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-21
New Jersey	NELAP	OH001	06-30-21
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
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	01-12-22
West Virginia DEP	State	210	12-31-21

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Laboratory: Eurofins TestAmerica, St. Louis

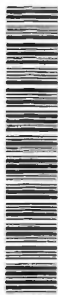
All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-23
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	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21
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	04-01-22
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	03-01-22
South Carolina	State	85002001	06-30-21
Texas	NELAP	T104704193	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	06-14-22
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Eurofins TestAmerica, Denver

Ver: 01/16/2019

Chain of Custody Record



Client Information (Sub Contract Lab)				Lab PM: Harrington, Danielle M		Carrier Tracking No(s): 280-568919.1	
Client Contact: Shipping/Receiving				E-Mail: Danielle.Harrington@Eurofinset.com		Page Page 1 of 1	
Company: TestAmerica Laboratories, Inc.				Accreditations Required (See note) DoD - AZLA		Job #: 280-148646-1	
Address: 4101 Shuffel Street NW, City: North Canton State, Zip: OH, 44720				Due Date Requested: 6/14/2021		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Phone: 330-497-0772(Tel) 330-497-0772(Fax)				TAT Requested (days):		Analysis Requested	
Email:				PO #:		Total Number of Containers	
Project Name: Xcel Energy GW CCR Monitoring - Valmont				WO #:		Perform MS/MSD (Yes or No)	
Site: Xcel Energy CCR - Valmont Station				Project #: 28014379		7470A/7470A Prep Mercury	
				SSOW#		6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	
						6010C/3005A (MOD) Boron	
						6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
						Field Filtered Sample (Yes or No)	
						7470A/7470A Prep Mercury	

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : _____

Client ETA Site Name _____ Cooler unpacked by: Matt
 Cooler Received on 3-19-21 Opened on 5-19-21
 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 +0.1 °C) Observed Cooler Temp. 16.2 °C Corrected Cooler Temp. 16.3 °C
 IR GUN #IR-12 (CF +0.2 °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# HC022887
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
17. Was a LL Hg or Me Hg trip blank present? Yes No

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: 280-148646-1

Login Number: 148646

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Rystrom, Joshua R

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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: 280-148646-1

Login Number: 148646

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

List Creation: 05/19/21 12:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-148646-1

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
280-148646-2	MW-12	84.7	
280-148646-3	MW-25B	90.1	
280-148646-4	MW-25BEB	83.2	
LCS 160-510755/1-A	Lab Control Sample	93.7	
LCSD 160-510755/2-A	Lab Control Sample Dup	86.8	
MB 160-510755/23-A	Method Blank	91.6	
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)
280-148646-2	MW-12	84.7	84.1
280-148646-3	MW-25B	90.1	87.1
280-148646-4	MW-25BEB	83.2	84.9
LCS 160-510823/1-A	Lab Control Sample	93.7	86.4
LCSD 160-510823/2-A	Lab Control Sample Dup	86.8	84.1
MB 160-510823/23-A	Method Blank	91.6	88.2
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

ANALYTICAL REPORT

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

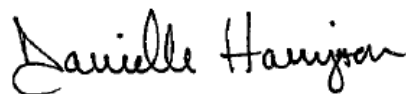
Laboratory Job ID: 280-154197-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
11/2/2021 2:08:10 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

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

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

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Definitions/Glossary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Job ID: 280-154197-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-154197-1

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 10/14/2021. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 1.1°C, 1.4°C, 2.3°C, 2.3°C, 2.4°C, 2.4°C and 2.9°C

TOTAL RECOVERABLE METALS- 6010C/6020A

MS/MSD analyses were performed on sample MW-23. The MSD for Boron method 6010C 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 MS/MSD performed on a sample MW-3 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-7470A

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 additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GENERAL CHEMISTRY - VARIOUS

Due to a laboratory error, the holding time for Total Suspended Solids Method 2540D for all samples expired prior to analysis. The sample analysis was inadvertently left off the preprinted chain of custody and the samplers did not add the request. Please note that the sample results should be considered estimated.

Several samples required a dilution prior to analysis or prepped at a dilution for various analyses. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 280-554979 recovered outside control limits for Fluoride. These analytes were biased high in the LCS and were not detected in the associated samples;

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Job ID: 280-154197-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

therefore, corrective action is deemed unnecessary.

MS/MSD analyses were performed on sample MW-13. The 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.

Please note that the recoveries, for the Sulfate MS/MSD performed on sample MW-1P, 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 pH sample duplicate analysis data associated with QC batch 280-554595 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 continuing calibration verification (CCV) associated with batch 280-554979 recovered above the upper control limit for Fluoride. The samples associated with this CCV were non-detects 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.

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-22

Lab Sample ID: 280-154197-1

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	20.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	51		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.87		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	4400		500	100	mg/L	100		9056A	Total/NA
Total Suspended Solids	23	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	8700		100	47	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-23

Lab Sample ID: 280-154197-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.3	F1	0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.00099	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.00090	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.015		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	380		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0081		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.082		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0022	J	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	0.57		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	21.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	140		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	16		2.5	0.83	mg/L	5		9056A	Total/NA
Sulfate	12000		500	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids (TDS)	17000		1000	470	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 280-154197-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.4		0.10	0.057	mg/L	1		6010C	Total Recoverable
Barium	0.011		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	480		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0012		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Lithium	0.070		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	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	41		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	4.3		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2400		100	21	mg/L	20		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-3 (Continued)

Lab Sample ID: 280-154197-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	3.6	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	3900		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-15

Lab Sample ID: 280-154197-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.58		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.0010	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	230		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00064	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0035	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.11		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	0.054		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	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	57	J	60	20	mg/L	20		9056A	Total/NA
Fluoride	1.3		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	1300		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	6.0	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	2700		20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 280-154197-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.21		0.10	0.057	mg/L	1		6010C	Total Recoverable
Barium	0.023		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	54		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	0.0033	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	0.0051		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.035		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	21.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	46		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.55		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	90		5.0	1.0	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-7 (Continued)

Lab Sample ID: 280-154197-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	6.0	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	540		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-1P

Lab Sample ID: 280-154197-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.8		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.00065	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	0.10		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	130		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00061	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.019		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.014		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	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	62		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.71		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	180		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	770		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 280-154197-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	10		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.0017	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.041		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0054		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.085		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.034		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	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	56		15	5.1	mg/L	5		9056A	Total/NA
Fluoride	2.4		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	470		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	3.2	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	1200		20	9.4	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-12

Lab Sample ID: 280-154197-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4.7		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.0057		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.16		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	110		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0045		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0039	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.0029	J	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	21.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	30		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.0		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	36		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	7.2	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	710		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-12-DUP

Lab Sample ID: 280-154197-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.0		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.0061		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.17		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.0048		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0041	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.0039	J	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	21.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	30		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.0		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	36		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	5.2	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	590		20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-12-EB

Lab Sample ID: 280-154197-10

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	20.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Dissolved Solids (TDS)	45		10	4.7	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-11

Lab Sample ID: 280-154197-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.1		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.0054		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.10		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	170		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.023		0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.018		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lead	0.00065	J	0.0010	0.00045	mg/L	1		6020A	Total Recoverable
Lithium	0.018		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	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	60		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	2.2		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	360		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	8.4	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	1100		20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-28

Lab Sample ID: 280-154197-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.7		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.022		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.013		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	530		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00089	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Selenium	3.0		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.27		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	20.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	58		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	8.8		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2800		500	100	mg/L	100		9056A	Total/NA
Total Suspended Solids	7.2	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	6000		100	47	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-14

Lab Sample ID: 280-154197-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.3		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.013		0.0050	0.00075	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-14 (Continued)

Lab Sample ID: 280-154197-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	490		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00085	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.0019	J	0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	1.7		0.0050	0.00089	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	7.5	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	160	J	300	100	mg/L	100		9056A	Total/NA
Fluoride	1.6		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2600		500	100	mg/L	100		9056A	Total/NA
Total Suspended Solids	4.8	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	3800		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-13

Lab Sample ID: 280-154197-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.1		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Arsenic	0.0025	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.022		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	530		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.0012		0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Chromium	0.0030		0.0025	0.0025	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.0044	J	0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.42		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	7.3	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	67		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.9	F1	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	1800		250	52	mg/L	50		9056A	Total/NA
Total Suspended Solids	2.8	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	3900		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-16

Lab Sample ID: 280-154197-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.53		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Antimony	0.0020		0.0020	0.00057	mg/L	1		6020A	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-16 (Continued)

Lab Sample ID: 280-154197-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0017	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.047		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	51		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00028	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Molybdenum	0.029		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Lithium	0.053		0.0080	0.0017	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	21.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	59		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.4		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	200		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	6.8	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	660		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-27

Lab Sample ID: 280-154197-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.072	J	0.10	0.057	mg/L	1		6010C	Total Recoverable
Barium	0.092		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	52		1.0	0.58	mg/L	1		6020A	Total Recoverable
Chromium	0.0027		0.0025	0.0025	mg/L	1		6020A	Total Recoverable
Molybdenum	0.0046	J	0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0060		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Lithium	0.029		0.0080	0.0017	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	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	17		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.78		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	43		5.0	1.0	mg/L	1		9056A	Total/NA
Total Suspended Solids	5.2	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	370		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-21

Lab Sample ID: 280-154197-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.3		0.10	0.057	mg/L	1		6010C	Total Recoverable
Arsenic	0.0096		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.015		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	480		1.0	0.58	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-21 (Continued)

Lab Sample ID: 280-154197-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.00085	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.0053	J	0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	1.3		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	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	330		60	20	mg/L	20		9056A	Total/NA
Fluoride	1.6		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3100		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4800		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-21-DUP

Lab Sample ID: 280-154197-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.3		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Arsenic	0.0093		0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.015		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	490		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00080	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.0057	J	0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	1.4		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	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	290	J	300	100	mg/L	100		9056A	Total/NA
Fluoride	1.7		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2600		500	100	mg/L	100		9056A	Total/NA
Total Suspended Solids	1.2	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4500		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-21-EB

Lab Sample ID: 280-154197-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	8.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	19.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA

Client Sample ID: MW-26

Lab Sample ID: 280-154197-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.64		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Barium	0.014		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-26 (Continued)

Lab Sample ID: 280-154197-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	500		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00079	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Selenium	0.0095		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Lithium	0.079		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	21.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	160		60	20	mg/L	20		9056A	Total/NA
Fluoride	3.5		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2000		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	1.6	J H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	3500		40	19	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM2540 C	Total Dissolved Solids	SM18	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"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-154197-1	MW-22	Water	10/12/21 11:30	10/14/21 17:00
280-154197-2	MW-23	Water	10/12/21 10:05	10/14/21 17:00
280-154197-3	MW-3	Water	10/12/21 13:45	10/14/21 17:00
280-154197-4	MW-15	Water	10/12/21 16:30	10/14/21 17:00
280-154197-5	MW-7	Water	10/13/21 12:40	10/14/21 17:00
280-154197-6	MW-1P	Water	10/13/21 15:15	10/14/21 17:00
280-154197-7	MW-9	Water	10/14/21 10:15	10/14/21 17:00
280-154197-8	MW-12	Water	10/14/21 11:55	10/14/21 17:00
280-154197-9	MW-12-DUP	Water	10/14/21 11:55	10/14/21 17:00
280-154197-10	MW-12-EB	Water	10/14/21 12:45	10/14/21 17:00
280-154197-11	MW-11	Water	10/14/21 14:30	10/14/21 17:00
280-154197-12	MW-28	Water	10/12/21 12:50	10/14/21 17:00
280-154197-13	MW-14	Water	10/12/21 14:50	10/14/21 17:00
280-154197-14	MW-13	Water	10/13/21 12:15	10/14/21 17:00
280-154197-15	MW-16	Water	10/13/21 17:05	10/14/21 17:00
280-154197-16	MW-27	Water	10/13/21 14:10	10/14/21 17:00
280-154197-17	MW-21	Water	10/14/21 10:35	10/14/21 17:00
280-154197-18	MW-21-DUP	Water	10/14/21 10:35	10/14/21 17:00
280-154197-19	MW-21-EB	Water	10/14/21 10:35	10/14/21 17:00
280-154197-20	MW-26	Water	10/14/21 13:50	10/14/21 17:00

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-23
Date Collected: 10/12/21 10:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.3	F1	0.10	0.057	mg/L		10/20/21 14:00	10/21/21 16:58	1

Client Sample ID: MW-3
Date Collected: 10/12/21 13:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.4		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:20	1

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.58		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:33	1

Client Sample ID: MW-7
Date Collected: 10/13/21 12:40
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.21		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:37	1

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:42	1

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:46	1

Client Sample ID: MW-12
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.7		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:50	1

Client Sample ID: MW-12-DUP
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.0		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:55	1

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 17:59	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-11
Date Collected: 10/14/21 14:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.1		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:04	1

Client Sample ID: MW-28
Date Collected: 10/12/21 12:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:08	1

Client Sample ID: MW-14
Date Collected: 10/12/21 14:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.3		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:13	1

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:26	1

Client Sample ID: MW-16
Date Collected: 10/13/21 17:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.53		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:30	1

Client Sample ID: MW-27
Date Collected: 10/13/21 14:10
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.072	J	0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:35	1

Client Sample ID: MW-21
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.3		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:39	1

Client Sample ID: MW-21-DUP
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.3		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:44	1

Client Sample ID: MW-21-EB
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:48	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-26
Date Collected: 10/14/21 13:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.64		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 18:53	1

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

Client Sample ID: MW-23
Date Collected: 10/12/21 10:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00099	J	0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 13:37	1
Arsenic	0.00090	J	0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 13:37	1
Barium	0.015		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 13:37	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 13:37	1
Calcium	380		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 13:37	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:37	1
Cobalt	0.0081		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 13:37	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 13:37	1
Molybdenum	0.082		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 13:37	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 13:37	1
Selenium	0.0022	J	0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 13:37	1
Thallium	0.00020	J	0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:37	1
Lithium	0.57		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 13:37	1

Client Sample ID: MW-3
Date Collected: 10/12/21 13:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 13:39	1
Arsenic	ND		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 13:39	1
Barium	0.011		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 13:39	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 13:39	1
Calcium	480		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 13:39	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:39	1
Cobalt	0.0012		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 13:39	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 13:39	1
Molybdenum	ND		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 13:39	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 13:39	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 13:39	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:39	1
Lithium	0.070		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 13:39	1

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 13:59	1
Arsenic	0.0010	J	0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 13:59	1
Barium	0.020		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 13:59	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 13:59	1
Calcium	230		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 13:59	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:59	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.00064	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 13:59	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 13:59	1
Molybdenum	0.0035	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 13:59	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 13:59	1
Selenium	0.11		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 13:59	1
Thallium	0.00021	J	0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:59	1
Lithium	0.054		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 13:59	1

Client Sample ID: MW-7
Date Collected: 10/13/21 12:40
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:01	1
Arsenic	ND		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:01	1
Barium	0.023		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:01	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:01	1
Calcium	54		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:01	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:01	1
Cobalt	0.00048	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:01	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:01	1
Molybdenum	0.0033	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:01	1
Lead	0.00075	J	0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:01	1
Selenium	0.0051		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:01	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:01	1
Lithium	0.035		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:01	1

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00065	J	0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:04	1
Arsenic	0.0016	J	0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:04	1
Barium	0.10		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:04	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:04	1
Calcium	130		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:04	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:04	1
Cobalt	0.00061	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:04	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:04	1
Molybdenum	0.019		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:04	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:04	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:04	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:04	1
Lithium	0.014		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:04	1

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:06	1
Arsenic	0.0017	J	0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:06	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.041		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:06	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:06	1
Calcium	120		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:06	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:06	1
Cobalt	0.0054		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:06	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:06	1
Molybdenum	0.085		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:06	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:06	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:06	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:06	1
Lithium	0.034		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:06	1

Client Sample ID: MW-12
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:09	1
Arsenic	0.0057		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:09	1
Barium	0.16		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:09	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:09	1
Calcium	110		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:09	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:09	1
Cobalt	0.0045		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:09	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:09	1
Molybdenum	0.0039	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:09	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:09	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:09	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:09	1
Lithium	0.0029	J	0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:09	1

Client Sample ID: MW-12-DUP
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:11	1
Arsenic	0.0061		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:11	1
Barium	0.17		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:11	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:11	1
Calcium	120		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:11	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:11	1
Cobalt	0.0048		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:11	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:11	1
Molybdenum	0.0041	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:11	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:11	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:11	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:11	1
Lithium	0.0039	J	0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:11	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:14	1
Arsenic	ND		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:14	1
Barium	ND		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:14	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:14	1
Calcium	ND		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:14	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:14	1
Cobalt	ND		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:14	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:14	1
Molybdenum	ND		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:14	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:14	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:14	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:14	1
Lithium	ND		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:14	1

Client Sample ID: MW-11
Date Collected: 10/14/21 14:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:16	1
Arsenic	0.0054		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:16	1
Barium	0.10		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:16	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:16	1
Calcium	170		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:16	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:16	1
Cobalt	0.023		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:16	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:16	1
Molybdenum	0.018		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:16	1
Lead	0.00065	J	0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:16	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:16	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:16	1
Lithium	0.018		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:16	1

Client Sample ID: MW-28
Date Collected: 10/12/21 12:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:19	1
Arsenic	0.022		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:19	1
Barium	0.013		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:19	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:19	1
Calcium	530		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:19	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:19	1
Cobalt	0.00089	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:19	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:19	1
Molybdenum	ND		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:19	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:19	1
Selenium	3.0		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:19	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:19	1
Lithium	0.27		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:19	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-14
Date Collected: 10/12/21 14:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:26	1
Arsenic	0.013		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:26	1
Barium	0.017		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:26	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:26	1
Calcium	490		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:26	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:26	1
Cobalt	0.00085	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:26	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:26	1
Molybdenum	0.0019	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:26	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:26	1
Selenium	1.7		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:26	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:26	1
Lithium	0.15		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:26	1

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:29	1
Arsenic	0.0025	J	0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:29	1
Barium	0.022		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:29	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:29	1
Calcium	530		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:29	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:29	1
Cobalt	0.0012		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:29	1
Chromium	0.0030		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:29	1
Molybdenum	0.0044	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:29	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:29	1
Selenium	0.42		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:29	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:29	1
Lithium	0.11		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:29	1

Client Sample ID: MW-16
Date Collected: 10/13/21 17:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0020		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:31	1
Arsenic	0.0017	J	0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:31	1
Barium	0.047		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:31	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:31	1
Calcium	51		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:31	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:31	1
Cobalt	0.00028	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:31	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:31	1
Molybdenum	0.029		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:31	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:31	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:31	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:31	1
Lithium	0.053		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:31	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-27
Date Collected: 10/13/21 14:10
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:34	1
Arsenic	ND		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:34	1
Barium	0.092		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:34	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:34	1
Calcium	52		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:34	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:34	1
Cobalt	ND		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:34	1
Chromium	0.0027		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:34	1
Molybdenum	0.0046	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:34	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:34	1
Selenium	0.0060		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:34	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:34	1
Lithium	0.029		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:34	1

Client Sample ID: MW-21
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:36	1
Arsenic	0.0096		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:36	1
Barium	0.015		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:36	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:36	1
Calcium	480		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:36	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:36	1
Cobalt	0.00085	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:36	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:36	1
Molybdenum	0.0053	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:36	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:36	1
Selenium	1.3		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:36	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:36	1
Lithium	0.21		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:36	1

Client Sample ID: MW-21-DUP
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:39	1
Arsenic	0.0093		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:39	1
Barium	0.015		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:39	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:39	1
Calcium	490		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:39	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:39	1
Cobalt	0.00080	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:39	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:39	1
Molybdenum	0.0057	J	0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:39	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:39	1
Selenium	1.4		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:39	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:39	1
Lithium	0.22		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Client Sample ID: MW-21-EB
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:41	1
Arsenic	ND		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:41	1
Barium	ND		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:41	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:41	1
Calcium	ND		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:41	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:41	1
Cobalt	ND		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:41	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:41	1
Molybdenum	ND		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:41	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:41	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:41	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:41	1
Lithium	ND		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:41	1

Client Sample ID: MW-26
Date Collected: 10/14/21 13:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 14:44	1
Arsenic	ND		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 14:44	1
Barium	0.014		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 14:44	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 14:44	1
Calcium	500		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 14:44	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:44	1
Cobalt	0.00079	J	0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 14:44	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 14:44	1
Molybdenum	ND		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 14:44	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 14:44	1
Selenium	0.0095		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 14:44	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 14:44	1
Lithium	0.079		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 14:44	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-23
Date Collected: 10/12/21 10:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:35	1

Client Sample ID: MW-3
Date Collected: 10/12/21 13:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:37	1

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:39	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-7
Date Collected: 10/13/21 12:40
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:41	1

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:43	1

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:50	1

Client Sample ID: MW-12
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:52	1

Client Sample ID: MW-12-DUP
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:54	1

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:56	1

Client Sample ID: MW-11
Date Collected: 10/14/21 14:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:58	1

Client Sample ID: MW-28
Date Collected: 10/12/21 12:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:00	1

Client Sample ID: MW-14
Date Collected: 10/12/21 14:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:02	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:04	1

Client Sample ID: MW-16
Date Collected: 10/13/21 17:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:06	1

Client Sample ID: MW-27
Date Collected: 10/13/21 14:10
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:08	1

Client Sample ID: MW-21
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:15	1

Client Sample ID: MW-21-DUP
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:17	1

Client Sample ID: MW-21-EB
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:19	1

Client Sample ID: MW-26
Date Collected: 10/14/21 13:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 18:21	1

General Chemistry

Client Sample ID: MW-22
Date Collected: 10/12/21 11:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-1
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			10/21/21 13:49	1
Temperature	20.0	HF	1.0	1.0	Degrees C			10/21/21 13:49	1
Chloride	51		3.0	1.0	mg/L			10/26/21 23:54	1
Fluoride	0.87		0.50	0.17	mg/L			10/26/21 23:54	1
Sulfate	4400		500	100	mg/L			10/27/21 00:10	100
Total Suspended Solids	23	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	8700		100	47	mg/L			10/18/21 09:41	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry

Client Sample ID: MW-23
Date Collected: 10/12/21 10:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2
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			10/20/21 21:12	1
Temperature	21.2	HF	1.0	1.0	Degrees C			10/20/21 21:12	1
Chloride	140		3.0	1.0	mg/L			10/27/21 00:26	1
Fluoride	16		2.5	0.83	mg/L			10/29/21 18:02	5
Sulfate	12000		500	100	mg/L			10/27/21 00:43	100
Total Suspended Solids	ND	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	17000		1000	470	mg/L			10/18/21 09:41	1

Client Sample ID: MW-3
Date Collected: 10/12/21 13:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3
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			10/20/21 21:16	1
Temperature	21.0	HF	1.0	1.0	Degrees C			10/20/21 21:16	1
Chloride	41		3.0	1.0	mg/L			10/27/21 00:59	1
Fluoride	4.3		0.50	0.17	mg/L			10/27/21 00:59	1
Sulfate	2400		100	21	mg/L			10/27/21 01:16	20
Total Suspended Solids	3.6	J H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	3900		40	19	mg/L			10/18/21 09:41	1

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
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			10/20/21 21:20	1
Temperature	21.0	HF	1.0	1.0	Degrees C			10/20/21 21:20	1
Chloride	57	J	60	20	mg/L			10/27/21 03:27	20
Fluoride	1.3		0.50	0.17	mg/L			10/27/21 15:03	1
Sulfate	1300		100	21	mg/L			10/27/21 03:27	20
Total Suspended Solids	6.0	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	2700		20	9.4	mg/L			10/18/21 09:41	1

Client Sample ID: MW-7
Date Collected: 10/13/21 12:40
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5
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			10/20/21 20:49	1
Temperature	21.1	HF	1.0	1.0	Degrees C			10/20/21 20:49	1
Chloride	46		3.0	1.0	mg/L			10/27/21 02:05	1
Fluoride	0.55		0.50	0.17	mg/L			10/27/21 16:03	1
Sulfate	90		5.0	1.0	mg/L			10/27/21 02:05	1
Total Suspended Solids	6.0	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	540		10	4.7	mg/L			10/18/21 09:41	1

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
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			10/20/21 20:00	1
Temperature	20.9	HF	1.0	1.0	Degrees C			10/20/21 20:00	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry (Continued)

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62		3.0	1.0	mg/L			10/27/21 09:28	1
Fluoride	0.71		0.50	0.17	mg/L			10/27/21 16:18	1
Sulfate	180		5.0	1.0	mg/L			10/27/21 09:28	1
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	770		10	4.7	mg/L			10/18/21 09:41	1

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
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			10/20/21 20:56	1
Temperature	20.9	HF	1.0	1.0	Degrees C			10/20/21 20:56	1
Chloride	56		15	5.1	mg/L			10/27/21 04:00	5
Fluoride	2.4		0.50	0.17	mg/L			10/27/21 16:32	1
Sulfate	470		25	5.2	mg/L			10/27/21 04:00	5
Total Suspended Solids	3.2	J H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	1200		20	9.4	mg/L			10/19/21 09:07	1

Client Sample ID: MW-12
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8
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			10/20/21 21:00	1
Temperature	21.0	HF	1.0	1.0	Degrees C			10/20/21 21:00	1
Chloride	30		3.0	1.0	mg/L			10/27/21 12:49	1
Fluoride	1.0		0.50	0.17	mg/L			10/27/21 16:47	1
Sulfate	36		5.0	1.0	mg/L			10/27/21 12:49	1
Total Suspended Solids	7.2	H	4.0	1.1	mg/L			10/25/21 09:49	1
Total Dissolved Solids (TDS)	710		10	4.7	mg/L			10/19/21 09:07	1

Client Sample ID: MW-12-DUP
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9
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			10/20/21 21:08	1
Temperature	21.9	HF	1.0	1.0	Degrees C			10/20/21 21:08	1
Chloride	30		3.0	1.0	mg/L			10/27/21 13:06	1
Fluoride	1.0		0.50	0.17	mg/L			10/27/21 17:02	1
Sulfate	36		5.0	1.0	mg/L			10/27/21 13:06	1
Total Suspended Solids	5.2	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	590		20	9.4	mg/L			10/19/21 09:07	1

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
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			10/21/21 13:45	1
Temperature	20.0	HF	1.0	1.0	Degrees C			10/21/21 13:45	1
Chloride	ND		3.0	1.0	mg/L			10/27/21 04:16	1
Fluoride	ND	^+	0.50	0.17	mg/L			10/27/21 04:16	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry (Continued)

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	1.0	mg/L			10/27/21 04:16	1
Total Suspended Solids	ND	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	45		10	4.7	mg/L			10/19/21 09:07	1

Client Sample ID: MW-11
Date Collected: 10/14/21 14:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-11
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			10/20/21 20:23	1
Temperature	21.3	HF	1.0	1.0	Degrees C			10/20/21 20:23	1
Chloride	60		3.0	1.0	mg/L			10/27/21 05:22	1
Fluoride	2.2		0.50	0.17	mg/L			10/27/21 18:02	1
Sulfate	360		25	5.2	mg/L			10/27/21 05:38	5
Total Suspended Solids	8.4	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	1100		20	9.4	mg/L			10/19/21 09:07	1

Client Sample ID: MW-28
Date Collected: 10/12/21 12:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12
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			10/20/21 20:52	1
Temperature	20.9	HF	1.0	1.0	Degrees C			10/20/21 20:52	1
Chloride	58		3.0	1.0	mg/L			10/27/21 05:55	1
Fluoride	8.8		0.50	0.17	mg/L			10/27/21 18:17	1
Sulfate	2800		500	100	mg/L			10/27/21 06:11	100
Total Suspended Solids	7.2	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	6000		100	47	mg/L			10/18/21 09:41	1

Client Sample ID: MW-14
Date Collected: 10/12/21 14:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13
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			10/20/21 21:24	1
Temperature	21.0	HF	1.0	1.0	Degrees C			10/20/21 21:24	1
Chloride	160	J	300	100	mg/L			10/27/21 06:44	100
Fluoride	1.6		0.50	0.17	mg/L			10/29/21 19:16	1
Sulfate	2600		500	100	mg/L			10/27/21 06:44	100
Total Suspended Solids	4.8	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	3800		40	19	mg/L			10/18/21 09:41	1

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
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			10/20/21 20:37	1
Temperature	22.0	HF	1.0	1.0	Degrees C			10/20/21 20:37	1
Chloride	67		3.0	1.0	mg/L			10/27/21 07:00	1
Fluoride	1.9	F1	0.50	0.17	mg/L			10/27/21 19:17	1
Sulfate	1800		250	52	mg/L			10/29/21 03:17	50
Total Suspended Solids	2.8	J H	4.0	1.1	mg/L			10/25/21 09:34	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry (Continued)

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	3900		40	19	mg/L			10/18/21 09:41	1

Client Sample ID: MW-16
Date Collected: 10/13/21 17:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15
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			10/20/21 20:41	1
Temperature	21.9	HF	1.0	1.0	Degrees C			10/20/21 20:41	1
Chloride	59		3.0	1.0	mg/L			10/27/21 07:33	1
Fluoride	1.4		0.50	0.17	mg/L			10/27/21 20:16	1
Sulfate	200		5.0	1.0	mg/L			10/27/21 07:33	1
Total Suspended Solids	6.8	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	660		10	4.7	mg/L			10/18/21 09:41	1

Client Sample ID: MW-27
Date Collected: 10/13/21 14:10
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16
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			10/20/21 20:45	1
Temperature	21.3	HF	1.0	1.0	Degrees C			10/20/21 20:45	1
Chloride	17		3.0	1.0	mg/L			10/27/21 13:22	1
Fluoride	0.78		0.50	0.17	mg/L			10/27/21 21:01	1
Sulfate	43		5.0	1.0	mg/L			10/27/21 13:22	1
Total Suspended Solids	5.2	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	370		10	4.7	mg/L			10/18/21 09:41	1

Client Sample ID: MW-21
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17
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			10/20/21 19:56	1
Temperature	20.8	HF	1.0	1.0	Degrees C			10/20/21 19:56	1
Chloride	330		60	20	mg/L			10/27/21 10:55	20
Fluoride	1.6		0.50	0.17	mg/L			10/27/21 21:16	1
Sulfate	3100		100	21	mg/L			10/27/21 10:55	20
Total Suspended Solids	2.0	J H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	4800		40	19	mg/L			10/19/21 09:07	1

Client Sample ID: MW-21-DUP
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18
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			10/20/21 19:52	1
Temperature	20.8	HF	1.0	1.0	Degrees C			10/20/21 19:52	1
Chloride	290	J	300	100	mg/L			10/27/21 11:27	100
Fluoride	1.7		0.50	0.17	mg/L			10/27/21 21:46	1
Sulfate	2600		500	100	mg/L			10/27/21 11:27	100
Total Suspended Solids	1.2	J H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	4500		40	19	mg/L			10/19/21 09:07	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry

Client Sample ID: MW-21-EB
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.4	HF	0.1	0.1	SU			10/21/21 13:41	1
Temperature	19.6	HF	1.0	1.0	Degrees C			10/21/21 13:41	1
Chloride	ND		3.0	1.0	mg/L			10/27/21 13:39	1
Fluoride	ND	*+ ^+	0.50	0.17	mg/L			10/27/21 13:39	1
Sulfate	ND		5.0	1.0	mg/L			10/27/21 13:39	1
Total Suspended Solids	ND	H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			10/18/21 09:41	1

Client Sample ID: MW-26
Date Collected: 10/14/21 13:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20
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			10/20/21 20:11	1
Temperature	21.9	HF	1.0	1.0	Degrees C			10/20/21 20:11	1
Chloride	160		60	20	mg/L			10/27/21 12:00	20
Fluoride	3.5		0.50	0.17	mg/L			10/27/21 22:31	1
Sulfate	2000		100	21	mg/L			10/27/21 12:00	20
Total Suspended Solids	1.6	J H	4.0	1.1	mg/L			10/25/21 09:34	1
Total Dissolved Solids (TDS)	3500		40	19	mg/L			10/18/21 09:41	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-509095/1-A
Matrix: Water
Analysis Batch: 509370

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 509095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		10/20/21 14:00	10/21/21 16:49	1

Lab Sample ID: LCS 240-509095/2-A
Matrix: Water
Analysis Batch: 509370

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 509095

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.893		mg/L		89	80 - 120

Lab Sample ID: 280-154197-2 MS
Matrix: Water
Analysis Batch: 509370

Client Sample ID: MW-23
Prep Type: Total Recoverable
Prep Batch: 509095

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	3.3	F1	1.00	4.12		mg/L		82	75 - 125

Lab Sample ID: 280-154197-2 MSD
Matrix: Water
Analysis Batch: 509370

Client Sample ID: MW-23
Prep Type: Total Recoverable
Prep Batch: 509095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	3.3	F1	1.00	3.89	F1	mg/L		59	75 - 125	6	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-509095/1-A
Matrix: Water
Analysis Batch: 509420

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 509095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/20/21 14:00	10/21/21 13:32	1
Arsenic	ND		0.0050	0.00075	mg/L		10/20/21 14:00	10/21/21 13:32	1
Barium	ND		0.0050	0.0022	mg/L		10/20/21 14:00	10/21/21 13:32	1
Beryllium	ND		0.0010	0.00062	mg/L		10/20/21 14:00	10/21/21 13:32	1
Calcium	ND		1.0	0.58	mg/L		10/20/21 14:00	10/21/21 13:32	1
Cadmium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:32	1
Cobalt	ND		0.0010	0.00019	mg/L		10/20/21 14:00	10/21/21 13:32	1
Chromium	ND		0.0025	0.0025	mg/L		10/20/21 14:00	10/21/21 13:32	1
Molybdenum	ND		0.010	0.0011	mg/L		10/20/21 14:00	10/21/21 13:32	1
Lead	ND		0.0010	0.00045	mg/L		10/20/21 14:00	10/21/21 13:32	1
Selenium	ND		0.0050	0.00089	mg/L		10/20/21 14:00	10/21/21 13:32	1
Thallium	ND		0.0010	0.00020	mg/L		10/20/21 14:00	10/21/21 13:32	1
Lithium	ND		0.0080	0.0017	mg/L		10/20/21 14:00	10/21/21 13:32	1

Lab Sample ID: LCS 240-509095/3-A
Matrix: Water
Analysis Batch: 509420

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 509095

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0914		mg/L		91	80 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Lab Sample ID: LCS 240-509095/3-A

Matrix: Water

Analysis Batch: 509420

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 509095

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.869		mg/L		87	80 - 120
Barium	1.00	0.865		mg/L		86	80 - 120
Beryllium	0.500	0.430		mg/L		86	80 - 120
Calcium	25.0	21.5		mg/L		86	80 - 120
Cadmium	0.500	0.452		mg/L		90	80 - 120
Cobalt	0.500	0.457		mg/L		91	80 - 120
Chromium	0.500	0.464		mg/L		93	80 - 120
Molybdenum	0.500	0.432		mg/L		86	80 - 120
Lead	0.500	0.463		mg/L		93	80 - 120
Selenium	1.00	0.924		mg/L		92	80 - 120
Thallium	1.00	0.918		mg/L		92	80 - 120
Lithium	0.500	0.455		mg/L		91	80 - 120

Lab Sample ID: 280-154197-3 MS

Matrix: Water

Analysis Batch: 509420

Client Sample ID: MW-3

Prep Type: Total Recoverable

Prep Batch: 509095

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.100	0.104		mg/L		104	75 - 125
Arsenic	ND		1.00	1.04		mg/L		104	75 - 125
Barium	0.011		1.00	0.984		mg/L		97	75 - 125
Beryllium	ND		0.500	0.463		mg/L		93	75 - 125
Calcium	480		25.0	533	4	mg/L		220	75 - 125
Cadmium	ND		0.500	0.479		mg/L		96	75 - 125
Cobalt	0.0012		0.500	0.523		mg/L		104	75 - 125
Chromium	ND		0.500	0.491		mg/L		98	75 - 125
Molybdenum	ND		0.500	0.512		mg/L		102	75 - 125
Lead	ND		0.500	0.506		mg/L		101	75 - 125
Selenium	ND		1.00	0.971		mg/L		97	75 - 125
Thallium	ND		1.00	0.983		mg/L		98	75 - 125
Lithium	0.070		0.500	0.582		mg/L		102	75 - 125

Lab Sample ID: 280-154197-3 MSD

Matrix: Water

Analysis Batch: 509420

Client Sample ID: MW-3

Prep Type: Total Recoverable

Prep Batch: 509095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	ND		0.100	0.104		mg/L		104	75 - 125	0	20
Arsenic	ND		1.00	1.05		mg/L		105	75 - 125	1	20
Barium	0.011		1.00	0.999		mg/L		99	75 - 125	2	20
Beryllium	ND		0.500	0.484		mg/L		97	75 - 125	4	20
Calcium	480		25.0	522	4	mg/L		179	75 - 125	2	20
Cadmium	ND		0.500	0.485		mg/L		97	75 - 125	1	20
Cobalt	0.0012		0.500	0.531		mg/L		106	75 - 125	1	20
Chromium	ND		0.500	0.508		mg/L		102	75 - 125	4	20
Molybdenum	ND		0.500	0.520		mg/L		104	75 - 125	1	20
Lead	ND		0.500	0.517		mg/L		103	75 - 125	2	20
Selenium	ND		1.00	1.00		mg/L		100	75 - 125	3	20
Thallium	ND		1.00	0.996		mg/L		100	75 - 125	1	20

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Lab Sample ID: 280-154197-3 MSD

Matrix: Water

Analysis Batch: 509420

Client Sample ID: MW-3

Prep Type: Total Recoverable

Prep Batch: 509095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.070		0.500	0.599		mg/L		106	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-509710/1-A

Matrix: Water

Analysis Batch: 509964

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 509710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 17:24	1

Lab Sample ID: LCS 240-509710/2-A

Matrix: Water

Analysis Batch: 509964

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 509710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.54		ug/L		111	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-554461/26

Matrix: Water

Analysis Batch: 554461

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: LCS 280-554461/4

Matrix: Water

Analysis Batch: 554461

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: 280-154197-11 DU

Matrix: Water

Analysis Batch: 554461

Client Sample ID: MW-11

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		0.1	5
Temperature	21.3	HF	20.8		Degrees C		2	10

Lab Sample ID: LCS 280-554595/4

Matrix: Water

Analysis Batch: 554595

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

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-554979/6

Matrix: Water

Analysis Batch: 554979

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			10/26/21 12:17	1
Fluoride	ND		0.50	0.17	mg/L			10/26/21 12:17	1
Sulfate	ND		5.0	1.0	mg/L			10/26/21 12:17	1

Lab Sample ID: MB 280-554979/69

Matrix: Water

Analysis Batch: 554979

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			10/27/21 09:12	1
Fluoride	ND	^+	0.50	0.17	mg/L			10/27/21 09:12	1
Sulfate	ND		5.0	1.0	mg/L			10/27/21 09:12	1

Lab Sample ID: LCS 280-554979/4

Matrix: Water

Analysis Batch: 554979

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	4.67		mg/L		93	90 - 110
Sulfate	100	92.7		mg/L		93	90 - 110

Lab Sample ID: LCS 280-554979/67

Matrix: Water

Analysis Batch: 554979

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	95.3		mg/L		95	90 - 110
Fluoride	5.00	5.64	^+ *+	mg/L		113	90 - 110
Sulfate	100	94.1		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-554979/5

Matrix: Water

Analysis Batch: 554979

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
Fluoride	5.00	4.73		mg/L		95	90 - 110	1	10
Sulfate	100	92.8		mg/L		93	90 - 110	0	10

Lab Sample ID: LCSD 280-554979/68

Matrix: Water

Analysis Batch: 554979

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	0	10
Fluoride	5.00	5.67	*+ ^+	mg/L		113	90 - 110	1	10
Sulfate	100	94.2		mg/L		94	90 - 110	0	10

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Lab Sample ID: MRL 280-554979/3

Matrix: Water

Analysis Batch: 554979

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	3.34		mg/L		67	50 - 150
Fluoride	0.500	0.523		mg/L		105	50 - 150
Sulfate	5.00	3.61	J	mg/L		72	50 - 150

Lab Sample ID: 280-154197-5 MS

Matrix: Water

Analysis Batch: 554979

Client Sample ID: MW-7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	46		50.0	100		mg/L		108	80 - 120
Sulfate	90		50.0	147		mg/L		114	80 - 120

Lab Sample ID: 280-154197-5 MSD

Matrix: Water

Analysis Batch: 554979

Client Sample ID: MW-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	46		50.0	98.5		mg/L		105	80 - 120	2	20
Sulfate	90		50.0	146		mg/L		111	80 - 120	1	20

Lab Sample ID: 280-154197-6 MS

Matrix: Water

Analysis Batch: 554979

Client Sample ID: MW-1P

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	62		50.0	114		mg/L		105	80 - 120
Sulfate	180		50.0	241	E	mg/L		112	80 - 120

