

Comanche Station CCR Landfill and Bottom Ash Impoundment

Notification of Alternative Source Demonstration

Public Service Company of Colorado (PSCo), an Xcel Energy Company, owns and operates Comanche Station, a coal-fired, steam turbine electric generating station. Comanche currently operates one CCR unit on site, a landfill that is used for final disposal of CCR generated at Comanche Station. Historically, a bottom ash pond was used for temporary storage and dewatering of bottom ash sluice water, prior to removal of the bottom ash solids for beneficial use or disposal in the on-site CCR landfill. The Bottom Ash Pond ceased operations in June 2021 when construction of an alternative treatment system for bottom ash sluice water was completed, and closure of the Bottom Ash Pond has been initiated. The CCR landfill has sufficient capacity to receive CCRs for the operating life of the coal-fired units and will be closed in phases with installation of a final cover that is compliant with 257.102(d) and State of Colorado solid waste regulations, and as described in the Written Closure Plan (HDR, 2016).

Protecting the environment is a priority for Xcel Energy

PSCo conducts all of our business in an environmentally responsible manner and that includes monitoring our operations and taking steps to protect our air, water and other natural resources. Pursuant to 40 CFR Part 257.93(h)(2) of the Disposal of Coal Combustion Residuals from Electrical Utilities Rule (Federal CCR Rule), finalized on April 17, 2015, PSCo made a determination in May 2021 of Statistically Significant Increases (SSIs) over background levels for the constituents listed in Appendix III as required by 257.94(a). These test results do not indicate there is any impact on local drinking water. The monitoring wells evaluate groundwater immediately adjacent to the CCR units, and measure groundwater conditions within the Comanche Station property boundary.

PSCo initiated assessment monitoring at both CCR units while also initiating an alternate source demonstration to evaluate whether a source other than the CCR units caused the SSIs. The attached memo dated August 24, 2021 presents the results of this evaluation. The evaluation concluded that the observed SSI in a single monitoring well at the CCR landfill was not related to the landfill, and groundwater monitoring will return to detection monitoring for this unit. For the Bottom Ash Pond, the evaluation did not identify an alternative source for the SSIs and PSCo will continue assessment monitoring for this unit, while continuing to implement pond closure activities.



Memo

Date: Tuesday, August 24, 2021

To: Jennifer McCarter, Public Service Company of Colorado

From: Matt Rohr, HDR, Inc.

Subject: Comanche Station Landfill and Bottom Ash Pond CCR Units
Alternative Source Determination of Statistically Significant Increases over Background per CCR Rule 257.93(h)(2)

The U.S. Environmental Protection Agency's (EPA's) 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. Comanche Station, located in Pueblo, Colorado (**Figure 1**), is owned and operated by Public Service Company of Colorado (PSCo), an Xcel Energy Company. Comanche Station has two CCR units subject to the CCR Rule: an impoundment (Bottom Ash Pond) and a landfill (**Figure 2**).

On May 26, 2021, PSCo documented statistically significant increases (SSIs) above the previously established background threshold values (BTVs) (HDR, 2021) for three Appendix III constituents in monitoring wells at the Comanche Station Bottom Ash Pond (BAP) and landfill. The SSIs at the BAP were observed for boron and pH in wells W-6 and W-1 and pH for W-3, W-4, W-5, W-5B, and W-9. The single SSI at the landfill was observed for calcium in well MW-4B.

The objective of this memorandum is to evaluate if the SSIs observed in the wells for the landfill or the BAP could be attributable to an alternative non-CCR source. While this evaluation was being conducted, PSCo also initiated assessment monitoring at both the landfill and BAP.

Landfill

Prior to the initiation of the CCR Rule monitoring program, four monitoring wells (MW-1, MW-2, MW-3, and MW-4) were installed at the landfill in 1987 under state regulations. These wells surround the landfill and are screened in the colluvium just above the colluvium/shale contact. The well locations are shown on **Figure 2**. Based upon topography in the landfill area, original well MW-4 was intended to be an upgradient location. It is located at the western boundary of the westernmost permitted future waste cell (Cell 3), and approximately 1,600 feet west of the existing waste disposal boundary at the time the well was installed. Given the lack of a laterally extensive shallow groundwater system in the colluvium deposits beneath the site, and the significant depth to the regional potentiometric surface in the Dakota sandstone, a wet/dry monitoring well design was requested by Colorado Department of Public Health and Environment (CDPHE) and deemed appropriate for the monitoring wells screened in the colluvium. Wells MW-1, MW-2, MW-3, and MW-4 incorporate a 2-foot sump consisting of blank



casing below the well screen that captures infiltrating perched water that otherwise would be too minimal along the bedrock surface to sample.