Lab Sample ID: 280-154197-6 MSD

Matrix: Water

Analysis Batch: 554979

Client Sample ID: MW-1P

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	62		50.0	115		mg/L		106	80 - 120	0	20
Sulfate	180		50.0	242	E	mg/L		114	80 - 120	0	20

Lab Sample ID: 280-154197-5 DU

Matrix: Water

Analysis Batch: 554979

Client Sample ID: MW-7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	46		46.1		mg/L		0.1	15
Sulfate	90		90.2		mg/L		0	15

Lab Sample ID: 280-154197-6 DU

Matrix: Water

Analysis Batch: 554979

Client Sample ID: MW-1P

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	62		61.7		mg/L		0.09	15

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Lab Sample ID: 280-154197-6 DU

Matrix: Water

Analysis Batch: 554979

Client Sample ID: MW-1P

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	180		184		mg/L		0.5	15

Lab Sample ID: MB 280-555147/6

Matrix: Water

Analysis Batch: 555147

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			10/27/21 11:39	1

Lab Sample ID: LCS 280-555147/4

Matrix: Water

Analysis Batch: 555147

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	5.27		mg/L		105	90 - 110

Lab Sample ID: LCSD 280-555147/5

Matrix: Water

Analysis Batch: 555147

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	5.15		mg/L		103	90 - 110	2	10

Lab Sample ID: MRL 280-555147/3

Matrix: Water

Analysis Batch: 555147

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	0.590		mg/L		118	50 - 150

Lab Sample ID: 280-154197-4 MS

Matrix: Water

Analysis Batch: 555147

Client Sample ID: MW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.3		5.00	6.34		mg/L		102	80 - 120

Lab Sample ID: 280-154197-4 MSD

Matrix: Water

Analysis Batch: 555147

Client Sample ID: MW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	1.3		5.00	6.52		mg/L		105	80 - 120	3	20

Lab Sample ID: 280-154197-14 MS

Matrix: Water

Analysis Batch: 555147

Client Sample ID: MW-13

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.9	F1	5.00	8.05	F1	mg/L		124	80 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Lab Sample ID: 280-154197-14 MSD

Matrix: Water

Analysis Batch: 555147

Client Sample ID: MW-13

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	1.9	F1	5.00	7.17		mg/L		106	80 - 120	12	20

Lab Sample ID: 280-154197-4 DU

Matrix: Water

Analysis Batch: 555147

Client Sample ID: MW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	1.3		1.20		mg/L		5	15

Lab Sample ID: 280-154197-14 DU

Matrix: Water

Analysis Batch: 555147

Client Sample ID: MW-13

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	1.9	F1	1.86		mg/L		0.3	15

Lab Sample ID: MB 280-555281/53

Matrix: Water

Analysis Batch: 555281

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			10/28/21 23:48	1

Lab Sample ID: MB 280-555281/6

Matrix: Water

Analysis Batch: 555281

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			10/28/21 11:57	1

Lab Sample ID: LCS 280-555281/4

Matrix: Water

Analysis Batch: 555281

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	98.8		mg/L		99	90 - 110

Lab Sample ID: LCS 280-555281/51

Matrix: Water

Analysis Batch: 555281

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	103		mg/L		103	90 - 110

Lab Sample ID: LCSD 280-555281/5

Matrix: Water

Analysis Batch: 555281

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	102		mg/L		102	90 - 110	3	10

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LCSD 280-555281/52

Matrix: Water

Analysis Batch: 555281

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	99.4		mg/L		99	90 - 110	3	10

Lab Sample ID: MRL 280-555281/3

Matrix: Water

Analysis Batch: 555281

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	3.94	J	mg/L		79	50 - 150		

Lab Sample ID: MB 280-555469/6

Matrix: Water

Analysis Batch: 555469

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			10/29/21 11:41	1
Fluoride	ND		0.50	0.17	mg/L			10/29/21 11:41	1
Sulfate	ND		5.0	1.0	mg/L			10/29/21 11:41	1

Lab Sample ID: LCS 280-555469/4

Matrix: Water

Analysis Batch: 555469

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	100	92.6		mg/L		93	90 - 110		
Fluoride	5.00	5.01		mg/L		100	90 - 110		
Sulfate	100	95.0		mg/L		95	90 - 110		

Lab Sample ID: LCSD 280-555469/5

Matrix: Water

Analysis Batch: 555469

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	3	10
Fluoride	5.00	5.15		mg/L		103	90 - 110	3	10
Sulfate	100	96.4		mg/L		96	90 - 110	2	10

Lab Sample ID: MRL 280-555469/3

Matrix: Water

Analysis Batch: 555469

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	0.551		mg/L		110	50 - 150		
Sulfate	5.00	3.91	J	mg/L		78	50 - 150		

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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

Lab Sample ID: MB 280-554821/1
Matrix: Water
Analysis Batch: 554821

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			10/25/21 09:34	1

Lab Sample ID: LCS 280-554821/2
Matrix: Water
Analysis Batch: 554821

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	80.0		mg/L		80	79 - 114

Lab Sample ID: LCSD 280-554821/3
Matrix: Water
Analysis Batch: 554821

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	82.4		mg/L		82	79 - 114	3	20

Lab Sample ID: 280-154197-7 DU
Matrix: Water
Analysis Batch: 554821

Client Sample ID: MW-9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	3.2	J H	3.20	J	mg/L		0	10

Lab Sample ID: 280-154197-12 DU
Matrix: Water
Analysis Batch: 554821

Client Sample ID: MW-28
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	7.2	H	6.80		mg/L		6	10

Lab Sample ID: MB 280-554824/1
Matrix: Water
Analysis Batch: 554824

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			10/25/21 09:46	1

Lab Sample ID: LCS 280-554824/2
Matrix: Water
Analysis Batch: 554824

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	88.8		mg/L		89	79 - 114

Lab Sample ID: 280-154197-8 DU
Matrix: Water
Analysis Batch: 554824

Client Sample ID: MW-12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	7.2	H	6.80		mg/L		6	10

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: MB 280-553940/1

Matrix: Water

Analysis Batch: 553940

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			10/18/21 08:41	1

Lab Sample ID: LCS 280-553940/2

Matrix: Water

Analysis Batch: 553940

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)	511	476		mg/L		93	88 - 114

Lab Sample ID: MB 280-554069/1

Matrix: Water

Analysis Batch: 554069

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			10/19/21 08:06	1

Lab Sample ID: LCS 280-554069/2

Matrix: Water

Analysis Batch: 554069

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)	511	447		mg/L		88	88 - 114

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Metals

Prep Batch: 509095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2	MW-23	Total Recoverable	Water	3005A	
280-154197-3	MW-3	Total Recoverable	Water	3005A	
280-154197-4	MW-15	Total Recoverable	Water	3005A	
280-154197-5	MW-7	Total Recoverable	Water	3005A	
280-154197-6	MW-1P	Total Recoverable	Water	3005A	
280-154197-7	MW-9	Total Recoverable	Water	3005A	
280-154197-8	MW-12	Total Recoverable	Water	3005A	
280-154197-9	MW-12-DUP	Total Recoverable	Water	3005A	
280-154197-10	MW-12-EB	Total Recoverable	Water	3005A	
280-154197-11	MW-11	Total Recoverable	Water	3005A	
280-154197-12	MW-28	Total Recoverable	Water	3005A	
280-154197-13	MW-14	Total Recoverable	Water	3005A	
280-154197-14	MW-13	Total Recoverable	Water	3005A	
280-154197-15	MW-16	Total Recoverable	Water	3005A	
280-154197-16	MW-27	Total Recoverable	Water	3005A	
280-154197-17	MW-21	Total Recoverable	Water	3005A	
280-154197-18	MW-21-DUP	Total Recoverable	Water	3005A	
280-154197-19	MW-21-EB	Total Recoverable	Water	3005A	
280-154197-20	MW-26	Total Recoverable	Water	3005A	
MB 240-509095/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-509095/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-509095/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-154197-2 MS	MW-23	Total Recoverable	Water	3005A	
280-154197-2 MSD	MW-23	Total Recoverable	Water	3005A	
280-154197-3 MS	MW-3	Total Recoverable	Water	3005A	
280-154197-3 MSD	MW-3	Total Recoverable	Water	3005A	

Analysis Batch: 509370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2	MW-23	Total Recoverable	Water	6010C	509095
280-154197-3	MW-3	Total Recoverable	Water	6010C	509095
280-154197-4	MW-15	Total Recoverable	Water	6010C	509095
280-154197-5	MW-7	Total Recoverable	Water	6010C	509095
280-154197-6	MW-1P	Total Recoverable	Water	6010C	509095
280-154197-7	MW-9	Total Recoverable	Water	6010C	509095
280-154197-8	MW-12	Total Recoverable	Water	6010C	509095
280-154197-9	MW-12-DUP	Total Recoverable	Water	6010C	509095
280-154197-10	MW-12-EB	Total Recoverable	Water	6010C	509095
280-154197-11	MW-11	Total Recoverable	Water	6010C	509095
280-154197-12	MW-28	Total Recoverable	Water	6010C	509095
280-154197-13	MW-14	Total Recoverable	Water	6010C	509095
280-154197-14	MW-13	Total Recoverable	Water	6010C	509095
280-154197-15	MW-16	Total Recoverable	Water	6010C	509095
280-154197-16	MW-27	Total Recoverable	Water	6010C	509095
280-154197-17	MW-21	Total Recoverable	Water	6010C	509095
280-154197-18	MW-21-DUP	Total Recoverable	Water	6010C	509095
280-154197-19	MW-21-EB	Total Recoverable	Water	6010C	509095
280-154197-20	MW-26	Total Recoverable	Water	6010C	509095
MB 240-509095/1-A	Method Blank	Total Recoverable	Water	6010C	509095
LCS 240-509095/2-A	Lab Control Sample	Total Recoverable	Water	6010C	509095
280-154197-2 MS	MW-23	Total Recoverable	Water	6010C	509095

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Metals (Continued)

Analysis Batch: 509370 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2 MSD	MW-23	Total Recoverable	Water	6010C	509095

Analysis Batch: 509420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2	MW-23	Total Recoverable	Water	6020A	509095
280-154197-3	MW-3	Total Recoverable	Water	6020A	509095
280-154197-4	MW-15	Total Recoverable	Water	6020A	509095
280-154197-5	MW-7	Total Recoverable	Water	6020A	509095
280-154197-6	MW-1P	Total Recoverable	Water	6020A	509095
280-154197-7	MW-9	Total Recoverable	Water	6020A	509095
280-154197-8	MW-12	Total Recoverable	Water	6020A	509095
280-154197-9	MW-12-DUP	Total Recoverable	Water	6020A	509095
280-154197-10	MW-12-EB	Total Recoverable	Water	6020A	509095
280-154197-11	MW-11	Total Recoverable	Water	6020A	509095
280-154197-12	MW-28	Total Recoverable	Water	6020A	509095
280-154197-13	MW-14	Total Recoverable	Water	6020A	509095
280-154197-14	MW-13	Total Recoverable	Water	6020A	509095
280-154197-15	MW-16	Total Recoverable	Water	6020A	509095
280-154197-16	MW-27	Total Recoverable	Water	6020A	509095
280-154197-17	MW-21	Total Recoverable	Water	6020A	509095
280-154197-18	MW-21-DUP	Total Recoverable	Water	6020A	509095
280-154197-19	MW-21-EB	Total Recoverable	Water	6020A	509095
280-154197-20	MW-26	Total Recoverable	Water	6020A	509095
MB 240-509095/1-A	Method Blank	Total Recoverable	Water	6020A	509095
LCS 240-509095/3-A	Lab Control Sample	Total Recoverable	Water	6020A	509095
280-154197-3 MS	MW-3	Total Recoverable	Water	6020A	509095
280-154197-3 MSD	MW-3	Total Recoverable	Water	6020A	509095

Prep Batch: 509710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2	MW-23	Total/NA	Water	7470A	
280-154197-3	MW-3	Total/NA	Water	7470A	
280-154197-4	MW-15	Total/NA	Water	7470A	
280-154197-5	MW-7	Total/NA	Water	7470A	
280-154197-6	MW-1P	Total/NA	Water	7470A	
280-154197-7	MW-9	Total/NA	Water	7470A	
280-154197-8	MW-12	Total/NA	Water	7470A	
280-154197-9	MW-12-DUP	Total/NA	Water	7470A	
280-154197-10	MW-12-EB	Total/NA	Water	7470A	
280-154197-11	MW-11	Total/NA	Water	7470A	
280-154197-12	MW-28	Total/NA	Water	7470A	
280-154197-13	MW-14	Total/NA	Water	7470A	
280-154197-14	MW-13	Total/NA	Water	7470A	
280-154197-15	MW-16	Total/NA	Water	7470A	
280-154197-16	MW-27	Total/NA	Water	7470A	
280-154197-17	MW-21	Total/NA	Water	7470A	
280-154197-18	MW-21-DUP	Total/NA	Water	7470A	
280-154197-19	MW-21-EB	Total/NA	Water	7470A	
280-154197-20	MW-26	Total/NA	Water	7470A	
MB 240-509710/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-509710/2-A	Lab Control Sample	Total/NA	Water	7470A	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Metals

Analysis Batch: 509964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2	MW-23	Total/NA	Water	7470A	509710
280-154197-3	MW-3	Total/NA	Water	7470A	509710
280-154197-4	MW-15	Total/NA	Water	7470A	509710
280-154197-5	MW-7	Total/NA	Water	7470A	509710
280-154197-6	MW-1P	Total/NA	Water	7470A	509710
280-154197-7	MW-9	Total/NA	Water	7470A	509710
280-154197-8	MW-12	Total/NA	Water	7470A	509710
280-154197-9	MW-12-DUP	Total/NA	Water	7470A	509710
280-154197-10	MW-12-EB	Total/NA	Water	7470A	509710
280-154197-11	MW-11	Total/NA	Water	7470A	509710
280-154197-12	MW-28	Total/NA	Water	7470A	509710
280-154197-13	MW-14	Total/NA	Water	7470A	509710
280-154197-14	MW-13	Total/NA	Water	7470A	509710
280-154197-15	MW-16	Total/NA	Water	7470A	509710
280-154197-16	MW-27	Total/NA	Water	7470A	509710
280-154197-17	MW-21	Total/NA	Water	7470A	509710
280-154197-18	MW-21-DUP	Total/NA	Water	7470A	509710
280-154197-19	MW-21-EB	Total/NA	Water	7470A	509710
280-154197-20	MW-26	Total/NA	Water	7470A	509710
MB 240-509710/1-A	Method Blank	Total/NA	Water	7470A	509710
LCS 240-509710/2-A	Lab Control Sample	Total/NA	Water	7470A	509710

General Chemistry

Analysis Batch: 553940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-1	MW-22	Total/NA	Water	SM2540 C	
280-154197-2	MW-23	Total/NA	Water	SM2540 C	
280-154197-3	MW-3	Total/NA	Water	SM2540 C	
280-154197-4	MW-15	Total/NA	Water	SM2540 C	
280-154197-5	MW-7	Total/NA	Water	SM2540 C	
280-154197-6	MW-1P	Total/NA	Water	SM2540 C	
280-154197-12	MW-28	Total/NA	Water	SM2540 C	
280-154197-13	MW-14	Total/NA	Water	SM2540 C	
280-154197-14	MW-13	Total/NA	Water	SM2540 C	
280-154197-15	MW-16	Total/NA	Water	SM2540 C	
280-154197-16	MW-27	Total/NA	Water	SM2540 C	
280-154197-19	MW-21-EB	Total/NA	Water	SM2540 C	
280-154197-20	MW-26	Total/NA	Water	SM2540 C	
MB 280-553940/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-553940/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 554069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-7	MW-9	Total/NA	Water	SM2540 C	
280-154197-8	MW-12	Total/NA	Water	SM2540 C	
280-154197-9	MW-12-DUP	Total/NA	Water	SM2540 C	
280-154197-10	MW-12-EB	Total/NA	Water	SM2540 C	
280-154197-11	MW-11	Total/NA	Water	SM2540 C	
280-154197-17	MW-21	Total/NA	Water	SM2540 C	
280-154197-18	MW-21-DUP	Total/NA	Water	SM2540 C	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry (Continued)

Analysis Batch: 554069 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-554069/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-554069/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 554461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2	MW-23	Total/NA	Water	9040B	
280-154197-3	MW-3	Total/NA	Water	9040B	
280-154197-4	MW-15	Total/NA	Water	9040B	
280-154197-5	MW-7	Total/NA	Water	9040B	
280-154197-6	MW-1P	Total/NA	Water	9040B	
280-154197-7	MW-9	Total/NA	Water	9040B	
280-154197-8	MW-12	Total/NA	Water	9040B	
280-154197-9	MW-12-DUP	Total/NA	Water	9040B	
280-154197-11	MW-11	Total/NA	Water	9040B	
280-154197-12	MW-28	Total/NA	Water	9040B	
280-154197-13	MW-14	Total/NA	Water	9040B	
280-154197-14	MW-13	Total/NA	Water	9040B	
280-154197-15	MW-16	Total/NA	Water	9040B	
280-154197-16	MW-27	Total/NA	Water	9040B	
280-154197-17	MW-21	Total/NA	Water	9040B	
280-154197-18	MW-21-DUP	Total/NA	Water	9040B	
280-154197-20	MW-26	Total/NA	Water	9040B	
LCS 280-554461/26	Lab Control Sample	Total/NA	Water	9040B	
LCS 280-554461/4	Lab Control Sample	Total/NA	Water	9040B	
280-154197-11 DU	MW-11	Total/NA	Water	9040B	

Analysis Batch: 554595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-1	MW-22	Total/NA	Water	9040B	
280-154197-10	MW-12-EB	Total/NA	Water	9040B	
280-154197-19	MW-21-EB	Total/NA	Water	9040B	
LCS 280-554595/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 554821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-1	MW-22	Total/NA	Water	SM 2540D	
280-154197-2	MW-23	Total/NA	Water	SM 2540D	
280-154197-3	MW-3	Total/NA	Water	SM 2540D	
280-154197-4	MW-15	Total/NA	Water	SM 2540D	
280-154197-5	MW-7	Total/NA	Water	SM 2540D	
280-154197-6	MW-1P	Total/NA	Water	SM 2540D	
280-154197-7	MW-9	Total/NA	Water	SM 2540D	
280-154197-9	MW-12-DUP	Total/NA	Water	SM 2540D	
280-154197-10	MW-12-EB	Total/NA	Water	SM 2540D	
280-154197-11	MW-11	Total/NA	Water	SM 2540D	
280-154197-12	MW-28	Total/NA	Water	SM 2540D	
280-154197-13	MW-14	Total/NA	Water	SM 2540D	
280-154197-14	MW-13	Total/NA	Water	SM 2540D	
280-154197-15	MW-16	Total/NA	Water	SM 2540D	
280-154197-16	MW-27	Total/NA	Water	SM 2540D	
280-154197-17	MW-21	Total/NA	Water	SM 2540D	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry (Continued)

Analysis Batch: 554821 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-18	MW-21-DUP	Total/NA	Water	SM 2540D	
280-154197-19	MW-21-EB	Total/NA	Water	SM 2540D	
280-154197-20	MW-26	Total/NA	Water	SM 2540D	
MB 280-554821/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-554821/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-554821/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
280-154197-7 DU	MW-9	Total/NA	Water	SM 2540D	
280-154197-12 DU	MW-28	Total/NA	Water	SM 2540D	

Analysis Batch: 554824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-8	MW-12	Total/NA	Water	SM 2540D	
MB 280-554824/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-554824/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-154197-8 DU	MW-12	Total/NA	Water	SM 2540D	

Analysis Batch: 554979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-1	MW-22	Total/NA	Water	9056A	
280-154197-1	MW-22	Total/NA	Water	9056A	
280-154197-2	MW-23	Total/NA	Water	9056A	
280-154197-2	MW-23	Total/NA	Water	9056A	
280-154197-3	MW-3	Total/NA	Water	9056A	
280-154197-3	MW-3	Total/NA	Water	9056A	
280-154197-4	MW-15	Total/NA	Water	9056A	
280-154197-5	MW-7	Total/NA	Water	9056A	
280-154197-6	MW-1P	Total/NA	Water	9056A	
280-154197-7	MW-9	Total/NA	Water	9056A	
280-154197-8	MW-12	Total/NA	Water	9056A	
280-154197-9	MW-12-DUP	Total/NA	Water	9056A	
280-154197-10	MW-12-EB	Total/NA	Water	9056A	
280-154197-11	MW-11	Total/NA	Water	9056A	
280-154197-11	MW-11	Total/NA	Water	9056A	
280-154197-12	MW-28	Total/NA	Water	9056A	
280-154197-12	MW-28	Total/NA	Water	9056A	
280-154197-13	MW-14	Total/NA	Water	9056A	
280-154197-14	MW-13	Total/NA	Water	9056A	
280-154197-15	MW-16	Total/NA	Water	9056A	
280-154197-16	MW-27	Total/NA	Water	9056A	
280-154197-17	MW-21	Total/NA	Water	9056A	
280-154197-18	MW-21-DUP	Total/NA	Water	9056A	
280-154197-19	MW-21-EB	Total/NA	Water	9056A	
280-154197-20	MW-26	Total/NA	Water	9056A	
MB 280-554979/6	Method Blank	Total/NA	Water	9056A	
MB 280-554979/69	Method Blank	Total/NA	Water	9056A	
LCS 280-554979/4	Lab Control Sample	Total/NA	Water	9056A	
LCS 280-554979/67	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-554979/5	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 280-554979/68	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-554979/3	Lab Control Sample	Total/NA	Water	9056A	
280-154197-5 MS	MW-7	Total/NA	Water	9056A	

Eurofins TestAmerica, Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry (Continued)

Analysis Batch: 554979 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-5 MSD	MW-7	Total/NA	Water	9056A	
280-154197-6 MS	MW-1P	Total/NA	Water	9056A	
280-154197-6 MSD	MW-1P	Total/NA	Water	9056A	
280-154197-5 DU	MW-7	Total/NA	Water	9056A	
280-154197-6 DU	MW-1P	Total/NA	Water	9056A	

Analysis Batch: 555147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-4	MW-15	Total/NA	Water	9056A	
280-154197-5	MW-7	Total/NA	Water	9056A	
280-154197-6	MW-1P	Total/NA	Water	9056A	
280-154197-7	MW-9	Total/NA	Water	9056A	
280-154197-8	MW-12	Total/NA	Water	9056A	
280-154197-9	MW-12-DUP	Total/NA	Water	9056A	
280-154197-11	MW-11	Total/NA	Water	9056A	
280-154197-12	MW-28	Total/NA	Water	9056A	
280-154197-14	MW-13	Total/NA	Water	9056A	
280-154197-15	MW-16	Total/NA	Water	9056A	
280-154197-16	MW-27	Total/NA	Water	9056A	
280-154197-17	MW-21	Total/NA	Water	9056A	
280-154197-18	MW-21-DUP	Total/NA	Water	9056A	
280-154197-20	MW-26	Total/NA	Water	9056A	
MB 280-555147/6	Method Blank	Total/NA	Water	9056A	
LCS 280-555147/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-555147/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-555147/3	Lab Control Sample	Total/NA	Water	9056A	
280-154197-4 MS	MW-15	Total/NA	Water	9056A	
280-154197-4 MSD	MW-15	Total/NA	Water	9056A	
280-154197-14 MS	MW-13	Total/NA	Water	9056A	
280-154197-14 MSD	MW-13	Total/NA	Water	9056A	
280-154197-4 DU	MW-15	Total/NA	Water	9056A	
280-154197-14 DU	MW-13	Total/NA	Water	9056A	

Analysis Batch: 555281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-14	MW-13	Total/NA	Water	9056A	
MB 280-555281/53	Method Blank	Total/NA	Water	9056A	
MB 280-555281/6	Method Blank	Total/NA	Water	9056A	
LCS 280-555281/4	Lab Control Sample	Total/NA	Water	9056A	
LCS 280-555281/51	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-555281/5	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 280-555281/52	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-555281/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 555469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-2	MW-23	Total/NA	Water	9056A	
280-154197-13	MW-14	Total/NA	Water	9056A	
MB 280-555469/6	Method Blank	Total/NA	Water	9056A	
LCS 280-555469/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-555469/5	Lab Control Sample Dup	Total/NA	Water	9056A	

Eurofins TestAmerica, Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

General Chemistry (Continued)

Analysis Batch: 555469 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 280-555469/3	Lab Control Sample	Total/NA	Water	9056A	

1

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Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-22

Date Collected: 10/12/21 11:30

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040B		1			554595	10/21/21 13:49	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/26/21 23:54	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	554979	10/27/21 00:10	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	10 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-23

Date Collected: 10/12/21 10:05

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 16:58	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 13:37	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:35	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 21:12	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 00:26	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	554979	10/27/21 00:43	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	555469	10/29/21 18:02	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	1 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-3

Date Collected: 10/12/21 13:45

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:20	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 13:39	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:37	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 21:16	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 00:59	CJ	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	554979	10/27/21 01:16	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-15

Date Collected: 10/12/21 16:30

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:33	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 13:59	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:39	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 21:20	ECC	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	554979	10/27/21 03:27	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 15:03	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-7

Date Collected: 10/13/21 12:40

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:37	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:01	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:41	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:49	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 02:05	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 16:03	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-1P

Date Collected: 10/13/21 15:15

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:42	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:04	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:43	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:00	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 09:28	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 16:18	SPG	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-1P

Date Collected: 10/13/21 15:15

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6

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 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-9

Date Collected: 10/14/21 10:15

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:46	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:06	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:50	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:56	ECC	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	554979	10/27/21 04:00	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 16:32	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	554069	10/19/21 09:07	ABW	TAL DEN

Client Sample ID: MW-12

Date Collected: 10/14/21 11:55

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:50	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:09	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:52	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 21:00	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 12:49	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 16:47	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554824	10/25/21 09:49	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	554069	10/19/21 09:07	ABW	TAL DEN

Client Sample ID: MW-12-DUP

Date Collected: 10/14/21 11:55

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:55	RKT	TAL CAN

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Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-12-DUP

Lab Sample ID: 280-154197-9

Date Collected: 10/14/21 11:55

Matrix: Water

Date Received: 10/14/21 17:00

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:11	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:54	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 21:08	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 13:06	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 17:02	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	554069	10/19/21 09:07	ABW	TAL DEN

Client Sample ID: MW-12-EB

Lab Sample ID: 280-154197-10

Date Collected: 10/14/21 12:45

Matrix: Water

Date Received: 10/14/21 17:00

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 17:59	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:14	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:56	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554595	10/21/21 13:45	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 04:16	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	554069	10/19/21 09:07	ABW	TAL DEN

Client Sample ID: MW-11

Lab Sample ID: 280-154197-11

Date Collected: 10/14/21 14:30

Matrix: Water

Date Received: 10/14/21 17:00

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:04	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:16	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 17:58	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:23	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 05:22	CJ	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	554979	10/27/21 05:38	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 18:02	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	554069	10/19/21 09:07	ABW	TAL DEN

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Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-28

Date Collected: 10/12/21 12:50

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:08	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:19	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:00	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:52	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 05:55	CJ	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	554979	10/27/21 06:11	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 18:17	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	10 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-14

Date Collected: 10/12/21 14:50

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:13	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:26	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:02	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 21:24	ECC	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	554979	10/27/21 06:44	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555469	10/29/21 19:16	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-13

Date Collected: 10/13/21 12:15

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:26	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:29	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:04	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:37	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 07:00	CJ	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-13

Date Collected: 10/13/21 12:15

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14

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		1	5 mL	5 mL	555147	10/27/21 19:17	SPG	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	555281	10/29/21 03:17	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-16

Date Collected: 10/13/21 17:05

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:30	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:31	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:06	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:41	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 07:33	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 20:16	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-27

Date Collected: 10/13/21 14:10

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:35	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:34	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:08	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:45	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 13:22	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 21:01	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-21

Date Collected: 10/14/21 10:35

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:39	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:36	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:15	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 19:56	ECC	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	554979	10/27/21 10:55	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 21:16	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	554069	10/19/21 09:07	ABW	TAL DEN

Client Sample ID: MW-21-DUP

Date Collected: 10/14/21 10:35

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:44	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:39	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:17	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 19:52	ECC	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	554979	10/27/21 11:27	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 21:46	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	554069	10/19/21 09:07	ABW	TAL DEN

Client Sample ID: MW-21-EB

Date Collected: 10/14/21 10:35

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:48	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:41	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:19	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554595	10/21/21 13:41	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	554979	10/27/21 13:39	CJ	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

Client Sample ID: MW-21-EB

Lab Sample ID: 280-154197-19

Date Collected: 10/14/21 10:35

Matrix: Water

Date Received: 10/14/21 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	553940	10/18/21 09:41	ABW	TAL DEN

Client Sample ID: MW-26

Lab Sample ID: 280-154197-20

Date Collected: 10/14/21 13:50

Matrix: Water

Date Received: 10/14/21 17:00

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	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			509370	10/21/21 18:53	RKT	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509095	10/20/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			509420	10/21/21 14:44	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509710	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 18:21	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554461	10/20/21 20:11	ECC	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	554979	10/27/21 12:00	CJ	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555147	10/27/21 22:31	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554821	10/25/21 09:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	553940	10/18/21 09:41	ABW	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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-1

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	11-02-21

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.

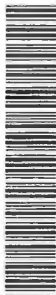
Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-18-10	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

Chain of Custody Record

Client Information		Sample: <i>Te Snyder</i>		Lab PM: Harrington, Danielle M		Carrier Tracking No(s):		COC No: 280-103098-29694.3					
Client Contact: Molly Reeves		Phone: 720-838-6065		E-Mail: Danielle.Harrington@Eurofinset.com				Page: Page 3 of 3					
Company: HDR Inc								Job #:					
Address: 9781 S. Meridian Blvd Suite 400													
City: Englewood													
State, Zip: CO, 80112													
Phone: 734-263-7138(Tel)													
Email: Molly.Reeves@hdrinc.com													
Project Name: Xcel Energy GW CCR Monitoring - Valmont													
Site: Colorado Landfill Wells													
Due Date Requested:		TAT Requested (days):		ASAP									
PO #: DEN-018		WO #:											
Project #: 28014379		SSOW#:											
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 6020A Total Metals - ETA Canton	2540C, Calcd TDS/IC Chloride, Fluoride, Sulfate/ pH	9315 Ra226, 9320 Ra228, Ra226Ra228 GFC - ETA St. Louis	Analysis Requested	Carrier Tracking No(s):	COC No: 280-103098-29694.3
MW-22	10/12/21	1130	G	WATER									
MW-23	10/12/21	1005	G	WATER									
MW-3	10/12/21	1345	G	WATER									
MW-15	10/12/21	1630	G	WATER									
MW-1P	10/13/21	1240	G	WATER									
MW-9	10/13/21	1515	G	WATER									
MW-12	10/14/21	1015	G	WATER									
MW-12-DUP	10/14/21	1155	G	WATER									
MW-12-EB	10/14/21	1245	G	WATER									
MW-11	10/14/21	1430	G	WATER									
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological													
Deliverable Requested: I, II, III, IV, Other (specify)													
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/OC Requirements:													
Empty Kit Relinquished by:													
Relinquished by: <i>[Signature]</i> Date: 10/14/21 1700 Company: HDR													
Relinquished by: _____ Date/Time: _____ Company: _____													
Relinquished by: _____ Date/Time: _____ Company: _____													
Custody Seals Intact: ☐ Yes ☐ No													
Custody Seal No.: 13140413, 1401191211CF10													

Ver: 01/16/2019

Chain of Custody Record



**Environment Testing
America**

Client Information (Sub Contract Lab)				Lab PM: Harrington, Danielle M		Carrier Tracking No(s): 280-589649.1	
Client Contact Shipping/Receiving				E-Mail: Danielle.Harrington@Eurofinset.com		State of Origin: Colorado	
Company TestAmerica Laboratories, Inc.				Accreditations Required (See note) DoD - A2LA		Page: Page 1 of 3	
Address: 4101 Shuffel Street NW, North Canton State, Zip OH, 44720				Phone: 330-497-9396(Tel) 330-497-0772(Fax)		Job #: 280-154197-1	
Project Name Xcel Energy GW CCR Monitoring - Valmont				Project #: 28014379		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Site Xcel Energy CCR - Valmont Station				SSOW#		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	

Due Date Requested: 10/31/2021				Analysis Requested				Total Number of containers			
TAT Requested (days):											
Sample	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=on-site)	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	Special Instructions/Note:		
MMW-23 (280-154197-2)	10/12/21	10:05 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-3 (280-154197-3)	10/12/21	13:45 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-15 (280-154197-4)	10/12/21	16:30 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-7 (280-154197-5)	10/13/21	12:40 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-1P (280-154197-6)	10/13/21	15:15 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-9 (280-154197-7)	10/14/21	10:15 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-12 (280-154197-8)	10/14/21	11:55 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-12-DUP (280-154197-9)	10/14/21	11:55 Mountain	Water	Water	X	X	X	X	Use Collision Cell		
MMW-12-EB (280-154197-10)	10/14/21	12:45 Mountain	Water	Water	X	X	X	X	Use Collision Cell		

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

Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 4			
Empty Kit Relinquished by:				Date:			
Relinquished by:				Date/Time:			
Relinquished by:				Date/Time:			
Relinquished by:				Date/Time:			
Custody Seals Intact:				Cooler Temperature(s) °C and Other Remarks:			

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months			
Special Instructions/QC Requirements:			
Method of Shipment:			
Received by:			
Date/Time:			
Received by:			
Date/Time:			
Received by:			
Date/Time:			

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler	Lab PM:	Carrier Tracking No(s)	GOC No.				
Client Contact: Shipping/Receiving		Phone	Harrington, Danielle M		280-589649.2				
Company: TestAmerica Laboratories, Inc.			E-Mail: Danielle.Harrington@Eurofinset.com	State of Origin: Colorado	Page: Page 2 of 3				
Address: 4101 Shuffel Street NW, City: North Canton State, Zip: OH, 44720		Due Date Requested: 10/31/2021	Accreditations Required (See note): DoD - A2LA		Job #: 280-154197-1				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		TAT Requested (days):	Preservation Codes:						
Email:		PO #	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 - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)						
Project Name: Xcel Energy GW CCR Monitoring - Valmont		WO #	Other:						
Site: Xcel Energy CCR - Valmont Station		Project # 28014379	Special Instructions/Note: <i>SOB WA</i>						
SSOW#									
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overstabil, BT-Tissue, AAR)	Field Filtered Sample (Yes or No)	Perform MS/MSD (MOD) 13 Total Metals (w/collision cell)	6010C/3005A (MOD) Boron	Total Number of Containers	Special Instructions/Note:
MW-11 (280-154197-11)	10/14/21	14:30 Mountain		Water		X	X	2	Use Collision Cell
MW-28 (280-154197-12)	10/12/21	12:50 Mountain		Water		X	X	2	Use Collision Cell
MW-14 (280-154197-13)	10/12/21	14:50 Mountain		Water		X	X	2	Use Collision Cell
MW-13 (280-154197-14)	10/13/21	12:15 Mountain		Water		X	X	2	Use Collision Cell
MW-16 (280-154197-15)	10/13/21	17:05 Mountain		Water		X	X	2	Use Collision Cell
MW-27 (280-154197-16)	10/13/21	14:10 Mountain		Water		X	X	2	Use Collision Cell
MW-21 (280-154197-17)	10/14/21	10:35 Mountain		Water		X	X	2	Use Collision Cell
MW-21-DUP (280-154197-18)	10/14/21	10:35 Mountain		Water		X	X	2	Use Collision Cell
MW-21-EB (280-154197-19)	10/14/21	10:35 Mountain		Water		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 our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica

Possible Hazard Identification		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)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 4		Method of Shipment	
Empty Kit Relinquished by:		Time:	
Date:		Time:	
Relinquished by:	Company:	Received by:	Company:
10/19/2021	ETA DCA	Young Power	ETA
Date/Time:	Company:	Date/Time:	Company:
Relinquished by:	Company:	Received by:	Company:
Date/Time:	Company:	Date/Time:	Company:
Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:	
Δ Yes Δ No			

Chain of Custody Record

Client Information (Sub Contract Lab)				Sampler: Lab PM Harrington, Danielle M		Carrier Tracking No(s) 280-589649.3	
Client Contact Shipping/Receiving				Phone E-Mail:		State of Origin: Colorado	
Company TestAmerica Laboratories, Inc.				Accreditations Required (See note) DoD - AZLA		Page 3 of 3	
Address: 4101 Shuffel Street NW, City: North Canton State, Zip: OH, 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) E-mail:				Project # 28014379		Job # 280-154197-1	
Project Name Xcel Energy GW CCR Monitoring - Valmont Site: Xcel Energy CCR - Valmont Station				SSOW#		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Sample Identification - Client ID (Lab ID)				Analysis Requested		Preservation Codes:	
MW-26 (280-154197-20)				Sample Date 10/14/21		Due Date Requested: 10/31/2021	
Sample Time 13:50 Mountain				Sample Type (C=comp, G=grab) Preservation Code:		TAT Requested (days):	
Matrix (Weaver, Solid, Overstool, BT-Tissue, Air)				Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Water				6020A/3005A (MOD) 13 Total Metals (w/collision cell)		6010C/3005A (MOD) Boron	
Total Number of containers				2		Special Instructions/Note: 5076 W70	

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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification

Unconfirmed

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

Primary Deliverable Rank: 4

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:

Date/Time 10/18/2021 1600		Date/Time 10/18/2021 1010	
Relinquished by: <i>AKC</i>		Relinquished by: <i>Young</i>	
Relinquished by:		Relinquished by:	
Relinquished by:		Relinquished by:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	

Eurofins TestAmerica Canton Sample Receipt Form/Narrative						Login # : _____	
Canton Facility							
Client <u>ETA</u>		Site Name _____		Cooler unpacked by <u>Tony Borge</u>			
Cooler Received on <u>10-19-21</u>		Opened on <u>10-19-21</u>					
FedEx: 1 st Grd Exp		UPS FAS Clipper		Client Drop Off		TestAmerica Courier Other	
Receipt After-hours: Drop-off Date/Time				Storage Location			
TestAmerica Cooler # <u>TA</u>		Foam Box		Client Cooler		Box Other	
Packing material used: Bubble Wrap		Foam		<u>Plastic Bag</u>		None Other	
COOLANT: Wet Ice		Blue Ice		Dry Ice		Water None	
1. Cooler temperature upon receipt				☒ See Multiple Cooler Form			
IR GUN# IR-14 (CF +0.1 °C)		Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C			
IR GUN #IR-15 (CF +0.2 °C)		Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C			
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>2</u>				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# <u>HC157842</u>	
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			
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: _____			



Environment Testing
TestAmerica

ORIGIN ID:WHHA (303) 736-0100

EUROFINS TESTAMERICA DENVER
4955 YARROW ST

ARVADA, CO 80002
UNITED STATES US

SHIP DATE: 18OCT21
ACTWGT: 34.55 LB MAN
CAD: 290884/CAFE3507

BILL SENDER

TO SHIPPING/RECEIVING
TESTAMERICA LABORATORIES, INC.
4101 SHUFFEL STREET NW

NORTH CANTON OH 44720

(330) 497-8398
PO: YES

REF: 6280-113448

DEPT: BOTTLE PREP

FedEx
Express



1 of 2

TRK# 5182 8143 0638

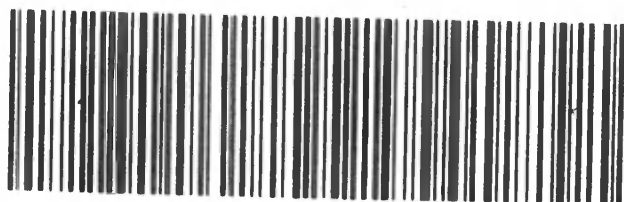
MASTER

NA PHDA

TUE - 19 OCT 10:30A
PRIORITY OVERNIGHT

44720

OH-US CLE



Environment Testing
TestAmerica

No
COE

1.8/1.9

ORIGIN ID:WHHA (303) 736-0100

EUROFINS TESTAMERICA DENVER
4955 YARROW ST

ARVADA, CO 80002
UNITED STATES US

SHIP DATE: 18OCT21
ACTWGT: 49.95 LB MAN
CAD: 290884/CAFE3507

BILL SENDER

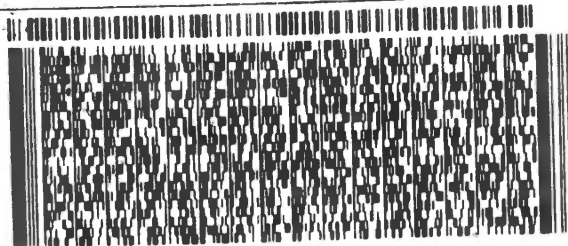
TO SHIPPING/RECEIVING
TESTAMERICA LABORATORIES, INC.
4101 SHUFFEL STREET NW

NORTH CANTON OH 44720

(330) 497-8398
PO: YES

REF: 6280-113448

DEPT: BOTTLE PREP



FedEx
Express



2 of 2

MPS# 5182 8143 0649

0263 Met# 5182 8143 0638

0201

NA PHDA

TUE - 19 OCT 10:3
PRIORITY OVERNIGHT

447

OH-US C



Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-154197-1

Login Number: 154197

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Roehsner, Karen P

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

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

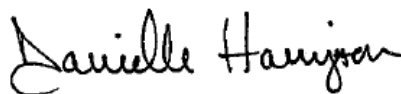
Laboratory Job ID: 280-154197-2

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
11/22/2021 8:53:32 AM

Danielle Harrington, Project Manager II
(303)736-0176

Danielle.Harrington@Eurofinset.com

LINKS

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results through

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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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Qualifiers

Rad

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

Glossary

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Job ID: 280-154197-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-154197-2

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 10/14/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.1°C, 1.4°C, 2.3°C, 2.3°C, 2.4°C, 2.4°C and 2.9°C.