Wells MW-5 and MW-6 were installed in August 2017 for CCR compliance to serve as additional monitoring wells for the landfill, including the newly constructed Cell 2E. Wells MW-5 and MW-6 incorporate 10-foot and 5-foot sumps respectively, consisting of blank casing below the well screen (and bedrock surface) that capture infiltrating perched water. The screen in MW-5 is in the colluvium and extends down two feet below the top of weathered bedrock. The monitored water level for well MW-5 is at the bedrock surface and sampled water is that which accumulates in the sump. MW-6 is screened across alluvium and weathered shale and typically has water in the screened interval.

Colluvial wells MW-1, MW-2, and MW-4 have always been dry, reflective of the discontinuous perched water in the colluvium, and a groundwater gradient and flow direction were not able to be identified. However, wells were located to surround the landfill to monitor any potential groundwater passing beneath the landfill. In 2020, the conceptual site model was updated based on new site hydrogeologic characterization borings, and three new wells, MW-1B, MW-2B, and MW-4B were installed at the landfill in August 2020. These new “B” wells are located adjacent to the respective existing colluvial wells but were drilled deeper and are screened in the weathered shale. Water is present in all of these new wells, making it possible to identify the groundwater flow direction and gradient.

The nine monitoring wells (MW-1 through MW-6 and MW-1B, MW-2B, and MW-4B) that surround the landfill were installed to meet the requirements of the CCR Rule for groundwater monitoring. Since the facility is surrounded by monitoring wells screened above and in the weathered shale the uppermost groundwater is represented at each well that contains water. The contour maps provided in **Figure 3, Figure 4, and Figure 5** display the groundwater elevations in October 2020, January 2021, and May 2021. The figures consistently show the groundwater flow direction beneath the landfill appears to be generally southeast; and wells MW-3, MW-4B, MW-5, and MW-6 all appear to be generally cross gradient or even upgradient of the landfill. Well MW-4B is located approximately 1,200 feet west of the current waste disposal boundary and groundwater elevation was measured at 4788.06 feet, whereas the groundwater under the landfill ranges from between 4778 to 4788 and flow is away from MW-3, MW-5, MW-4B, and MW-6. Based on the recently updated groundwater flow conditions under the landfill, only two of the six waste boundary monitoring wells that contain water appear to be strictly downgradient of the landfill (MW-1B and MW-2B), although monitoring well W-11 is located further downgradient approximately 600 feet from the waste boundary.

The current certified monitoring network for the landfill includes the following wells:

- Background wells: MW-3, MW-5
- Downgradient compliance wells (wells to evaluate impact at the CCR unit boundary): MW-1, MW-1B, MW-2, MW-2B



- Wells that have recently been determined to be cross gradient or upgradient: MW-4, MW-4B, MW-6

Additionally, PSCo will install a new downgradient monitoring well at the waste boundary between MW-2B and MW-1B in 2021, which will be sampled with the other wells in November 2021.

As described in HDR (2021), the only well that identified an SSI at the landfill is MW-4B. Well MW-4B had one SSI for calcium. The background threshold value for calcium, calculated from the upgradient wells at the landfill is 480 milligrams per liter (mg/L), and the detection monitoring event concentration at MW-4B that triggered the SSI was 510 mg/L. PSCo determined it was not necessary to collect a confirmation sample because the concentration of calcium at MW-4B was consistently between 510 and 590 mg/L for all nine background and detection sample events between August 2020 and January 2021. Therefore, the SSI triggered either completion of an Alternate Source Demonstration (ASD) or initiation of Assessment Monitoring.

The groundwater flow direction under the landfill is to the southeast in each of three contour map dates (October, 2020 and January and May, 2021) developed for the site. The groundwater under the landfill does not flow towards MW-4B. The flow direction demonstrates that well MW-4B is not downgradient of the landfill and does not accurately represent the quality of groundwater passing the waste boundary of the CCR unit. Therefore, it is not appropriate to compare the MW-4B groundwater quality to background water quality for purposes of compliance evaluation. Furthermore, the observed calcium concentration in upgradient well MW-4B could not have originated from the landfill.

The boring log for MW-4B in the Monitoring Well Installation Report shows the well screen is from 38 to 58 feet below surface, and the majority of that interval (38 to 56.5 feet below surface) is documented as clay with gypsum present (HDR, 2021b). Gypsum is composed of calcium sulfate, which is moderately water soluble, and the gypsum is the probable source of the observed calcium concentration in groundwater from MW-4B.

Therefore, the landfill will remain in Detection Monitoring. Detection Monitoring for the landfill will include sampling upgradient and downgradient wells for Appendix III constituents of interest (COI), including the new downgradient well that will be installed.