RADIUM-226 (GFPC)- METHOD 9315

All of the samples were prepared at a reduced aliquot due to matrix interferences.

The method 9315 Sample Duplicate 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- METHOD 9320

All of the samples were prepared at a reduced aliquot due to matrix interferences.

Low levels of Radium-228 are present in the method blank associated with QC batches 160-532830 and 160-536041. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The method 9320 Sample Duplicate 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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Client Sample ID: MW-22	Lab Sample ID: 280-154197-1
No Detections.	
Client Sample ID: MW-23	Lab Sample ID: 280-154197-2
No Detections.	
Client Sample ID: MW-3	Lab Sample ID: 280-154197-3
No Detections.	
Client Sample ID: MW-15	Lab Sample ID: 280-154197-4
No Detections.	
Client Sample ID: MW-7	Lab Sample ID: 280-154197-5
No Detections.	
Client Sample ID: MW-1P	Lab Sample ID: 280-154197-6
No Detections.	
Client Sample ID: MW-9	Lab Sample ID: 280-154197-7
No Detections.	
Client Sample ID: MW-12	Lab Sample ID: 280-154197-8
No Detections.	
Client Sample ID: MW-12-DUP	Lab Sample ID: 280-154197-9
No Detections.	
Client Sample ID: MW-12-EB	Lab Sample ID: 280-154197-10
No Detections.	
Client Sample ID: MW-11	Lab Sample ID: 280-154197-11
No Detections.	
Client Sample ID: MW-28	Lab Sample ID: 280-154197-12
No Detections.	
Client Sample ID: MW-14	Lab Sample ID: 280-154197-13
No Detections.	
Client Sample ID: MW-13	Lab Sample ID: 280-154197-14
No Detections.	
Client Sample ID: MW-16	Lab Sample ID: 280-154197-15
No Detections.	
Client Sample ID: MW-27	Lab Sample ID: 280-154197-16
No Detections.	

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Client Sample ID: MW-21

Lab Sample ID: 280-154197-17

☐ No Detections.

Client Sample ID: MW-21-DUP

Lab Sample ID: 280-154197-18

☐ No Detections.

Client Sample ID: MW-21-EB

Lab Sample ID: 280-154197-19

☐ No Detections.

Client Sample ID: MW-26

Lab Sample ID: 280-154197-20

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver



Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-154197-1	MW-22	Water	10/12/21 11:30	10/14/21 17:00
280-154197-2	MW-23	Water	10/12/21 10:05	10/14/21 17:00
280-154197-3	MW-3	Water	10/12/21 13:45	10/14/21 17:00
280-154197-4	MW-15	Water	10/12/21 16:30	10/14/21 17:00
280-154197-5	MW-7	Water	10/13/21 12:40	10/14/21 17:00
280-154197-6	MW-1P	Water	10/13/21 15:15	10/14/21 17:00
280-154197-7	MW-9	Water	10/14/21 10:15	10/14/21 17:00
280-154197-8	MW-12	Water	10/14/21 11:55	10/14/21 17:00
280-154197-9	MW-12-DUP	Water	10/14/21 11:55	10/14/21 17:00
280-154197-10	MW-12-EB	Water	10/14/21 12:45	10/14/21 17:00
280-154197-11	MW-11	Water	10/14/21 14:30	10/14/21 17:00
280-154197-12	MW-28	Water	10/12/21 12:50	10/14/21 17:00
280-154197-13	MW-14	Water	10/12/21 14:50	10/14/21 17:00
280-154197-14	MW-13	Water	10/13/21 12:15	10/14/21 17:00
280-154197-15	MW-16	Water	10/13/21 17:05	10/14/21 17:00
280-154197-16	MW-27	Water	10/13/21 14:10	10/14/21 17:00
280-154197-17	MW-21	Water	10/14/21 10:35	10/14/21 17:00
280-154197-18	MW-21-DUP	Water	10/14/21 10:35	10/14/21 17:00
280-154197-19	MW-21-EB	Water	10/14/21 10:35	10/14/21 17:00
280-154197-20	MW-26	Water	10/14/21 13:50	10/14/21 17:00

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-22
Date Collected: 10/12/21 11:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.445	U	0.314	0.316	1.00	0.454	pCi/L	10/20/21 11:16	11/11/21 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					10/20/21 11:16	11/11/21 11:04	1

Client Sample ID: MW-23
Date Collected: 10/12/21 10:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220	U	0.231	0.232	1.00	0.369	pCi/L	10/20/21 11:16	11/11/21 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.3		40 - 110					10/20/21 11:16	11/11/21 11:04	1

Client Sample ID: MW-3
Date Collected: 10/12/21 13:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.637		0.363	0.368	1.00	0.500	pCi/L	10/20/21 11:16	11/11/21 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					10/20/21 11:16	11/11/21 11:04	1

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.381	U	0.323	0.324	1.00	0.497	pCi/L	10/20/21 11:16	11/11/21 11:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					10/20/21 11:16	11/11/21 11:04	1

Client Sample ID: MW-7
Date Collected: 10/13/21 12:40
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0400	U	0.261	0.261	1.00	0.492	pCi/L	10/20/21 11:16	11/11/21 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					10/20/21 11:16	11/11/21 11:05	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.297	U	0.277	0.278	1.00	0.435	pCi/L	10/20/21 11:16	11/11/21 11:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					10/20/21 11:16	11/11/21 11:05	1

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0770	U	0.206	0.206	1.00	0.381	pCi/L	10/20/21 11:16	11/11/21 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110					10/20/21 11:16	11/11/21 14:36	1

Client Sample ID: MW-12
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.102	U	0.183	0.183	1.00	0.413	pCi/L	10/20/21 11:16	11/11/21 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					10/20/21 11:16	11/11/21 14:36	1

Client Sample ID: MW-12-DUP
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0381	U	0.188	0.188	1.00	0.396	pCi/L	10/20/21 11:16	11/11/21 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110					10/20/21 11:16	11/11/21 14:36	1

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0117	U	0.170	0.170	1.00	0.345	pCi/L	10/20/21 11:16	11/11/21 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					10/20/21 11:16	11/11/21 14:36	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-11
Date Collected: 10/14/21 14:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.303	U	0.226	0.228	1.00	0.320	pCi/L	10/20/21 11:16	11/11/21 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					10/20/21 11:16	11/11/21 14:36	1

Client Sample ID: MW-28
Date Collected: 10/12/21 12:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.725		0.292	0.299	1.00	0.296	pCi/L	10/20/21 11:16	11/11/21 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					10/20/21 11:16	11/11/21 14:37	1

Client Sample ID: MW-14
Date Collected: 10/12/21 14:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.401		0.266	0.268	1.00	0.364	pCi/L	10/20/21 11:16	11/11/21 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					10/20/21 11:16	11/11/21 14:37	1

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.217	U	0.210	0.211	1.00	0.324	pCi/L	10/20/21 11:16	11/11/21 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					10/20/21 11:16	11/11/21 14:37	1

Client Sample ID: MW-16
Date Collected: 10/13/21 17:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.416	U	0.292	0.294	1.00	0.421	pCi/L	10/20/21 11:16	11/11/21 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					10/20/21 11:16	11/11/21 14:32	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-27
Date Collected: 10/13/21 14:10
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.160	U	0.262	0.263	1.00	0.454	pCi/L	10/20/21 11:16	11/11/21 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					10/20/21 11:16	11/11/21 14:32	1

Client Sample ID: MW-21
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.409		0.269	0.272	1.00	0.374	pCi/L	10/20/21 11:16	11/11/21 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					10/20/21 11:16	11/11/21 14:32	1

Client Sample ID: MW-21-DUP
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.244	U	0.242	0.243	1.00	0.382	pCi/L	10/20/21 11:16	11/11/21 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					10/20/21 11:16	11/11/21 14:33	1

Client Sample ID: MW-21-EB
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.355	U	0.432	0.434	1.00	0.714	pCi/L	10/20/21 11:16	11/11/21 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	57.8		40 - 110					10/20/21 11:16	11/11/21 14:33	1

Client Sample ID: MW-26
Date Collected: 10/14/21 13:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.313	U	0.307	0.308	1.00	0.486	pCi/L	10/20/21 11:16	11/11/21 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110					10/20/21 11:16	11/11/21 14:33	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-22
Date Collected: 10/12/21 11:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.01		0.390	0.401	1.00	0.536	pCi/L	10/20/21 12:02	11/10/21 16:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					10/20/21 12:02	11/10/21 16:29	1
Y Carrier	80.7		40 - 110					10/20/21 12:02	11/10/21 16:29	1

Client Sample ID: MW-23
Date Collected: 10/12/21 10:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.436	U	0.314	0.317	1.00	0.487	pCi/L	10/20/21 12:02	11/10/21 16:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.3		40 - 110					10/20/21 12:02	11/10/21 16:29	1
Y Carrier	77.4		40 - 110					10/20/21 12:02	11/10/21 16:29	1

Client Sample ID: MW-3
Date Collected: 10/12/21 13:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.744		0.346	0.352	1.00	0.494	pCi/L	10/20/21 12:02	11/10/21 16:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					10/20/21 12:02	11/10/21 16:29	1
Y Carrier	81.1		40 - 110					10/20/21 12:02	11/10/21 16:29	1

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.409	U	0.313	0.315	1.00	0.489	pCi/L	10/20/21 12:02	11/10/21 16:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					10/20/21 12:02	11/10/21 16:29	1
Y Carrier	76.6		40 - 110					10/20/21 12:02	11/10/21 16:29	1

Client Sample ID: MW-7
Date Collected: 10/13/21 12:40
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.484	U	0.382	0.385	1.00	0.603	pCi/L	10/20/21 12:02	11/10/21 16:29	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110	10/20/21 12:02	11/10/21 16:29	1
Y Carrier	76.3		40 - 110	10/20/21 12:02	11/10/21 16:29	1

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0848	U	0.359	0.359	1.00	0.627	pCi/L	10/20/21 12:02	11/10/21 16:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					10/20/21 12:02	11/10/21 16:34	1
Y Carrier	76.3		40 - 110					10/20/21 12:02	11/10/21 16:34	1

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.528	U	0.373	0.377	1.00	0.581	pCi/L	10/20/21 12:02	11/10/21 16:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110					10/20/21 12:02	11/10/21 16:34	1
Y Carrier	80.7		40 - 110					10/20/21 12:02	11/10/21 16:34	1

Client Sample ID: MW-12
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.174	U	0.386	0.386	1.00	0.661	pCi/L	10/20/21 12:02	11/10/21 16:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					10/20/21 12:02	11/10/21 16:34	1
Y Carrier	79.3		40 - 110					10/20/21 12:02	11/10/21 16:34	1

Client Sample ID: MW-12-DUP
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.713		0.449	0.454	1.00	0.689	pCi/L	10/20/21 12:02	11/10/21 16:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110					10/20/21 12:02	11/10/21 16:35	1
Y Carrier	75.5		40 - 110					10/20/21 12:02	11/10/21 16:35	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.686		0.432	0.437	1.00	0.665	pCi/L	10/20/21 12:02	11/10/21 16:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					10/20/21 12:02	11/10/21 16:35	1
Y Carrier	76.6		40 - 110					10/20/21 12:02	11/10/21 16:35	1

Client Sample ID: MW-11
Date Collected: 10/14/21 14:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.393	U	0.393	0.394	1.00	0.638	pCi/L	10/20/21 12:02	11/10/21 16:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					10/20/21 12:02	11/10/21 16:35	1
Y Carrier	75.9		40 - 110					10/20/21 12:02	11/10/21 16:35	1

Client Sample ID: MW-28
Date Collected: 10/12/21 12:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.16		0.401	0.415	1.00	0.539	pCi/L	10/20/21 12:02	11/10/21 16:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					10/20/21 12:02	11/10/21 16:35	1
Y Carrier	80.7		40 - 110					10/20/21 12:02	11/10/21 16:35	1

Client Sample ID: MW-14
Date Collected: 10/12/21 14:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.588	U	0.396	0.399	1.00	0.612	pCi/L	10/20/21 12:02	11/10/21 16:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					10/20/21 12:02	11/10/21 16:35	1
Y Carrier	80.0		40 - 110					10/20/21 12:02	11/10/21 16:35	1

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.418	U	0.372	0.374	1.00	0.598	pCi/L	10/20/21 12:02	11/10/21 16:35	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110	10/20/21 12:02	11/10/21 16:35	1
Y Carrier	82.2		40 - 110	10/20/21 12:02	11/10/21 16:35	1

Client Sample ID: MW-16
Date Collected: 10/13/21 17:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.508	U	0.458	0.460	1.00	0.738	pCi/L	10/20/21 12:02	11/10/21 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					10/20/21 12:02	11/10/21 16:41	1
Y Carrier	77.8		40 - 110					10/20/21 12:02	11/10/21 16:41	1

Client Sample ID: MW-27
Date Collected: 10/13/21 14:10
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.296	U	0.400	0.401	1.00	0.667	pCi/L	10/20/21 12:02	11/10/21 16:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					10/20/21 12:02	11/10/21 16:41	1
Y Carrier	79.3		40 - 110					10/20/21 12:02	11/10/21 16:41	1

Client Sample ID: MW-21
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.40		0.450	0.468	1.00	0.591	pCi/L	10/20/21 12:02	11/10/21 16:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					10/20/21 12:02	11/10/21 16:42	1
Y Carrier	77.0		40 - 110					10/20/21 12:02	11/10/21 16:42	1

Client Sample ID: MW-21-DUP
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.437	U	0.383	0.385	1.00	0.614	pCi/L	10/20/21 12:02	11/10/21 16:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					10/20/21 12:02	11/10/21 16:42	1
Y Carrier	74.8		40 - 110					10/20/21 12:02	11/10/21 16:42	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-21-EB
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.653	U	0.590	0.593	1.00	0.948	pCi/L	10/20/21 12:02	11/10/21 16:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	57.8		40 - 110					10/20/21 12:02	11/10/21 16:42	1
Y Carrier	77.8		40 - 110					10/20/21 12:02	11/10/21 16:42	1

Client Sample ID: MW-26
Date Collected: 10/14/21 13:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.06		0.370	0.383	1.00	0.497	pCi/L	11/11/21 10:34	11/18/21 16:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					11/11/21 10:34	11/18/21 16:22	1
Y Carrier	84.1		40 - 110					11/11/21 10:34	11/18/21 16:22	1

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

Client Sample ID: MW-22
Date Collected: 10/12/21 11:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.45		0.501	0.511	5.00	0.536	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-23
Date Collected: 10/12/21 10:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.656		0.390	0.393	5.00	0.487	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-3
Date Collected: 10/12/21 13:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.38		0.501	0.509	5.00	0.500	pCi/L		11/16/21 22:00	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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

Client Sample ID: MW-15
Date Collected: 10/12/21 16:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.790		0.450	0.452	5.00	0.497	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-7
Date Collected: 10/13/21 12:40
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.524	U	0.463	0.465	5.00	0.603	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-1P
Date Collected: 10/13/21 15:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-6
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.382	U	0.453	0.454	5.00	0.627	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-9
Date Collected: 10/14/21 10:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.605		0.426	0.430	5.00	0.581	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-12
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0718	U	0.427	0.427	5.00	0.661	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-12-DUP
Date Collected: 10/14/21 11:55
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.675	U	0.487	0.491	5.00	0.689	pCi/L		11/16/21 22:00	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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

Client Sample ID: MW-12-EB
Date Collected: 10/14/21 12:45
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-10
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.698		0.464	0.469	5.00	0.665	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-11
Date Collected: 10/14/21 14:30
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-11
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.696		0.453	0.455	5.00	0.638	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-28
Date Collected: 10/12/21 12:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-12
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.88		0.496	0.511	5.00	0.539	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-14
Date Collected: 10/12/21 14:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.989		0.477	0.481	5.00	0.612	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-13
Date Collected: 10/13/21 12:15
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.635		0.427	0.429	5.00	0.598	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-16
Date Collected: 10/13/21 17:05
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.924		0.543	0.546	5.00	0.738	pCi/L		11/16/21 22:00	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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

Client Sample ID: MW-27
Date Collected: 10/13/21 14:10
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.456	U	0.478	0.480	5.00	0.667	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-21
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.81		0.524	0.541	5.00	0.591	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-21-DUP
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.682		0.453	0.455	5.00	0.614	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-21-EB
Date Collected: 10/14/21 10:35
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.01		0.731	0.735	5.00	0.948	pCi/L		11/16/21 22:00	1

Client Sample ID: MW-26
Date Collected: 10/14/21 13:50
Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.37		0.481	0.491	5.00	0.497	pCi/L		11/18/21 21:49	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-532818/23-A

Matrix: Water

Analysis Batch: 536046

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 532818

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.09970	U	0.262	0.262	1.00	0.471	pCi/L	10/20/21 11:16	11/11/21 14:33	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					10/20/21 11:16	11/11/21 14:33	1

Lab Sample ID: LCS 160-532818/1-A

Matrix: Water

Analysis Batch: 536046

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 532818

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		15.1	14.23		1.76	1.00	0.430	pCi/L	94	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	91.3		40 - 110							

Lab Sample ID: LCSD 160-532818/2-A

Matrix: Water

Analysis Batch: 536046

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 532818

Analyte		Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226		15.1	13.66		1.70	1.00	0.432	pCi/L	90	75 - 125	0.16	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits									
Ba Carrier	86.8		40 - 110									

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-532830/23-A

Matrix: Water

Analysis Batch: 535808

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 532830

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7481		0.431	0.437	1.00	0.655	pCi/L	10/20/21 12:02	11/10/21 16:42	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					10/20/21 12:02	11/10/21 16:42	1
Y Carrier	70.7		40 - 110					10/20/21 12:02	11/10/21 16:42	1

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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

Lab Sample ID: LCS 160-532830/1-A

Matrix: Water

Analysis Batch: 535791

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 532830

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228		12.2	13.98		1.64	1.00	0.515	pCi/L	114	75 - 125		
	LCS	LCS										
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	91.3		40 - 110									
Y Carrier	73.3		40 - 110									

Lab Sample ID: LCSD 160-532830/2-A

Matrix: Water

Analysis Batch: 535791

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 532830

Analyte		Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228		12.2	14.20		1.68	1.00	0.648	pCi/L	116	75 - 125	0.07	1
	LCSD	LCSD										
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	86.8		40 - 110									
Y Carrier	77.8		40 - 110									

Lab Sample ID: MB 160-536041/8-A

Matrix: Water

Analysis Batch: 537292

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 536041

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.04323		0.0243	0.0247	1.00	0.0363	pCi/L	11/11/21 10:34	11/18/21 16:23	1
	MB	MB								
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		40 - 110					11/11/21 10:34	11/18/21 16:23	1
Y Carrier	87.1		40 - 110					11/11/21 10:34	11/18/21 16:23	1

Lab Sample ID: LCS 160-536041/1-A

Matrix: Water

Analysis Batch: 537292

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 536041

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228		9.14	9.089		1.12	1.00	0.488	pCi/L	99	75 - 125		
	LCS	LCS										
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	98.0		40 - 110									
Y Carrier	66.2		40 - 110									

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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

Lab Sample ID: LCSD 160-536041/2-A

Matrix: Water

Analysis Batch: 537292

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 536041

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	9.14	9.210		1.08	1.00	0.407	pCi/L	101	75 - 125	0.06	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	92.7		40 - 110
Y Carrier	87.1		40 - 110

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Rad

Prep Batch: 532818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-1	MW-22	Total/NA	Water	PrecSep-21	
280-154197-2	MW-23	Total/NA	Water	PrecSep-21	
280-154197-3	MW-3	Total/NA	Water	PrecSep-21	
280-154197-4	MW-15	Total/NA	Water	PrecSep-21	
280-154197-5	MW-7	Total/NA	Water	PrecSep-21	
280-154197-6	MW-1P	Total/NA	Water	PrecSep-21	
280-154197-7	MW-9	Total/NA	Water	PrecSep-21	
280-154197-8	MW-12	Total/NA	Water	PrecSep-21	
280-154197-9	MW-12-DUP	Total/NA	Water	PrecSep-21	
280-154197-10	MW-12-EB	Total/NA	Water	PrecSep-21	
280-154197-11	MW-11	Total/NA	Water	PrecSep-21	
280-154197-12	MW-28	Total/NA	Water	PrecSep-21	
280-154197-13	MW-14	Total/NA	Water	PrecSep-21	
280-154197-14	MW-13	Total/NA	Water	PrecSep-21	
280-154197-15	MW-16	Total/NA	Water	PrecSep-21	
280-154197-16	MW-27	Total/NA	Water	PrecSep-21	
280-154197-17	MW-21	Total/NA	Water	PrecSep-21	
280-154197-18	MW-21-DUP	Total/NA	Water	PrecSep-21	
280-154197-19	MW-21-EB	Total/NA	Water	PrecSep-21	
280-154197-20	MW-26	Total/NA	Water	PrecSep-21	
MB 160-532818/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-532818/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-532818/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 532830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-1	MW-22	Total/NA	Water	PrecSep_0	
280-154197-2	MW-23	Total/NA	Water	PrecSep_0	
280-154197-3	MW-3	Total/NA	Water	PrecSep_0	
280-154197-4	MW-15	Total/NA	Water	PrecSep_0	
280-154197-5	MW-7	Total/NA	Water	PrecSep_0	
280-154197-6	MW-1P	Total/NA	Water	PrecSep_0	
280-154197-7	MW-9	Total/NA	Water	PrecSep_0	
280-154197-8	MW-12	Total/NA	Water	PrecSep_0	
280-154197-9	MW-12-DUP	Total/NA	Water	PrecSep_0	
280-154197-10	MW-12-EB	Total/NA	Water	PrecSep_0	
280-154197-11	MW-11	Total/NA	Water	PrecSep_0	
280-154197-12	MW-28	Total/NA	Water	PrecSep_0	
280-154197-13	MW-14	Total/NA	Water	PrecSep_0	
280-154197-14	MW-13	Total/NA	Water	PrecSep_0	
280-154197-15	MW-16	Total/NA	Water	PrecSep_0	
280-154197-16	MW-27	Total/NA	Water	PrecSep_0	
280-154197-17	MW-21	Total/NA	Water	PrecSep_0	
280-154197-18	MW-21-DUP	Total/NA	Water	PrecSep_0	
280-154197-19	MW-21-EB	Total/NA	Water	PrecSep_0	
MB 160-532830/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-532830/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-532830/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Rad

Prep Batch: 536041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154197-20	MW-26	Total/NA	Water	PrecSep_0	
MB 160-536041/8-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-536041/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-536041/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Client Sample ID: MW-22

Date Collected: 10/12/21 11:30

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-1

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			750.54 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 11:04	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.54 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535791	11/10/21 16:29	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-23

Date Collected: 10/12/21 10:05

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.38 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 11:04	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.38 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535791	11/10/21 16:29	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-3

Date Collected: 10/12/21 13:45

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.23 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 11:04	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.23 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535791	11/10/21 16:29	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-15

Date Collected: 10/12/21 16:30

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.21 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 11:04	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.21 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535791	11/10/21 16:29	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Client Sample ID: MW-7

Lab Sample ID: 280-154197-5

Date Collected: 10/13/21 12:40

Matrix: Water

Date Received: 10/14/21 17:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.09 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536054	11/11/21 11:05	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.09 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535791	11/10/21 16:29	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-1P

Lab Sample ID: 280-154197-6

Date Collected: 10/13/21 15:15

Matrix: Water

Date Received: 10/14/21 17:00

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			750.84 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536054	11/11/21 11:05	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.84 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:34	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-9

Lab Sample ID: 280-154197-7

Date Collected: 10/14/21 10:15

Matrix: Water

Date Received: 10/14/21 17:00

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	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:36	MLK	TAL SL
Total/NA	Prep	PrecSep_0			750.36 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:34	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-12

Lab Sample ID: 280-154197-8

Date Collected: 10/14/21 11:55

Matrix: Water

Date Received: 10/14/21 17:00

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	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:36	MLK	TAL SL
Total/NA	Prep	PrecSep_0			750.31 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:34	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Client Sample ID: MW-12-DUP

Lab Sample ID: 280-154197-9

Date Collected: 10/14/21 11:55

Matrix: Water

Date Received: 10/14/21 17:00

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			749.65 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:36	MLK	TAL SL
Total/NA	Prep	PrecSep_0			749.65 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:35	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-12-EB

Lab Sample ID: 280-154197-10

Date Collected: 10/14/21 12:45

Matrix: Water

Date Received: 10/14/21 17:00

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			750.59 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:36	MLK	TAL SL
Total/NA	Prep	PrecSep_0			750.59 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:35	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-11

Lab Sample ID: 280-154197-11

Date Collected: 10/14/21 14:30

Matrix: Water

Date Received: 10/14/21 17:00

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			750.56 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:36	MLK	TAL SL
Total/NA	Prep	PrecSep_0			750.56 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:35	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-28

Lab Sample ID: 280-154197-12

Date Collected: 10/12/21 12:50

Matrix: Water

Date Received: 10/14/21 17:00

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	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:37	MLK	TAL SL
Total/NA	Prep	PrecSep_0			750.04 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:35	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Client Sample ID: MW-14

Date Collected: 10/12/21 14:50

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.52 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:37	MLK	TAL SL
Total/NA	Prep	PrecSep_0			750.52 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:35	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-13

Date Collected: 10/13/21 12:15

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.53 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536055	11/11/21 14:37	MLK	TAL SL
Total/NA	Prep	PrecSep_0			750.53 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535804	11/10/21 16:35	RER	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-16

Date Collected: 10/13/21 17:05

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.75 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 14:32	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.75 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535808	11/10/21 16:41	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-27

Date Collected: 10/13/21 14:10

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.54 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 14:32	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.54 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535808	11/10/21 16:41	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Client Sample ID: MW-21

Date Collected: 10/14/21 10:35

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.28 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 14:32	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.28 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535808	11/10/21 16:42	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-21-DUP

Date Collected: 10/14/21 10:35

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.90 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 14:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.90 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535808	11/10/21 16:42	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-21-EB

Date Collected: 10/14/21 10:35

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.88 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 14:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.88 mL	1.0 g	532830	10/20/21 12:02	BMP	TAL SL
Total/NA	Analysis	9320		1			535808	11/10/21 16:42	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537041	11/16/21 22:00	MLK	TAL SL

Client Sample ID: MW-26

Date Collected: 10/14/21 13:50

Date Received: 10/14/21 17:00

Lab Sample ID: 280-154197-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.59 mL	1.0 g	532818	10/20/21 11:16	BMP	TAL SL
Total/NA	Analysis	9315		1			536046	11/11/21 14:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.71 mL	1.0 g	536041	11/11/21 10:34	LPS	TAL SL
Total/NA	Analysis	9320		1			537292	11/18/21 16:22	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537494	11/18/21 21:49	EMH	TAL SL

Laboratory References:

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

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

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	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	03-01-22
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

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

Eurofins TestAmerica, Denver

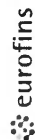
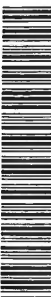
Chain of Custody Record

Client Information		Sample: <i>Te Snyder</i>		Lab PM: Harrington, Danielle M		Carrier Tracking No(s):		COC No: 280-103098-29694.3				
Client Contact: Molly Reeves		Phone: 720-838-6065		E-Mail: Danielle.Harrington@Eurofinset.com				Page: Page 3 of 3				
Company: HDR Inc								Job #:				
Address: 9781 S. Meridian Blvd Suite 400												
City: Englewood												
State, Zip: CO, 80112												
Phone: 734-263-7138(Tel)												
Email: Molly.Reeves@hdrinc.com												
Project Name: Xcel Energy GW CCR Monitoring - Valmont												
Site: Colorado Landfill Wells												
Due Date Requested:		TAT Requested (days):		Analysis Requested								
PO #: DEN-018		ASAP										
WO #:												
Project #:		28014379										
SSOW#:												
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefill, BT=Tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 6020A Total Metals - ETA Canton	2540C, Calcd TDS/IC Chloride, Fluoride, Sulfate/ pH	9315 Louis	Total Number of containers	Special Instructions/Note:
MW-22	10/12/21	1130	G	WATER							24	
MW-23	10/12/21	1005	G	WATER							6	
MW-3	10/12/21	1345	G	WATER							6	
MW-15	10/12/21	1630	G	WATER							6	
MW-1P	10/13/21	1240	G	WATER							6	
MW-9	10/13/21	1515	G	WATER							6	
MW-12	10/14/21	1015	G	WATER							6	
MW-12-DUP	10/14/21	1155	G	WATER							6	
MW-12-EB	10/14/21	1245	G	WATER							6	
MW-11	10/14/21	1430	G	WATER							6	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)												
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months												
Special Instructions/QC Requirements:												
Empty Kit Relinquished by:												
Relinquished by: <i>[Signature]</i> Date: 10/14/21 Time: 1700 Company: HDR												
Relinquished by: _____ Date: _____ Time: _____ Company: _____												
Relinquished by: _____ Date: _____ Time: _____ Company: _____												
Custody Seals Intact: ☐ Yes ☐ No												
Custody Seal No.: 13140413, 1401191211CF10												

Chain of Custody Record

Client Information						Carrier Tracking No(s)					
Lab PM: Harrington, Danielle M											
Phone: 720-838-6069						Page: Page 3 of 3					
Company: HDR Inc						Job #:					
Address: 9781 S. Meridian Blvd Suite 400 City: Englewood State, Zip: CO, 80112 Phone: 734-263-7138(Tel) Email: Molly.Reeves@hdrinc.com Project Name: Xcel Energy GW CCR Monitoring - Valmont Site: Colorado Landfill Wells						Analysis Requested					
Due Date Requested:						Total Number of containers					
TAT Requested (day): ASAP											
PO #: DEN-018											
WO #:											
Project #: 28014379											
SSOW#:											
Sample Identification						Special Instructions/Note:					
MW-28	10/12/21	1250	G	WATER	D	N	D	9315 Ra226, 9320 Ra228, Ra226Ra228_GFPc - ETA St.			
MW-28-MW-14	10/12/21	1450	G	WATER							
MW-13	10/13/21	1215	G	WATER							
MW-16	10/13/21	1705	G	WATER							
MW-27	10/13/21	1410	G	WATER							
MW-21	10/14/21	1035	G	WATER							
MW-21-DUP	10/14/21	1035	G	WATER							
MW-21-EB	10/14/21	1035	G	WATER							
MW-26	10/14/21	1350	G	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:						Method of Shipment:					
Relinquished by:						Date/Time:					
Relinquished by:						Date/Time:					
Relinquished by:						Date/Time:					
Custody Seals Intact: Δ Yes Δ No						Cooler Temperature(s) °C and Other Remarks:					

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):		COC No:					
Client Contact:		Phone:	Harrington, Danielle M	State of Origin:		280-589592.1					
Shipping/Receiving			E-Mail:	Colorado		Page:					
Company:			Danielle.Harrington@Eurofinset.com	Accreditations Required (See note):		Page 1 of 3					
TestAmerica Laboratories, Inc.			DoD - A2LA	Job #:		280-154197-2					
Address:		Due Date Requested:	Analysis Requested:								
13715 Rider Trail North,		11/14/2021	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 Other:								
State/Zip:	MO. 63045	PO #:	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)								
Phone:	314-298-8566(Tel) 314-298-8757(Fax)	WO #:									
Email:		Project #:									
Project Name:	Xcel Energy GW CCR Monitoring - Valmont	SSOW#:									
Site:	Xcel Energy CCR - Valmont Station										
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	9315_Ra226/PreSep_21 Radium-226 (1/3)	9320_Ra228/PreSep_0 Radium-228 (2/3)	Ra228Ra228_GFP/ (MOD) Local Method	Total Number of Containers	Special Instructions/Note:
MW-22 (280-154197-1)	10/12/21	11:30 Mountain		Water			X	X	X	2	
MW-23 (280-154197-2)	10/12/21	10:05 Mountain		Water			X	X	X	2	
MW-3 (280-154197-3)	10/12/21	13:45 Mountain		Water			X	X	X	2	
MW-15 (280-154197-4)	10/12/21	16:30 Mountain		Water			X	X	X	2	
MW-7 (280-154197-5)	10/13/21	12:40 Mountain		Water			X	X	X	2	
MW-1P (280-154197-6)	10/13/21	15:15 Mountain		Water			X	X	X	2	
MW-9 (280-154197-7)	10/14/21	10:15 Mountain		Water			X	X	X	2	
MW-12 (280-154197-8)	10/14/21	11:55 Mountain		Water			X	X	X	2	
MW-12-DUP (280-154197-9)	10/14/21	11:55 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica											
Possible Hazard Identification											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 4											
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months											
Special Instructions/QC Requirements:											
Empty Kit Relinquished by:											
Date:											
Time:											
Relinquished by:											
Date/Time:											
Company:											
Relinquished by:											
Date/Time:											
Company:											
Custody Seals Intact: Custody Seal No.:											
☐ Yes ☐ No											
Cooler Temperature(s) °C and Other Remarks:											

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact:		Harrington, Danielle M			280-589592.2
Shipping/Receiving:		Phone:	E-Mail:	State of Origin:	Page
Company:			Danielle.Harrington@Eurofinset.com	Colorado	Page 2 of 3
TestAmerica Laboratories, Inc.		Accreditations Required (See note):			
Address:		DoD - A2LA			
13715 Rider Trail North,					
City:					
Earth City					
State, Zip:					
MO, 63045					
Phone:					
314-298-8566(Tel) 314-298-8757(Fax)					
Email:					
Project Name:					
Xcel Energy GW CCR Monitoring - Valmont					
Site:					
Xcel Energy CCR - Valmont Station					

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Tissue, A=air)	Analysis Requested				Field Filtered Sample (Yes or No)	9315, Ra226/PreSep, 21 Radium-226 (1/3)	9320, Ra226/PreSep, 0 Radium-228 (2/3)	Ra226Ra228, GFPC/ (MOD) Local Method	Total Number of containers	Special Instructions/Note:
					Due Date Requested:	TAT Requested (days):	PO #	WO #						
MW-12-EB (280-154197-10)	10/14/21	12:45 Mountain		Water					X	X	X		2	
MW-11 (280-154197-11)	10/14/21	14:30 Mountain		Water					X	X	X		2	
MW-28 (280-154197-12)	10/12/21	12:50 Mountain		Water					X	X	X		2	
MW-14 (280-154197-13)	10/12/21	14:50 Mountain		Water					X	X	X		2	
MW-13 (280-154197-14)	10/13/21	12:15 Mountain		Water					X	X	X		2	
MW-16 (280-154197-15)	10/13/21	17:05 Mountain		Water					X	X	X		2	
MW-27 (280-154197-16)	10/13/21	14:10 Mountain		Water					X	X	X		2	
MW-21 (280-154197-17)	10/14/21	10:35 Mountain		Water					X	X	X		2	
MW-21-DUP (280-154197-18)	10/14/21	10:35 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica

Possible Hazard Identification		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)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Time:	
Relinquished by:		Date:	
Relinquished by:		Date:	
Relinquished by:		Date:	
Relinquished by:		Date:	
Custody Seals Intact:		Cooler Temperature(s) °C and Other Remarks:	
Δ Yes Δ No			

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-154197-2

Login Number: 154197

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Roehsner, Karen P

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
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 $<6\text{mm}$ (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: 280-154197-2

Login Number: 154197

List Number: 2

Creator: Johnson, Autumn R

List Source: Eurofins TestAmerica, St. Louis

List Creation: 10/19/21 12:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154197-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)					
Lab Sample ID	Client Sample ID	Ba					
		(40-110)					
280-154197-1	MW-22	91.0					
280-154197-2	MW-23	98.3					
280-154197-3	MW-3	94.3					
280-154197-4	MW-15	95.8					
280-154197-5	MW-7	86.0					
280-154197-6	MW-1P	94.8					
280-154197-7	MW-9	86.8					
280-154197-8	MW-12	84.5					
280-154197-9	MW-12-DUP	86.8					
280-154197-10	MW-12-EB	89.3					
280-154197-11	MW-11	89.5					
280-154197-12	MW-28	94.8					
280-154197-13	MW-14	86.0					
280-154197-14	MW-13	93.5					
280-154197-15	MW-16	84.3					
280-154197-16	MW-27	86.0					
280-154197-17	MW-21	91.0					
280-154197-18	MW-21-DUP	94.3					
280-154197-19	MW-21-EB	57.8					
280-154197-20	MW-26	82.0					
LCS 160-532818/1-A	Lab Control Sample	91.3					
LCSD 160-532818/2-A	Lab Control Sample Dup	86.8					
MB 160-532818/23-A	Method Blank	96.8					
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	Y				
		(40-110)	(40-110)				
280-154197-1	MW-22	91.0	80.7				
280-154197-2	MW-23	98.3	77.4				
280-154197-3	MW-3	94.3	81.1				
280-154197-4	MW-15	95.8	76.6				
280-154197-5	MW-7	86.0	76.3				
280-154197-6	MW-1P	94.8	76.3				
280-154197-7	MW-9	86.8	80.7				
280-154197-8	MW-12	84.5	79.3				
280-154197-9	MW-12-DUP	86.8	75.5				
280-154197-10	MW-12-EB	89.3	76.6				
280-154197-11	MW-11	89.5	75.9				
280-154197-12	MW-28	94.8	80.7				
280-154197-13	MW-14	86.0	80.0				
280-154197-14	MW-13	93.5	82.2				
280-154197-15	MW-16	84.3	77.8				
280-154197-16	MW-27	86.0	79.3				
280-154197-17	MW-21	91.0	77.0				

Eurofins TestAmerica, Denver

Tracer/Carrier Summary

Client: HDR Inc

Job ID: 280-154197-2

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

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

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
280-154197-18	MW-21-DUP	94.3	74.8
280-154197-19	MW-21-EB	57.8	77.8
280-154197-20	MW-26	95.2	84.1
LCS 160-532830/1-A	Lab Control Sample	91.3	73.3
LCS 160-536041/1-A	Lab Control Sample	98.0	66.2
LCSD 160-532830/2-A	Lab Control Sample Dup	86.8	77.8
LCSD 160-536041/2-A	Lab Control Sample Dup	92.7	87.1
MB 160-532830/23-A	Method Blank	96.8	70.7
MB 160-536041/8-A	Method Blank	92.2	87.1

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

ANALYTICAL REPORT

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

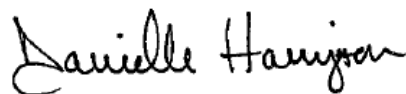
Laboratory Job ID: 280-154444-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
11/4/2021 5:49:48 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

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

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

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Definitions/Glossary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

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
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Job ID: 280-154444-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-154444-1

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 10/20/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.1°C, 1.8°C, 2.2°C and 4.2°C

Please note, Insufficient sample volume was provided for the following sample for the <FRACTION_METHOD> analysis: MW-33B (280-154444-6). Both one liter plastic unpreserved containers received for this sample only contain 500mL each.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): MW-29 (280-154444-1). The container labels list a collection date and time of 10/20/2021 1135, while the COC lists a collection date and time of 10/15/2021 1610. The sample was logged per the chain of custody.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): MW-33B (280-154444-6). The container labels list a sample time of 1110, while the COC lists a sample time of 1055. The sample was logged per the chain of custody.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): MW-34 (280-154444-7). The container labels list a sample time of 1025, while the COC lists a sample time of 0950. The sample was logged per the chain of custody.

MW-34 is logged under 280- 154444 Just 1L unpreserved Container. This sample will only get Alkalinity, Chloride, Fluoride, and Sulfate. Rest of the analytes for MW-34 with job 280- 154447.

DISSOLVED METALS (ICPMS)- METHOD 6020A

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

TOTAL RECOVERABLE METALS (ICPMS)- METHOD 6020A

Sample MW-33B (280-154444-6) 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.

GENERAL CHEMISTRY- VARIOUS

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Job ID: 280-154444-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

Several samples required dilution prior to analysis for Method 9056A. The reporting limits have been adjusted accordingly.

Low levels of Alkalinity and Carbonate Alkalinity as CaCO₃ are present in the method blank associated with QC batch 280-554946. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

Low levels of Total Suspended Solids are present in the method blank associated with QC batch 280-554494. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The Total Suspended Solids sample duplicate analysis data associated with QC batch 280-554494 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 that the recoveries, for the Chloride 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 Chloride 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 Chloride and Sulfate 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.