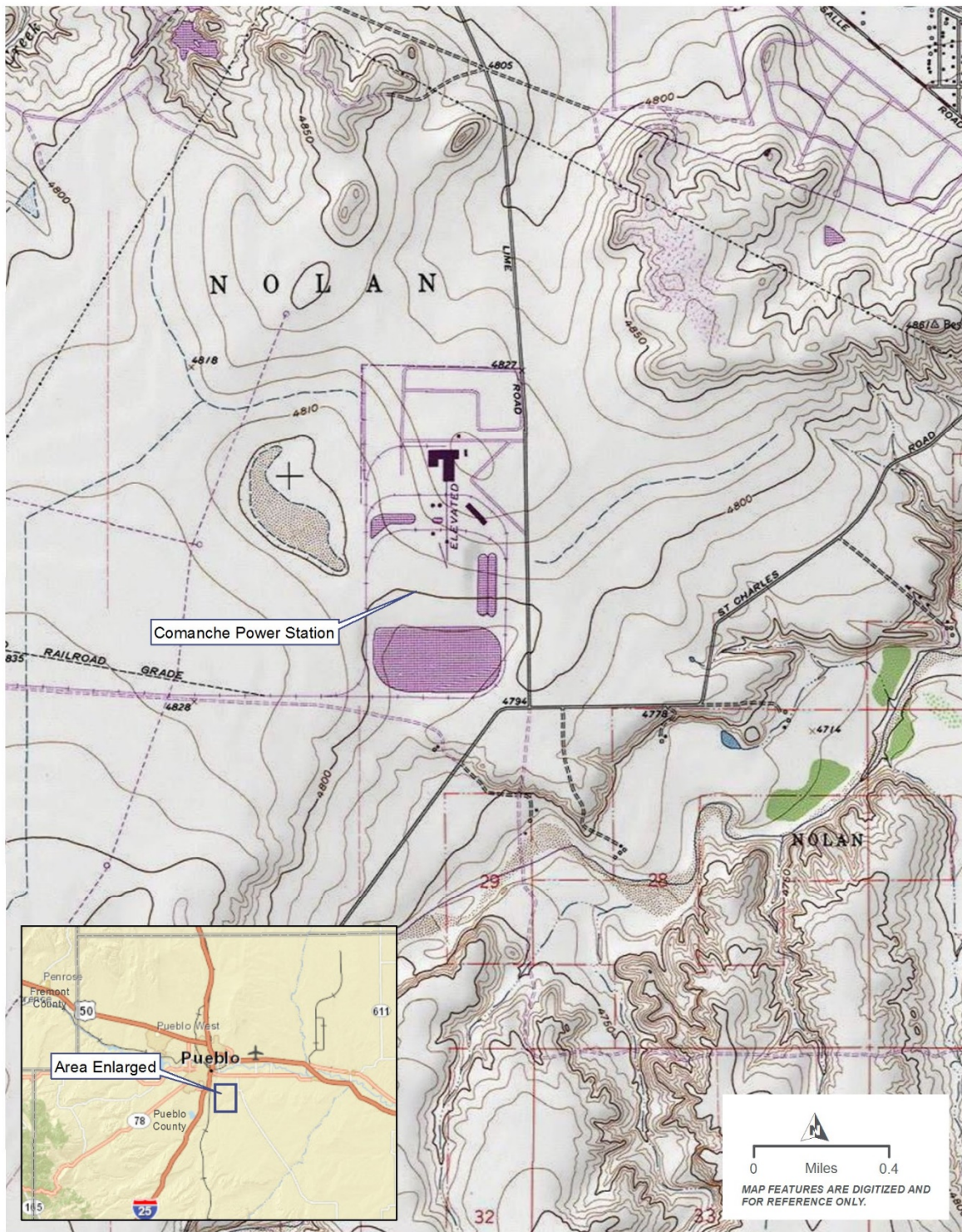


Figure 1. Vicinity Map for Comanche Station

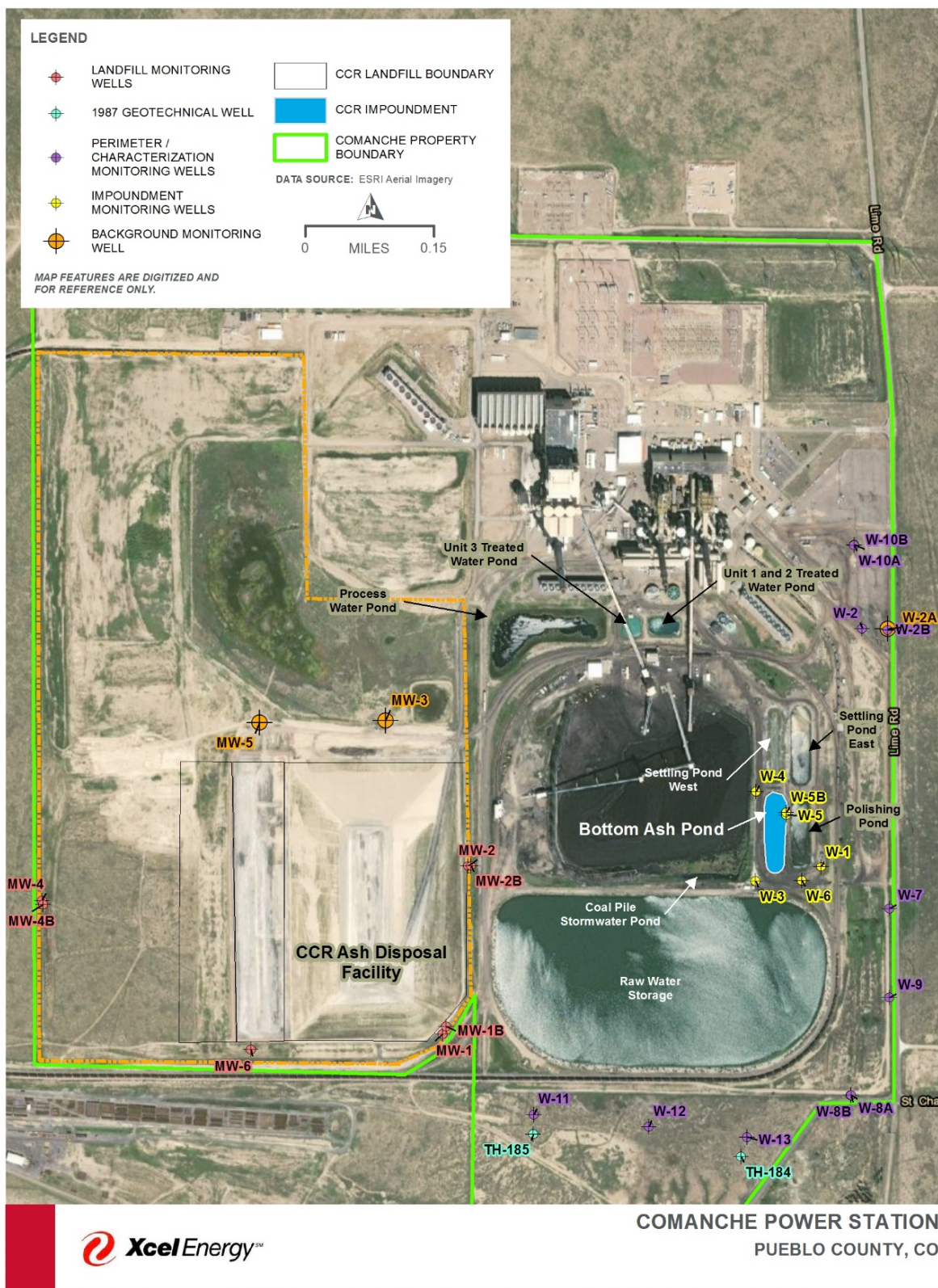


Figure 2. Comanche Station – CCR Units and Monitoring Well Location Map

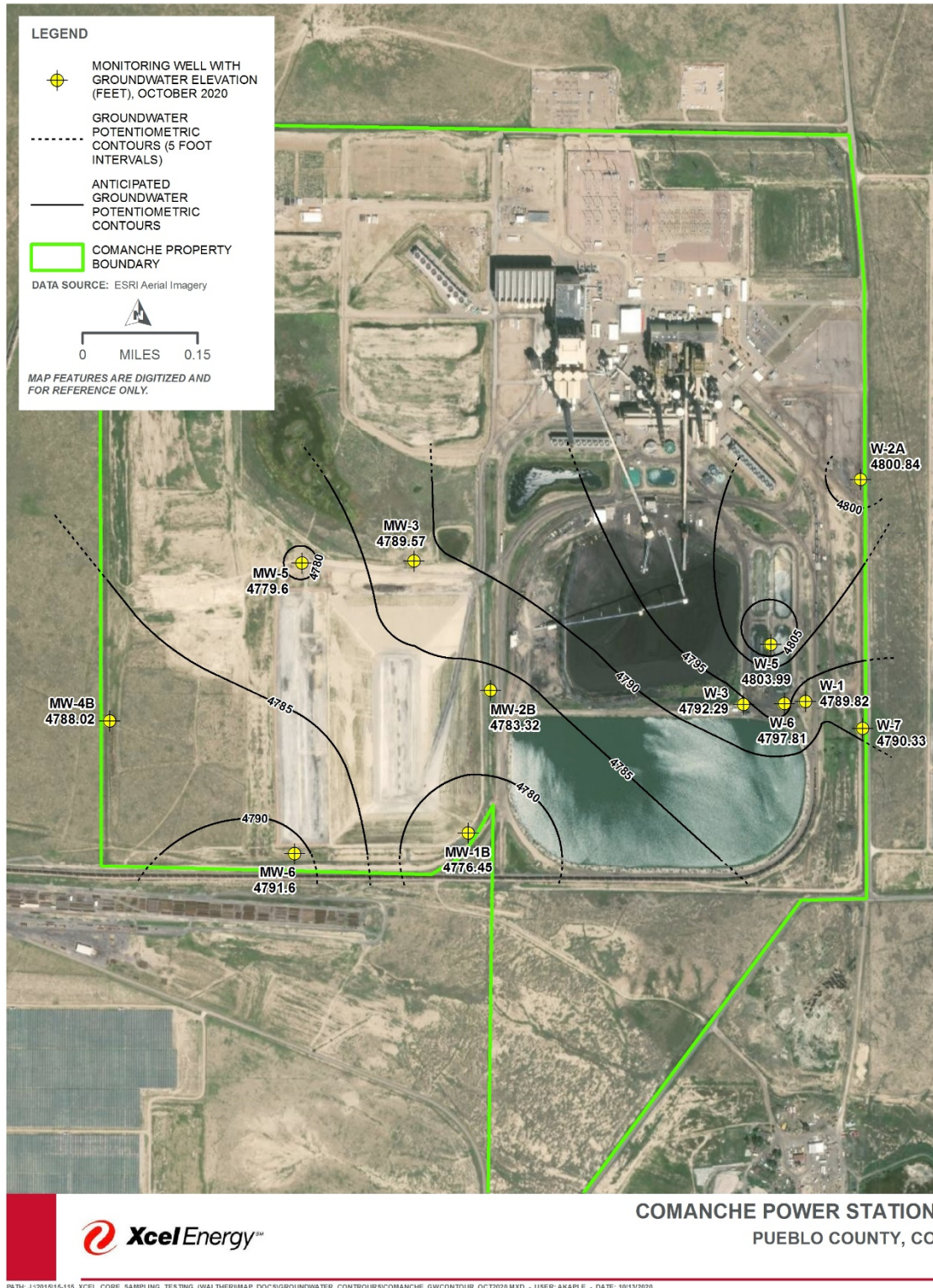


Figure 3. Groundwater contour map October 2020, wells completed in colluvium and weathered shale.