Method 9040B: The initial calibration verification (ICV) result for batch 280-554951 was above the upper control limit. However The ICV buffer within ± 0.05 pH units. Sample results have been reported as qualified data.

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

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Client Sample ID: MW-29

Lab Sample ID: 280-154444-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.026		0.0050	0.00075	mg/L	1			6020A	Total
										Recoverable
Calcium	530000		1000	580	ug/L	1			6020A	Total
										Recoverable
Potassium	23000		1000	220	ug/L	1			6020A	Total
										Recoverable
Magnesium	370000		1000	200	ug/L	1			6020A	Total
										Recoverable
Selenium	2.9		0.0050	0.00089	mg/L	1			6020A	Total
										Recoverable
Sodium	930000		1000	330	ug/L	1			6020A	Total
										Recoverable
Lithium	0.34		0.0080	0.0017	mg/L	1			6020A	Total
										Recoverable
Arsenic	15		5.0	0.75	ug/L	1			6020A	Dissolved
Selenium	2800		5.0	0.89	ug/L	1			6020A	Dissolved
Lithium	310		8.0	1.7	ug/L	1			6020A	Dissolved
Sodium	970000		1000	330	ug/L	1			6020A	Dissolved
Potassium	18000		1000	220	ug/L	1			6020A	Dissolved
Calcium	550000		1000	580	ug/L	1			6020A	Dissolved
Magnesium	340000		1000	200	ug/L	1			6020A	Dissolved
pH adj. to 25 deg C	7.3	HF	0.1	0.1	SU	1			9040B	Total/NA
Temperature	19.9	HF	1.0	1.0	Degrees C	1			9040B	Total/NA
Chloride	100		3.0	1.0	mg/L	1			9056A	Total/NA
Sulfate	3200		100	21	mg/L	20			9056A	Total/NA
Alkalinity	780	B	10	3.1	mg/L	1			SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	780		10	3.1	mg/L	1			SM 2320B	Total/NA
Total Suspended Solids	680	B	14	3.9	mg/L	1			SM 2540D	Total/NA

Client Sample ID: MW-30

Lab Sample ID: 280-154444-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.0044	J	0.0050	0.00075	mg/L	1			6020A	Total
										Recoverable
Calcium	290000		1000	580	ug/L	1			6020A	Total
										Recoverable
Potassium	23000		1000	220	ug/L	1			6020A	Total
										Recoverable
Magnesium	330000		1000	200	ug/L	1			6020A	Total
										Recoverable
Selenium	0.014		0.0050	0.00089	mg/L	1			6020A	Total
										Recoverable
Sodium	2300000		1000	330	ug/L	1			6020A	Total
										Recoverable
Lithium	0.43		0.0080	0.0017	mg/L	1			6020A	Total
										Recoverable
Arsenic	1.4	J	5.0	0.75	ug/L	1			6020A	Dissolved
Selenium	19		5.0	0.89	ug/L	1			6020A	Dissolved
Lithium	410		8.0	1.7	ug/L	1			6020A	Dissolved
Sodium	2300000		2000	660	ug/L	2			6020A	Dissolved
Potassium	20000		1000	220	ug/L	1			6020A	Dissolved
Calcium	270000		1000	580	ug/L	1			6020A	Dissolved
Magnesium	320000		1000	200	ug/L	1			6020A	Dissolved
pH adj. to 25 deg C	7.3	HF ^1+	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

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Client Sample ID: MW-30 (Continued)

Lab Sample ID: 280-154444-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	180		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	5800		250	52	mg/L	50		9056A	Total/NA
Alkalinity	1200	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	1200		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	1600	B	33	9.2	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-31

Lab Sample ID: 280-154444-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0038	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	380000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	16000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	370000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.39		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	1200000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.18		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	20.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	190		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	4100		250	52	mg/L	50		9056A	Total/NA
Alkalinity	650	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	650		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	12	B	4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-32

Lab Sample ID: 280-154444-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00086	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	420000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	12000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	150000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.068		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	360000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.050		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	37		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	2300		100	21	mg/L	20		9056A	Total/NA
Alkalinity	410	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	410		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	1.6	J B	4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Client Sample ID: MW-33A

Lab Sample ID: 280-154444-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	420000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	18000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	320000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.21		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	510000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.13		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	21.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	62		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	2900		100	21	mg/L	20		9056A	Total/NA
Alkalinity	470	B	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
Total Suspended Solids	1.6	J B	4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: MW-33B

Lab Sample ID: 280-154444-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.044		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	300000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	27000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	140000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.043		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	730000		10000	3300	ug/L	10		6020A	Total Recoverable
Lithium	0.22		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Arsenic	3.3	J	5.0	0.75	ug/L	1		6020A	Dissolved
Selenium	22		5.0	0.89	ug/L	1		6020A	Dissolved
Lithium	80		8.0	1.7	ug/L	1		6020A	Dissolved
Sodium	740000		1000	330	ug/L	1		6020A	Dissolved
Potassium	5500		1000	220	ug/L	1		6020A	Dissolved
Calcium	73000		1000	580	ug/L	1		6020A	Dissolved
Magnesium	37000		1000	200	ug/L	1		6020A	Dissolved
pH adj. to 25 deg C	8.0	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	120		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	1600		100	21	mg/L	20		9056A	Total/NA
Alkalinity	280	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	280		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	290	B	8.3	2.3	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Client Sample ID: MW-34

Lab Sample ID: 280-154444-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9	J	3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	410		25	5.2	mg/L	5		9056A	Total/NA
Fluoride	0.88		0.50	0.17	mg/L	1		9056A	Total/NA
Alkalinity	210	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	210		10	3.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-35

Lab Sample ID: 280-154444-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.014		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	450000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	12000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	310000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	1.8		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	800000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.17		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Chloride	720		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	3100		100	21	mg/L	20		9056A	Total/NA
Alkalinity	200	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	200		10	3.1	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc

Job ID: 280-154444-1

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
FILTRATION	Sample Filtration	None	TAL CAN

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.

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: 280-154444-1

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-154444-1	MW-29	Water	10/15/21 16:10	10/20/21 13:07
280-154444-2	MW-30	Water	10/20/21 12:00	10/20/21 13:07
280-154444-3	MW-31	Water	10/18/21 14:00	10/20/21 13:07
280-154444-4	MW-32	Water	10/15/21 14:40	10/20/21 13:07
280-154444-5	MW-33A	Water	10/15/21 12:05	10/20/21 13:07
280-154444-6	MW-33B	Water	10/20/21 10:55	10/20/21 13:07
280-154444-7	MW-34	Water	10/20/21 09:50	10/20/21 13:07
280-154444-8	MW-35	Water	10/15/21 09:50	10/20/21 13:07

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

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

Client Sample ID: MW-29
Date Collected: 10/15/21 16:10
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.026		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 17:52	1
Calcium	530000		1000	580	ug/L		10/25/21 14:00	10/27/21 17:40	1
Potassium	23000		1000	220	ug/L		10/25/21 14:00	10/26/21 17:52	1
Magnesium	370000		1000	200	ug/L		10/25/21 14:00	10/26/21 17:52	1
Selenium	2.9		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 17:52	1
Sodium	930000		1000	330	ug/L		10/25/21 14:00	10/27/21 17:40	1
Lithium	0.34		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 17:52	1

Client Sample ID: MW-30
Date Collected: 10/20/21 12:00
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0044	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 17:57	1
Calcium	290000		1000	580	ug/L		10/25/21 14:00	10/26/21 17:57	1
Potassium	23000		1000	220	ug/L		10/25/21 14:00	10/26/21 17:57	1
Magnesium	330000		1000	200	ug/L		10/25/21 14:00	10/26/21 17:57	1
Selenium	0.014		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 17:57	1
Sodium	2300000		1000	330	ug/L		10/25/21 14:00	10/27/21 17:43	1
Lithium	0.43		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 17:57	1

Client Sample ID: MW-31
Date Collected: 10/18/21 14:00
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0038	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 18:02	1
Calcium	380000		1000	580	ug/L		10/25/21 14:00	10/27/21 17:45	1
Potassium	16000		1000	220	ug/L		10/25/21 14:00	10/26/21 18:02	1
Magnesium	370000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:02	1
Selenium	0.39		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 18:02	1
Sodium	1200000		1000	330	ug/L		10/25/21 14:00	10/27/21 17:45	1
Lithium	0.18		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 18:02	1

Client Sample ID: MW-32
Date Collected: 10/15/21 14:40
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00086	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 18:06	1
Calcium	420000		1000	580	ug/L		10/25/21 14:00	10/27/21 17:48	1
Potassium	12000		1000	220	ug/L		10/25/21 14:00	10/26/21 18:06	1
Magnesium	150000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:06	1
Selenium	0.068		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 18:06	1
Sodium	360000		1000	330	ug/L		10/25/21 14:00	10/26/21 18:06	1
Lithium	0.050		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 18:06	1

Client Sample ID: MW-33A
Date Collected: 10/15/21 12:05
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0011	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 18:11	1
Calcium	420000		1000	580	ug/L		10/25/21 14:00	10/27/21 17:50	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

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

Client Sample ID: MW-33A
Date Collected: 10/15/21 12:05
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	18000		1000	220	ug/L		10/25/21 14:00	10/26/21 18:11	1
Magnesium	320000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:11	1
Selenium	0.21		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 18:11	1
Sodium	510000		1000	330	ug/L		10/25/21 14:00	10/27/21 17:50	1
Lithium	0.13		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 18:11	1

Client Sample ID: MW-33B
Date Collected: 10/20/21 10:55
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.044		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 18:15	1
Calcium	300000		1000	580	ug/L		10/25/21 14:00	10/26/21 18:15	1
Potassium	27000		1000	220	ug/L		10/25/21 14:00	10/26/21 18:15	1
Magnesium	140000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:15	1
Selenium	0.043		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 18:15	1
Sodium	730000		10000	3300	ug/L		10/25/21 14:00	10/26/21 18:20	10
Lithium	0.22		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 18:15	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 18:25	1
Calcium	450000		1000	580	ug/L		10/25/21 14:00	10/27/21 17:53	1
Potassium	12000		1000	220	ug/L		10/25/21 14:00	10/26/21 18:25	1
Magnesium	310000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:25	1
Selenium	1.8		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 18:25	1
Sodium	800000		1000	330	ug/L		10/25/21 14:00	10/27/21 17:53	1
Lithium	0.17		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 18:25	1

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

Client Sample ID: MW-29
Date Collected: 10/15/21 16:10
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15		5.0	0.75	ug/L		10/25/21 14:00	10/26/21 18:38	1
Selenium	2800		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 18:38	1
Lithium	310		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 18:38	1
Sodium	970000		1000	330	ug/L		10/25/21 14:00	11/04/21 10:38	1
Potassium	18000		1000	220	ug/L		10/25/21 14:00	10/26/21 18:38	1
Calcium	550000		1000	580	ug/L		10/25/21 14:00	11/04/21 10:38	1
Magnesium	340000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:38	1

Client Sample ID: MW-30
Date Collected: 10/20/21 12:00
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4	J	5.0	0.75	ug/L		10/25/21 14:00	10/26/21 18:43	1
Selenium	19		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 18:43	1
Lithium	410		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 18:43	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

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

Client Sample ID: MW-30
Date Collected: 10/20/21 12:00
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	2300000		2000	660	ug/L		10/25/21 14:00	11/04/21 10:40	2
Potassium	20000		1000	220	ug/L		10/25/21 14:00	10/26/21 18:43	1
Calcium	270000		1000	580	ug/L		10/25/21 14:00	10/26/21 18:43	1
Magnesium	320000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:43	1

Client Sample ID: MW-33B
Date Collected: 10/20/21 10:55
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3	J	5.0	0.75	ug/L		10/25/21 14:00	10/26/21 18:48	1
Selenium	22		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 18:48	1
Lithium	80		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 18:48	1
Sodium	740000		1000	330	ug/L		10/25/21 14:00	11/04/21 10:43	1
Potassium	5500		1000	220	ug/L		10/25/21 14:00	10/26/21 18:48	1
Calcium	73000		1000	580	ug/L		10/25/21 14:00	10/26/21 18:48	1
Magnesium	37000		1000	200	ug/L		10/25/21 14:00	10/26/21 18:48	1

General Chemistry

Client Sample ID: MW-29
Date Collected: 10/15/21 16:10
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-1
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			10/22/21 18:21	1
Temperature	19.9	HF	1.0	1.0	Degrees C			10/22/21 18:21	1
Chloride	100		3.0	1.0	mg/L			11/02/21 12:13	1
Sulfate	3200		100	21	mg/L			11/02/21 12:43	20
Alkalinity	780	B	10	3.1	mg/L			10/24/21 07:08	1
Bicarbonate Alkalinity as CaCO3	780		10	3.1	mg/L			10/24/21 07:08	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 07:08	1
Total Suspended Solids	680	B	14	3.9	mg/L			10/21/21 12:37	1

Client Sample ID: MW-30
Date Collected: 10/20/21 12:00
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	7.3	HF ^1+	0.1	0.1	SU			10/23/21 18:22	1
Temperature	19.5	HF	1.0	1.0	Degrees C			10/23/21 18:22	1
Chloride	180		3.0	1.0	mg/L			11/02/21 12:58	1
Sulfate	5800		250	52	mg/L			11/03/21 13:29	50
Alkalinity	1200	B	10	3.1	mg/L			10/24/21 07:49	1
Bicarbonate Alkalinity as CaCO3	1200		10	3.1	mg/L			10/24/21 07:49	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 07:49	1
Total Suspended Solids	1600	B	33	9.2	mg/L			10/21/21 12:37	1

Client Sample ID: MW-31
Date Collected: 10/18/21 14:00
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-3
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			10/22/21 18:13	1
Temperature	20.2	HF	1.0	1.0	Degrees C			10/22/21 18:13	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

General Chemistry (Continued)

Client Sample ID: MW-31
Date Collected: 10/18/21 14:00
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	190		3.0	1.0	mg/L			11/02/21 13:43	1
Sulfate	4100		250	52	mg/L			11/03/21 13:45	50
Alkalinity	650	B	10	3.1	mg/L			10/24/21 07:35	1
Bicarbonate Alkalinity as CaCO3	650		10	3.1	mg/L			10/24/21 07:35	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 07:35	1
Total Suspended Solids	12	B	4.0	1.1	mg/L			10/21/21 12:37	1

Client Sample ID: MW-32
Date Collected: 10/15/21 14:40
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-4
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			10/22/21 18:29	1
Temperature	20.5	HF	1.0	1.0	Degrees C			10/22/21 18:29	1
Chloride	37		3.0	1.0	mg/L			11/02/21 14:28	1
Sulfate	2300		100	21	mg/L			11/02/21 15:28	20
Alkalinity	410	B	10	3.1	mg/L			10/24/21 08:39	1
Bicarbonate Alkalinity as CaCO3	410		10	3.1	mg/L			10/24/21 08:39	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 08:39	1
Total Suspended Solids	1.6	J B	4.0	1.1	mg/L			10/21/21 12:37	1

Client Sample ID: MW-33A
Date Collected: 10/15/21 12:05
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-5
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			10/22/21 18:10	1
Temperature	21.2	HF	1.0	1.0	Degrees C			10/22/21 18:10	1
Chloride	62		3.0	1.0	mg/L			11/02/21 15:43	1
Sulfate	2900		100	21	mg/L			11/02/21 16:13	20
Alkalinity	470	B	10	3.1	mg/L			10/24/21 07:24	1
Bicarbonate Alkalinity as CaCO3	470		10	3.1	mg/L			10/24/21 07:24	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 07:24	1
Total Suspended Solids	1.6	J B	4.0	1.1	mg/L			10/21/21 12:37	1

Client Sample ID: MW-33B
Date Collected: 10/20/21 10:55
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-6
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			10/22/21 18:25	1
Temperature	20.0	HF	1.0	1.0	Degrees C			10/22/21 18:25	1
Chloride	120		3.0	1.0	mg/L			11/02/21 16:28	1
Sulfate	1600		100	21	mg/L			11/02/21 16:58	20
Alkalinity	280	B	10	3.1	mg/L			10/24/21 07:16	1
Bicarbonate Alkalinity as CaCO3	280		10	3.1	mg/L			10/24/21 07:16	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 07:16	1
Total Suspended Solids	290	B	8.3	2.3	mg/L			10/21/21 12:37	1

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

General Chemistry

Client Sample ID: MW-34
Date Collected: 10/20/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9	J	3.0	1.0	mg/L			11/02/21 04:59	1
Sulfate	410		25	5.2	mg/L			11/02/21 05:14	5
Fluoride	0.88		0.50	0.17	mg/L			11/02/21 04:59	1
Alkalinity	210	B	10	3.1	mg/L			10/24/21 08:45	1
Bicarbonate Alkalinity as CaCO3	210		10	3.1	mg/L			10/24/21 08:45	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 08:45	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	720		15	5.1	mg/L			11/02/21 18:28	5
Sulfate	3100		100	21	mg/L			11/02/21 18:43	20
Alkalinity	200	B	10	3.1	mg/L			10/24/21 08:24	1
Bicarbonate Alkalinity as CaCO3	200		10	3.1	mg/L			10/24/21 08:24	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 08:24	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-509772/1-A
Matrix: Water
Analysis Batch: 510075

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 509772

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 16:53	1
Selenium	ND		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 16:53	1
Lithium	ND		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 16:53	1
Sodium	ND		1000	330	ug/L		10/25/21 14:00	10/26/21 16:53	1
Potassium	ND		1000	220	ug/L		10/25/21 14:00	10/26/21 16:53	1
Calcium	ND		1000	580	ug/L		10/25/21 14:00	10/26/21 16:53	1
Magnesium	ND		1000	200	ug/L		10/25/21 14:00	10/26/21 16:53	1

Lab Sample ID: LCS 240-509772/2-A
Matrix: Water
Analysis Batch: 510075

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 509772

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.969		mg/L		97	80 - 120
Selenium	1.00	0.992		mg/L		99	80 - 120
Lithium	0.500	0.485		mg/L		97	80 - 120
Sodium	25000	24000		ug/L		96	80 - 120
Potassium	25000	25000		ug/L		100	80 - 120
Calcium	25000	25400		ug/L		101	80 - 120
Magnesium	25000	23900		ug/L		96	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-554752/26
Matrix: Water
Analysis Batch: 554752

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: LCS 280-554951/4
Matrix: Water
Analysis Batch: 554951

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	^1+	SU		100	99 - 101

Lab Sample ID: 280-154444-2 DU
Matrix: Water
Analysis Batch: 554951

Client Sample ID: MW-30
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 ^1+	7.3	^1+	SU		0.7	5
Temperature	19.5	HF	19.4		Degrees C		0.3	10

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-555711/6

Matrix: Water

Analysis Batch: 555711

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			11/01/21 15:59	1
Sulfate	ND		5.0	1.0	mg/L			11/01/21 15:59	1
Fluoride	ND		0.50	0.17	mg/L			11/01/21 15:59	1

Lab Sample ID: LCS 280-555711/4

Matrix: Water

Analysis Batch: 555711

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	93.6		mg/L		94	90 - 110
Fluoride	5.00	4.99		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-555711/5

Matrix: Water

Analysis Batch: 555711

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	0	10
Sulfate	100	92.5		mg/L		92	90 - 110	1	10
Fluoride	5.00	5.00		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-555711/3

Matrix: Water

Analysis Batch: 555711

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	3.82		mg/L		76	50 - 150
Sulfate	5.00	3.80	J	mg/L		76	50 - 150
Fluoride	0.500	0.550		mg/L		110	50 - 150

Lab Sample ID: MB 280-555743/13

Matrix: Water

Analysis Batch: 555743

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			11/01/21 20:09	1
Sulfate	ND		5.0	1.0	mg/L			11/01/21 20:09	1

Lab Sample ID: LCS 280-555743/11

Matrix: Water

Analysis Batch: 555743

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
Sulfate	100	98.8		mg/L		99	90 - 110

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

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

Lab Sample ID: LCSD 280-555743/12

Matrix: Water

Analysis Batch: 555743

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	0	10
Sulfate	100	98.5		mg/L		99	90 - 110	0	10

Lab Sample ID: MRL 280-555743/10

Matrix: Water

Analysis Batch: 555743

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	4.75		mg/L		95	50 - 150		
Sulfate	5.00	4.49	J	mg/L		90	50 - 150		

Lab Sample ID: MB 280-555998/6

Matrix: Water

Analysis Batch: 555998

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			11/03/21 12:29	1
Sulfate	ND		5.0	1.0	mg/L			11/03/21 12:29	1

Lab Sample ID: LCS 280-555998/4

Matrix: Water

Analysis Batch: 555998

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		
Sulfate	100	94.6		mg/L		95	90 - 110		

Lab Sample ID: LCSD 280-555998/5

Matrix: Water

Analysis Batch: 555998

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
Sulfate	100	94.6		mg/L		95	90 - 110	0	10

Lab Sample ID: MRL 280-555998/3

Matrix: Water

Analysis Batch: 555998

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	3.58		mg/L		72	50 - 150		
Sulfate	5.00	3.91	J	mg/L		78	50 - 150		

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-554946/111

Matrix: Water

Analysis Batch: 554946

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.02	J	10	3.1	mg/L			10/24/21 08:17	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 08:17	1
Carbonate Alkalinity as CaCO3	3.61	J	10	3.1	mg/L			10/24/21 08:17	1

Lab Sample ID: MB 280-554946/59

Matrix: Water

Analysis Batch: 554946

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.56	J	10	3.1	mg/L			10/24/21 01:48	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 01:48	1
Carbonate Alkalinity as CaCO3	4.82	J	10	3.1	mg/L			10/24/21 01:48	1

Lab Sample ID: MB 280-554946/6

Matrix: Water

Analysis Batch: 554946

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/23/21 18:36	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/23/21 18:36	1

Lab Sample ID: MB 280-554946/85

Matrix: Water

Analysis Batch: 554946

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.46	J	10	3.1	mg/L			10/24/21 04:42	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			10/24/21 04:42	1
Carbonate Alkalinity as CaCO3	4.04	J	10	3.1	mg/L			10/24/21 04:42	1

Lab Sample ID: LCS 280-554946/110

Matrix: Water

Analysis Batch: 554946

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	208		mg/L		104	89 - 109

Lab Sample ID: LCS 280-554946/84

Matrix: Water

Analysis Batch: 554946

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	208		mg/L		104	89 - 109

Lab Sample ID: LCSD 280-554946/32

Matrix: Water

Analysis Batch: 554946

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	210		mg/L		105	89 - 109	1	10

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Method: SM 2320B - Alkalinity

Lab Sample ID: 280-154444-8 DU
Matrix: Water
Analysis Batch: 554946

Client Sample ID: MW-35
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	200	B	199		mg/L		1	10

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

Lab Sample ID: MB 280-554494/1
Matrix: Water
Analysis Batch: 554494

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	1.20	J	4.0	1.1	mg/L			10/21/21 12:37	1

Lab Sample ID: LCS 280-554494/2
Matrix: Water
Analysis Batch: 554494

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	80.0		mg/L		80	79 - 114

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Metals

Filtration Batch: 509771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Dissolved	Water	FILTRATION	
280-154444-2	MW-30	Dissolved	Water	FILTRATION	
280-154444-6	MW-33B	Dissolved	Water	FILTRATION	

Prep Batch: 509772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Dissolved	Water	3005A	509771
280-154444-1	MW-29	Total Recoverable	Water	3005A	
280-154444-2	MW-30	Dissolved	Water	3005A	509771
280-154444-2	MW-30	Total Recoverable	Water	3005A	
280-154444-3	MW-31	Total Recoverable	Water	3005A	
280-154444-4	MW-32	Total Recoverable	Water	3005A	
280-154444-5	MW-33A	Total Recoverable	Water	3005A	
280-154444-6	MW-33B	Dissolved	Water	3005A	509771
280-154444-6	MW-33B	Total Recoverable	Water	3005A	
280-154444-8	MW-35	Total Recoverable	Water	3005A	
MB 240-509772/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-509772/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 510075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Dissolved	Water	6020A	509772
280-154444-1	MW-29	Total Recoverable	Water	6020A	509772
280-154444-2	MW-30	Dissolved	Water	6020A	509772
280-154444-2	MW-30	Total Recoverable	Water	6020A	509772
280-154444-3	MW-31	Total Recoverable	Water	6020A	509772
280-154444-4	MW-32	Total Recoverable	Water	6020A	509772
280-154444-5	MW-33A	Total Recoverable	Water	6020A	509772
280-154444-6	MW-33B	Dissolved	Water	6020A	509772
280-154444-6	MW-33B	Total Recoverable	Water	6020A	509772
280-154444-6	MW-33B	Total Recoverable	Water	6020A	509772
280-154444-8	MW-35	Total Recoverable	Water	6020A	509772
MB 240-509772/1-A	Method Blank	Total Recoverable	Water	6020A	509772
LCS 240-509772/2-A	Lab Control Sample	Total Recoverable	Water	6020A	509772

Analysis Batch: 510255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Total Recoverable	Water	6020A	509772
280-154444-2	MW-30	Total Recoverable	Water	6020A	509772
280-154444-3	MW-31	Total Recoverable	Water	6020A	509772
280-154444-4	MW-32	Total Recoverable	Water	6020A	509772
280-154444-5	MW-33A	Total Recoverable	Water	6020A	509772
280-154444-8	MW-35	Total Recoverable	Water	6020A	509772

Analysis Batch: 511470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Dissolved	Water	6020A	509772
280-154444-2	MW-30	Dissolved	Water	6020A	509772
280-154444-6	MW-33B	Dissolved	Water	6020A	509772

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

General Chemistry

Analysis Batch: 554494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Total/NA	Water	SM 2540D	
280-154444-2	MW-30	Total/NA	Water	SM 2540D	
280-154444-3	MW-31	Total/NA	Water	SM 2540D	
280-154444-4	MW-32	Total/NA	Water	SM 2540D	
280-154444-5	MW-33A	Total/NA	Water	SM 2540D	
280-154444-6	MW-33B	Total/NA	Water	SM 2540D	
MB 280-554494/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-554494/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 554752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Total/NA	Water	9040B	
280-154444-3	MW-31	Total/NA	Water	9040B	
280-154444-4	MW-32	Total/NA	Water	9040B	
280-154444-5	MW-33A	Total/NA	Water	9040B	
280-154444-6	MW-33B	Total/NA	Water	9040B	
LCS 280-554752/26	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 554946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Total/NA	Water	SM 2320B	
280-154444-2	MW-30	Total/NA	Water	SM 2320B	
280-154444-3	MW-31	Total/NA	Water	SM 2320B	
280-154444-4	MW-32	Total/NA	Water	SM 2320B	
280-154444-5	MW-33A	Total/NA	Water	SM 2320B	
280-154444-6	MW-33B	Total/NA	Water	SM 2320B	
280-154444-7	MW-34	Total/NA	Water	SM 2320B	
280-154444-8	MW-35	Total/NA	Water	SM 2320B	
MB 280-554946/111	Method Blank	Total/NA	Water	SM 2320B	
MB 280-554946/59	Method Blank	Total/NA	Water	SM 2320B	
MB 280-554946/6	Method Blank	Total/NA	Water	SM 2320B	
MB 280-554946/85	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-554946/110	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 280-554946/84	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-554946/32	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
280-154444-8 DU	MW-35	Total/NA	Water	SM 2320B	

Analysis Batch: 554951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-2	MW-30	Total/NA	Water	9040B	
LCS 280-554951/4	Lab Control Sample	Total/NA	Water	9040B	
280-154444-2 DU	MW-30	Total/NA	Water	9040B	

Analysis Batch: 555711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-7	MW-34	Total/NA	Water	9056A	
280-154444-7	MW-34	Total/NA	Water	9056A	
MB 280-555711/6	Method Blank	Total/NA	Water	9056A	
LCS 280-555711/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-555711/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-555711/3	Lab Control Sample	Total/NA	Water	9056A	

Eurofins TestAmerica, Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

General Chemistry

Analysis Batch: 555743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-1	MW-29	Total/NA	Water	9056A	
280-154444-1	MW-29	Total/NA	Water	9056A	
280-154444-2	MW-30	Total/NA	Water	9056A	
280-154444-3	MW-31	Total/NA	Water	9056A	
280-154444-4	MW-32	Total/NA	Water	9056A	
280-154444-4	MW-32	Total/NA	Water	9056A	
280-154444-5	MW-33A	Total/NA	Water	9056A	
280-154444-5	MW-33A	Total/NA	Water	9056A	
280-154444-6	MW-33B	Total/NA	Water	9056A	
280-154444-6	MW-33B	Total/NA	Water	9056A	
280-154444-8	MW-35	Total/NA	Water	9056A	
280-154444-8	MW-35	Total/NA	Water	9056A	
MB 280-555743/13	Method Blank	Total/NA	Water	9056A	
LCS 280-555743/11	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-555743/12	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-555743/10	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 555998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154444-2	MW-30	Total/NA	Water	9056A	
280-154444-3	MW-31	Total/NA	Water	9056A	
MB 280-555998/6	Method Blank	Total/NA	Water	9056A	
LCS 280-555998/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-555998/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-555998/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Client Sample ID: MW-29

Date Collected: 10/15/21 16:10

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509771	10/25/21 12:03	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510075	10/26/21 18:38	DSH	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509771	10/25/21 12:03	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			511470	11/04/21 10:38	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510075	10/26/21 17:52	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510255	10/27/21 17:40	AJC	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 18:21	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555743	11/02/21 12:13	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	555743	11/02/21 12:43	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 07:08	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	70 mL	250 mL	554494	10/21/21 12:37	ABW	TAL DEN

Client Sample ID: MW-30

Date Collected: 10/20/21 12:00

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509771	10/25/21 12:03	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510075	10/26/21 18:43	DSH	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509771	10/25/21 12:03	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		2			511470	11/04/21 10:40	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510075	10/26/21 17:57	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510255	10/27/21 17:43	AJC	TAL CAN
Total/NA	Analysis	9040B		1			554951	10/23/21 18:22	ECC	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	555998	11/03/21 13:29	SPG	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555743	11/02/21 12:58	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 07:49	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	30 mL	250 mL	554494	10/21/21 12:37	ABW	TAL DEN

Client Sample ID: MW-31

Date Collected: 10/18/21 14:00

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-3

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	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510075	10/26/21 18:02	DSH	TAL CAN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Client Sample ID: MW-31

Date Collected: 10/18/21 14:00

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-3

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	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510255	10/27/21 17:45	AJC	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 18:13	ECC	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	555998	11/03/21 13:45	SPG	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555743	11/02/21 13:43	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 07:35	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554494	10/21/21 12:37	ABW	TAL DEN

Client Sample ID: MW-32

Date Collected: 10/15/21 14:40

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-4

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	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510075	10/26/21 18:06	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510255	10/27/21 17:48	AJC	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 18:29	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555743	11/02/21 14:28	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	555743	11/02/21 15:28	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 08:39	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554494	10/21/21 12:37	ABW	TAL DEN

Client Sample ID: MW-33A

Date Collected: 10/15/21 12:05

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154444-5

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	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510075	10/26/21 18:11	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510255	10/27/21 17:50	AJC	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 18:10	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555743	11/02/21 15:43	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	555743	11/02/21 16:13	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 07:24	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554494	10/21/21 12:37	ABW	TAL DEN

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

Client Sample ID: MW-33B

Lab Sample ID: 280-154444-6

Date Collected: 10/20/21 10:55

Matrix: Water

Date Received: 10/20/21 13:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509771	10/25/21 12:03	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510075	10/26/21 18:48	DSH	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509771	10/25/21 12:03	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			511470	11/04/21 10:43	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510075	10/26/21 18:15	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		10			510075	10/26/21 18:20	DSH	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 18:25	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555743	11/02/21 16:28	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	555743	11/02/21 16:58	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 07:16	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	120 mL	250 mL	554494	10/21/21 12:37	ABW	TAL DEN

Client Sample ID: MW-34

Lab Sample ID: 280-154444-7

Date Collected: 10/20/21 09:50

Matrix: Water

Date Received: 10/20/21 13:07

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	555711	11/02/21 04:59	SPG	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	555711	11/02/21 05:14	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 08:45	ECC	TAL DEN

Client Sample ID: MW-35

Lab Sample ID: 280-154444-8

Date Collected: 10/15/21 09:50

Matrix: Water

Date Received: 10/20/21 13:07

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	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510075	10/26/21 18:25	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509772	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510255	10/27/21 17:53	AJC	TAL CAN
Total/NA	Analysis	9056A		5	5 mL	5 mL	555743	11/02/21 18:28	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	555743	11/02/21 18:43	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			554946	10/24/21 08:24	ECC	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

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154444-1

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	11-30-21
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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-18-10	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

[illegible]



Chain of Custody Record

Client Information (Sub Contract Lab)						Carrier Tracking No(s):		
Client Contact Shipping/Receiving						COC No.		
Company						Page		
TestAmerica Laboratories, Inc.						State of Origin:		
Address: 4101 Shuffel Street NW, City: North Canton State, Zip: OH, 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) Email:						Job #		
Project Name: Xcel Energy GW CCR Monitoring - Valmont						Preservation Codes:		
Site: Xcel Energy CCR - Valmont Station						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO ₂ P - Na ₂ O ₄ S Q - Na ₂ SO ₃ R - Na ₂ SO ₄ S - H ₂ SO ₄ T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		
Sample Identification - Client ID (Lab ID)						Total Number of containers		
Sample Date	Sample Time	Sample Type (C=grab)	Matrix (Weaver, Spald, Owens-Ill, BT-Tissue, Anal)	Field Filtered Sample (Yes or No)	Performance MS/MSD (Yes or No)	6020A/FILTRATION (MOD) 12 Metals	6020A/3005A (MOD) 13 Total Metals (w/collision cell)	Special Instructions/Note:
MW-29 (280-154444-1)	10/15/21	Mountain	Water	X	X	X	X	Use Collision Cell
MW-30 (280-154444-2)	10/20/21	Mountain	Water	X	X	X	X	Use Collision Cell
MW-31 (280-154444-3)	10/18/21	Mountain	Water	X	X	X	X	Use Collision Cell
MW-32 (280-154444-4)	10/15/21	Mountain	Water	X	X	X	X	Use Collision Cell
MW-33A (280-154444-5)	10/15/21	Mountain	Water	X	X	X	X	Use Collision Cell
MW-33B (280-154444-6)	10/20/21	Mountain	Water	X	X	X	X	Use Collision Cell
MW-35 (280-154444-8)	10/15/21	Mountain	Water	X	X	X	X	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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.								
Possible Hazard Identification								
Unconfirmed								
Deliverable Requested: I, II, III, IV, Other (specify)								
Primary Deliverable Rank: 4								
Empty Kit Relinquished by:								
Relinquished by:								
Relinquished by:								
Relinquished by:								
Custody Seal No.: Δ Yes Δ No								

Eurofins TestAmerica Canton Sample Receipt Form/Narrative				Login # : _____	
Canton Facility					
Client <u>ETA</u>		Site Name _____		Cooler unpacked by: <u>Math</u>	
Cooler Received on <u>10-23-21</u>		Opened on <u>10-23-21</u>			
FedEx: 1 st Grd ☒ Exp		UPS FAS Clipper		Client Drop Off TestAmerica Courier Other	
Receipt After-hours: Drop-off Date/Time _____ Storage Location _____					
TestAmerica Cooler # <u>TD</u>		Foam Box		Client Cooler Box Other _____	
Packing material used: <u>Bubble Wrap</u>		Foam Plastic Bag		None Other _____	
COOLANT: <u>wet ice</u>		Blue Ice Dry Ice Water		None	
1. Cooler temperature upon receipt ☐ See Multiple Cooler Form					
IR GUN# IR-14 (CF +0.1 °C)		Observed Cooler Temp. <u>2.5</u> °C		Corrected Cooler Temp. <u>2.6</u> °C	
IR GUN #IR-15 (CF +0.2 °C)		Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> ☒ 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 ☐ NA					
-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# <u>HC157842</u>					
14. Were VOAs on the COC? ☒ Yes ☐ No					
15. Were air bubbles >6 mm in any VOA vials? ☒ Yes ☐ No ☐ NA 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					
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: _____			

WT-NC-099

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-154444-1

Login Number: 154444

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Burke, Sophie G

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

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

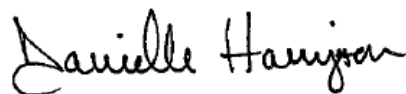
Laboratory Job ID: 280-154447-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
11/3/2021 6:29:25 PM

Danielle Harrington, Project Manager II
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LINKS

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

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

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Definitions/Glossary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Job ID: 280-154447-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-154447-1

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 10/20/2021. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 1.1°C and 1.8°C.

Please note, volume was received for the following samples for analyses not requested on the chain of custody. Each affected sample arrived with an extra 500mL unpreserved plastic container for dissolved metals analysis. MW-1 (280-154447-1), MW-25B (280-154447-7) and MW-35 (280-154447-9)

Insufficient sample volume was provided for the following sample for the <FRACTION_METHOD> analysis: MW-34 (280-154447-8). Limited volume was received for TDS/IC/pH/dissolved metals analyses, only one 1L plastic unpreserved was received and only contains 525mL. Limited volume was also received for Ra226/Ra228 analyses, one 1L plastic preserved with nitric acid container was received full along with a second 1L plastic preserved with nitric acid which only contains 825mL.

MW-34 is with both 154444 Just 1L unpreserved Container. This sample will only get Alkalinity, Chloride and Sulfate.

MW-34 with job 280- 154447. And unpreserved volume will be sent to canton for dissolved metals.

TOTAL RECOVERABLE METALS- METHOD 6010C/6020A

The accuracy and precision of the Calcium MS/MSD performed on a sample MW-4 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.

DISSOLVED METALS (ICPMS)- METHOD 6010C/6020A

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.

DISSOLVED MERCURY- Method 7470A

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Job ID: 280-154447-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

TOTAL MERCURY- METHOD 7470A

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 or prepped at a dilution for various analyses. The reporting limits have been adjusted accordingly.

The analysis for Total Suspended Solids Method 2540D for samples MW-25B and MW-35 was performed outside of hold due to more than half of the hold time expiring during transit. It is Eurofins TestAmerica's policy to analyze all samples within holding time, but when samples are received with less than half the hold time remaining, this cannot be guaranteed. Please note that the sample results should be considered estimated.