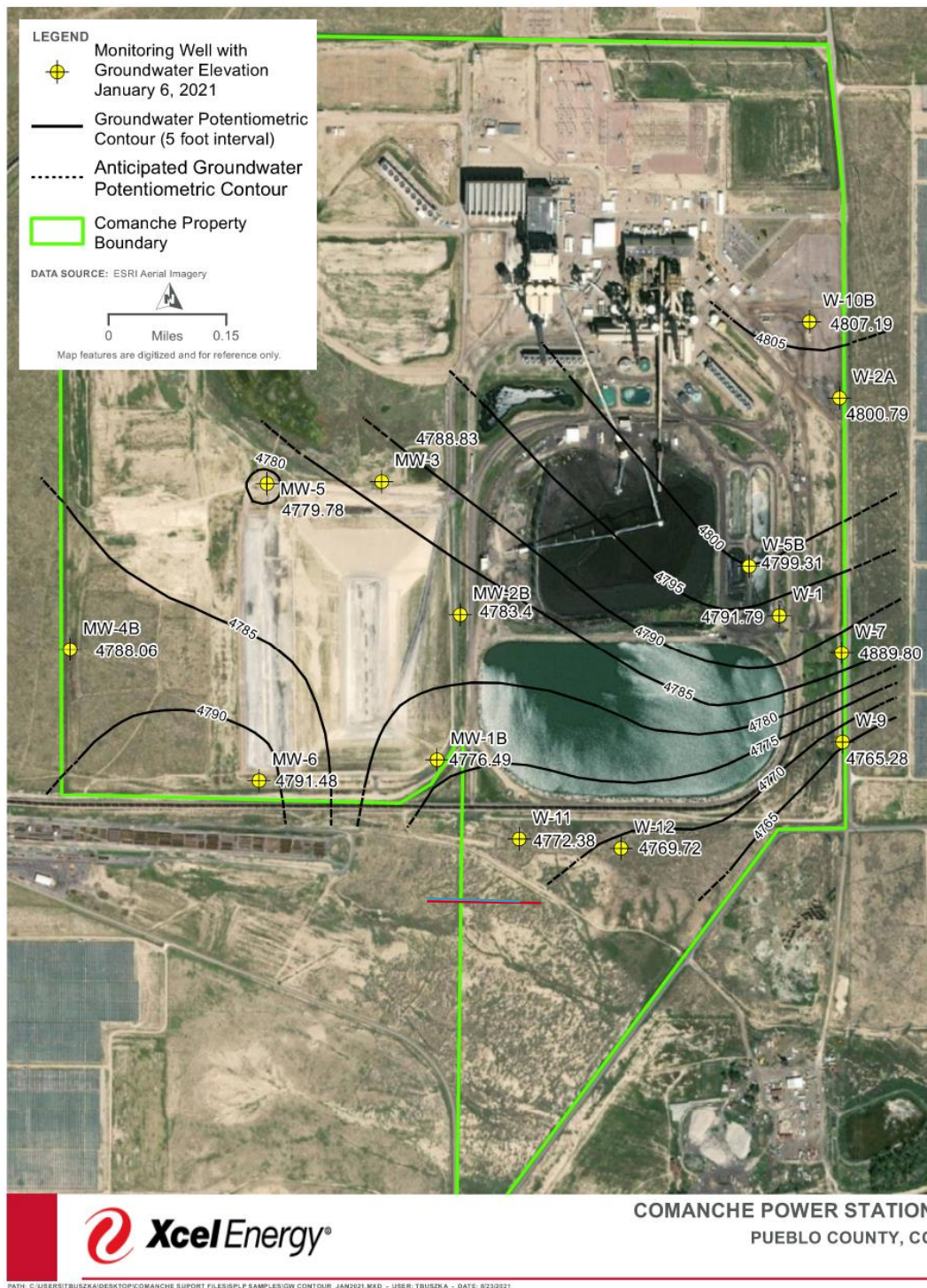


Figure 4. Groundwater potentiometric map for the Site – Water level measurements from January 2021 collected from the CCR well network showing wells screened in weathered shale.

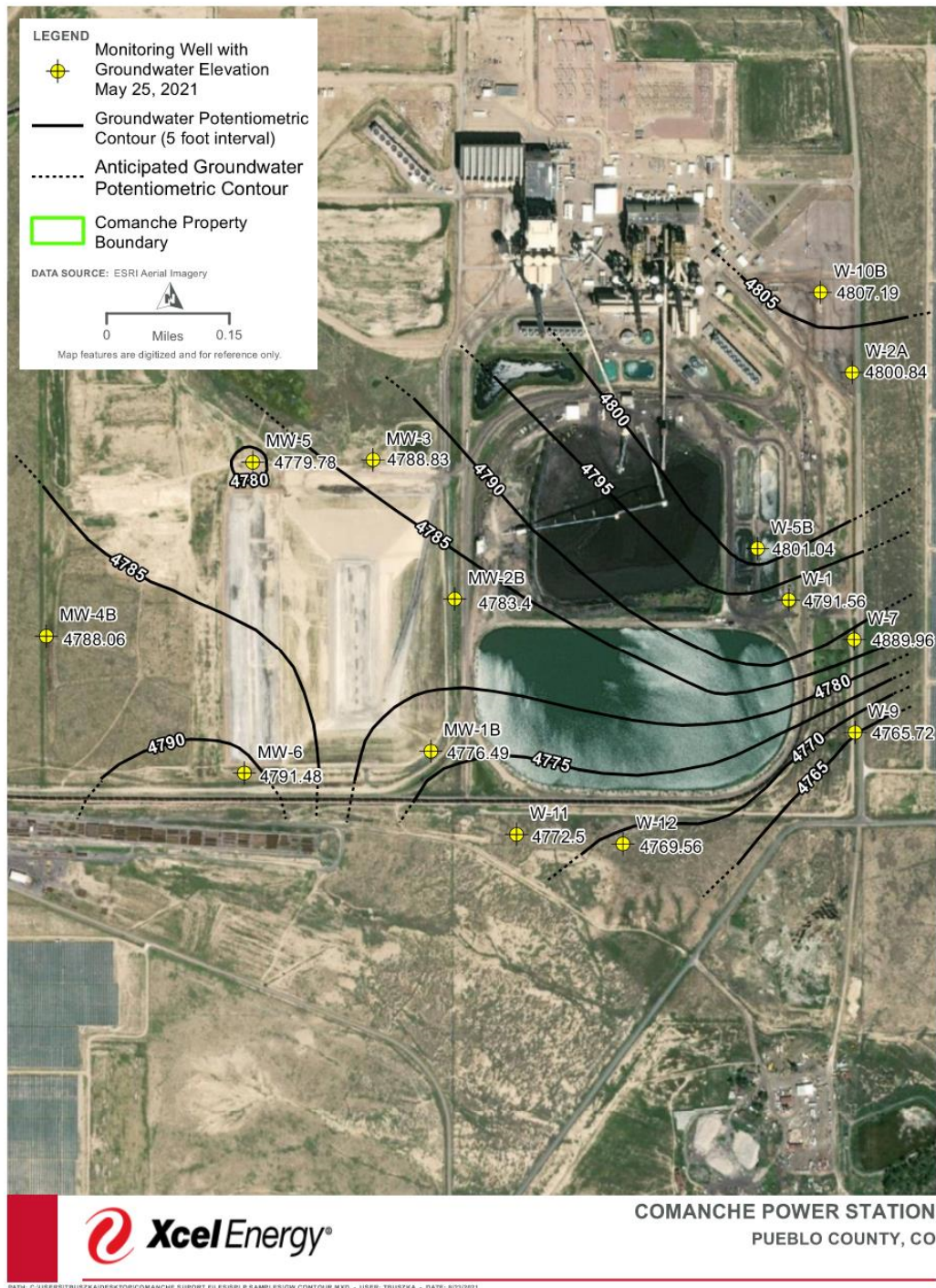


Figure 5. Groundwater potentiometric map for the Site – Water level measurements from May 2021 collected from the CCR well network showing wells screened in weathered shale.

Bottom Ash Pond

On May 26, 2021, PSCo documented SSIs above the previously established background threshold values (BTVs) (HDR, 2021) for two Appendix III constituents in downgradient monitoring wells at the Comanche Station BAP (HDR, 2018a). The SSIs were observed for boron and pH in wells W-1 and W-6, and for pH in wells W-3, W-4, W-5, W-5B, and W-9.

Wells W-6 and W-1 had SSIs of boron during the January 2021 Detection Monitoring event (7.50 and 4.10 mg/L, respectively) over the BTV (4.00 mg/L). Wells W-1, W-3, W-4, W-5, W-5B, W-6, and W-9 had SSIs of pH during the January 2021 Detection Monitoring event (6.87-7.74) over the BTV upper limit (6.73). PSCo determined it was not necessary to collect confirmation samples because the concentrations of these COIs were consistent over the nine Background and Detection sample events between August 2020 and January 2021. Therefore, the SSI triggered either an ASD or initiation of Assessment Monitoring. Because of the adjacent proximity of three other impoundments to the BAP within similar construction and liners, PSCo completed this ASD to evaluate potential sources for the boron and pH SSIs in groundwater other than the BAP. Potential sources considered include:

- Impoundments other than the BAP: Polishing Pond, Settling Pond East, Settling Pond West, and Coal Pile Pond
- Surface Soils
- Colluvium leachate

The Bottom Ash Pond, Polishing Pond, Settling Pond East, and Settling Pond West were sampled at multiple locations within the pond to evaluate the potential for variable surface water quality conditions in the ponds (**Figure 6**). The purpose of the surface water sampling and analysis was to evaluate if pond water constituent concentrations appear to contribute to the observed groundwater SSIs and groundwater quality. They were sampled at the inlet, at the pond surface, and as close to the pond bottom as sampling would allow from the bank of the pond. Samples were collected on July 28, 2021 and delivered to Eurofins TestAmerica for analysis of CCR Rule Appendix III and Appendix IV constituents plus alkalinity, carbonate, bicarbonate, potassium, sodium, and magnesium. Attachment 1 provides the water quality data for the surface water samples collected from the impoundments at Comanche including the Bottom Ash Pond, Polishing Pond, Settling Pond East, Settling Pond West, and the Coal Pile Pond. The laboratory report is provided in Attachment 2.



Figure 6. Pond water and surface soil sample locations at Comanche Station.



The water quality within each pond, and between each pond, did not appear to have significant variability at the different sampled locations within each pond (surface, bottom, and inlet). This is also apparent when reviewing the water quality results displayed on the Piper Diagram on Attachment 3. All the pond samples appear to cluster together as calcium chloride type waters with the exception of the Settling Pond West Inlet, though still a calcium chloride type water. The similarity of the water quality between ponds makes it impossible to distinguish any pond from another as a potential source of constituents in groundwater.