The pH sample duplicate analysis data associated with QC batch 280-555993 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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-1

Lab Sample ID: 280-154447-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.40		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Arsenic	0.0012	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	80		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	0.012		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Thallium	0.00056	J	0.0010	0.00020	mg/L	1		6020A	Total
									Recoverable
Lithium	0.031		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	20.0	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	63		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	270		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	10		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	910		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 280-154447-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.3		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Boron	1200		100	57	ug/L	1		6010C	Dissolved
Arsenic	0.0031	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.011		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	380		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.0012		0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.015		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.20		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Lithium	0.21		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
Arsenic	2.6	J	5.0	0.75	ug/L	1		6020A	Dissolved
Barium	7.8		5.0	2.2	ug/L	1		6020A	Dissolved
Calcium	360000		1000	580	ug/L	1		6020A	Dissolved
Cobalt	0.80	J	1.0	0.19	ug/L	1		6020A	Dissolved
Molybdenum	14		5.0	1.1	ug/L	1		6020A	Dissolved
Selenium	190		5.0	0.89	ug/L	1		6020A	Dissolved
Lithium	190		8.0	1.7	ug/L	1		6020A	Dissolved
pH adj. to 25 deg C	7.5	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	370		300	100	mg/L	100		9056A	Total/NA
Sulfate	5300		500	100	mg/L	100		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-4 (Continued)

Lab Sample ID: 280-154447-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	31		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	9600		100	47	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 280-154447-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.9		0.10	0.057	mg/L	1		6010C	Total
Boron	1500		100	57	ug/L	1		6010C	Recoverable Dissolved
Arsenic	0.0013	J	0.0050	0.00075	mg/L	1		6020A	Total
Barium	0.016		0.0050	0.0022	mg/L	1		6020A	Recoverable Total
Calcium	90		1.0	0.58	mg/L	1		6020A	Total
Cobalt	0.00054	J	0.0010	0.00019	mg/L	1		6020A	Recoverable Total
Molybdenum	0.0027	J	0.010	0.0011	mg/L	1		6020A	Total
Lead	0.00070	J	0.0010	0.00045	mg/L	1		6020A	Recoverable Total
Selenium	0.0047	J	0.0050	0.00089	mg/L	1		6020A	Total
Lithium	0.069		0.0080	0.0017	mg/L	1		6020A	Recoverable Total
Arsenic	0.84	J	5.0	0.75	ug/L	1		6020A	Dissolved
Barium	13		5.0	2.2	ug/L	1		6020A	Dissolved
Calcium	81000		1000	580	ug/L	1		6020A	Dissolved
Cobalt	0.34	J	1.0	0.19	ug/L	1		6020A	Dissolved
Molybdenum	2.3	J	5.0	1.1	ug/L	1		6020A	Dissolved
Selenium	6.6		5.0	0.89	ug/L	1		6020A	Dissolved
Lithium	61		8.0	1.7	ug/L	1		6020A	Dissolved
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	35		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.35	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	530		50	10	mg/L	10		9056A	Total/NA
Total Suspended Solids	44		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	1300		20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 280-154447-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.43		0.10	0.057	mg/L	1		6010C	Total
Boron	360		100	57	ug/L	1		6010C	Recoverable Dissolved
Barium	0.041		0.0050	0.0022	mg/L	1		6020A	Total
Calcium	350		1.0	0.58	mg/L	1		6020A	Recoverable Total
Cobalt	0.00089	J	0.0010	0.00019	mg/L	1		6020A	Total
Molybdenum	0.0014	J	0.010	0.0011	mg/L	1		6020A	Recoverable Total
Lead	0.00068	J	0.0010	0.00045	mg/L	1		6020A	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-6 (Continued)

Lab Sample ID: 280-154447-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.016		0.0050	0.00089	mg/L	1		6020A	Total
Lithium	0.059		0.0080	0.0017	mg/L	1		6020A	Recoverable
Barium	30		5.0	2.2	ug/L	1		6020A	Total
Calcium	330000		1000	580	ug/L	1		6020A	Recoverable
Cobalt	0.58	J	1.0	0.19	ug/L	1		6020A	Dissolved
Molybdenum	1.2	J	5.0	1.1	ug/L	1		6020A	Dissolved
Selenium	16		5.0	0.89	ug/L	1		6020A	Dissolved
Lithium	54		8.0	1.7	ug/L	1		6020A	Dissolved
pH adj. to 25 deg C	7.4	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	620		30	10	mg/L	10		9056A	Total/NA
Fluoride	0.61		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	550		50	10	mg/L	10		9056A	Total/NA
Total Suspended Solids	25		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	2100		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 280-154447-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.91		0.10	0.057	mg/L	1		6010C	Total
Boron	760		100	57	ug/L	1		6010C	Recoverable
Arsenic	0.0011	J	0.0050	0.00075	mg/L	1		6020A	Dissolved
Barium	0.017		0.0050	0.0022	mg/L	1		6020A	Total
Calcium	480		1.0	0.58	mg/L	1		6020A	Recoverable
Cobalt	0.0015		0.0010	0.00019	mg/L	1		6020A	Total
Lead	0.00064	J	0.0010	0.00045	mg/L	1		6020A	Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total
Lithium	0.12		0.0080	0.0017	mg/L	1		6020A	Recoverable
Barium	12		5.0	2.2	ug/L	1		6020A	Total
Calcium	440000		1000	580	ug/L	1		6020A	Recoverable
Cobalt	0.88	J	1.0	0.19	ug/L	1		6020A	Dissolved
Selenium	9.2		5.0	0.89	ug/L	1		6020A	Dissolved
Lithium	110		8.0	1.7	ug/L	1		6020A	Dissolved
pH adj. to 25 deg C	7.2	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	210		60	20	mg/L	20		9056A	Total/NA
Fluoride	5.5		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	2800		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	22		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4400		40	19	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-22

Lab Sample ID: 280-154447-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.8		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Boron	2400		100	57	ug/L	1		6010C	Dissolved
Arsenic	0.0079		0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.039		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	470		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	0.0065		0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Chromium	0.0062		0.0025	0.0025	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.014		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Lead	0.0018		0.0010	0.00045	mg/L	1		6020A	Total
									Recoverable
Selenium	0.91		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Lithium	0.39		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
Arsenic	5.6		5.0	0.75	ug/L	1		6020A	Dissolved
Barium	13		5.0	2.2	ug/L	1		6020A	Dissolved
Calcium	380000		1000	580	ug/L	1		6020A	Dissolved
Cobalt	4.1		1.0	0.19	ug/L	1		6020A	Dissolved
Molybdenum	12		5.0	1.1	ug/L	1		6020A	Dissolved
Selenium	790		5.0	0.89	ug/L	1		6020A	Dissolved
Lithium	360		8.0	1.7	ug/L	1		6020A	Dissolved

Client Sample ID: MW-25B

Lab Sample ID: 280-154447-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.48		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Arsenic	0.0023	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.024		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	130		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00064	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Molybdenum	0.055		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	0.0080		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Lithium	0.045		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	19.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	78		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.62		0.50	0.17	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-25B (Continued)

Lab Sample ID: 280-154447-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	570		25	5.2	mg/L	5		9056A	Total/NA
Total Suspended Solids	13	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	1300		20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-34

Lab Sample ID: 280-154447-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2.1		0.10	0.057	mg/L	1		6010C	Total
Boron	1900		100	57	ug/L	1		6010C	Recoverable
Antimony	0.0043		0.0020	0.00057	mg/L	1		6020A	Dissolved
Arsenic	0.0092		0.0050	0.00075	mg/L	1		6020A	Total
Barium	0.14		0.0050	0.0022	mg/L	1		6020A	Recoverable
Beryllium	0.00092	J	0.0010	0.00062	mg/L	1		6020A	Total
Calcium	39		1.0	0.58	mg/L	1		6020A	Recoverable
Cobalt	0.0088		0.0010	0.00019	mg/L	1		6020A	Total
Chromium	0.027		0.0025	0.0025	mg/L	1		6020A	Recoverable
Molybdenum	0.045		0.010	0.0011	mg/L	1		6020A	Total
Lead	0.016		0.0010	0.00045	mg/L	1		6020A	Recoverable
Selenium	0.040		0.0050	0.00089	mg/L	1		6020A	Total
Thallium	0.00023	J	0.0010	0.00020	mg/L	1		6020A	Recoverable
Lithium	0.064		0.0080	0.0017	mg/L	1		6020A	Total
Arsenic	3.8	J	5.0	0.75	ug/L	1		6020A	Recoverable
Barium	38		5.0	2.2	ug/L	1		6020A	Dissolved
Calcium	22000		1000	580	ug/L	1		6020A	Dissolved
Cobalt	0.79	J	1.0	0.19	ug/L	1		6020A	Dissolved
Molybdenum	42		5.0	1.1	ug/L	1		6020A	Dissolved
Antimony	4.5		2.0	0.57	ug/L	1		6020A	Dissolved
Selenium	37		5.0	0.89	ug/L	1		6020A	Dissolved
Lithium	40		8.0	1.7	ug/L	1		6020A	Dissolved
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Suspended Solids	360		10	2.8	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	960		20	9.4	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-35

Lab Sample ID: 280-154447-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.3		0.10	0.057	mg/L	1		6010C	Total
Arsenic	0.012		0.0050	0.00075	mg/L	1		6020A	Recoverable
Barium	0.023		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-35 (Continued)

Lab Sample ID: 280-154447-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	500		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.0013		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	0.00050	J	0.0010	0.00045	mg/L	1		6020A	Total
									Recoverable
Selenium	1.6		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Lithium	0.18		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	19.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	600		60	20	mg/L	20		9056A	Total/NA
Fluoride	7.8		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3300		100	21	mg/L	20		9056A	Total/NA
Total Suspended Solids	16	H	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	5900		40	19	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM2540 C	Total Dissolved Solids	SM18	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
FILTRATION	Sample Filtration	None	TAL CAN

Protocol References:

None = None

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

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

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: 280-154447-1

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-154447-1	MW-1	Water	10/19/21 10:45	10/20/21 13:07
280-154447-2	MW-4	Water	10/19/21 13:20	10/20/21 13:07
280-154447-3	MW-5	Water	10/20/21 09:25	10/20/21 13:07
280-154447-4	MW-6	Water	10/19/21 12:25	10/20/21 13:07
280-154447-5	MW-8	Water	10/19/21 11:35	10/20/21 13:07
280-154447-6	MW-22	Water	10/15/21 09:50	10/20/21 13:07
280-154447-7	MW-25B	Water	10/15/21 12:50	10/20/21 13:07
280-154447-8	MW-34	Water	10/20/21 10:25	10/20/21 13:07
280-154447-9	MW-35	Water	10/15/21 09:50	10/20/21 13:07

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Client Sample ID: MW-1
Date Collected: 10/19/21 10:45
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.40		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 12:19	1

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.3		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 12:40	1

Client Sample ID: MW-5
Date Collected: 10/20/21 09:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 13:14	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.43		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 13:18	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.91		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 13:22	1

Client Sample ID: MW-22
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.8		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 13:27	1

Client Sample ID: MW-25B
Date Collected: 10/15/21 12:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.48		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 13:31	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.1		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 13:44	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.3		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 13:48	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Method: 6010C - Metals (ICP) - Dissolved

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1200		100	57	ug/L		10/25/21 14:00	10/26/21 13:52	1

Client Sample ID: MW-5
Date Collected: 10/20/21 09:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1500		100	57	ug/L		10/25/21 14:00	10/26/21 13:57	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	360		100	57	ug/L		10/25/21 14:00	10/26/21 14:01	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	760		100	57	ug/L		10/25/21 14:00	10/26/21 14:05	1

Client Sample ID: MW-22
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2400		100	57	ug/L		10/25/21 14:00	10/26/21 14:10	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1900		100	57	ug/L		10/29/21 14:00	11/02/21 12:48	1

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

Client Sample ID: MW-1
Date Collected: 10/19/21 10:45
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 14:27	1
Arsenic	0.0012	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 14:27	1
Barium	0.035		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 14:27	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 14:27	1
Calcium	80		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 14:27	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 14:27	1
Cobalt	0.00052	J	0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 14:27	1
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 14:27	1
Molybdenum	0.012		0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 14:27	1
Lead	ND		0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 14:27	1
Selenium	ND		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 14:27	1
Thallium	0.00056	J	0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 14:27	1
Lithium	0.031		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 14:27	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 14:35	1
Arsenic	0.0031	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 14:35	1
Barium	0.011		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 14:35	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 14:35	1
Calcium	380		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 14:35	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 14:35	1
Cobalt	0.0012		0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 14:35	1
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 14:35	1
Molybdenum	0.015		0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 14:35	1
Lead	ND		0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 14:35	1
Selenium	0.20		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 14:35	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 14:35	1
Lithium	0.21		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 14:35	1

Client Sample ID: MW-5
Date Collected: 10/20/21 09:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 15:05	1
Arsenic	0.0013	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 15:05	1
Barium	0.016		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 15:05	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 15:05	1
Calcium	90		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 15:05	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:05	1
Cobalt	0.00054	J	0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 15:05	1
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 15:05	1
Molybdenum	0.0027	J	0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 15:05	1
Lead	0.00070	J	0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 15:05	1
Selenium	0.0047	J	0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 15:05	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:05	1
Lithium	0.069		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 15:05	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 15:07	1
Arsenic	ND		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 15:07	1
Barium	0.041		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 15:07	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 15:07	1
Calcium	350		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 15:07	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:07	1
Cobalt	0.00089	J	0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 15:07	1
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 15:07	1
Molybdenum	0.0014	J	0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 15:07	1
Lead	0.00068	J	0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 15:07	1
Selenium	0.016		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 15:07	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:07	1
Lithium	0.059		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 15:07	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 15:09	1
Arsenic	0.0011	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 15:09	1
Barium	0.017		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 15:09	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 15:09	1
Calcium	480		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 15:09	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:09	1
Cobalt	0.0015		0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 15:09	1
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 15:09	1
Molybdenum	ND		0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 15:09	1
Lead	0.00064	J	0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 15:09	1
Selenium	0.011		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 15:09	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:09	1
Lithium	0.12		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 15:09	1

Client Sample ID: MW-22
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 15:12	1
Arsenic	0.0079		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 15:12	1
Barium	0.039		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 15:12	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 15:12	1
Calcium	470		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 15:12	1
Cadmium	0.00020	J	0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:12	1
Cobalt	0.0065		0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 15:12	1
Chromium	0.0062		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 15:12	1
Molybdenum	0.014		0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 15:12	1
Lead	0.0018		0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 15:12	1
Selenium	0.91		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 15:12	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:12	1
Lithium	0.39		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 15:12	1

Client Sample ID: MW-25B
Date Collected: 10/15/21 12:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 15:14	1
Arsenic	0.0023	J	0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 15:14	1
Barium	0.024		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 15:14	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 15:14	1
Calcium	130		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 15:14	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:14	1
Cobalt	0.00064	J	0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 15:14	1
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 15:14	1
Molybdenum	0.055		0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 15:14	1
Lead	0.00051	J	0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 15:14	1
Selenium	0.0080		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 15:14	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:14	1
Lithium	0.045		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 15:14	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0043		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 15:17	1
Arsenic	0.0092		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 15:17	1
Barium	0.14		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 15:17	1
Beryllium	0.00092	J	0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 15:17	1
Calcium	39		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 15:17	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:17	1
Cobalt	0.0088		0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 15:17	1
Chromium	0.027		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 15:17	1
Molybdenum	0.045		0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 15:17	1
Lead	0.016		0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 15:17	1
Selenium	0.040		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 15:17	1
Thallium	0.00023	J	0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:17	1
Lithium	0.064		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 15:17	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 15:19	1
Arsenic	0.012		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 15:19	1
Barium	0.023		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 15:19	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 15:19	1
Calcium	500		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 15:19	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:19	1
Cobalt	0.0013		0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 15:19	1
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 15:19	1
Molybdenum	0.0027	J	0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 15:19	1
Lead	0.00050	J	0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 15:19	1
Selenium	1.6		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 15:19	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 15:19	1
Lithium	0.18		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 15:19	1

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

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.6	J	5.0	0.75	ug/L		10/25/21 14:00	10/26/21 15:22	1
Barium	7.8		5.0	2.2	ug/L		10/25/21 14:00	10/26/21 15:22	1
Beryllium	ND		1.0	0.62	ug/L		10/25/21 14:00	10/26/21 15:22	1
Calcium	360000		1000	580	ug/L		10/25/21 14:00	10/26/21 15:22	1
Cadmium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 15:22	1
Cobalt	0.80	J	1.0	0.19	ug/L		10/25/21 14:00	10/26/21 15:22	1
Chromium	ND		5.0	2.5	ug/L		10/25/21 14:00	10/26/21 15:22	1
Molybdenum	14		5.0	1.1	ug/L		10/25/21 14:00	10/26/21 15:22	1
Lead	ND		1.0	0.45	ug/L		10/25/21 14:00	10/26/21 15:22	1
Antimony	ND		2.0	0.57	ug/L		10/25/21 14:00	10/26/21 15:22	1
Selenium	190		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 15:22	1
Lithium	190		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 15:22	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 15:22	1

Client Sample ID: MW-5
Date Collected: 10/20/21 09:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.84	J	5.0	0.75	ug/L		10/25/21 14:00	10/26/21 15:25	1
Barium	13		5.0	2.2	ug/L		10/25/21 14:00	10/26/21 15:25	1
Beryllium	ND		1.0	0.62	ug/L		10/25/21 14:00	10/26/21 15:25	1
Calcium	81000		1000	580	ug/L		10/25/21 14:00	10/26/21 15:25	1
Cadmium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 15:25	1
Cobalt	0.34	J	1.0	0.19	ug/L		10/25/21 14:00	10/26/21 15:25	1
Chromium	ND		5.0	2.5	ug/L		10/25/21 14:00	10/26/21 15:25	1
Molybdenum	2.3	J	5.0	1.1	ug/L		10/25/21 14:00	10/26/21 15:25	1
Lead	ND		1.0	0.45	ug/L		10/25/21 14:00	10/26/21 15:25	1
Antimony	ND		2.0	0.57	ug/L		10/25/21 14:00	10/26/21 15:25	1
Selenium	6.6		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 15:25	1
Lithium	61		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 15:25	1
Thallium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 15:25	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.75	ug/L		10/25/21 14:00	10/26/21 15:27	1
Barium	30		5.0	2.2	ug/L		10/25/21 14:00	10/26/21 15:27	1
Beryllium	ND		1.0	0.62	ug/L		10/25/21 14:00	10/26/21 15:27	1
Calcium	330000		1000	580	ug/L		10/25/21 14:00	10/26/21 15:27	1
Cadmium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 15:27	1
Cobalt	0.58	J	1.0	0.19	ug/L		10/25/21 14:00	10/26/21 15:27	1
Chromium	ND		5.0	2.5	ug/L		10/25/21 14:00	10/26/21 15:27	1
Molybdenum	1.2	J	5.0	1.1	ug/L		10/25/21 14:00	10/26/21 15:27	1
Lead	ND		1.0	0.45	ug/L		10/25/21 14:00	10/26/21 15:27	1
Antimony	ND		2.0	0.57	ug/L		10/25/21 14:00	10/26/21 15:27	1
Selenium	16		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 15:27	1
Lithium	54		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 15:27	1
Thallium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 15:27	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.75	ug/L		10/25/21 14:00	10/26/21 16:17	1
Barium	12		5.0	2.2	ug/L		10/25/21 14:00	10/26/21 16:17	1
Beryllium	ND		1.0	0.62	ug/L		10/25/21 14:00	10/26/21 16:17	1
Calcium	440000		1000	580	ug/L		10/25/21 14:00	10/26/21 16:17	1
Cadmium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 16:17	1
Cobalt	0.88	J	1.0	0.19	ug/L		10/25/21 14:00	10/26/21 16:17	1
Chromium	ND		5.0	2.5	ug/L		10/25/21 14:00	10/26/21 16:17	1
Molybdenum	ND		5.0	1.1	ug/L		10/25/21 14:00	10/26/21 16:17	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		1.0	0.45	ug/L		10/25/21 14:00	10/26/21 16:17	1
Antimony	ND		2.0	0.57	ug/L		10/25/21 14:00	10/26/21 16:17	1
Selenium	9.2		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 16:17	1
Lithium	110		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 16:17	1
Thallium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 16:17	1

Client Sample ID: MW-22
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.6		5.0	0.75	ug/L		10/25/21 14:00	10/26/21 16:19	1
Barium	13		5.0	2.2	ug/L		10/25/21 14:00	10/26/21 16:19	1
Beryllium	ND		1.0	0.62	ug/L		10/25/21 14:00	10/26/21 16:19	1
Calcium	380000		1000	580	ug/L		10/25/21 14:00	10/26/21 16:19	1
Cadmium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 16:19	1
Cobalt	4.1		1.0	0.19	ug/L		10/25/21 14:00	10/26/21 16:19	1
Chromium	ND		5.0	2.5	ug/L		10/25/21 14:00	10/26/21 16:19	1
Molybdenum	12		5.0	1.1	ug/L		10/25/21 14:00	10/26/21 16:19	1
Lead	ND		1.0	0.45	ug/L		10/25/21 14:00	10/26/21 16:19	1
Antimony	ND		2.0	0.57	ug/L		10/25/21 14:00	10/26/21 16:19	1
Selenium	790		5.0	0.89	ug/L		10/25/21 14:00	10/26/21 16:19	1
Lithium	360		8.0	1.7	ug/L		10/25/21 14:00	10/26/21 16:19	1
Thallium	ND		1.0	0.20	ug/L		10/25/21 14:00	10/26/21 16:19	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.8	J	5.0	0.75	ug/L		10/29/21 14:00	11/01/21 15:26	1
Barium	38		5.0	2.2	ug/L		10/29/21 14:00	11/01/21 15:26	1
Beryllium	ND		1.0	0.62	ug/L		10/29/21 14:00	11/01/21 15:26	1
Calcium	22000		1000	580	ug/L		10/29/21 14:00	11/01/21 15:26	1
Cadmium	ND		1.0	0.20	ug/L		10/29/21 14:00	11/01/21 15:26	1
Cobalt	0.79	J	1.0	0.19	ug/L		10/29/21 14:00	11/01/21 15:26	1
Chromium	ND		5.0	2.5	ug/L		10/29/21 14:00	11/01/21 15:26	1
Molybdenum	42		5.0	1.1	ug/L		10/29/21 14:00	11/01/21 15:26	1
Lead	ND		1.0	0.45	ug/L		10/29/21 14:00	11/01/21 15:26	1
Antimony	4.5		2.0	0.57	ug/L		10/29/21 14:00	11/01/21 15:26	1
Selenium	37		5.0	0.89	ug/L		10/29/21 14:00	11/01/21 15:26	1
Lithium	40		8.0	1.7	ug/L		10/29/21 14:00	11/01/21 15:26	1
Thallium	ND		1.0	0.20	ug/L		10/29/21 14:00	11/01/21 15:26	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-1
Date Collected: 10/19/21 10:45
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:10	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:17	1

Client Sample ID: MW-5
Date Collected: 10/20/21 09:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:34	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:36	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:38	1

Client Sample ID: MW-22
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:40	1

Client Sample ID: MW-25B
Date Collected: 10/15/21 12:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:42	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:44	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 12:13	1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:46	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: MW-5
Date Collected: 10/20/21 09:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:52	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:54	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:56	1

Client Sample ID: MW-22
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:58	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/29/21 14:00	11/01/21 15:00	1

General Chemistry

Client Sample ID: MW-1
Date Collected: 10/19/21 10:45
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1
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			10/22/21 17:27	1
Temperature	20.0	HF	1.0	1.0	Degrees C			10/22/21 17:27	1
Chloride	63		3.0	1.0	mg/L			11/02/21 14:25	1
Fluoride	0.38	J	0.50	0.17	mg/L			11/02/21 14:25	1
Sulfate	270		25	5.2	mg/L			11/02/21 14:41	5
Total Suspended Solids	10		4.0	1.1	mg/L			10/24/21 18:54	1
Total Dissolved Solids (TDS)	910		10	4.7	mg/L			10/21/21 09:10	1

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
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			10/22/21 17:34	1
Temperature	20.3	HF	1.0	1.0	Degrees C			10/22/21 17:34	1
Chloride	370		300	100	mg/L			11/02/21 15:14	100
Fluoride	ND		50	17	mg/L			11/02/21 15:14	100
Sulfate	5300		500	100	mg/L			11/02/21 15:14	100
Total Suspended Solids	31		4.0	1.1	mg/L			10/24/21 18:54	1
Total Dissolved Solids (TDS)	9600		100	47	mg/L			10/21/21 09:10	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

General Chemistry

Client Sample ID: MW-5
Date Collected: 10/20/21 09:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3
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			10/22/21 17:38	1
Temperature	21.1	HF	1.0	1.0	Degrees C			10/22/21 17:38	1
Chloride	35		3.0	1.0	mg/L			11/02/21 15:30	1
Fluoride	0.35	J	0.50	0.17	mg/L			11/02/21 15:30	1
Sulfate	530		50	10	mg/L			11/02/21 15:47	10
Total Suspended Solids	44		4.0	1.1	mg/L			10/24/21 18:54	1
Total Dissolved Solids (TDS)	1300		20	9.4	mg/L			10/21/21 09:10	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
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			10/22/21 17:42	1
Temperature	21.2	HF	1.0	1.0	Degrees C			10/22/21 17:42	1
Chloride	620		30	10	mg/L			11/02/21 17:42	10
Fluoride	0.61		0.50	0.17	mg/L			11/02/21 16:03	1
Sulfate	550		50	10	mg/L			11/02/21 17:42	10
Total Suspended Solids	25		4.0	1.1	mg/L			10/24/21 18:54	1
Total Dissolved Solids (TDS)	2100		40	19	mg/L			10/21/21 09:10	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
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			10/22/21 17:46	1
Temperature	20.4	HF	1.0	1.0	Degrees C			10/22/21 17:46	1
Chloride	210		60	20	mg/L			11/02/21 19:04	20
Fluoride	5.5		0.50	0.17	mg/L			11/02/21 18:47	1
Sulfate	2800		100	21	mg/L			11/02/21 19:04	20
Total Suspended Solids	22		4.0	1.1	mg/L			10/24/21 18:54	1
Total Dissolved Solids (TDS)	4400		40	19	mg/L			10/21/21 09:10	1

Client Sample ID: MW-25B
Date Collected: 10/15/21 12:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7
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			10/22/21 17:50	1
Temperature	19.9	HF	1.0	1.0	Degrees C			10/22/21 17:50	1
Chloride	78		3.0	1.0	mg/L			11/02/21 19:20	1
Fluoride	0.62		0.50	0.17	mg/L			11/02/21 19:20	1
Sulfate	570		25	5.2	mg/L			11/02/21 19:37	5
Total Suspended Solids	13	H	4.0	1.1	mg/L			10/25/21 09:49	1
Total Dissolved Solids (TDS)	1300		20	9.4	mg/L			10/21/21 09:06	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
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			11/02/21 17:02	1
Temperature	21.5	HF	1.0	1.0	Degrees C			11/02/21 17:02	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

General Chemistry (Continued)

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	360		10	2.8	mg/L			10/24/21 18:54	1
Total Dissolved Solids (TDS)	960		20	9.4	mg/L			10/21/21 09:10	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9
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			10/22/21 17:53	1
Temperature	19.9	HF	1.0	1.0	Degrees C			10/22/21 17:53	1
Chloride	600		60	20	mg/L			11/02/21 20:09	20
Fluoride	7.8		0.50	0.17	mg/L			11/02/21 19:53	1
Sulfate	3300		100	21	mg/L			11/02/21 20:09	20
Total Suspended Solids	16	H	4.0	1.1	mg/L			10/25/21 09:49	1
Total Dissolved Solids (TDS)	5900		40	19	mg/L			10/21/21 09:06	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-509729/1-A
Matrix: Water
Analysis Batch: 510034

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 509729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		10/25/21 14:00	10/26/21 12:11	1

Lab Sample ID: LCS 240-509729/2-A
Matrix: Water
Analysis Batch: 510034

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 509729

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: 280-154447-1 MS
Matrix: Water
Analysis Batch: 510034

Client Sample ID: MW-1
Prep Type: Total Recoverable
Prep Batch: 509729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.40		1.00	1.36		mg/L		96	75 - 125

Lab Sample ID: 280-154447-1 MSD
Matrix: Water
Analysis Batch: 510034

Client Sample ID: MW-1
Prep Type: Total Recoverable
Prep Batch: 509729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.40		1.00	1.38		mg/L		98	75 - 125	2	20

Lab Sample ID: MB 240-510507/1-A
Matrix: Water
Analysis Batch: 511035

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 510507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		10/29/21 14:00	11/02/21 12:40	1

Lab Sample ID: LCS 240-510507/2-A
Matrix: Water
Analysis Batch: 511035

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 510507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	946		ug/L		95	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-509729/1-A
Matrix: Water
Analysis Batch: 510069

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 509729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		10/25/21 14:00	10/26/21 14:22	1
Barium	ND		0.0050	0.0022	mg/L		10/25/21 14:00	10/26/21 14:22	1
Beryllium	ND		0.0010	0.00062	mg/L		10/25/21 14:00	10/26/21 14:22	1
Calcium	ND		1.0	0.58	mg/L		10/25/21 14:00	10/26/21 14:22	1
Cadmium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 14:22	1
Cobalt	ND		0.0010	0.00019	mg/L		10/25/21 14:00	10/26/21 14:22	1

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Lab Sample ID: MB 240-509729/1-A

Matrix: Water

Analysis Batch: 510069

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 509729

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0025	0.0025	mg/L		10/25/21 14:00	10/26/21 14:22	1
Molybdenum	ND		0.010	0.0011	mg/L		10/25/21 14:00	10/26/21 14:22	1
Antimony	ND		0.0020	0.00057	mg/L		10/25/21 14:00	10/26/21 14:22	1
Lead	ND		0.0010	0.00045	mg/L		10/25/21 14:00	10/26/21 14:22	1
Selenium	ND		0.0050	0.00089	mg/L		10/25/21 14:00	10/26/21 14:22	1
Lithium	ND		0.0080	0.0017	mg/L		10/25/21 14:00	10/26/21 14:22	1
Thallium	ND		0.0010	0.00020	mg/L		10/25/21 14:00	10/26/21 14:22	1

Lab Sample ID: LCS 240-509729/3-A

Matrix: Water

Analysis Batch: 510069

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 509729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.956		mg/L		96	80 - 120
Barium	1.00	0.956		mg/L		96	80 - 120
Beryllium	0.500	0.480		mg/L		96	80 - 120
Calcium	25.0	23.5		mg/L		94	80 - 120
Cadmium	0.500	0.494		mg/L		99	80 - 120
Cobalt	0.500	0.487		mg/L		97	80 - 120
Chromium	0.500	0.506		mg/L		101	80 - 120
Molybdenum	0.500	0.469		mg/L		94	80 - 120
Antimony	0.100	0.102		mg/L		102	80 - 120
Lead	0.500	0.501		mg/L		100	80 - 120
Selenium	1.00	0.923		mg/L		92	80 - 120
Lithium	0.500	0.501		mg/L		100	80 - 120
Thallium	1.00	0.988		mg/L		99	80 - 120

Lab Sample ID: 280-154447-2 MS

Matrix: Water

Analysis Batch: 510069

Client Sample ID: MW-4

Prep Type: Total Recoverable

Prep Batch: 509729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0031	J	1.00	0.994		mg/L		99	75 - 125
Barium	0.011		1.00	0.954		mg/L		94	75 - 125
Beryllium	ND		0.500	0.435		mg/L		87	75 - 125
Calcium	380		25.0	382	4	mg/L		27	75 - 125
Cadmium	ND		0.500	0.458		mg/L		92	75 - 125
Cobalt	0.0012		0.500	0.498		mg/L		99	75 - 125
Chromium	ND		0.500	0.468		mg/L		94	75 - 125
Molybdenum	0.015		0.500	0.508		mg/L		99	75 - 125
Antimony	ND		0.100	0.0911		mg/L		91	75 - 125
Lead	ND		0.500	0.460		mg/L		92	75 - 125
Selenium	0.20		1.00	1.12		mg/L		92	75 - 125
Lithium	0.21		0.500	0.682		mg/L		95	75 - 125
Thallium	ND		1.00	0.907		mg/L		91	75 - 125

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Lab Sample ID: 280-154447-2 MSD

Matrix: Water

Analysis Batch: 510069

Client Sample ID: MW-4

Prep Type: Total Recoverable

Prep Batch: 509729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0031	J	1.00	0.960		mg/L		96	75 - 125	3	20
Barium	0.011		1.00	0.938		mg/L		93	75 - 125	2	20
Beryllium	ND		0.500	0.430		mg/L		86	75 - 125	1	20
Calcium	380		25.0	372	4	mg/L		-14	75 - 125	3	20
Cadmium	ND		0.500	0.451		mg/L		90	75 - 125	2	20
Cobalt	0.0012		0.500	0.487		mg/L		97	75 - 125	2	20
Chromium	ND		0.500	0.465		mg/L		93	75 - 125	1	20
Molybdenum	0.015		0.500	0.503		mg/L		98	75 - 125	1	20
Antimony	ND		0.100	0.0985		mg/L		99	75 - 125	8	20
Lead	ND		0.500	0.458		mg/L		92	75 - 125	0	20
Selenium	0.20		1.00	1.09		mg/L		89	75 - 125	2	20
Lithium	0.21		0.500	0.675		mg/L		93	75 - 125	1	20
Thallium	ND		1.00	0.900		mg/L		90	75 - 125	1	20

Lab Sample ID: MB 240-510507/1-A

Matrix: Water

Analysis Batch: 510947

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 510507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.75	ug/L		10/29/21 14:00	11/01/21 14:34	1
Barium	ND		5.0	2.2	ug/L		10/29/21 14:00	11/01/21 14:34	1
Beryllium	ND		1.0	0.62	ug/L		10/29/21 14:00	11/01/21 14:34	1
Calcium	ND		1000	580	ug/L		10/29/21 14:00	11/01/21 14:34	1
Cadmium	ND		1.0	0.20	ug/L		10/29/21 14:00	11/01/21 14:34	1
Cobalt	ND		1.0	0.19	ug/L		10/29/21 14:00	11/01/21 14:34	1
Chromium	ND		5.0	2.5	ug/L		10/29/21 14:00	11/01/21 14:34	1
Molybdenum	ND		5.0	1.1	ug/L		10/29/21 14:00	11/01/21 14:34	1
Antimony	ND		2.0	0.57	ug/L		10/29/21 14:00	11/01/21 14:34	1
Lead	ND		1.0	0.45	ug/L		10/29/21 14:00	11/01/21 14:34	1
Selenium	ND		5.0	0.89	ug/L		10/29/21 14:00	11/01/21 14:34	1
Lithium	ND		8.0	1.7	ug/L		10/29/21 14:00	11/01/21 14:34	1
Thallium	ND		1.0	0.20	ug/L		10/29/21 14:00	11/01/21 14:34	1

Lab Sample ID: LCS 240-510507/3-A

Matrix: Water

Analysis Batch: 510947

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 510507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	990		ug/L		99	80 - 120
Barium	1000	1010		ug/L		101	80 - 120
Beryllium	500	493		ug/L		99	80 - 120
Calcium	25000	25200		ug/L		101	80 - 120
Cadmium	500	514		ug/L		103	80 - 120
Cobalt	500	525		ug/L		105	80 - 120
Chromium	500	521		ug/L		104	80 - 120
Molybdenum	500	517		ug/L		103	80 - 120
Antimony	100	107		ug/L		107	80 - 120
Lead	500	538		ug/L		108	80 - 120
Selenium	1000	945		ug/L		94	80 - 120

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Lab Sample ID: LCS 240-510507/3-A
Matrix: Water
Analysis Batch: 510947

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 510507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	500	510		ug/L		102	80 - 120
Thallium	1000	1050		ug/L		105	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-509730/1-A
Matrix: Water
Analysis Batch: 509964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 509730

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/25/21 14:00	10/26/21 13:06	1

Lab Sample ID: LCS 240-509730/2-A
Matrix: Water
Analysis Batch: 509964

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509730

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.47		ug/L		109	80 - 120

Lab Sample ID: 280-154447-1 MS
Matrix: Water
Analysis Batch: 509964

Client Sample ID: MW-1
Prep Type: Total/NA
Prep Batch: 509730

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		1.00	1.06		ug/L		106	80 - 120

Lab Sample ID: 280-154447-1 MSD
Matrix: Water
Analysis Batch: 509964

Client Sample ID: MW-1
Prep Type: Total/NA
Prep Batch: 509730

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		1.00	1.00		ug/L		100	80 - 120	6	20

Lab Sample ID: MB 240-510509/1-A
Matrix: Water
Analysis Batch: 510861

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 510509

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/29/21 14:00	11/01/21 13:59	1

Lab Sample ID: LCS 240-510509/2-A
Matrix: Water
Analysis Batch: 510861

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 510509

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.22		ug/L		104	80 - 120

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Method: 9040B - pH

Lab Sample ID: LCS 280-554752/26

Matrix: Water

Analysis Batch: 554752

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: 280-154447-1 DU

Matrix: Water

Analysis Batch: 554752

Client Sample ID: MW-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	7.5		SU		3	5
Temperature	20.0	HF	19.8		Degrees C		1	10

Lab Sample ID: LCS 280-555993/4

Matrix: Water

Analysis Batch: 555993

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 280-555831/6

Matrix: Water

Analysis Batch: 555831

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			11/02/21 11:47	1
Fluoride	ND		0.50	0.17	mg/L			11/02/21 11:47	1
Sulfate	ND		5.0	1.0	mg/L			11/02/21 11:47	1

Lab Sample ID: LCS 280-555831/4

Matrix: Water

Analysis Batch: 555831

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	96.0		mg/L		96	90 - 110
Fluoride	5.00	4.76		mg/L		95	90 - 110
Sulfate	100	93.6		mg/L		94	90 - 110

Lab Sample ID: LCSD 280-555831/5

Matrix: Water

Analysis Batch: 555831

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
Fluoride	5.00	4.81		mg/L		96	90 - 110	1	10
Sulfate	100	93.8		mg/L		94	90 - 110	0	10

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Lab Sample ID: MRL 280-555831/3

Matrix: Water

Analysis Batch: 555831

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	3.39		mg/L		68	50 - 150
Fluoride	0.500	0.500		mg/L		100	50 - 150
Sulfate	5.00	3.74	J	mg/L		75	50 - 150

Lab Sample ID: 280-154447-4 MS

Matrix: Water

Analysis Batch: 555831

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
Fluoride	0.61		5.00	5.90		mg/L		106	80 - 120

Lab Sample ID: 280-154447-4 MS

Matrix: Water

Analysis Batch: 555831

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	620		500	1150		mg/L		105	80 - 120
Sulfate	550		500	1080		mg/L		106	80 - 120

Lab Sample ID: 280-154447-4 MSD

Matrix: Water

Analysis Batch: 555831

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
Fluoride	0.61		5.00	5.89		mg/L		106	80 - 120	0	20

Lab Sample ID: 280-154447-4 MSD

Matrix: Water

Analysis Batch: 555831

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	620		500	1150		mg/L		107	80 - 120	1	20
Sulfate	550		500	1090		mg/L		108	80 - 120	1	20

Lab Sample ID: 280-154447-4 DU

Matrix: Water

Analysis Batch: 555831

Client Sample ID: MW-6

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.61		0.622		mg/L		2	15

Lab Sample ID: 280-154447-4 DU

Matrix: Water

Analysis Batch: 555831

Client Sample ID: MW-6

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	620		610		mg/L		2	15
Sulfate	550		540		mg/L		2	15

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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

Lab Sample ID: MB 280-554787/2
Matrix: Water
Analysis Batch: 554787

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			10/24/21 18:54	1

Lab Sample ID: LCS 280-554787/1
Matrix: Water
Analysis Batch: 554787

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	83.6		mg/L		84	79 - 114

Lab Sample ID: MB 280-554824/1
Matrix: Water
Analysis Batch: 554824

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			10/25/21 09:46	1

Lab Sample ID: LCS 280-554824/2
Matrix: Water
Analysis Batch: 554824

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	88.8		mg/L		89	79 - 114

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: MB 280-554438/1
Matrix: Water
Analysis Batch: 554438

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			10/21/21 08:06	1

Lab Sample ID: LCS 280-554438/2
Matrix: Water
Analysis Batch: 554438

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)	506	505		mg/L		100	88 - 114

Lab Sample ID: LCSD 280-554438/3
Matrix: Water
Analysis Batch: 554438

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)	506	493		mg/L		97	88 - 114	2	20

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Method: SM2540 C - Total Dissolved Solids (Continued)

Lab Sample ID: MB 280-554439/1
Matrix: Water
Analysis Batch: 554439

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			10/21/21 08:09	1

Lab Sample ID: LCS 280-554439/2
Matrix: Water
Analysis Batch: 554439

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)	506	516		mg/L		102	88 - 114

Lab Sample ID: 280-154447-1 DU
Matrix: Water
Analysis Batch: 554439

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)	910		916		mg/L		0.5	10

Lab Sample ID: 280-154447-8 DU
Matrix: Water
Analysis Batch: 554439

Client Sample ID: MW-34
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	960		912		mg/L		5	10

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Metals

Filtration Batch: 509728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-2	MW-4	Dissolved	Water	FILTRATION	
280-154447-3	MW-5	Dissolved	Water	FILTRATION	
280-154447-4	MW-6	Dissolved	Water	FILTRATION	
280-154447-5	MW-8	Dissolved	Water	FILTRATION	
280-154447-6	MW-22	Dissolved	Water	FILTRATION	

Prep Batch: 509729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total Recoverable	Water	3005A	509728
280-154447-2	MW-4	Dissolved	Water	3005A	
280-154447-2	MW-4	Total Recoverable	Water	3005A	
280-154447-3	MW-5	Dissolved	Water	3005A	
280-154447-3	MW-5	Total Recoverable	Water	3005A	
280-154447-4	MW-6	Dissolved	Water	3005A	509728
280-154447-4	MW-6	Total Recoverable	Water	3005A	
280-154447-5	MW-8	Dissolved	Water	3005A	509728
280-154447-5	MW-8	Total Recoverable	Water	3005A	
280-154447-6	MW-22	Dissolved	Water	3005A	509728
280-154447-6	MW-22	Total Recoverable	Water	3005A	
280-154447-7	MW-25B	Total Recoverable	Water	3005A	
280-154447-8	MW-34	Total Recoverable	Water	3005A	
280-154447-9	MW-35	Total Recoverable	Water	3005A	
MB 240-509729/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-509729/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-509729/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-154447-1 MS	MW-1	Total Recoverable	Water	3005A	
280-154447-1 MSD	MW-1	Total Recoverable	Water	3005A	
280-154447-2 MS	MW-4	Total Recoverable	Water	3005A	
280-154447-2 MSD	MW-4	Total Recoverable	Water	3005A	

Prep Batch: 509730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	7470A	509728
280-154447-2	MW-4	Dissolved	Water	7470A	
280-154447-2	MW-4	Total/NA	Water	7470A	
280-154447-3	MW-5	Dissolved	Water	7470A	509728
280-154447-3	MW-5	Total/NA	Water	7470A	
280-154447-4	MW-6	Dissolved	Water	7470A	509728
280-154447-4	MW-6	Total/NA	Water	7470A	
280-154447-5	MW-8	Dissolved	Water	7470A	509728
280-154447-5	MW-8	Total/NA	Water	7470A	
280-154447-6	MW-22	Dissolved	Water	7470A	509728
280-154447-6	MW-22	Total/NA	Water	7470A	
280-154447-7	MW-25B	Total/NA	Water	7470A	
280-154447-8	MW-34	Total/NA	Water	7470A	
280-154447-9	MW-35	Total/NA	Water	7470A	
MB 240-509730/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-509730/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-154447-1 MS	MW-1	Total/NA	Water	7470A	
280-154447-1 MSD	MW-1	Total/NA	Water	7470A	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Metals

Analysis Batch: 509964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	7470A	509730
280-154447-2	MW-4	Dissolved	Water	7470A	509730
280-154447-2	MW-4	Total/NA	Water	7470A	509730
280-154447-3	MW-5	Dissolved	Water	7470A	509730
280-154447-3	MW-5	Total/NA	Water	7470A	509730
280-154447-4	MW-6	Dissolved	Water	7470A	509730
280-154447-4	MW-6	Total/NA	Water	7470A	509730
280-154447-5	MW-8	Dissolved	Water	7470A	509730
280-154447-5	MW-8	Total/NA	Water	7470A	509730
280-154447-6	MW-22	Dissolved	Water	7470A	509730
280-154447-6	MW-22	Total/NA	Water	7470A	509730
280-154447-7	MW-25B	Total/NA	Water	7470A	509730
280-154447-8	MW-34	Total/NA	Water	7470A	509730
280-154447-9	MW-35	Total/NA	Water	7470A	509730
MB 240-509730/1-A	Method Blank	Total/NA	Water	7470A	509730
LCS 240-509730/2-A	Lab Control Sample	Total/NA	Water	7470A	509730
280-154447-1 MS	MW-1	Total/NA	Water	7470A	509730
280-154447-1 MSD	MW-1	Total/NA	Water	7470A	509730

Analysis Batch: 510034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total Recoverable	Water	6010C	509729
280-154447-2	MW-4	Dissolved	Water	6010C	509729
280-154447-2	MW-4	Total Recoverable	Water	6010C	509729
280-154447-3	MW-5	Dissolved	Water	6010C	509729
280-154447-3	MW-5	Total Recoverable	Water	6010C	509729
280-154447-4	MW-6	Dissolved	Water	6010C	509729
280-154447-4	MW-6	Total Recoverable	Water	6010C	509729
280-154447-5	MW-8	Dissolved	Water	6010C	509729
280-154447-5	MW-8	Total Recoverable	Water	6010C	509729
280-154447-6	MW-22	Dissolved	Water	6010C	509729
280-154447-6	MW-22	Total Recoverable	Water	6010C	509729
280-154447-7	MW-25B	Total Recoverable	Water	6010C	509729
280-154447-8	MW-34	Total Recoverable	Water	6010C	509729
280-154447-9	MW-35	Total Recoverable	Water	6010C	509729
MB 240-509729/1-A	Method Blank	Total Recoverable	Water	6010C	509729
LCS 240-509729/2-A	Lab Control Sample	Total Recoverable	Water	6010C	509729
280-154447-1 MS	MW-1	Total Recoverable	Water	6010C	509729
280-154447-1 MSD	MW-1	Total Recoverable	Water	6010C	509729

Analysis Batch: 510069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total Recoverable	Water	6020A	509729
280-154447-2	MW-4	Dissolved	Water	6020A	509729
280-154447-2	MW-4	Total Recoverable	Water	6020A	509729
280-154447-3	MW-5	Dissolved	Water	6020A	509729
280-154447-3	MW-5	Total Recoverable	Water	6020A	509729
280-154447-4	MW-6	Dissolved	Water	6020A	509729
280-154447-4	MW-6	Total Recoverable	Water	6020A	509729
280-154447-5	MW-8	Dissolved	Water	6020A	509729
280-154447-5	MW-8	Total Recoverable	Water	6020A	509729

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Metals (Continued)

Analysis Batch: 510069 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-6	MW-22	Dissolved	Water	6020A	509729
280-154447-6	MW-22	Total Recoverable	Water	6020A	509729
280-154447-7	MW-25B	Total Recoverable	Water	6020A	509729
280-154447-8	MW-34	Total Recoverable	Water	6020A	509729
280-154447-9	MW-35	Total Recoverable	Water	6020A	509729
MB 240-509729/1-A	Method Blank	Total Recoverable	Water	6020A	509729
LCS 240-509729/3-A	Lab Control Sample	Total Recoverable	Water	6020A	509729
280-154447-2 MS	MW-4	Total Recoverable	Water	6020A	509729
280-154447-2 MSD	MW-4	Total Recoverable	Water	6020A	509729

Filtration Batch: 510505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-8	MW-34	Dissolved	Water	FILTRATION	

Prep Batch: 510507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-8	MW-34	Dissolved	Water	3005A	510505
MB 240-510507/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-510507/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-510507/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 510509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-8	MW-34	Dissolved	Water	7470A	510505
MB 240-510509/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-510509/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 510861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-8	MW-34	Dissolved	Water	7470A	510509
MB 240-510509/1-A	Method Blank	Total/NA	Water	7470A	510509
LCS 240-510509/2-A	Lab Control Sample	Total/NA	Water	7470A	510509

Analysis Batch: 510947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-8	MW-34	Dissolved	Water	6020A	510507
MB 240-510507/1-A	Method Blank	Total Recoverable	Water	6020A	510507
LCS 240-510507/3-A	Lab Control Sample	Total Recoverable	Water	6020A	510507

Analysis Batch: 511035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-8	MW-34	Dissolved	Water	6010C	510507
MB 240-510507/1-A	Method Blank	Total Recoverable	Water	6010C	510507
LCS 240-510507/2-A	Lab Control Sample	Total Recoverable	Water	6010C	510507

General Chemistry

Analysis Batch: 554438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-7	MW-25B	Total/NA	Water	SM2540 C	
280-154447-9	MW-35	Total/NA	Water	SM2540 C	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

General Chemistry (Continued)

Analysis Batch: 554438 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-554438/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-554438/2	Lab Control Sample	Total/NA	Water	SM2540 C	
LCSD 280-554438/3	Lab Control Sample Dup	Total/NA	Water	SM2540 C	

Analysis Batch: 554439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	SM2540 C	
280-154447-2	MW-4	Total/NA	Water	SM2540 C	
280-154447-3	MW-5	Total/NA	Water	SM2540 C	
280-154447-4	MW-6	Total/NA	Water	SM2540 C	
280-154447-5	MW-8	Total/NA	Water	SM2540 C	
280-154447-8	MW-34	Total/NA	Water	SM2540 C	
MB 280-554439/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-554439/2	Lab Control Sample	Total/NA	Water	SM2540 C	
280-154447-1 DU	MW-1	Total/NA	Water	SM2540 C	
280-154447-8 DU	MW-34	Total/NA	Water	SM2540 C	

Analysis Batch: 554752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	9040B	
280-154447-2	MW-4	Total/NA	Water	9040B	
280-154447-3	MW-5	Total/NA	Water	9040B	
280-154447-4	MW-6	Total/NA	Water	9040B	
280-154447-5	MW-8	Total/NA	Water	9040B	
280-154447-7	MW-25B	Total/NA	Water	9040B	
280-154447-9	MW-35	Total/NA	Water	9040B	
LCS 280-554752/26	Lab Control Sample	Total/NA	Water	9040B	
280-154447-1 DU	MW-1	Total/NA	Water	9040B	

Analysis Batch: 554787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	SM 2540D	
280-154447-2	MW-4	Total/NA	Water	SM 2540D	
280-154447-3	MW-5	Total/NA	Water	SM 2540D	
280-154447-4	MW-6	Total/NA	Water	SM 2540D	
280-154447-5	MW-8	Total/NA	Water	SM 2540D	
280-154447-8	MW-34	Total/NA	Water	SM 2540D	
MB 280-554787/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-554787/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 554824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-7	MW-25B	Total/NA	Water	SM 2540D	
280-154447-9	MW-35	Total/NA	Water	SM 2540D	
MB 280-554824/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-554824/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 555831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	9056A	
280-154447-1	MW-1	Total/NA	Water	9056A	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

General Chemistry (Continued)

Analysis Batch: 555831 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-2	MW-4	Total/NA	Water	9056A	
280-154447-3	MW-5	Total/NA	Water	9056A	
280-154447-3	MW-5	Total/NA	Water	9056A	
280-154447-4	MW-6	Total/NA	Water	9056A	
280-154447-4	MW-6	Total/NA	Water	9056A	
280-154447-5	MW-8	Total/NA	Water	9056A	
280-154447-5	MW-8	Total/NA	Water	9056A	
280-154447-7	MW-25B	Total/NA	Water	9056A	
280-154447-7	MW-25B	Total/NA	Water	9056A	
280-154447-9	MW-35	Total/NA	Water	9056A	
280-154447-9	MW-35	Total/NA	Water	9056A	
MB 280-555831/6	Method Blank	Total/NA	Water	9056A	
LCS 280-555831/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-555831/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-555831/3	Lab Control Sample	Total/NA	Water	9056A	
280-154447-4 MS	MW-6	Total/NA	Water	9056A	
280-154447-4 MS	MW-6	Total/NA	Water	9056A	
280-154447-4 MSD	MW-6	Total/NA	Water	9056A	
280-154447-4 MSD	MW-6	Total/NA	Water	9056A	
280-154447-4 DU	MW-6	Total/NA	Water	9056A	
280-154447-4 DU	MW-6	Total/NA	Water	9056A	

Analysis Batch: 555993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-8	MW-34	Total/NA	Water	9040B	
LCS 280-555993/4	Lab Control Sample	Total/NA	Water	9040B	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-1

Date Collected: 10/19/21 10:45

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1

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	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 12:19	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 14:27	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:10	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 17:27	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555831	11/02/21 14:25	SPG	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	555831	11/02/21 14:41	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554787	10/24/21 18:54	SVC	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	554439	10/21/21 09:10	ABW	TAL DEN

Client Sample ID: MW-4

Date Collected: 10/19/21 13:20

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6010C		1			510034	10/26/21 13:52	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 12:40	KLC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510069	10/26/21 15:22	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 14:35	AJC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	7470A		1			509964	10/26/21 13:46	MRL	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:17	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 17:34	ECC	TAL DEN
Total/NA	Analysis	9056A		100	5 mL	5 mL	555831	11/02/21 15:14	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554787	10/24/21 18:54	SVC	TAL DEN
Total/NA	Analysis	SM2540 C		1	10 mL	100 mL	554439	10/21/21 09:10	ABW	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-5

Date Collected: 10/20/21 09:25

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6010C		1			510034	10/26/21 13:57	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 13:14	KLC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510069	10/26/21 15:25	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 15:05	AJC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	7470A		1			509964	10/26/21 13:52	MRL	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:34	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 17:38	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555831	11/02/21 15:30	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	555831	11/02/21 15:47	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554787	10/24/21 18:54	SVC	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	554439	10/21/21 09:10	ABW	TAL DEN

Client Sample ID: MW-6

Date Collected: 10/19/21 12:25

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6010C		1			510034	10/26/21 14:01	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 13:18	KLC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510069	10/26/21 15:27	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 15:07	AJC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	7470A		1			509964	10/26/21 13:54	MRL	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:36	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 17:42	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555831	11/02/21 16:03	SPG	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	555831	11/02/21 17:42	SPG	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-6

Lab Sample ID: 280-154447-4

Date Collected: 10/19/21 12:25

Matrix: Water

Date Received: 10/20/21 13:07

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	554787	10/24/21 18:54	SVC	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	554439	10/21/21 09:10	ABW	TAL DEN

Client Sample ID: MW-8

Lab Sample ID: 280-154447-5

Date Collected: 10/19/21 11:35

Matrix: Water

Date Received: 10/20/21 13:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6010C		1			510034	10/26/21 14:05	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 13:22	KLC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510069	10/26/21 16:17	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 15:09	AJC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	7470A		1			509964	10/26/21 13:56	MRL	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:38	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 17:46	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555831	11/02/21 18:47	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	555831	11/02/21 19:04	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554787	10/24/21 18:54	SVC	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	554439	10/21/21 09:10	ABW	TAL DEN

Client Sample ID: MW-22

Lab Sample ID: 280-154447-6

Date Collected: 10/15/21 09:50

Matrix: Water

Date Received: 10/20/21 13:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6010C		1			510034	10/26/21 14:10	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 13:27	KLC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510069	10/26/21 16:19	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 15:12	AJC	TAL CAN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-22

Date Collected: 10/15/21 09:50

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	509728	10/25/21 11:06	SHB	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Dissolved	Analysis	7470A		1			509964	10/26/21 13:58	MRL	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:40	MRL	TAL CAN

Client Sample ID: MW-25B

Date Collected: 10/15/21 12:50

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7

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	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 13:31	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 15:14	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:42	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 17:50	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555831	11/02/21 19:20	SPG	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	555831	11/02/21 19:37	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554824	10/25/21 09:49	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	50 mL	100 mL	554438	10/21/21 09:06	ABW	TAL DEN

Client Sample ID: MW-34

Date Collected: 10/20/21 10:25

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	510505	10/29/21 09:41	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	510507	10/29/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6010C		1			511035	11/02/21 12:48	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 13:44	KLC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	510505	10/29/21 09:41	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	510507	10/29/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			510947	11/01/21 15:26	AJC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 15:17	AJC	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	510505	10/29/21 09:41	SHB	TAL CAN
Dissolved	Prep	7470A			50 mL	50 mL	510509	10/29/21 14:00	SHB	TAL CAN
Dissolved	Analysis	7470A		1			510861	11/01/21 15:00	MRL	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 13:44	MRL	TAL CAN
Total/NA	Analysis	9040B		1			555993	11/02/21 17:02	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	100 mL	250 mL	554787	10/24/21 18:54	SVC	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

Client Sample ID: MW-34

Date Collected: 10/20/21 10:25

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8

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	SM2540 C		1	50 mL	100 mL	554439	10/21/21 09:10	ABW	TAL DEN

Client Sample ID: MW-35

Date Collected: 10/15/21 09:50

Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9

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	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6010C		1			510034	10/26/21 13:48	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	509729	10/25/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			510069	10/26/21 15:19	AJC	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	509730	10/25/21 14:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1			509964	10/26/21 12:13	MRL	TAL CAN
Total/NA	Analysis	9040B		1			554752	10/22/21 17:53	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	555831	11/02/21 19:53	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	555831	11/02/21 20:09	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	554824	10/25/21 09:49	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	554438	10/21/21 09:06	ABW	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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-1

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	11-02-21

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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-18-10	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

Chain of Custody Record

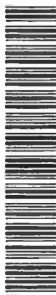
Client Information Client Contact: Molly Reeves Company: HDR Inc		Sampler: T. Snyder Phone: 720 838 6065	Lab PM: Harrington, Danielle M E-Mail: Danielle.Harrington@Eurofinset.com	Carrier Tracking No(s): COC No: 280-103098-29694.3 Page: Page 3 of 3 Job #:
Address: 9781 S. Meridian Blvd Suite 400 City: Englewood State: CO, Zip: 80112 Phone: 734-263-7138(Tel) Email: Molly.Reeves@hdrinc.com Project Name: Xcel Energy GW CCR Monitoring - Valmont Site: Colorado Groundwater App III + App IV		Analysis Requested Due Date Requested: TAT Requested (days): ASAP PO #: DEN-018 WO #: 28014379 Project #: SOW#: Perform MS/MSD (Yes or No) ☒ Field Filtered Sample (Yes or No) ☒ 6010C, 6020A Total Metals - EPA Cation ☒ 2540C, Calcd TDS/IC Chloride, Fluoride, Sulfate/ pH ☒ 9315 Ra226, 9320 Ra228, Ra226Ra228_GFPIC - EPA SL ☒ Dissolved metals (Lab filter) ☒		
Sample Identification Sample Date Sample Time Sample Type Matrix Preservation Code MW-1 10/19/21 1045 G WATER MW-4 10/19/21 1320 G WATER MW-5 10/20/21 0925 G WATER MW-6 10/19/21 1225 G WATER MW-8 10/19/21 1135 G WATER MW-22 10/15/21 0950 G WATER MW-25B 10/15/21 1250 G WATER MW-34 10/20/21 1025 G WATER MW-35 10/15/21 0950 G WATER		Total Number of containers 5 6 3 Incomplete suite - 1.5L sampled 6 6 Rest of suite collected 10/13 5 6 5		
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months		
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: Relinquished by:		Special Instructions/QC Requirements: Method of Shipment: Date/Time: 10/20/21 1309 Date/Time: Date/Time:		
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 0.1, 0.8 CF + 1.0 F 2V		

2.5/26

Chain of Custody Record



Environment Testing
America



Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: 4101 Shuffel Street NW		Harrington, Danielle M			280-590216.1
Shipping/Receiving		Phone:	E-Mail:	State of Origin:	Page:
Company: TestAmerica Laboratories, Inc.			Danielle Harrington@Eurofins.com	Colorado	Page 1 of 1
Address:		Accreditations Required (See note):		Job #	280-154447-1
City: North Canton		DoD - A2LA		Preservation Codes:	
State: OH, 44720				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:	
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		PO #		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Email:		WO #			
Project Name: Xcel Energy GW CCR Monitoring - Valmont		Project #			
Site: Xcel Energy CCR - Valmont Station		SSOW#			
Due Date Requested:		Analysis Requested		Special Instructions/Note:	
11/18/2021		TAT Requested (days):		514 W73	
Sample Date		Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Other)	Field Filtered Sample (Yes or No)
MW-1 (280-154447-1)		10:45 Mountain	Water	Water	6020A/3005A (MOD) 13 Total Metals (w/collision cell)
MW-4 (280-154447-2)		13:20 Mountain	Water	Water	6020A/3005A (MOD) Boron
MW-5 (280-154447-3)		09:25 Mountain	Water	Water	6010C/FILTRATION (MOD) Copy Analyses
MW-6 (280-154447-4)		12:25 Mountain	Water	Water	6020A/FILTRATION (MOD) 13 Metals
MW-8 (280-154447-5)		11:35 Mountain	Water	Water	6010C/3005A (MOD) Boron
MW-22 (280-154447-6)		09:50 Mountain	Water	Water	6020A/3005A (MOD) 13 Total Metals (w/collision cell)
MW-25B (280-154447-7)		12:50 Mountain	Water	Water	Perform MS/MSD (Yes or No)
MW-34 (280-154447-8)		10:25 Mountain	Water	Water	Field Filtered Sample (Yes or No)
MW-35 (280-154447-9)		09:50 Mountain	Water	Water	Field Filtered Sample (Yes or No)
					Total Number of Containers
					1
					2
					2
					2
					2
					2
					1
					1
					1

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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4

Empty Kit Relinquished by:
Relinquished by: [Signature]
Relinquished by: [Signature]
Relinquished by: [Signature]
Custody Seal No.: [Signature]
Custody Seals Intact: ☐ Yes ☐ No

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:

Time: Date: [Signature]
Received by: [Signature]
Received by: [Signature]
Received by: [Signature]
Cooler Temperature(s) °C and Other Remarks:

1
2
3
4
5
6
7
8
9
10
11
12
13
14

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Canton Facility				Login # : _____	
Client <u>ETA</u>		Site Name _____		Cooler unpacked by: <u>Mati</u>	
Cooler Received on <u>10-23-21</u>		Opened on <u>10-23-21</u>			
FedEx: 1 st Grd <u>Exp</u> UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____					
Receipt After-hours: Drop-off Date/Time _____				Storage Location _____	
TestAmerica Cooler # <u>TD</u>		Foam Box	Client Cooler	Box	Other _____
Packing material used: <u>Bubble Wrap</u>		Foam	Plastic Bag	None	Other _____
COOLANT: <u>Water Ice</u>		Blue Ice	Dry Ice	Water	None
1. Cooler temperature upon receipt ☐ See Multiple Cooler Form					
IR GUN# IR-14 (CF +0.1 °C)		Observed Cooler Temp. <u>2.5</u> °C	Corrected Cooler Temp. <u>2.6</u> °C		
IR GUN #IR-15 (CF +0.2 °C)		Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C		
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>				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 <u>No</u>	
-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
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
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: _____		

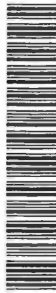
WT-NC-099

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

Chain of Custody Record



Environment Testing
 America



Client Information (Sub Contract Lab)		Sampler:	Lab PM	Carrier Tracking No(s)	COC No
Client Contact Shipping/Receiving		Phone	Harrington, Danielle M		280-590793.1
Company TestAmerica Laboratories, Inc.		E-Mail	Danielle.Harrington@Eurofinset.com	State of Origin:	Page
Address: 4101 Shuffel Street NW, City: North Canton State, Zip: OH, 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) Email:		Accreditations Required (See note): DoD - A2LA		Job #	Page 1 of 1
Due Date Requested: 11/2/2021		Analysis Requested		Job #	280-154447-1
TAT Requested (days):		Analysis Requested		Preservation Codes:	
PO #		Analysis Requested		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:	
WO #		Analysis Requested		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)	
Project # 28014379		Analysis Requested		Special Instructions/Note:	
SSOW#		Analysis Requested		W9S	
Sample Identification - Client ID (Lab ID)		Analysis Requested		Special Instructions/Note:	
MW-34 (280-154447-8)		Analysis Requested		Use Collision Cell	
Sample Date		Analysis Requested			
10/20/21		Analysis Requested			
Sample Time		Analysis Requested			
10:25		Analysis Requested			
Mountain		Analysis Requested			
Sample Type		Analysis Requested			
(C=comp, G=grab)		Analysis Requested			
Matrix		Analysis Requested			
(W=water, S=solid, O=oil, BT=Tissue, A=Air)		Analysis Requested			
Preservation Code:		Analysis Requested			
Water		Analysis Requested			
Field Filtered Sample (Yes or No)		Analysis Requested			
X		Analysis Requested			
Perform MS/MSD (Yes or No)		Analysis Requested			
X		Analysis Requested			
6020A/3005A (MOD) 13 Metals		Analysis Requested			
X		Analysis Requested			
6020A/FILTRATION (MOD) 13 Metals		Analysis Requested			
X		Analysis Requested			
6020A/3005A (MOD) 13 Metals		Analysis Requested			
X		Analysis Requested			
6010C/FILTRATION (MOD) Copy Analyses		Analysis Requested			
X		Analysis Requested			
6010C/3005A (MOD) Copy Analyses		Analysis Requested			
X		Analysis Requested			
7470A/7470A Prep Mercury		Analysis Requested			
X		Analysis Requested			
7470A/FILTRATION Mercury - 2/2		Analysis Requested			
X		Analysis Requested			
7470A/7470A Prep Mercury - 2/2		Analysis Requested			
X		Analysis Requested			
Total Number of Containers		Analysis Requested			
1		Analysis Requested			

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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification

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

Primary Deliverable Rank: 4

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: _____ Date/Time: 10-26-21 Company: STAPEN

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

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

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

Special Instructions/QC Requirements:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Canton Facility				Login # : _____	
Client <u>ETA</u>		Site Name _____		Cooler unpacked by: <u>Trent</u>	
Cooler Received on <u>10/28/11</u>		Opened on <u>10/28/11</u>			
FedEx: 1 st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Clipper ☐		Client Drop Off ☐ TestAmerica Courier ☐		Other ☐	
Receipt After-hours: Drop-off Date/Time _____			Storage Location _____		
TestAmerica Cooler # <u>7A</u>		Foam Box ☐ Client Cooler ☐ Box ☐ Other ☐			
Packing material used: <u>Bubble Wrap</u>		Foam ☐ Plastic Bag ☐ None ☐ Other ☐			
COOLANT: <u>Wet Ice</u>		Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐			
1. Cooler temperature upon receipt		☐ See Multiple Cooler Form			
IR GUN# IR-14 (CF +0.1 °C) Observed Cooler Temp. <u>1.8</u> °C		Corrected Cooler Temp. <u>1.9</u> °C			
IR GUN #IR-15 (CF +0.2 °C) Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C			
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>		☒ Yes ☐ No		Tests that are not checked for pH by Receiving: VOAs Oil and Grease TOC	
-Were the seals on the outside of the cooler(s) signed & dated?		☒ Yes ☐ No ☐ NA			
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?		☒ Yes ☐ No ☐ NA			
-Were tamper/custody seals intact and uncompromised?		☒ Yes ☐ No ☐ NA			
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 <u>(Y/N)</u> , and sample type of grab/comp <u>(Y/N)</u> ?		☒ 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# <u>HC157842</u>	
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			
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: 280-154447-1

Login Number: 154447

List Number: 1

Creator: Burke, Sophie G

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

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

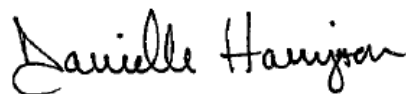
Laboratory Job ID: 280-154447-2

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
11/22/2021 9:08:32 AM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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results through
TotalAccess

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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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Qualifiers

Rad

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Job ID: 280-154447-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-154447-2

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 10/20/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.1°C and 1.8°C.

RADIUM-226 (GFPC)- METHOD 9315

The following samples were prepared at a reduced aliquot due to Matrix: MW-1 (280-154447-1), MW-4 (280-154447-2), MW-6 (280-154447-4), MW-8 (280-154447-5), MW-25B (280-154447-7), MW-34 (280-154447-8) and MW-35 (280-154447-9).

The Radium 226 carrier recovery is outside the lower control limit (40%) for the following sample: MW-4 (280-154447-2). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

The LCS recovered at (71%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (67-118) per method requirements. The LCS passes, no further action is required.

The method 9315 Sample Duplicate 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- METHOD 9320

The following samples were prepared at a reduced aliquot due to Matrix: MW-1 (280-154447-1), MW-4 (280-154447-2), MW-6 (280-154447-4), MW-8 (280-154447-5), MW-25B (280-154447-7), MW-34 (280-154447-8) and MW-35 (280-154447-9).

The Barium carrier recovery is outside the lower control limit of 40% (18.3%) for the following sample: MW-4 (280-154447-2). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

The method 9320 Sample Duplicate could not be performed, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Job ID: 280-154447-2 (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/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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Client Sample ID: MW-1

Lab Sample ID: 280-154447-1

☐ No Detections.

Client Sample ID: MW-4

Lab Sample ID: 280-154447-2

☐ No Detections.

Client Sample ID: MW-6

Lab Sample ID: 280-154447-4

☐ No Detections.

Client Sample ID: MW-8

Lab Sample ID: 280-154447-5

☐ No Detections.

Client Sample ID: MW-25B

Lab Sample ID: 280-154447-7

☐ No Detections.

Client Sample ID: MW-34

Lab Sample ID: 280-154447-8

☐ No Detections.

Client Sample ID: MW-35

Lab Sample ID: 280-154447-9

☐ No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

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: 280-154447-2

Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-154447-1	MW-1	Water	10/19/21 10:45	10/20/21 13:07
280-154447-2	MW-4	Water	10/19/21 13:20	10/20/21 13:07
280-154447-4	MW-6	Water	10/19/21 12:25	10/20/21 13:07
280-154447-5	MW-8	Water	10/19/21 11:35	10/20/21 13:07
280-154447-7	MW-25B	Water	10/15/21 12:50	10/20/21 13:07
280-154447-8	MW-34	Water	10/20/21 10:25	10/20/21 13:07
280-154447-9	MW-35	Water	10/15/21 09:50	10/20/21 13:07

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-1
Date Collected: 10/19/21 10:45
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.207	U	0.288	0.288	1.00	0.486	pCi/L	10/29/21 13:06	11/18/21 20:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					10/29/21 13:06	11/18/21 20:43	1

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.980	U G	1.32	1.32	1.00	2.21	pCi/L	10/29/21 13:06	11/18/21 20:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	18.3	X	40 - 110					10/29/21 13:06	11/18/21 20:43	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.612	U	0.496	0.499	1.00	0.740	pCi/L	10/29/21 13:06	11/18/21 20:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	55.5		40 - 110					10/29/21 13:06	11/18/21 20:44	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.664		0.359	0.364	1.00	0.456	pCi/L	10/29/21 13:06	11/18/21 20:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					10/29/21 13:06	11/18/21 20:44	1

Client Sample ID: MW-25B
Date Collected: 10/15/21 12:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.408	U	0.336	0.338	1.00	0.506	pCi/L	10/29/21 13:06	11/18/21 20:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					10/29/21 13:06	11/18/21 20:44	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.725	U G	0.976	0.978	1.00	1.64	pCi/L	10/29/21 13:06	11/18/21 20:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.8		40 - 110					10/29/21 13:06	11/18/21 20:44	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.466		0.300	0.303	1.00	0.397	pCi/L	10/29/21 13:06	11/18/21 20:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					10/29/21 13:06	11/18/21 20:44	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-1
Date Collected: 10/19/21 10:45
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.752		0.368	0.374	1.00	0.535	pCi/L	10/29/21 13:44	11/18/21 16:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					10/29/21 13:44	11/18/21 16:29	1
Y Carrier	81.1		40 - 110					10/29/21 13:44	11/18/21 16:29	1

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.930	U G	1.41	1.41	1.00	2.38	pCi/L	10/29/21 13:44	11/18/21 16:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	18.3	X	40 - 110					10/29/21 13:44	11/18/21 16:29	1
Y Carrier	86.0		40 - 110					10/29/21 13:44	11/18/21 16:29	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0839	U	0.500	0.500	1.00	0.882	pCi/L	10/29/21 13:44	11/18/21 16:30	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

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

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	55.5		40 - 110	10/29/21 13:44	11/18/21 16:30	1
Y Carrier	84.5		40 - 110	10/29/21 13:44	11/18/21 16:30	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.14		0.365	0.380	1.00	0.472	pCi/L	10/29/21 13:44	11/18/21 16:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					10/29/21 13:44	11/18/21 16:30	1
Y Carrier	85.2		40 - 110					10/29/21 13:44	11/18/21 16:30	1

Client Sample ID: MW-25B
Date Collected: 10/15/21 12:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.116	U	0.267	0.267	1.00	0.461	pCi/L	10/29/21 13:44	11/18/21 16:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					10/29/21 13:44	11/18/21 16:30	1
Y Carrier	89.7		40 - 110					10/29/21 13:44	11/18/21 16:30	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.626	U G	1.11	1.11	1.00	1.88	pCi/L	10/29/21 13:44	11/18/21 16:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.8		40 - 110					10/29/21 13:44	11/18/21 16:30	1
Y Carrier	89.7		40 - 110					10/29/21 13:44	11/18/21 16:30	1

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.280	U	0.269	0.270	1.00	0.434	pCi/L	10/29/21 13:44	11/18/21 16:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					10/29/21 13:44	11/18/21 16:30	1
Y Carrier	87.1		40 - 110					10/29/21 13:44	11/18/21 16:30	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

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

Client Sample ID: MW-1
Date Collected: 10/19/21 10:45
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-1
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.958		0.467	0.472	5.00	0.535	pCi/L		11/19/21 23:53	1

Client Sample ID: MW-4
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-2
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.91	U	1.93	1.93	5.00	2.38	pCi/L		11/19/21 23:53	1

Client Sample ID: MW-6
Date Collected: 10/19/21 12:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-4
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.696	U	0.704	0.706	5.00	0.882	pCi/L		11/19/21 23:53	1

Client Sample ID: MW-8
Date Collected: 10/19/21 11:35
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-5
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.81		0.512	0.526	5.00	0.472	pCi/L		11/19/21 23:53	1

Client Sample ID: MW-25B
Date Collected: 10/15/21 12:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-7
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.524		0.429	0.431	5.00	0.506	pCi/L		11/19/21 23:53	1

Client Sample ID: MW-34
Date Collected: 10/20/21 10:25
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-8
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.35	U	1.48	1.48	5.00	1.88	pCi/L		11/19/21 23:53	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

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

Client Sample ID: MW-35
Date Collected: 10/15/21 09:50
Date Received: 10/20/21 13:07

Lab Sample ID: 280-154447-9
Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.745		0.403	0.406	5.00	0.434	pCi/L		11/19/21 23:53	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-534284/18-A

Matrix: Water

Analysis Batch: 537292

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 534284

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.1614	U	0.267	0.267	1.00	0.587	pCi/L	10/29/21 13:06	11/18/21 20:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					10/29/21 13:06	11/18/21 20:46	1

Lab Sample ID: LCS 160-534284/1-A

Matrix: Water

Analysis Batch: 537291

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 534284

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		15.1	10.77		1.49	1.00	0.464	pCi/L	71	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	101		40 - 110							

Lab Sample ID: LCSD 160-534284/2-A

Matrix: Water

Analysis Batch: 537291

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 534284

Analyte		Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226		15.1	13.64		1.80	1.00	0.579	pCi/L	90	75 - 125	0.87	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits									
Ba Carrier	94.0		40 - 110									

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-534288/18-A

Matrix: Water

Analysis Batch: 537490

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 534288

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2033	U	0.310	0.311	1.00	0.521	pCi/L	10/29/21 13:44	11/18/21 16:43	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		40 - 110					10/29/21 13:44	11/18/21 16:43	1
Y Carrier	92.0		40 - 110					10/29/21 13:44	11/18/21 16:43	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

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

Lab Sample ID: LCS 160-534288/1-A
Matrix: Water
Analysis Batch: 537275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 534288

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228		12.2	11.18		1.31	1.00	0.393	pCi/L	92	75 - 125		
	LCS	LCS										
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	101		40 - 110									
Y Carrier	84.9		40 - 110									

Lab Sample ID: LCSD 160-534288/2-A
Matrix: Water
Analysis Batch: 537275

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 534288

Analyte		Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228		12.2	10.71		1.28	1.00	0.489	pCi/L	88	75 - 125	0.18	1
	LCSD	LCSD										
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	94.0		40 - 110									
Y Carrier	87.1		40 - 110									

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Rad

Prep Batch: 534284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	PrecSep-21	
280-154447-2	MW-4	Total/NA	Water	PrecSep-21	
280-154447-4	MW-6	Total/NA	Water	PrecSep-21	
280-154447-5	MW-8	Total/NA	Water	PrecSep-21	
280-154447-7	MW-25B	Total/NA	Water	PrecSep-21	
280-154447-8	MW-34	Total/NA	Water	PrecSep-21	
280-154447-9	MW-35	Total/NA	Water	PrecSep-21	
MB 160-534284/18-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-534284/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-534284/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 534288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-154447-1	MW-1	Total/NA	Water	PrecSep_0	
280-154447-2	MW-4	Total/NA	Water	PrecSep_0	
280-154447-4	MW-6	Total/NA	Water	PrecSep_0	
280-154447-5	MW-8	Total/NA	Water	PrecSep_0	
280-154447-7	MW-25B	Total/NA	Water	PrecSep_0	
280-154447-8	MW-34	Total/NA	Water	PrecSep_0	
280-154447-9	MW-35	Total/NA	Water	PrecSep_0	
MB 160-534288/18-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-534288/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-534288/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Client Sample ID: MW-1

Lab Sample ID: 280-154447-1

Date Collected: 10/19/21 10:45

Matrix: Water

Date Received: 10/20/21 13:07

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			750.85 mL	1.0 g	534284	10/29/21 13:06	BMP	TAL SL
Total/NA	Analysis	9315		1			537291	11/18/21 20:43	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.85 mL	1.0 g	534288	10/29/21 13:44	BMP	TAL SL
Total/NA	Analysis	9320		1			537275	11/18/21 16:29	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537579	11/19/21 23:53	MLK	TAL SL

Client Sample ID: MW-4

Lab Sample ID: 280-154447-2

Date Collected: 10/19/21 13:20

Matrix: Water

Date Received: 10/20/21 13:07

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.09 mL	1.0 g	534284	10/29/21 13:06	BMP	TAL SL
Total/NA	Analysis	9315		1			537291	11/18/21 20:43	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.09 mL	1.0 g	534288	10/29/21 13:44	BMP	TAL SL
Total/NA	Analysis	9320		1			537275	11/18/21 16:29	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537579	11/19/21 23:53	MLK	TAL SL

Client Sample ID: MW-6

Lab Sample ID: 280-154447-4

Date Collected: 10/19/21 12:25

Matrix: Water

Date Received: 10/20/21 13:07

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			750.48 mL	1.0 g	534284	10/29/21 13:06	BMP	TAL SL
Total/NA	Analysis	9315		1			537291	11/18/21 20:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.48 mL	1.0 g	534288	10/29/21 13:44	BMP	TAL SL
Total/NA	Analysis	9320		1			537275	11/18/21 16:30	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537579	11/19/21 23:53	MLK	TAL SL

Client Sample ID: MW-8

Lab Sample ID: 280-154447-5

Date Collected: 10/19/21 11:35

Matrix: Water

Date Received: 10/20/21 13:07

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			750.82 mL	1.0 g	534284	10/29/21 13:06	BMP	TAL SL
Total/NA	Analysis	9315		1			537291	11/18/21 20:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.82 mL	1.0 g	534288	10/29/21 13:44	BMP	TAL SL
Total/NA	Analysis	9320		1			537275	11/18/21 16:30	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537579	11/19/21 23:53	MLK	TAL SL

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Client Sample ID: MW-25B

Lab Sample ID: 280-154447-7

Date Collected: 10/15/21 12:50

Matrix: Water

Date Received: 10/20/21 13:07

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			750.62 mL	1.0 g	534284	10/29/21 13:06	BMP	TAL SL
Total/NA	Analysis	9315		1			537291	11/18/21 20:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.62 mL	1.0 g	534288	10/29/21 13:44	BMP	TAL SL
Total/NA	Analysis	9320		1			537275	11/18/21 16:30	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537579	11/19/21 23:53	MLK	TAL SL

Client Sample ID: MW-34

Lab Sample ID: 280-154447-8

Date Collected: 10/20/21 10:25

Matrix: Water

Date Received: 10/20/21 13:07

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			250.66 mL	1.0 g	534284	10/29/21 13:06	BMP	TAL SL
Total/NA	Analysis	9315		1			537291	11/18/21 20:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			250.66 mL	1.0 g	534288	10/29/21 13:44	BMP	TAL SL
Total/NA	Analysis	9320		1			537275	11/18/21 16:30	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537579	11/19/21 23:53	MLK	TAL SL

Client Sample ID: MW-35

Lab Sample ID: 280-154447-9

Date Collected: 10/15/21 09:50

Matrix: Water

Date Received: 10/20/21 13:07

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			750.26 mL	1.0 g	534284	10/29/21 13:06	BMP	TAL SL
Total/NA	Analysis	9315		1			537291	11/18/21 20:44	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.26 mL	1.0 g	534288	10/29/21 13:44	BMP	TAL SL
Total/NA	Analysis	9320		1			537275	11/18/21 16:30	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			537579	11/19/21 23:53	MLK	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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

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	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	03-01-22
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

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

Eurofins TestAmerica, Denver

Chain of Custody Record

Client Information Client Contact: Molly Reeves Company: HDR Inc		Sampler: T. Snyder Lab PM: Harrington, Danielle M Phone: 720 838 6065 E-Mail: Danielle.Harrington@Eurofinset.com	Carrier Tracking No(s): COC No: 280-103098-29694.3 Page: Page 3 of 3 Job #:
Address: 9781 S. Meridian Blvd Suite 400 City: Englewood State: CO, Zip: 80112 Phone: 734-263-7138(Tel) Email: Molly.Reeves@hdrinc.com Project Name: Xcel Energy GW CCR Monitoring - Valmont Site: Colorado Groundwater App III + App IV		Analysis Requested Due Date Requested: TAT Requested (days): ASAP PO #: DEN-018 WO #: Project #: 28014379 SSOW#:	
Sample Identification Sample ID: MW-1 MW-4 MW-5 MW-6 MW-8 MW-22 MW-25B MW-34 MW-35		Sample Date: 10/19/21 10/19/21 10/20/21 10/19/21 10/19/21 10/15/21 10/15/21 10/20/21 10/15/21	Sample Time: 1045 1320 0925 1225 1135 0950 1250 1025 0950
Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) Preservation Code: WATER WATER WATER WATER WATER WATER WATER WATER WATER		Perform MS/MSD (Yes or No) ☒ Field Filtered Sample (Yes or No) ☒ 6010C, 6020A Total Metals - EPA Cation ☒ 2540C, Calcd TDS/IC Chloride, Fluoride, Sulfate/ pH ☒ 9315 Ra226, 9320 Ra228, Ra226Ra228_GFPIC - EPA SL ☒ Dissolved metals (Lab filter) ☒	
Total Number of containers: 5 6 3 6 6 2 5 6 5		Special Instructions/Note: Incomplete suite - 1.5L sampled Rest of suite collected 10/13	
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:			
Barcode: 280-154447 Chain of Custody			
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months			
Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:	
Relinquished by:		Date: 10/20/21 1309 Company: HDR	
Relinquished by:		Date:	
Relinquished by:		Date:	
Relinquished by:		Date:	
Custody Seals Intact: ☒ Yes ☐ No		Cooler Temperature(s) °C and Other Remarks: 0.1, 0.8 CF + 1.0 F2V	

Phone: 303-736-0100 Fax: 303-431-7171													
Client Information (Sub Contract Lab)													
Client Contact: Shipping/Receiving													
Company: TestAmerica Laboratories, Inc.													
Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045													
Phone: 314-298-8566(Tel) 314-298-8757(Fax)													
Email:													
Project Name: Xcel Energy GW CCR Monitoring - Valmont													
Site: Xcel Energy CCR - Valmont Station													
Due Date Requested: 11/18/2021													
TAT Requested (days):													
PO #:													
WO #:													
Project #: 28014379													
SSOW#:													
Sample Identification - Client ID (Lab ID)													
MW-1 (280-154447-1)	10/19/21	10:45 Mountain	Water	Field Filled Sample (Yes or No)	X	9315_Ra226/PrecSep_21 Radium-226 (1/3)	X	9320_Ra226/PrecSep_0 Radium-228 (2/3)	X	Ra226Ra228_GFP/C (MOD) Local Method	Total Number of Containers	2	Special Instructions/Note:
MW-4 (280-154447-2)	10/19/21	13:20 Mountain	Water		X		X	X	X		2		
MW-6 (280-154447-4)	10/19/21	12:25 Mountain	Water		X		X	X	X		2		
MW-8 (280-154447-5)	10/19/21	11:35 Mountain	Water		X		X	X	X		2		
MW-25B (280-154447-7)	10/15/21	12:50 Mountain	Water		X		X	X	X		2		
MW-34 (280-154447-8)	10/20/21	10:25 Mountain	Water		X		X	X	X		2		
MW-35 (280-154447-9)	10/15/21	09:50 Mountain	Water		X		X	X	X		2		
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of sample must be shipped back to the Eurofins TestAmerica laboratory or other instructions should be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.													
Possible Hazard Identification													
Unconfirmed													
Deliverable Requested: I, II, III, IV, Other (specify)													
Primary Deliverable Rank: 4													
Empty Kit Relinquished by:													
Relinquished by:													
Relinquished by:													
Relinquished by:													
Custody Seals Intact: A Yes A No													
Custody Seal No.: ETA57L													
Cooler Temperature(s) °C and Other Remarks:													

COC No:	280-590217-1	Carrier Tracking No(s):	Lab PM:	Harrington, Danielle M	Sampler:								
Page:	Page 1 of 1	State of Origin:	E-Mail:	Danielle.Harrington@Eurofinset.com	Phone:								
Job #:	280-154447-1	Accreditations Required (See note):	DoD - A2LA										
Preservation Codes:													
A - HCL	B - NaOH	C - Zn Acetate	D - Nitric Acid	E - NaHSO4	F - MeOH	G - Anchor	H - Ascorbic Acid	I - Ice	J - DI Water	K - EDTA	L - EDA	Z - other (specify)	Other:
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			
Analysis Requested													
Total Number of containers													
Special Instructions/Note:													

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For		Months	
Special Instructions/QC Requirements:									
Method of Shipment:									
Received by:									
Date/Time:									
Received by:									
Date/Time:									
Received by:									
Date/Time:									
Cooler Temperature(s) °C and Other Remarks:									

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-154447-2

Login Number: 154447

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Burke, Sophie G

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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: 280-154447-2

Login Number: 154447

List Number: 3

Creator: Johnson, Autumn R

List Source: Eurofins TestAmerica, St. Louis

List Creation: 10/25/21 10:30 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-154447-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
280-154447-1	MW-1	91.3	
280-154447-2	MW-4	18.3 X	
280-154447-4	MW-6	55.5	
280-154447-5	MW-8	95.8	
280-154447-7	MW-25B	92.0	
280-154447-8	MW-34	72.8	
280-154447-9	MW-35	96.0	
LCS 160-534284/1-A	Lab Control Sample	101	
LCSD 160-534284/2-A	Lab Control Sample Dup	94.0	
MB 160-534284/18-A	Method Blank	94.8	
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)
280-154447-1	MW-1	91.3	81.1
280-154447-2	MW-4	18.3 X	86.0
280-154447-4	MW-6	55.5	84.5
280-154447-5	MW-8	95.8	85.2
280-154447-7	MW-25B	92.0	89.7
280-154447-8	MW-34	72.8	89.7
280-154447-9	MW-35	96.0	87.1
LCS 160-534288/1-A	Lab Control Sample	101	84.9
LCSD 160-534288/2-A	Lab Control Sample Dup	94.0	87.1
MB 160-534288/18-A	Method Blank	94.8	92.0
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

ANALYTICAL REPORT

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

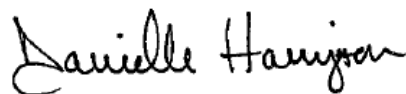
Laboratory Job ID: 280-156404-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
12/17/2021 7:28:57 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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results through
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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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Job ID: 280-156404-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-156404-1

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 12/03/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.1 C.

Please note, The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): MW-32-EB (280-156404-5). Container label reads Equipment Blank for ID. COC reads MW-32-EB. Sample time and date matches. The sample was logged per COC. For all samples, limited volume provided to run both TSS and TSD analysis. The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): MW-31 (280-156404-6) and MW-29 (280-156404-12). COC reads dissolved metals container is nitric acid preserved. Container received is unpreserved.

DISSOLVED METALS (ICPMS)- Method 6020A

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

TOTAL RECOVERABLE METALS (ICPMS)- Method 6020A

The accuracy and precision of the Calcium, Magnesium, and Sodium MS/MSD performed on a sample MW-30 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

Several samples are required dilution prior to analysis for various methods. The reporting limits have been adjusted accordingly.

Sulfate was detected in method blank MB 280-560952/6 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. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

MS/MSD analyses were performed on sample MW-27. The MS/MSD for MW-27 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 pH sample duplicate analysis data associated with QC batch 280-559796 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.

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Job ID: 280-156404-1 (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.

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Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-30

Lab Sample ID: 280-156404-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0028	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	260000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	17000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	320000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.0056		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	2200000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.36		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	160		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	5900		250	52	mg/L	50		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	1100		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	27		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	9500		1000	470	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-21

Lab Sample ID: 280-156404-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0088		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	480000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	9500		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	250000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	1.2		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	690000		1000	330	ug/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	18.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	410		60	20	mg/L	20		9056A	Total/NA
Sulfate	3000	B	100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	270		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	2.8	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	5400		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-21-FD

Lab Sample ID: 280-156404-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0095		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	430000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	8400		1000	220	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-21-FD (Continued)

Lab Sample ID: 280-156404-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	220000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	1.1		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	600000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.17		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	7.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.5	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	410		60	20	mg/L	20		9056A	Total/NA
Sulfate	3100	B	100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	270		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	2.4	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	5300		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-32

Lab Sample ID: 280-156404-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	420000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	9500		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	130000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.050		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	310000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.044		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	18.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	40		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	2400		100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	410		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	2.0	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	3700		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-32-EB

Lab Sample ID: 280-156404-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH adj. to 25 deg C	6.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	18.7	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Total Dissolved Solids (TDS)	6.0	J	10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-31

Lab Sample ID: 280-156404-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	280000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	10000		1000	220	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-31 (Continued)

Lab Sample ID: 280-156404-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	240000		1000	200	ug/L	1		6020A	Total
									Recoverable
Selenium	0.21		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	910000		1000	330	ug/L	1		6020A	Total
									Recoverable
Lithium	0.12		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
Arsenic	0.0029	J	0.0050	0.00075	mg/L	1		6020A	Dissolved
Calcium	340000		1000	580	ug/L	1		6020A	Dissolved
Potassium	12000		1000	220	ug/L	1		6020A	Dissolved
Magnesium	290000		1000	200	ug/L	1		6020A	Dissolved
Sodium	1100000		1000	330	ug/L	1		6020A	Dissolved
Selenium	0.25		0.0050	0.00089	mg/L	1		6020A	Dissolved
Lithium	0.13		0.0080	0.0017	mg/L	1		6020A	Dissolved
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	200		15	5.1	mg/L	5		9056A	Total/NA
Sulfate	3900		250	52	mg/L	50		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	640		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	19		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	6500		100	47	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-33A

Lab Sample ID: 280-156404-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Calcium	400000		1000	580	ug/L	1		6020A	Total
									Recoverable
Potassium	14000		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	270000		1000	200	ug/L	1		6020A	Total
									Recoverable
Selenium	0.17		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	490000		1000	330	ug/L	1		6020A	Total
									Recoverable
Lithium	0.12		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
pH adj. to 25 deg C	7.4	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	63		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	3100	B	100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	490		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	2.8	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	4500		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-13

Lab Sample ID: 280-156404-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0020	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Calcium	540000		1000	580	ug/L	1		6020A	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-13 (Continued)

Lab Sample ID: 280-156404-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	11000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	190000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.30		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	420000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.096		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	22.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	70		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	2200	B	100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	880		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	4000		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-27

Lab Sample ID: 280-156404-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	52000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	2300		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	24000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	0.0043	J	0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	57000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.025		0.0080	0.0017	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	22.2	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	25		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	49	B	5.0	1.0	mg/L	1		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	260		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	9.6		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	380		10	4.7	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-35

Lab Sample ID: 280-156404-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0072		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	530000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	10000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	290000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	1.5		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	850000		1000	330	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-35 (Continued)

Lab Sample ID: 280-156404-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.15		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	21.9	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	690		60	20	mg/L	20		9056A	Total/NA
Sulfate	3200	B	100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	190		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	18		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	5900		40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-28

Lab Sample ID: 280-156404-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.016		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	530000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	18000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	350000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	2.8		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	1000000		1000	330	ug/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	20.6	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	66		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	3300	B	100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	700		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	15		4.0	1.1	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	7400		100	47	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 280-156404-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.021		0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Calcium	520000		1000	580	ug/L	1		6020A	Total Recoverable
Potassium	17000		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	310000		1000	200	ug/L	1		6020A	Total Recoverable
Selenium	2.2		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	950000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.27		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
Arsenic	0.017		0.0050	0.00075	mg/L	1		6020A	Dissolved
Calcium	570000		1000	580	ug/L	1		6020A	Dissolved
Potassium	16000		1000	220	ug/L	1		6020A	Dissolved
Magnesium	340000		1000	200	ug/L	1		6020A	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-29 (Continued)

Lab Sample ID: 280-156404-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	990000		5000	1600	ug/L	5		6020A	Dissolved
Selenium	2.4		0.0050	0.00089	mg/L	1		6020A	Dissolved
Lithium	0.28		0.040	0.0083	mg/L	5		6020A	Dissolved
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	110		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	3700	B	100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	830		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	360		8.2	2.3	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	6800		100	47	mg/L	1		SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM2540 C	Total Dissolved Solids	SM18	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
FILTRATION	Sample Filtration	None	TAL CAN

Protocol References:

None = None

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

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-156404-1	MW-30	Water	11/29/21 15:30	12/03/21 15:37
280-156404-2	MW-21	Water	11/30/21 15:30	12/03/21 15:37
280-156404-3	MW-21-FD	Water	11/30/21 15:40	12/03/21 15:37
280-156404-4	MW-32	Water	12/01/21 10:30	12/03/21 15:37
280-156404-5	MW-32-EB	Water	12/01/21 10:45	12/03/21 15:37
280-156404-6	MW-31	Water	12/01/21 13:45	12/03/21 15:37
280-156404-7	MW-33A	Ground Water	12/01/21 14:15	12/03/21 15:37
280-156404-8	MW-13	Water	12/02/21 10:40	12/03/21 15:37
280-156404-9	MW-27	Water	12/02/21 12:15	12/03/21 15:37
280-156404-10	MW-35	Water	12/02/21 15:40	12/03/21 15:37
280-156404-11	MW-28	Water	12/03/21 10:50	12/03/21 15:37
280-156404-12	MW-29	Water	12/03/21 14:30	12/03/21 15:37

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Client Sample ID: MW-30
Date Collected: 11/29/21 15:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0028	J	0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:19	1
Calcium	260000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:19	1
Potassium	17000		1000	220	ug/L		12/10/21 14:00	12/14/21 17:19	1
Magnesium	320000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:19	1
Selenium	0.0056		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:19	1
Sodium	2200000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:19	1
Lithium	0.36		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 12:37	1

Client Sample ID: MW-21
Date Collected: 11/30/21 15:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0088		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:31	1
Calcium	480000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:31	1
Potassium	9500		1000	220	ug/L		12/10/21 14:00	12/14/21 17:31	1
Magnesium	250000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:31	1
Selenium	1.2		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:31	1
Sodium	690000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:31	1
Lithium	0.19		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 12:46	1

Client Sample ID: MW-21-FD
Date Collected: 11/30/21 15:40
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0095		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:34	1
Calcium	430000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:34	1
Potassium	8400		1000	220	ug/L		12/10/21 14:00	12/14/21 17:34	1
Magnesium	220000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:34	1
Selenium	1.1		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:34	1
Sodium	600000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:34	1
Lithium	0.17		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 12:49	1

Client Sample ID: MW-32
Date Collected: 12/01/21 10:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:41	1
Calcium	420000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:41	1
Potassium	9500		1000	220	ug/L		12/10/21 14:00	12/14/21 17:41	1
Magnesium	130000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:41	1
Selenium	0.050		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:41	1
Sodium	310000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:41	1
Lithium	0.044		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 12:51	1

Client Sample ID: MW-32-EB
Date Collected: 12/01/21 10:45
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:44	1
Calcium	ND		1000	580	ug/L		12/10/21 14:00	12/14/21 17:44	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Client Sample ID: MW-32-EB
Date Collected: 12/01/21 10:45
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		1000	220	ug/L		12/10/21 14:00	12/14/21 17:44	1
Magnesium	ND		1000	200	ug/L		12/10/21 14:00	12/14/21 17:44	1
Selenium	ND		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:44	1
Sodium	ND		1000	330	ug/L		12/10/21 14:00	12/14/21 17:44	1
Lithium	ND		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 12:54	1

Client Sample ID: MW-31
Date Collected: 12/01/21 13:45
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0018	J	0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:46	1
Calcium	280000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:46	1
Potassium	10000		1000	220	ug/L		12/10/21 14:00	12/14/21 17:46	1
Magnesium	240000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:46	1
Selenium	0.21		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:46	1
Sodium	910000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:46	1
Lithium	0.12		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 13:01	1

Client Sample ID: MW-33A
Date Collected: 12/01/21 14:15
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0018	J	0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:49	1
Calcium	400000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:49	1
Potassium	14000		1000	220	ug/L		12/10/21 14:00	12/14/21 17:49	1
Magnesium	270000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:49	1
Selenium	0.17		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:49	1
Sodium	490000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:49	1
Lithium	0.12		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 13:04	1

Client Sample ID: MW-13
Date Collected: 12/02/21 10:40
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0020	J	0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:51	1
Calcium	540000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:51	1
Potassium	11000		1000	220	ug/L		12/10/21 14:00	12/14/21 17:51	1
Magnesium	190000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:51	1
Selenium	0.30		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:51	1
Sodium	420000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:51	1
Lithium	0.096		0.0080	0.0017	mg/L		12/10/21 14:00	12/16/21 14:09	1

Client Sample ID: MW-27
Date Collected: 12/02/21 12:15
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:54	1
Calcium	52000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:54	1
Potassium	2300		1000	220	ug/L		12/10/21 14:00	12/14/21 17:54	1
Magnesium	24000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:54	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Client Sample ID: MW-27
Date Collected: 12/02/21 12:15
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.0043	J	0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:54	1
Sodium	57000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:54	1
Lithium	0.025		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 13:06	1

Client Sample ID: MW-35
Date Collected: 12/02/21 15:40
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0072		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:56	1
Calcium	530000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:56	1
Potassium	10000		1000	220	ug/L		12/10/21 14:00	12/14/21 17:56	1
Magnesium	290000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:56	1
Selenium	1.5		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:56	1
Sodium	850000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:56	1
Lithium	0.15		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 13:09	1

Client Sample ID: MW-28
Date Collected: 12/03/21 10:50
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.016		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:59	1
Calcium	530000		1000	580	ug/L		12/10/21 14:00	12/14/21 17:59	1
Potassium	18000		1000	220	ug/L		12/10/21 14:00	12/14/21 17:59	1
Magnesium	350000		1000	200	ug/L		12/10/21 14:00	12/14/21 17:59	1
Selenium	2.8		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:59	1
Sodium	1000000		1000	330	ug/L		12/10/21 14:00	12/14/21 17:59	1
Lithium	0.22		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 13:11	1

Client Sample ID: MW-29
Date Collected: 12/03/21 14:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.021		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 18:02	1
Calcium	520000		1000	580	ug/L		12/10/21 14:00	12/14/21 18:02	1
Potassium	17000		1000	220	ug/L		12/10/21 14:00	12/14/21 18:02	1
Magnesium	310000		1000	200	ug/L		12/10/21 14:00	12/14/21 18:02	1
Selenium	2.2		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 18:02	1
Sodium	950000		1000	330	ug/L		12/10/21 14:00	12/14/21 18:02	1
Lithium	0.27		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 13:14	1

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

Client Sample ID: MW-31
Date Collected: 12/01/21 13:45
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0029	J	0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 18:04	1
Calcium	340000		1000	580	ug/L		12/10/21 14:00	12/14/21 18:04	1
Potassium	12000		1000	220	ug/L		12/10/21 14:00	12/14/21 18:04	1
Magnesium	290000		1000	200	ug/L		12/10/21 14:00	12/14/21 18:04	1
Sodium	1100000		1000	330	ug/L		12/10/21 14:00	12/14/21 18:04	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Client Sample ID: MW-31
Date Collected: 12/01/21 13:45
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.25		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 18:04	1
Lithium	0.13		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 13:17	1

Client Sample ID: MW-29
Date Collected: 12/03/21 14:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.017		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 18:12	1
Calcium	570000		1000	580	ug/L		12/10/21 14:00	12/14/21 18:12	1
Potassium	16000		1000	220	ug/L		12/10/21 14:00	12/14/21 18:12	1
Magnesium	340000		1000	200	ug/L		12/10/21 14:00	12/14/21 18:12	1
Sodium	990000		5000	1600	ug/L		12/10/21 14:00	12/15/21 13:19	5
Selenium	2.4		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 18:12	1
Lithium	0.28		0.040	0.0083	mg/L		12/10/21 14:00	12/15/21 13:19	5

General Chemistry

Client Sample ID: MW-30
Date Collected: 11/29/21 15:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-1
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			12/06/21 16:41	1
Temperature	22.7	HF	1.0	1.0	Degrees C			12/06/21 16:41	1
Chloride	160		15	5.1	mg/L			12/16/21 17:23	5
Sulfate	5900		250	52	mg/L			12/17/21 13:39	50
Bicarbonate Alkalinity as CaCO3	1100		10	3.1	mg/L			12/08/21 15:02	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/08/21 15:02	1
Total Suspended Solids	27		4.0	1.1	mg/L			12/06/21 08:34	1
Total Dissolved Solids (TDS)	9500		1000	470	mg/L			12/06/21 08:32	1

Client Sample ID: MW-21
Date Collected: 11/30/21 15:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-2
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			12/07/21 16:42	1
Temperature	18.3	HF	1.0	1.0	Degrees C			12/07/21 16:42	1
Chloride	410		60	20	mg/L			12/16/21 18:23	20
Sulfate	3000	B	100	21	mg/L			12/16/21 18:23	20
Bicarbonate Alkalinity as CaCO3	270		10	3.1	mg/L			12/09/21 20:20	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/09/21 20:20	1
Total Suspended Solids	2.8	J	4.0	1.1	mg/L			12/06/21 08:34	1
Total Dissolved Solids (TDS)	5400		40	19	mg/L			12/06/21 08:32	1

Client Sample ID: MW-21-FD
Date Collected: 11/30/21 15:40
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-3
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			12/07/21 16:46	1
Temperature	18.5	HF	1.0	1.0	Degrees C			12/07/21 16:46	1
Chloride	410		60	20	mg/L			12/16/21 18:38	20
Sulfate	3100	B	100	21	mg/L			12/16/21 18:38	20

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

General Chemistry (Continued)

Client Sample ID: MW-21-FD
Date Collected: 11/30/21 15:40
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	270		10	3.1	mg/L			12/09/21 20:12	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/09/21 20:12	1
Total Suspended Solids	2.4	J	4.0	1.1	mg/L			12/06/21 08:34	1
Total Dissolved Solids (TDS)	5300		40	19	mg/L			12/06/21 08:32	1

Client Sample ID: MW-32
Date Collected: 12/01/21 10:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-4
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			12/07/21 16:32	1
Temperature	18.1	HF	1.0	1.0	Degrees C			12/07/21 16:32	1
Chloride	40		3.0	1.0	mg/L			12/16/21 18:53	1
Sulfate	2400		100	21	mg/L			12/17/21 12:44	20
Bicarbonate Alkalinity as CaCO3	410		10	3.1	mg/L			12/15/21 14:48	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 14:48	1
Total Suspended Solids	2.0	J	4.0	1.1	mg/L			12/06/21 08:34	1
Total Dissolved Solids (TDS)	3700		40	19	mg/L			12/07/21 10:24	1

Client Sample ID: MW-32-EB
Date Collected: 12/01/21 10:45
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	6.5	HF	0.1	0.1	SU			12/07/21 16:38	1
Temperature	18.7	HF	1.0	1.0	Degrees C			12/07/21 16:38	1
Chloride	ND		3.0	1.0	mg/L			12/16/21 19:08	1
Sulfate	ND		5.0	1.0	mg/L			12/16/21 19:08	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 13:41	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 13:41	1
Total Suspended Solids	ND		4.0	1.1	mg/L			12/06/21 08:34	1
Total Dissolved Solids (TDS)	6.0	J	10	4.7	mg/L			12/07/21 10:24	1

Client Sample ID: MW-31
Date Collected: 12/01/21 13:45
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-6
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			12/09/21 14:40	1
Temperature	22.4	HF	1.0	1.0	Degrees C			12/09/21 14:40	1
Chloride	200		15	5.1	mg/L			12/16/21 20:23	5
Sulfate	3900		250	52	mg/L			12/17/21 13:40	50
Bicarbonate Alkalinity as CaCO3	640		10	3.1	mg/L			12/15/21 13:51	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 13:51	1
Total Suspended Solids	19		4.0	1.1	mg/L			12/06/21 08:34	1
Total Dissolved Solids (TDS)	6500		100	47	mg/L			12/07/21 10:24	1

Client Sample ID: MW-33A
Date Collected: 12/01/21 14:15
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-7
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			12/09/21 14:48	1
Temperature	23.1	HF	1.0	1.0	Degrees C			12/09/21 14:48	1

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Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

General Chemistry (Continued)

Client Sample ID: MW-33A
Date Collected: 12/01/21 14:15
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-7
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63		3.0	1.0	mg/L			12/16/21 19:23	1
Sulfate	3100	B	100	21	mg/L			12/16/21 19:38	20
Bicarbonate Alkalinity as CaCO3	490		10	3.1	mg/L			12/15/21 14:14	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 14:14	1
Total Suspended Solids	2.8	J	4.0	1.1	mg/L			12/06/21 08:34	1
Total Dissolved Solids (TDS)	4500		40	19	mg/L			12/07/21 10:24	1

Client Sample ID: MW-13
Date Collected: 12/02/21 10:40
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-8
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			12/09/21 14:52	1
Temperature	22.8	HF	1.0	1.0	Degrees C			12/09/21 14:52	1
Chloride	70		3.0	1.0	mg/L			12/16/21 20:38	1
Sulfate	2200	B	100	21	mg/L			12/16/21 20:53	20
Bicarbonate Alkalinity as CaCO3	880		10	3.1	mg/L			12/15/21 14:39	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 14:39	1
Total Suspended Solids	ND		4.0	1.1	mg/L			12/07/21 10:28	1
Total Dissolved Solids (TDS)	4000		40	19	mg/L			12/08/21 10:11	1

Client Sample ID: MW-27
Date Collected: 12/02/21 12:15
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-9
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			12/09/21 14:27	1
Temperature	22.2	HF	1.0	1.0	Degrees C			12/09/21 14:27	1
Chloride	25		3.0	1.0	mg/L			12/16/21 21:08	1
Sulfate	49	B	5.0	1.0	mg/L			12/16/21 21:08	1
Bicarbonate Alkalinity as CaCO3	260		10	3.1	mg/L			12/15/21 13:58	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 13:58	1
Total Suspended Solids	9.6		4.0	1.1	mg/L			12/07/21 10:28	1
Total Dissolved Solids (TDS)	380		10	4.7	mg/L			12/08/21 10:11	1

Client Sample ID: MW-35
Date Collected: 12/02/21 15:40
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-10
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			12/09/21 14:31	1
Temperature	21.9	HF	1.0	1.0	Degrees C			12/09/21 14:31	1
Chloride	690		60	20	mg/L			12/16/21 21:23	20
Sulfate	3200	B	100	21	mg/L			12/16/21 21:23	20
Bicarbonate Alkalinity as CaCO3	190		10	3.1	mg/L			12/15/21 14:05	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 14:05	1
Total Suspended Solids	18		4.0	1.1	mg/L			12/07/21 10:28	1
Total Dissolved Solids (TDS)	5900		40	19	mg/L			12/08/21 10:11	1

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

General Chemistry

Client Sample ID: MW-28
Date Collected: 12/03/21 10:50
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-11
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			12/14/21 14:06	1
Temperature	20.6	HF	1.0	1.0	Degrees C			12/14/21 14:06	1
Chloride	66		3.0	1.0	mg/L			12/16/21 21:38	1
Sulfate	3300	B	100	21	mg/L			12/16/21 21:54	20
Bicarbonate Alkalinity as CaCO3	700		10	3.1	mg/L			12/15/21 13:35	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 13:35	1
Total Suspended Solids	15		4.0	1.1	mg/L			12/08/21 10:20	1
Total Dissolved Solids (TDS)	7400		100	47	mg/L			12/09/21 12:22	1

Client Sample ID: MW-29
Date Collected: 12/03/21 14:30
Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-12
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			12/14/21 14:14	1
Temperature	20.5	HF	1.0	1.0	Degrees C			12/14/21 14:14	1
Chloride	110		3.0	1.0	mg/L			12/16/21 22:09	1
Sulfate	3700	B	100	21	mg/L			12/16/21 22:24	20
Bicarbonate Alkalinity as CaCO3	830		10	3.1	mg/L			12/15/21 13:24	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 13:24	1
Total Suspended Solids	360		8.2	2.3	mg/L			12/08/21 10:20	1
Total Dissolved Solids (TDS)	6800		100	47	mg/L			12/09/21 12:22	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-516394/1-A

Matrix: Water

Analysis Batch: 516825

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		12/10/21 14:00	12/14/21 17:14	1
Calcium	ND		1000	580	ug/L		12/10/21 14:00	12/14/21 17:14	1
Potassium	ND		1000	220	ug/L		12/10/21 14:00	12/14/21 17:14	1
Magnesium	ND		1000	200	ug/L		12/10/21 14:00	12/14/21 17:14	1
Selenium	ND		0.0050	0.00089	mg/L		12/10/21 14:00	12/14/21 17:14	1
Sodium	ND		1000	330	ug/L		12/10/21 14:00	12/14/21 17:14	1

Lab Sample ID: MB 240-516394/1-A

Matrix: Water

Analysis Batch: 516928

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		0.0080	0.0017	mg/L		12/10/21 14:00	12/15/21 12:32	1

Lab Sample ID: LCS 240-516394/2-A

Matrix: Water

Analysis Batch: 516825

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.03		mg/L		103	80 - 120
Calcium	25000	26400		ug/L		105	80 - 120
Potassium	25000	26100		ug/L		104	80 - 120
Magnesium	25000	25800		ug/L		103	80 - 120
Selenium	1.00	0.959		mg/L		96	80 - 120
Sodium	25000	26100		ug/L		105	80 - 120

Lab Sample ID: LCS 240-516394/2-A

Matrix: Water

Analysis Batch: 516928

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.456		mg/L		91	80 - 120

Lab Sample ID: 280-156404-1 MS

Matrix: Water

Analysis Batch: 516825

Client Sample ID: MW-30

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0028	J	1.00	1.10		mg/L		110	75 - 125
Calcium	260000		25000	297000	4	ug/L		146	75 - 125
Potassium	17000		25000	43400		ug/L		104	75 - 125
Magnesium	320000		25000	352000	4	ug/L		135	75 - 125
Selenium	0.0056		1.00	0.974		mg/L		97	75 - 125
Sodium	2200000		25000	2260000	4	ug/L		367	75 - 125

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Lab Sample ID: 280-156404-1 MS

Matrix: Water

Analysis Batch: 516928

Client Sample ID: MW-30

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.36		0.500	0.786		mg/L		86	75 - 125

Lab Sample ID: 280-156404-1 MSD

Matrix: Water

Analysis Batch: 516825

Client Sample ID: MW-30

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	0.0028	J	1.00	1.09		mg/L		109	75 - 125	1	20
Calcium	260000		25000	300000	4	ug/L		156	75 - 125	1	20
Potassium	17000		25000	43500		ug/L		104	75 - 125	0	20
Magnesium	320000		25000	355000	4	ug/L		146	75 - 125	1	20
Selenium	0.0056		1.00	0.963		mg/L		96	75 - 125	1	20
Sodium	2200000		25000	2280000	4	ug/L		458	75 - 125	1	20

Lab Sample ID: 280-156404-1 MSD

Matrix: Water

Analysis Batch: 516928

Client Sample ID: MW-30

Prep Type: Total Recoverable

Prep Batch: 516394

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lithium	0.36		0.500	0.777		mg/L		84	75 - 125	1	20

Method: 9040B - pH

Lab Sample ID: LCS 280-559796/50

Matrix: Water

Analysis Batch: 559796

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 280-559935/4

Matrix: Water

Analysis Batch: 559935

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 280-560189/27

Matrix: Water

Analysis Batch: 560189

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 280-560189/50

Matrix: Water

Analysis Batch: 560189

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

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Method: 9040B - pH (Continued)

Lab Sample ID: 280-156404-6 DU

Matrix: Water

Analysis Batch: 560189

Client Sample ID: MW-31

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.4	HF	7.4		SU		0.4	5
Temperature	22.4	HF	22.8		Degrees C		2	10

Lab Sample ID: LCS 280-560613/4

Matrix: Water

Analysis Batch: 560613

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: 280-156404-11 DU

Matrix: Water

Analysis Batch: 560613

Client Sample ID: MW-28

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	7.5	HF	7.5		SU		0.1	5
Temperature	20.6	HF	20.4		Degrees C		0.5	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-560882/6

Matrix: Water

Analysis Batch: 560882

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			12/16/21 11:40	1

Lab Sample ID: LCS 280-560882/4

Matrix: Water

Analysis Batch: 560882

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	102		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-560882/5

Matrix: Water

Analysis Batch: 560882

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	100		mg/L		100	90 - 110	2	10

Lab Sample ID: MRL 280-560882/3

Matrix: Water

Analysis Batch: 560882

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	4.59	J	mg/L		92	50 - 150

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Lab Sample ID: 280-156404-9 MS

Matrix: Water

Analysis Batch: 560882

Client Sample ID: MW-27

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	46	F1	50.0	172	F1	mg/L		252	80 - 120

Lab Sample ID: 280-156404-9 MSD

Matrix: Water

Analysis Batch: 560882

Client Sample ID: MW-27

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	46	F1	50.0	175	F1	mg/L		258	80 - 120	2	20

Lab Sample ID: 280-156404-9 DU

Matrix: Water

Analysis Batch: 560882

Client Sample ID: MW-27

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	46	F1	43.3		mg/L		6	15

Lab Sample ID: MB 280-560952/6

Matrix: Water

Analysis Batch: 560952

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			12/16/21 15:57	1
Sulfate	1.34	J	5.0	1.0	mg/L			12/16/21 15:57	1

Lab Sample ID: LCS 280-560952/4

Matrix: Water

Analysis Batch: 560952

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	99.5		mg/L		99	90 - 110
Sulfate	100	101		mg/L		101	90 - 110

Lab Sample ID: LCSD 280-560952/5

Matrix: Water

Analysis Batch: 560952

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	101		mg/L		101	90 - 110	0	10

Lab Sample ID: MRL 280-560952/3

Matrix: Water

Analysis Batch: 560952

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	5.31		mg/L		106	50 - 150
Sulfate	5.00	6.34		mg/L		127	50 - 150

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Lab Sample ID: 280-156404-1 MS

Matrix: Water

Analysis Batch: 560952

Client Sample ID: MW-30

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	160		250	428		mg/L		107	80 - 120

Lab Sample ID: 280-156404-1 MSD

Matrix: Water

Analysis Batch: 560952

Client Sample ID: MW-30

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	160		250	424		mg/L		105	80 - 120	1	20

Lab Sample ID: 280-156404-1 DU

Matrix: Water

Analysis Batch: 560952

Client Sample ID: MW-30

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	160		154		mg/L		4	15

Lab Sample ID: MB 280-561035/6

Matrix: Water

Analysis Batch: 561035

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			12/17/21 11:19	1

Lab Sample ID: LCS 280-561035/4

Matrix: Water

Analysis Batch: 561035

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	103		mg/L		103	90 - 110

Lab Sample ID: LCSD 280-561035/5

Matrix: Water

Analysis Batch: 561035

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	103		mg/L		103	90 - 110	0	10

Lab Sample ID: MRL 280-561035/3

Matrix: Water

Analysis Batch: 561035

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	4.80	J	mg/L		96	50 - 150

Lab Sample ID: 280-156404-4 MS

Matrix: Water

Analysis Batch: 561035

Client Sample ID: MW-32

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2400		1000	3320		mg/L		96	80 - 120

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 280-156404-4 MSD

Matrix: Water

Analysis Batch: 561035

Client Sample ID: MW-32

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	2400		1000	3460		mg/L		109	80 - 120	4	20

Lab Sample ID: 280-156404-4 DU

Matrix: Water

Analysis Batch: 561035

Client Sample ID: MW-32

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	2400		2350		mg/L		0.5	15

Lab Sample ID: MB 280-561037/6

Matrix: Water

Analysis Batch: 561037

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			12/17/21 11:21	1

Lab Sample ID: LCS 280-561037/4

Matrix: Water

Analysis Batch: 561037

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	99.6		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-561037/5

Matrix: Water

Analysis Batch: 561037

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	99.5		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-561037/3

Matrix: Water

Analysis Batch: 561037

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	4.40	J	mg/L		88	50 - 150

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-560077/5

Matrix: Water

Analysis Batch: 560077

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/08/21 11:26	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/08/21 11:26	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 280-560255/31

Matrix: Water

Analysis Batch: 560255

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/09/21 14:23	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/09/21 14:23	1

Lab Sample ID: MB 280-560255/57

Matrix: Water

Analysis Batch: 560255

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/09/21 17:21	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/09/21 17:21	1

Lab Sample ID: MB 280-560810/5

Matrix: Water

Analysis Batch: 560810

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 12:43	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/15/21 12:43	1

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

Lab Sample ID: MB 280-559669/1

Matrix: Water

Analysis Batch: 559669

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			12/06/21 07:34	1

Lab Sample ID: LCS 280-559669/2

Matrix: Water

Analysis Batch: 559669

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 280-559669/3

Matrix: Water

Analysis Batch: 559669

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	4	20

Lab Sample ID: MB 280-559810/1

Matrix: Water

Analysis Batch: 559810

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			12/07/21 09:28	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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

Lab Sample ID: LCS 280-559810/2

Matrix: Water

Analysis Batch: 559810

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	88.0		mg/L		88	79 - 114

Lab Sample ID: LCSD 280-559810/3

Matrix: Water

Analysis Batch: 559810

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	91.2		mg/L		91	79 - 114	4	20

Lab Sample ID: MB 280-559971/1

Matrix: Water

Analysis Batch: 559971

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			12/08/21 10:19	1

Lab Sample ID: LCS 280-559971/2

Matrix: Water

Analysis Batch: 559971

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	91.6		mg/L		92	79 - 114

Lab Sample ID: LCSD 280-559971/3

Matrix: Water

Analysis Batch: 559971

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	90.0		mg/L		90	79 - 114	2	20

Lab Sample ID: 280-156404-11 DU

Matrix: Water

Analysis Batch: 559971

Client Sample ID: MW-28

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	15		14.4		mg/L				

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: MB 280-559667/1

Matrix: Water

Analysis Batch: 559667

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			12/06/21 07:32	1

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QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Method: SM2540 C - Total Dissolved Solids (Continued)

Lab Sample ID: LCS 280-559667/2

Matrix: Water

Analysis Batch: 559667

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)	503	500		mg/L		99	88 - 114

Lab Sample ID: MB 280-559807/1

Matrix: Water

Analysis Batch: 559807

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			12/07/21 09:24	1

Lab Sample ID: LCS 280-559807/2

Matrix: Water

Analysis Batch: 559807

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)	503	499		mg/L		99	88 - 114

Lab Sample ID: MB 280-559970/1

Matrix: Water

Analysis Batch: 559970

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			12/08/21 10:11	1

Lab Sample ID: LCS 280-559970/2

Matrix: Water

Analysis Batch: 559970

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)	523	522		mg/L		100	88 - 114

Lab Sample ID: 280-156404-9 DU

Matrix: Water

Analysis Batch: 559970

Client Sample ID: MW-27

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	380		383		mg/L		1	10

Lab Sample ID: MB 280-560148/1

Matrix: Water

Analysis Batch: 560148

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			12/09/21 12:21	1

Lab Sample ID: LCS 280-560148/2

Matrix: Water

Analysis Batch: 560148

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)	523	521		mg/L		100	88 - 114

Eurofins TestAmerica, Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Metals

Filtration Batch: 516393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-6	MW-31	Dissolved	Water	FILTRATION	
280-156404-12	MW-29	Dissolved	Water	FILTRATION	

Prep Batch: 516394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total Recoverable	Water	3005A	
280-156404-2	MW-21	Total Recoverable	Water	3005A	
280-156404-3	MW-21-FD	Total Recoverable	Water	3005A	
280-156404-4	MW-32	Total Recoverable	Water	3005A	
280-156404-5	MW-32-EB	Total Recoverable	Water	3005A	
280-156404-6	MW-31	Dissolved	Water	3005A	516393
280-156404-6	MW-31	Total Recoverable	Water	3005A	
280-156404-7	MW-33A	Total Recoverable	Ground Water	3005A	
280-156404-8	MW-13	Total Recoverable	Water	3005A	
280-156404-9	MW-27	Total Recoverable	Water	3005A	
280-156404-10	MW-35	Total Recoverable	Water	3005A	
280-156404-11	MW-28	Total Recoverable	Water	3005A	
280-156404-12	MW-29	Dissolved	Water	3005A	516393
280-156404-12	MW-29	Total Recoverable	Water	3005A	
MB 240-516394/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-516394/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-156404-1 MS	MW-30	Total Recoverable	Water	3005A	
280-156404-1 MSD	MW-30	Total Recoverable	Water	3005A	

Analysis Batch: 516825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total Recoverable	Water	6020A	516394
280-156404-2	MW-21	Total Recoverable	Water	6020A	516394
280-156404-3	MW-21-FD	Total Recoverable	Water	6020A	516394
280-156404-4	MW-32	Total Recoverable	Water	6020A	516394
280-156404-5	MW-32-EB	Total Recoverable	Water	6020A	516394
280-156404-6	MW-31	Dissolved	Water	6020A	516394
280-156404-6	MW-31	Total Recoverable	Water	6020A	516394
280-156404-7	MW-33A	Total Recoverable	Ground Water	6020A	516394
280-156404-8	MW-13	Total Recoverable	Water	6020A	516394
280-156404-9	MW-27	Total Recoverable	Water	6020A	516394
280-156404-10	MW-35	Total Recoverable	Water	6020A	516394
280-156404-11	MW-28	Total Recoverable	Water	6020A	516394
280-156404-12	MW-29	Dissolved	Water	6020A	516394
280-156404-12	MW-29	Total Recoverable	Water	6020A	516394
MB 240-516394/1-A	Method Blank	Total Recoverable	Water	6020A	516394
LCS 240-516394/2-A	Lab Control Sample	Total Recoverable	Water	6020A	516394
280-156404-1 MS	MW-30	Total Recoverable	Water	6020A	516394
280-156404-1 MSD	MW-30	Total Recoverable	Water	6020A	516394

Analysis Batch: 516928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total Recoverable	Water	6020A	516394
280-156404-2	MW-21	Total Recoverable	Water	6020A	516394
280-156404-3	MW-21-FD	Total Recoverable	Water	6020A	516394
280-156404-4	MW-32	Total Recoverable	Water	6020A	516394

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Metals (Continued)

Analysis Batch: 516928 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-5	MW-32-EB	Total Recoverable	Water	6020A	516394
280-156404-6	MW-31	Dissolved	Water	6020A	516394
280-156404-6	MW-31	Total Recoverable	Water	6020A	516394
280-156404-7	MW-33A	Total Recoverable	Ground Water	6020A	516394
280-156404-9	MW-27	Total Recoverable	Water	6020A	516394
280-156404-10	MW-35	Total Recoverable	Water	6020A	516394
280-156404-11	MW-28	Total Recoverable	Water	6020A	516394
280-156404-12	MW-29	Dissolved	Water	6020A	516394
280-156404-12	MW-29	Total Recoverable	Water	6020A	516394
MB 240-516394/1-A	Method Blank	Total Recoverable	Water	6020A	516394
LCS 240-516394/2-A	Lab Control Sample	Total Recoverable	Water	6020A	516394
280-156404-1 MS	MW-30	Total Recoverable	Water	6020A	516394
280-156404-1 MSD	MW-30	Total Recoverable	Water	6020A	516394

Analysis Batch: 516991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-8	MW-13	Total Recoverable	Water	6020A	516394

General Chemistry

Analysis Batch: 559667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total/NA	Water	SM2540 C	
280-156404-2	MW-21	Total/NA	Water	SM2540 C	
280-156404-3	MW-21-FD	Total/NA	Water	SM2540 C	
MB 280-559667/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-559667/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 559669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total/NA	Water	SM 2540D	
280-156404-2	MW-21	Total/NA	Water	SM 2540D	
280-156404-3	MW-21-FD	Total/NA	Water	SM 2540D	
280-156404-4	MW-32	Total/NA	Water	SM 2540D	
280-156404-5	MW-32-EB	Total/NA	Water	SM 2540D	
280-156404-6	MW-31	Total/NA	Water	SM 2540D	
280-156404-7	MW-33A	Total/NA	Ground Water	SM 2540D	
MB 280-559669/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-559669/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-559669/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 559796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total/NA	Water	9040B	
LCS 280-559796/50	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 559807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-4	MW-32	Total/NA	Water	SM2540 C	
280-156404-5	MW-32-EB	Total/NA	Water	SM2540 C	
280-156404-6	MW-31	Total/NA	Water	SM2540 C	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

General Chemistry (Continued)

Analysis Batch: 559807 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-7	MW-33A	Total/NA	Ground Water	SM2540 C	
MB 280-559807/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-559807/2	Lab Control Sample	Total/NA	Water	SM2540 C	

Analysis Batch: 559810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-8	MW-13	Total/NA	Water	SM 2540D	
280-156404-9	MW-27	Total/NA	Water	SM 2540D	
280-156404-10	MW-35	Total/NA	Water	SM 2540D	
MB 280-559810/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-559810/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-559810/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 559935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-2	MW-21	Total/NA	Water	9040B	
280-156404-3	MW-21-FD	Total/NA	Water	9040B	
280-156404-4	MW-32	Total/NA	Water	9040B	
280-156404-5	MW-32-EB	Total/NA	Water	9040B	
LCS 280-559935/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 559970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-8	MW-13	Total/NA	Water	SM2540 C	
280-156404-9	MW-27	Total/NA	Water	SM2540 C	
280-156404-10	MW-35	Total/NA	Water	SM2540 C	
MB 280-559970/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-559970/2	Lab Control Sample	Total/NA	Water	SM2540 C	
280-156404-9 DU	MW-27	Total/NA	Water	SM2540 C	

Analysis Batch: 559971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-11	MW-28	Total/NA	Water	SM 2540D	
280-156404-12	MW-29	Total/NA	Water	SM 2540D	
MB 280-559971/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-559971/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-559971/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
280-156404-11 DU	MW-28	Total/NA	Water	SM 2540D	

Analysis Batch: 560077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total/NA	Water	SM 2320B	
MB 280-560077/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-560077/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 560148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-11	MW-28	Total/NA	Water	SM2540 C	
280-156404-12	MW-29	Total/NA	Water	SM2540 C	
MB 280-560148/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-560148/2	Lab Control Sample	Total/NA	Water	SM2540 C	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

General Chemistry (Continued)

Analysis Batch: 560148 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-560148/3	Lab Control Sample Dup	Total/NA	Water	SM2540 C	

Analysis Batch: 560189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-6	MW-31	Total/NA	Water	9040B	
280-156404-7	MW-33A	Total/NA	Ground Water	9040B	
280-156404-8	MW-13	Total/NA	Water	9040B	
280-156404-9	MW-27	Total/NA	Water	9040B	
280-156404-10	MW-35	Total/NA	Water	9040B	
LCS 280-560189/27	Lab Control Sample	Total/NA	Water	9040B	
LCS 280-560189/50	Lab Control Sample	Total/NA	Water	9040B	
280-156404-6 DU	MW-31	Total/NA	Water	9040B	

Analysis Batch: 560255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-2	MW-21	Total/NA	Water	SM 2320B	
280-156404-3	MW-21-FD	Total/NA	Water	SM 2320B	
MB 280-560255/31	Method Blank	Total/NA	Water	SM 2320B	
MB 280-560255/57	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-560255/56	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 560613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-11	MW-28	Total/NA	Water	9040B	
280-156404-12	MW-29	Total/NA	Water	9040B	
LCS 280-560613/4	Lab Control Sample	Total/NA	Water	9040B	
280-156404-11 DU	MW-28	Total/NA	Water	9040B	

Analysis Batch: 560810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-4	MW-32	Total/NA	Water	SM 2320B	
280-156404-5	MW-32-EB	Total/NA	Water	SM 2320B	
280-156404-6	MW-31	Total/NA	Water	SM 2320B	
280-156404-7	MW-33A	Total/NA	Ground Water	SM 2320B	
280-156404-8	MW-13	Total/NA	Water	SM 2320B	
280-156404-9	MW-27	Total/NA	Water	SM 2320B	
280-156404-10	MW-35	Total/NA	Water	SM 2320B	
280-156404-11	MW-28	Total/NA	Water	SM 2320B	
280-156404-12	MW-29	Total/NA	Water	SM 2320B	
MB 280-560810/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-560810/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 560882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-560882/6	Method Blank	Total/NA	Water	9056A	
LCS 280-560882/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-560882/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-560882/3	Lab Control Sample	Total/NA	Water	9056A	
280-156404-9 MS	MW-27	Total/NA	Water	9056A	
280-156404-9 MSD	MW-27	Total/NA	Water	9056A	
280-156404-9 DU	MW-27	Total/NA	Water	9056A	

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QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

General Chemistry

Analysis Batch: 560952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total/NA	Water	9056A	
280-156404-2	MW-21	Total/NA	Water	9056A	
280-156404-3	MW-21-FD	Total/NA	Water	9056A	
280-156404-4	MW-32	Total/NA	Water	9056A	
280-156404-5	MW-32-EB	Total/NA	Water	9056A	
280-156404-6	MW-31	Total/NA	Water	9056A	
280-156404-7	MW-33A	Total/NA	Ground Water	9056A	
280-156404-7	MW-33A	Total/NA	Ground Water	9056A	
280-156404-8	MW-13	Total/NA	Water	9056A	
280-156404-8	MW-13	Total/NA	Water	9056A	
280-156404-9	MW-27	Total/NA	Water	9056A	
280-156404-10	MW-35	Total/NA	Water	9056A	
280-156404-11	MW-28	Total/NA	Water	9056A	
280-156404-11	MW-28	Total/NA	Water	9056A	
280-156404-12	MW-29	Total/NA	Water	9056A	
280-156404-12	MW-29	Total/NA	Water	9056A	
MB 280-560952/6	Method Blank	Total/NA	Water	9056A	
LCS 280-560952/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-560952/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-560952/3	Lab Control Sample	Total/NA	Water	9056A	
280-156404-1 MS	MW-30	Total/NA	Water	9056A	
280-156404-1 MSD	MW-30	Total/NA	Water	9056A	
280-156404-1 DU	MW-30	Total/NA	Water	9056A	

Analysis Batch: 561035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-4	MW-32	Total/NA	Water	9056A	
280-156404-6	MW-31	Total/NA	Water	9056A	
MB 280-561035/6	Method Blank	Total/NA	Water	9056A	
LCS 280-561035/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-561035/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-561035/3	Lab Control Sample	Total/NA	Water	9056A	
280-156404-4 MS	MW-32	Total/NA	Water	9056A	
280-156404-4 MSD	MW-32	Total/NA	Water	9056A	
280-156404-4 DU	MW-32	Total/NA	Water	9056A	

Analysis Batch: 561037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156404-1	MW-30	Total/NA	Water	9056A	
MB 280-561037/6	Method Blank	Total/NA	Water	9056A	
LCS 280-561037/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-561037/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-561037/3	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-30

Lab Sample ID: 280-156404-1

Date Collected: 11/29/21 15:30

Matrix: Water

Date Received: 12/03/21 15:37

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:19	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 12:37	DSH	TAL CAN
Total/NA	Analysis	9040B		1			559796	12/06/21 16:41	SPG	TAL DEN
Total/NA	Analysis	9056A		50	5 mL	5 mL	561037	12/17/21 13:39	SPG	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	560952	12/16/21 17:23	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560077	12/08/21 15:02	SPG	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559669	12/06/21 08:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	1 mL	100 mL	559667	12/06/21 08:32	ABW	TAL DEN

Client Sample ID: MW-21

Lab Sample ID: 280-156404-2

Date Collected: 11/30/21 15:30

Matrix: Water

Date Received: 12/03/21 15:37

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:31	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 12:46	DSH	TAL CAN
Total/NA	Analysis	9040B		1			559935	12/07/21 16:42	SPG	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	560952	12/16/21 18:23	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560255	12/09/21 20:20	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559669	12/06/21 08:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	559667	12/06/21 08:32	ABW	TAL DEN

Client Sample ID: MW-21-FD

Lab Sample ID: 280-156404-3

Date Collected: 11/30/21 15:40

Matrix: Water

Date Received: 12/03/21 15:37

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:34	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 12:49	DSH	TAL CAN
Total/NA	Analysis	9040B		1			559935	12/07/21 16:46	SPG	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	560952	12/16/21 18:38	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560255	12/09/21 20:12	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559669	12/06/21 08:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	559667	12/06/21 08:32	ABW	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-32

Date Collected: 12/01/21 10:30

Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-4

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:41	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 12:51	DSH	TAL CAN
Total/NA	Analysis	9040B		1			559935	12/07/21 16:32	SPG	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	561035	12/17/21 12:44	SPG	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	560952	12/16/21 18:53	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 14:48	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559669	12/06/21 08:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	559807	12/07/21 10:24	ABW	TAL DEN

Client Sample ID: MW-32-EB

Date Collected: 12/01/21 10:45

Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-5

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:44	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 12:54	DSH	TAL CAN
Total/NA	Analysis	9040B		1			559935	12/07/21 16:38	SPG	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	560952	12/16/21 19:08	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 13:41	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559669	12/06/21 08:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	559807	12/07/21 10:24	ABW	TAL DEN

Client Sample ID: MW-31

Date Collected: 12/01/21 13:45

Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	516393	12/10/21 11:00	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			516825	12/14/21 18:04	DSH	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	516393	12/10/21 11:00	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			516928	12/15/21 13:17	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:46	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 13:01	DSH	TAL CAN
Total/NA	Analysis	9040B		1			560189	12/09/21 14:40	ECC	TAL DEN
Total/NA	Analysis	9056A		50	10 mL	10 mL	561035	12/17/21 13:40	SPG	TAL DEN
Total/NA	Analysis	9056A		5	10 mL	10 mL	560952	12/16/21 20:23	SPG	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-31

Date Collected: 12/01/21 13:45

Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-6

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 2320B		1			560810	12/15/21 13:51	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559669	12/06/21 08:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	10 mL	100 mL	559807	12/07/21 10:24	ABW	TAL DEN

Client Sample ID: MW-33A

Date Collected: 12/01/21 14:15

Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-7

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:49	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 13:04	DSH	TAL CAN
Total/NA	Analysis	9040B		1			560189	12/09/21 14:48	ECC	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	560952	12/16/21 19:23	SPG	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	560952	12/16/21 19:38	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 14:14	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559669	12/06/21 08:34	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	559807	12/07/21 10:24	ABW	TAL DEN

Client Sample ID: MW-13

Date Collected: 12/02/21 10:40

Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-8

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:51	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516991	12/16/21 14:09	DSH	TAL CAN
Total/NA	Analysis	9040B		1			560189	12/09/21 14:52	ECC	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	560952	12/16/21 20:38	SPG	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	560952	12/16/21 20:53	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 14:39	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559810	12/07/21 10:28	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	559970	12/08/21 10:11	ABW	TAL DEN

Client Sample ID: MW-27

Date Collected: 12/02/21 12:15

Date Received: 12/03/21 15:37

Lab Sample ID: 280-156404-9

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:54	DSH	TAL CAN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-27

Lab Sample ID: 280-156404-9

Date Collected: 12/02/21 12:15

Matrix: Water

Date Received: 12/03/21 15:37

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 13:06	DSH	TAL CAN
Total/NA	Analysis	9040B		1			560189	12/09/21 14:27	ECC	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	560952	12/16/21 21:08	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 13:58	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559810	12/07/21 10:28	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	559970	12/08/21 10:11	ABW	TAL DEN

Client Sample ID: MW-35

Lab Sample ID: 280-156404-10

Date Collected: 12/02/21 15:40

Matrix: Water

Date Received: 12/03/21 15:37

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:56	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 13:09	DSH	TAL CAN
Total/NA	Analysis	9040B		1			560189	12/09/21 14:31	ECC	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	560952	12/16/21 21:23	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 14:05	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559810	12/07/21 10:28	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	559970	12/08/21 10:11	ABW	TAL DEN

Client Sample ID: MW-28

Lab Sample ID: 280-156404-11

Date Collected: 12/03/21 10:50

Matrix: Water

Date Received: 12/03/21 15:37

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	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 17:59	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 13:11	DSH	TAL CAN
Total/NA	Analysis	9040B		1			560613	12/14/21 14:06	ECC	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	560952	12/16/21 21:38	SPG	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	560952	12/16/21 21:54	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 13:35	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	559971	12/08/21 10:20	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	10 mL	100 mL	560148	12/09/21 12:22	ABW	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

Client Sample ID: MW-29

Lab Sample ID: 280-156404-12

Date Collected: 12/03/21 14:30

Matrix: Water

Date Received: 12/03/21 15:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	516393	12/10/21 11:00	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			516825	12/14/21 18:12	DSH	TAL CAN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	516393	12/10/21 11:00	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		5			516928	12/15/21 13:19	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 18:02	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516394	12/10/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516928	12/15/21 13:14	DSH	TAL CAN
Total/NA	Analysis	9040B		1			560613	12/14/21 14:14	ECC	TAL DEN
Total/NA	Analysis	9056A		1	10 mL	10 mL	560952	12/16/21 22:09	SPG	TAL DEN
Total/NA	Analysis	9056A		20	10 mL	10 mL	560952	12/16/21 22:24	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			560810	12/15/21 13:24	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	122 mL	250 mL	559971	12/08/21 10:20	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	10 mL	100 mL	560148	12/09/21 12:22	ABW	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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156404-1

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	10-31-23
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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-18-10	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

Chain of Custody Record

Client Information		Sampler: <u>T. Snyder</u>		Lab PM:	Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-113/24-32494.1
Client Contact: Molly Reeves HDR Inc		Phone: <u>720-838-6065</u>		E-Mail:	Danielle.Harrington@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Address: 1670 Broadway Suite 3400 City: Denver State, Zip: CO, 80202 Phone: 734-263-7138(Tel) Email: Molly.Reeves@hdrinc.com		Due Date Requested: TAT Requested (days): <u>ASAP</u> Compliance Project: ☐ Yes ☐ No PO #: 10227700-400 WO #: Project #: 28014379 SSOW#:		PWSID:		Job #:	
Project Name: Xcel Energy GW CCR Monitoring - Valmont Site: Colorado Additional Testing 2021		Matrix (W=water, S=solid, O=soil, A=air) Sample Type (C=Comp, G=grab) ☐ Tissue, A=Air		Field Filtered Sample (Yes or No)		Analysis Requested	
Sample Identification		Sample Date	Sample Time	Sample Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A - 7 metals ETA Canton
MW-30	11/29/21	1530	G	Water	☒	☒	Dissolved 6020A - ETA Canton (7 metals only)
MW-21	11/30/21	1530	G	Water	☒	☒	9056A Chloride/Sulfate
MW-21-FD	11/30/21	1540	G	Water	☒	☒	pH
MW-32	12/1/21	1030	G	Water	☒	☒	2540D - TSS/2540C TDS
MW-32-EB	12/1/21	1045	G	Water	☒	☒	2320B Alkalinity
MW-31	12/1/21	1345	G	Water	☒	☒	6020A - 7 metals ETA Canton
MW-33A	12/1/21	1415	G	Water	☒	☒	Field Filtered Sample (Yes or No)
MW-13	12/2/21	1040	G	Water	☒	☒	Perform MS/MSD (Yes or No)
MW-27	12/2/21	1215	G	W	☒	☒	9056A Chloride/Sulfate
MW-35	12/2/21	1540	G	W	☒	☒	pH
MW-28	12/3/21	1050	G	W	☒	☒	2540D - TSS/2540C TDS
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		Special Instructions/QC Requirements:		Total Number of Containers	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Date:		Special Instructions/Note:	
Relinquished by: <u>[Signature]</u>		Date/Time: 12/3/21 1537		Company: HDR		Special Instructions/Note:	
Relinquished by:		Date/Time:		Company:		Special Instructions/Note:	
Relinquished by:		Date/Time:		Company:		Special Instructions/Note:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.2, 1.5, 12.9-0.2		Ver: 01/16/2019	

Ver: 01/16/2019

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:		Lab PM		Carmer Tracking No(s):		COC No:	
Shipping/Receiving		Phone:		Harrington, Danielle M				280-596675.1	
Company:		E-Mail:		Danielle Harrington@Eurofinset.com		State of Origin:		Page	
TestAmerica Laboratories, Inc.						Colorado		1 of 2	
Address:		Due Date Requested:		Accreditations Required (See note)		Job #		280-156404-1	
4101 Shuffel Street NW,		12/16/2021		DoD - A2LA					
City:		TAT Requested (days):		Analysis Requested					
North Canton									
State Zip:									
OH, 44720									
Phone:		PO #:							
330-497-9396(Tel) 330-497-0772(Fax)									
Email:		WO #:							
Project Name:		Project #:							
Xcel Energy GW CCR Monitoring - Valmont		28014379							
Site:		SSOW#:							
Xcel Energy CCR - Valmont Station									

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Solid, O=Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020A/3005A (MOD) 13 Total Metals (w/collision cell)	6020A/FILTRATION (MOD) 13 Total Metals (w/collision cell)	Total Number of Containers	Special Instructions/Note:
MW-30 (280-156404-1)	11/29/21	15:30	Mountain	Water	X	X	X	X	1	Use Collision Cell
MW-21 (280-156404-2)	11/30/21	15:30	Mountain	Water	X	X	X	X	1	Use Collision Cell
MW-21-FD (280-156404-3)	11/30/21	15:40	Mountain	Water	X	X	X	X	1	Use Collision Cell
MW-32 (280-156404-4)	12/1/21	10:30	Mountain	Water	X	X	X	X	1	Use Collision Cell
MW-32-EB (280-156404-5)	12/1/21	10:45	Mountain	Water	X	X	X	X	1	Use Collision Cell
MW-31 (280-156404-6)	12/1/21	13:45	Mountain	Water	X	X	X	X	2	Use Collision Cell
MW-33A (280-156404-7)	12/1/21	14:15	Mountain	Water	X	X	X	X	1	Use Collision Cell
MW-13 (280-156404-8)	12/2/21	10:40	Mountain	Water	X	X	X	X	1	Use Collision Cell
MW-27 (280-156404-9)	12/2/21	12:15	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 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica

Possible Hazard Identification	
Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Deliverable Requested: I, II, III, IV, Other (specify)	☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months
Special Instructions/QC Requirements:	
Empty Kit Relinquished by: _____ Date: _____	
Relinquished by: _____	Received by: _____
Relinquished by: _____	Received by: _____
Relinquished by: _____	Received by: _____
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: _____

Ver: 06/08/2021

Eurofins TestAmerica Canton Sample Receipt Form/Narrative				Login # : _____	
Canton Facility					
Client <u>ETA</u>		Site Name _____		Cooler unpacked by: <u>Mat</u>	
Cooler Received on <u>12-9-21</u>		Opened on <u>12-9-21</u>			
FedEx: 1 st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Clipper ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐					
Receipt After-hours: Drop-off Date/Time _____				Storage Location _____	
TestAmerica Cooler # <u>78</u>		Foam Box ☐ Client Cooler ☐ Box ☐ Other ☐			
Packing material used: <u>Bubble Wrap</u>		Foam ☐ Plastic Bag ☐ None ☐ Other ☐			
COOLANT: <u>Wet Ice</u>		Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐			
1. Cooler temperature upon receipt ☐ See Multiple Cooler Form					
IR GUN# IR-14 (CF +0.1 °C)		Observed Cooler Temp. <u>2-8</u> °C		Corrected Cooler Temp. <u>2-9</u> °C	
IR GUN #IR-15 (CF +0.2 °C)		Observed Cooler Temp. _____ °C		Corrected Cooler Temp. _____ °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>				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 ☐ NA ☐	
-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# <u>HC157842</u>	
14. Were VOAs on the COC?				Yes ☒ No ☐ NA ☐	
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 ☐	
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: 280-156404-1

Login Number: 156404

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Lee, Jerry

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

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

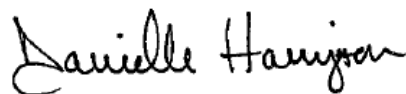
Laboratory Job ID: 280-156594-1

Client Project/Site: Xcel Energy GW CCR Monitoring - Valmont

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
12/22/2021 1:07:52 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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Job ID: 280-156594-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Valmont

Report Number: 280-156594-1

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 12/08/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.4 C.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. CoC lists containers for Dissolved Metals as a Nitric preserved container. An unpreserved container was received.

DISSOLVED METALS (ICPMS)-METHOD 6020A

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

TOTAL RECOVERABLE METALS (ICPMS)0 METHOD 6020A

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 Magnesium and Sodium 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.

GENERAL CHEMISTRY- VARIOUS

Samples MW-33B (280-156594-1) and MW-34 (280-156594-2) required dilution prior to analysis for various methods. The reporting limits have been adjusted accordingly.

Total Dissolved Solids (TDS) is present at a level greater than the reporting limit in the method blank associated with QC batch 280-560559. As the associated sample amounts are ten times greater than the method blank concentration, corrective action is deemed unnecessary.

The Total Suspended Solids sample duplicate analysis data associated with QC batch 280-560566 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

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Job ID: 280-156594-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

deemed unnecessary.

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

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Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Client Sample ID: MW-33B

Lab Sample ID: 280-156594-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.056		0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Calcium	530000		1000	580	ug/L	1		6020A	Total
									Recoverable
Potassium	27000		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	220000		1000	200	ug/L	1		6020A	Total
									Recoverable
Selenium	0.027		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	670000		1000	330	ug/L	1		6020A	Total
									Recoverable
Lithium	0.24		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
Arsenic	0.0025	J	0.0050	0.00075	mg/L	1		6020A	Dissolved
Calcium	54000		1000	580	ug/L	1		6020A	Dissolved
Potassium	4800		1000	220	ug/L	1		6020A	Dissolved
Magnesium	30000		1000	200	ug/L	1		6020A	Dissolved
Sodium	750000		1000	330	ug/L	1		6020A	Dissolved
Selenium	0.018		0.0050	0.00089	mg/L	1		6020A	Dissolved
Lithium	0.089		0.0080	0.0017	mg/L	1		6020A	Dissolved
pH adj. to 25 deg C	8.0	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	120		3.0	1.0	mg/L	1		9056A	Total/NA
Sulfate	1500		100	21	mg/L	20		9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	310		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Suspended Solids	2200		36	9.8	mg/L	1		SM 2540D	Total/NA
Total Dissolved Solids (TDS)	2600	B	40	19	mg/L	1		SM2540 C	Total/NA

Client Sample ID: MW-34

Lab Sample ID: 280-156594-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.022		0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Calcium	63000		1000	580	ug/L	1		6020A	Total
									Recoverable
Potassium	13000		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	50000		1000	200	ug/L	1		6020A	Total
									Recoverable
Selenium	0.025		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	200000		1000	330	ug/L	1		6020A	Total
									Recoverable
Lithium	0.10		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
Arsenic	0.0031	J	0.0050	0.00075	mg/L	1		6020A	Dissolved
Calcium	21000		1000	580	ug/L	1		6020A	Dissolved
Potassium	3000		1000	220	ug/L	1		6020A	Dissolved
Magnesium	11000		1000	200	ug/L	1		6020A	Dissolved
Sodium	200000		1000	330	ug/L	1		6020A	Dissolved
Selenium	0.024		0.0050	0.00089	mg/L	1		6020A	Dissolved
Lithium	0.039		0.0080	0.0017	mg/L	1		6020A	Dissolved
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Client Sample ID: MW-34 (Continued)

Lab Sample ID: 280-156594-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	1.6	J	3.0	1.0	mg/L	1			9056A	Total/NA
Sulfate	270		100	21	mg/L	20			9056A	Total/NA
Bicarbonate Alkalinity as CaCO3	250		10	3.1	mg/L	1			SM 2320B	Total/NA
Total Suspended Solids	180		4.0	1.1	mg/L	1			SM 2540D	Total/NA
Total Dissolved Solids (TDS)	770	B	10	4.7	mg/L	1			SM2540 C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM2540 C	Total Dissolved Solids	SM18	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
FILTRATION	Sample Filtration	None	TAL CAN

Protocol References:

None = None

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

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

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
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-156594-1	MW-33B	Water	12/08/21 10:15	12/08/21 18:36
280-156594-2	MW-34	Water	12/08/21 11:00	12/08/21 18:36

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

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

Client Sample ID: MW-33B
Date Collected: 12/08/21 10:15
Date Received: 12/08/21 18:36

Lab Sample ID: 280-156594-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.056		0.0050	0.00075	mg/L		12/13/21 14:00	12/14/21 16:52	1
Calcium	530000		1000	580	ug/L		12/13/21 14:00	12/14/21 16:52	1
Potassium	27000		1000	220	ug/L		12/13/21 14:00	12/14/21 16:52	1
Magnesium	220000		1000	200	ug/L		12/13/21 14:00	12/14/21 16:52	1
Selenium	0.027		0.0050	0.00089	mg/L		12/13/21 14:00	12/14/21 16:52	1
Sodium	670000		1000	330	ug/L		12/13/21 14:00	12/14/21 16:52	1
Lithium	0.24		0.0080	0.0017	mg/L		12/13/21 14:00	12/14/21 16:52	1

Client Sample ID: MW-34
Date Collected: 12/08/21 11:00
Date Received: 12/08/21 18:36

Lab Sample ID: 280-156594-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.022		0.0050	0.00075	mg/L		12/13/21 14:00	12/14/21 16:54	1
Calcium	63000		1000	580	ug/L		12/13/21 14:00	12/14/21 16:54	1
Potassium	13000		1000	220	ug/L		12/13/21 14:00	12/14/21 16:54	1
Magnesium	50000		1000	200	ug/L		12/13/21 14:00	12/14/21 16:54	1
Selenium	0.025		0.0050	0.00089	mg/L		12/13/21 14:00	12/14/21 16:54	1
Sodium	200000		1000	330	ug/L		12/13/21 14:00	12/14/21 16:54	1
Lithium	0.10		0.0080	0.0017	mg/L		12/13/21 14:00	12/14/21 16:54	1

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

Client Sample ID: MW-33B
Date Collected: 12/08/21 10:15
Date Received: 12/08/21 18:36

Lab Sample ID: 280-156594-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0025	J	0.0050	0.00075	mg/L		12/13/21 14:00	12/14/21 16:57	1
Calcium	54000		1000	580	ug/L		12/13/21 14:00	12/14/21 16:57	1
Potassium	4800		1000	220	ug/L		12/13/21 14:00	12/14/21 16:57	1
Magnesium	30000		1000	200	ug/L		12/13/21 14:00	12/14/21 16:57	1
Sodium	750000		1000	330	ug/L		12/13/21 14:00	12/14/21 16:57	1
Selenium	0.018		0.0050	0.00089	mg/L		12/13/21 14:00	12/14/21 16:57	1
Lithium	0.089		0.0080	0.0017	mg/L		12/13/21 14:00	12/14/21 16:57	1

Client Sample ID: MW-34
Date Collected: 12/08/21 11:00
Date Received: 12/08/21 18:36

Lab Sample ID: 280-156594-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0031	J	0.0050	0.00075	mg/L		12/13/21 14:00	12/14/21 17:04	1
Calcium	21000		1000	580	ug/L		12/13/21 14:00	12/14/21 17:04	1
Potassium	3000		1000	220	ug/L		12/13/21 14:00	12/14/21 17:04	1
Magnesium	11000		1000	200	ug/L		12/13/21 14:00	12/14/21 17:04	1
Sodium	200000		1000	330	ug/L		12/13/21 14:00	12/14/21 17:04	1
Selenium	0.024		0.0050	0.00089	mg/L		12/13/21 14:00	12/14/21 17:04	1
Lithium	0.039		0.0080	0.0017	mg/L		12/13/21 14:00	12/14/21 17:04	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

General Chemistry

Client Sample ID: MW-33B
Date Collected: 12/08/21 10:15
Date Received: 12/08/21 18:36

Lab Sample ID: 280-156594-1
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			12/17/21 16:04	1
Temperature	21.4	HF	1.0	1.0	Degrees C			12/17/21 16:04	1
Chloride	120		3.0	1.0	mg/L			12/18/21 00:40	1
Sulfate	1500		100	21	mg/L			12/18/21 00:56	20
Bicarbonate Alkalinity as CaCO3	310		10	3.1	mg/L			12/17/21 13:57	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/17/21 13:57	1
Total Suspended Solids	2200		36	9.8	mg/L			12/14/21 09:32	1
Total Dissolved Solids (TDS)	2600	B	40	19	mg/L			12/14/21 09:21	1

Client Sample ID: MW-34
Date Collected: 12/08/21 11:00
Date Received: 12/08/21 18:36

Lab Sample ID: 280-156594-2
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			12/17/21 16:08	1
Temperature	22.4	HF	1.0	1.0	Degrees C			12/17/21 16:08	1
Chloride	1.6	J	3.0	1.0	mg/L			12/18/21 01:12	1
Sulfate	270		100	21	mg/L			12/18/21 01:29	20
Bicarbonate Alkalinity as CaCO3	250		10	3.1	mg/L			12/17/21 14:12	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/17/21 14:12	1
Total Suspended Solids	180		4.0	1.1	mg/L			12/14/21 09:32	1
Total Dissolved Solids (TDS)	770	B	10	4.7	mg/L			12/14/21 09:21	1

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-516526/1-A

Matrix: Water

Analysis Batch: 516825

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 516526

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		12/13/21 14:00	12/14/21 16:08	1
Calcium	ND		1000	580	ug/L		12/13/21 14:00	12/14/21 16:08	1
Potassium	ND		1000	220	ug/L		12/13/21 14:00	12/14/21 16:08	1
Magnesium	ND		1000	200	ug/L		12/13/21 14:00	12/14/21 16:08	1
Selenium	ND		0.0050	0.00089	mg/L		12/13/21 14:00	12/14/21 16:08	1
Sodium	ND		1000	330	ug/L		12/13/21 14:00	12/14/21 16:08	1
Lithium	ND		0.0080	0.0017	mg/L		12/13/21 14:00	12/14/21 16:08	1

Lab Sample ID: LCS 240-516526/2-A

Matrix: Water

Analysis Batch: 516825

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 516526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.977		mg/L		98	80 - 120
Calcium	25000	24900		ug/L		100	80 - 120
Potassium	25000	24600		ug/L		98	80 - 120
Magnesium	25000	24600		ug/L		99	80 - 120
Selenium	1.00	0.908		mg/L		91	80 - 120
Sodium	25000	24700		ug/L		99	80 - 120
Lithium	0.500	0.467		mg/L		93	80 - 120

Method: 9040B - pH

Lab Sample ID: LCS 280-561159/4

Matrix: Water

Analysis Batch: 561159

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 280-561037/6

Matrix: Water

Analysis Batch: 561037

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			12/17/21 11:21	1
Sulfate	ND		5.0	1.0	mg/L			12/17/21 11:21	1

Lab Sample ID: LCS 280-561037/4

Matrix: Water

Analysis Batch: 561037

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	99.6		mg/L		100	90 - 110

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

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

Lab Sample ID: LCSD 280-561037/5

Matrix: Water

Analysis Batch: 561037

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	99.5		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-561037/3

Matrix: Water

Analysis Batch: 561037

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	5.00	4.27		mg/L		85	50 - 150		
Sulfate	5.00	4.40	J	mg/L		88	50 - 150		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-561158/5

Matrix: Water

Analysis Batch: 561158

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/17/21 13:49	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			12/17/21 13:49	1

Lab Sample ID: 280-156594-1 DU

Matrix: Water

Analysis Batch: 561158

Client Sample ID: MW-33B

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	Prepared	Analyzed	RPD	RPD Limit
Bicarbonate Alkalinity as CaCO3	310		307		mg/L				0.7	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L				NC	20

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

Lab Sample ID: MB 280-560566/1

Matrix: Water

Analysis Batch: 560566

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			12/14/21 08:31	1

Lab Sample ID: LCS 280-560566/2

Matrix: Water

Analysis Batch: 560566

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	100	95.2		mg/L		95	79 - 114		

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

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

Lab Sample ID: LCSD 280-560566/3

Matrix: Water

Analysis Batch: 560566

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	89.2		mg/L		89	79 - 114	7	20

Method: SM2540 C - Total Dissolved Solids

Lab Sample ID: MB 280-560559/1

Matrix: Water

Analysis Batch: 560559

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)	28.0		10	4.7	mg/L			12/14/21 08:21	1

Lab Sample ID: LCS 280-560559/2

Matrix: Water

Analysis Batch: 560559

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids (TDS)	507	506		mg/L		100	88 - 114		

Lab Sample ID: 280-156594-2 DU

Matrix: Water

Analysis Batch: 560559

Client Sample ID: MW-34

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids (TDS)	770	B	759		mg/L		0.9	10

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Metals

Filtration Batch: 516525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Dissolved	Water	FILTRATION	
280-156594-2	MW-34	Dissolved	Water	FILTRATION	

Prep Batch: 516526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Dissolved	Water	3005A	516525
280-156594-1	MW-33B	Total Recoverable	Water	3005A	
280-156594-2	MW-34	Dissolved	Water	3005A	516525
280-156594-2	MW-34	Total Recoverable	Water	3005A	
MB 240-516526/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-516526/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 516825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Dissolved	Water	6020A	516526
280-156594-1	MW-33B	Total Recoverable	Water	6020A	516526
280-156594-2	MW-34	Dissolved	Water	6020A	516526
280-156594-2	MW-34	Total Recoverable	Water	6020A	516526
MB 240-516526/1-A	Method Blank	Total Recoverable	Water	6020A	516526
LCS 240-516526/2-A	Lab Control Sample	Total Recoverable	Water	6020A	516526

General Chemistry

Analysis Batch: 560559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Total/NA	Water	SM2540 C	
280-156594-2	MW-34	Total/NA	Water	SM2540 C	
MB 280-560559/1	Method Blank	Total/NA	Water	SM2540 C	
LCS 280-560559/2	Lab Control Sample	Total/NA	Water	SM2540 C	
280-156594-2 DU	MW-34	Total/NA	Water	SM2540 C	

Analysis Batch: 560566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Total/NA	Water	SM 2540D	
280-156594-2	MW-34	Total/NA	Water	SM 2540D	
MB 280-560566/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-560566/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-560566/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 561037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Total/NA	Water	9056A	
280-156594-1	MW-33B	Total/NA	Water	9056A	
280-156594-2	MW-34	Total/NA	Water	9056A	
280-156594-2	MW-34	Total/NA	Water	9056A	
MB 280-561037/6	Method Blank	Total/NA	Water	9056A	
LCS 280-561037/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-561037/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-561037/3	Lab Control Sample	Total/NA	Water	9056A	

Eurofins TestAmerica, Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

General Chemistry

Analysis Batch: 561158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Total/NA	Water	SM 2320B	
280-156594-2	MW-34	Total/NA	Water	SM 2320B	
MB 280-561158/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-561158/4	Lab Control Sample	Total/NA	Water	SM 2320B	
280-156594-1 DU	MW-33B	Total/NA	Water	SM 2320B	

Analysis Batch: 561159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-156594-1	MW-33B	Total/NA	Water	9040B	
280-156594-2	MW-34	Total/NA	Water	9040B	
LCS 280-561159/4	Lab Control Sample	Total/NA	Water	9040B	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

Client Sample ID: MW-33B

Lab Sample ID: 280-156594-1

Date Collected: 12/08/21 10:15

Matrix: Water

Date Received: 12/08/21 18:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	516525	12/13/21 09:46	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	516526	12/13/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			516825	12/14/21 16:57	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516526	12/13/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 16:52	DSH	TAL CAN
Total/NA	Analysis	9040B		1			561159	12/17/21 16:04	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	561037	12/18/21 00:40	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	561037	12/18/21 00:56	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			561158	12/17/21 13:57	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	28 mL	250 mL	560566	12/14/21 09:32	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	25 mL	100 mL	560559	12/14/21 09:21	ABW	TAL DEN

Client Sample ID: MW-34

Lab Sample ID: 280-156594-2

Date Collected: 12/08/21 11:00

Matrix: Water

Date Received: 12/08/21 18:36

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	516525	12/13/21 09:46	SHB	TAL CAN
Dissolved	Prep	3005A			50 mL	50 mL	516526	12/13/21 14:00	SHB	TAL CAN
Dissolved	Analysis	6020A		1			516825	12/14/21 17:04	DSH	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	516526	12/13/21 14:00	SHB	TAL CAN
Total Recoverable	Analysis	6020A		1			516825	12/14/21 16:54	DSH	TAL CAN
Total/NA	Analysis	9040B		1			561159	12/17/21 16:08	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	561037	12/18/21 01:12	SPG	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	561037	12/18/21 01:29	SPG	TAL DEN
Total/NA	Analysis	SM 2320B		1			561158	12/17/21 14:12	ECC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	560566	12/14/21 09:32	ABW	TAL DEN
Total/NA	Analysis	SM2540 C		1	100 mL	100 mL	560559	12/14/21 09:21	ABW	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

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Valmont

Job ID: 280-156594-1

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	10-31-23

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.

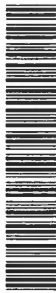
Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Temperature

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	02-23-22
Connecticut	State	PH-0590	12-31-21
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22
Kentucky (WW)	State	KY98016	12-31-21
Minnesota	NELAP	OH00048	12-31-21
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	11-06-22
New York	NELAP	10975	03-31-22
Ohio VAP	State	CL0024	12-21-23
Oregon	NELAP	4062	02-23-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-18-10	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-22
West Virginia DEP	State	210	12-31-21

Ver: 01/16/2019



Client Information (Sub Contract Lab)				Lab PW: Harrington, Danielle M E-Mail: Danielle.Harrington@Eurofinset.com		Carrier Tracking No(s): 280-597305.1 State of Origin: Colorado Page 1 of 1	
Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. Address: 4101 Shuffel Street NW, North Canton, OH 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) Email:				Project Name: Xcel Energy GW CCR Monitoring - Valmont Project #: 28014379 Site: Xcel Energy CCR - Valmont Station		Accreditations Required (See note): DoD - A2LA Job #: 280-156594-1	
Due Date Requested: 1/10/2022 TAT Requested (days):				Analysis Requested			
PO #: WO #: Project #: SOW#:				Perform MS/MSD (Yes or No) 6020A/3005A (MOD) 13 Total Metals (w/collision cell) 6020A/FILTRATION (MOD) 13 Total Metals (w/collision cell)			
Sample Date: 12/8/21 Sample Time: 10:15 Mountain Sample Type (C=comp, G=grab): Matrix (W=water, S=solid, O=other): Preservation Code:				Total Number of containers: 2 Special Instructions/Note: SSZ WIS			
Sample Identification - Client ID (Lab ID) MMW-33B (280-156594-1) MMW-34 (280-156594-2)				Use Collision Cell 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica

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

Empty Kit Relinquished by: _____ Date: 12/17/2021		Method of Shipment:	
Relinquished by: _____ Date/Time: 12/17/2021 1300		Received by: _____ Date/Time: 12/17/2021 1300	
Relinquished by: _____ Date/Time:		Received by: _____ Date/Time:	
Relinquished by: _____ Date/Time:		Received by: _____ Date/Time:	
Custody Seal No.: _____ Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Canton Facility						Login # : _____
Client <u>ETA Denver</u>			Site Name _____		Cooler unpacked by: <u>Adam Gentry</u>	
Cooler Received on <u>12-10-21</u>			Opened on <u>12-10-21</u>			
FedEx: 1 st Grd <u>Exp</u> UPS FAS Clipper			Client Drop Off TestAmerica Courier Other			
Receipt After-hours: Drop-off Date/Time						Storage Location
TestAmerica Cooler # <u>NA</u>			Foam Box Client Cooler Box Other _____		Tests that are not checked for pH by Receiving: VOAs Oil and Grease TOC	
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-14 (CF +0.1 °C) Observed Cooler Temp. <u>1-4</u> °C Corrected Cooler Temp. _____ °C						
IR GUN #IR-15 (CF +0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C						
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>			☒ 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# <u>HC157842</u>	
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			
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: _____		

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Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-156594-1

Login Number: 156594

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Dubicki, Adam L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	