The water quality of the ponds was reviewed for similarity to groundwater. As shown in Attachment 3, the groundwaters do not plot similarly to the wells, nor do the ponds plot as an endmember opposite the background well with downgradient wells between, which could indicate mixing. The boron concentrations in all of the ponds ranged between 0.20 and 0.48 mg/L, with the highest concentration at the Coal Pile Pond. The well concentrations around the BAP range between approximately 2.1 and 9.5 mg/L. The ponds have one to two orders of magnitude lower concentrations of boron than the highest observed concentrations in a downgradient well. Therefore, the source of the boron in groundwater is not directly associated with any of the pond water; however, sampled pond water may not be representative of the potential for pond water to leach through pond settled ash (Izquierdo and Querol, 2012). The pH of all of the ponds was high, between 8.4 and 9.5. This high pH water could help to explain the SSI for the upper end pH in the BAP downgradient wells. The high pH in each of the four impoundments makes it impossible to distinguish any pond from another as a potential source of pH in groundwater, and when the BAP is clean closed, there is potential for the pH to remain high in the downgradient groundwater from the non-CCR impoundments.

PSCo also collected soil samples to evaluate if sediment leachate constituent concentrations appear to contribute to the observed groundwater SSIs and groundwater quality. PSCo collected surface soils from around the area of the impoundments and also sediment samples while drilling borings in December 2020. Samples were delivered to Eurofins TestAmerica July 23, 2021 for Synthetic Precipitation Leaching Procedure (SPLP) and analysis of boron, cadmium, calcium, cobalt, molybdenum, and selenium in the leachate. Attachment 1 provides the leachate quality data, each sample lithology, and **Figure 6 and 7** provides the locations of the surface soil and borings from which samples were collected. The laboratory reports are provided in Attachment 2.

Concentrations of boron in boring leachate were between 0.039 and 0.45 mg/L. The highest concentration of boron was in an alluvium leachate sample; however, one of the lowest concentrations of boron was also in an alluvium leachate sample. The colluvium and residuum material were the primary targeted lithology of interest for the location above the water table because precipitation infiltration or pond water leakage could leach these lithologic units and infiltrate to groundwater. Concentrations of boron in colluvium and residuum leachate was between 0.097 and 0.15 mg/L. These leachate boron concentrations do not appear high enough to be a source of boron to groundwater above background groundwater concentrations.



Figure 7. Boring sample locations at Comanche Station.



Concentrations of boron in surface soil leachate were between 0.33 and 1.9 mg/L. The highest concentrations of boron were collected from SS-4, SS-5, and SS-6, located at the southwest corner of the BAP. The south end of the BAP is the location where CCR is excavated and handled into a truck for pond cleanout. However, the boron concentrations in surface soil leachate do not appear high enough to be a source of boron to groundwater above background groundwater concentrations. This area close to the BAP will be part of the clean closure corrective action.

The alternate source investigation completed for the BAP did not result in identification of an alternate source.

Summary

The groundwater flow direction under the landfill is to the southeast in each of three contour map dates (October 2020, and January and May 2021). The groundwater flow direction under the landfill is away from MW-4B, not towards the well and therefore well MW-4B is not downgradient of the landfill. PSCo will install a new downgradient well on the southeast side of the landfill between MW-1B and MW-2B, which will be sampled with the other wells in November 2021. The calcium SSI in MW-4B could not have originated from the landfill, and it is probable that the calcium in the groundwater at MW-4B is due to the gypsum in the screened interval lithology. Therefore, the landfill will remain in Detection Monitoring.

There do not appear to be concentrations of boron in pond water, surface soil leachate, or colluvium or residuum leachate high enough to be a source to groundwater above background groundwater concentrations in the Bottom Ash Pond area. The CCR and non-CCR impoundments cannot be differentiated from each other based on the sampling done in this investigation and boron concentrations in the impoundments do not appear high enough to be a source to groundwater above background groundwater concentrations. However, the pH in the ponds, if leaking, could account for the pH SSI in downgradient impoundment wells. The pH of the pond water could also potentially leach through pond settled ash and be a source of the boron observed in the wells. PSCo did not identify an alternate source at the BAP. Therefore, PSCo will continue Assessment Monitoring at this CCR unit.



References

HDR, Inc. 2021. Comanche Station CCR Units –Landfill and Bottom Ash Pond Determination of Statistically Significant Increases over Background per 257.93(h)(2), Comanche Station, Pueblo, Colorado. May 26, 2021.

HDR, Inc. 2021b. Well Installation Report, Comanche Station, Pueblo, Colorado. January 13, 2015.

Izquierdo, M. and Querol, X., 2012. Leaching behavior of elements from coal combustion fly ash: an overview. *Int. J. Coal Geol.*, 94, 54–66.



Certification

Comanche Station Landfill Alternative Source Demonstration

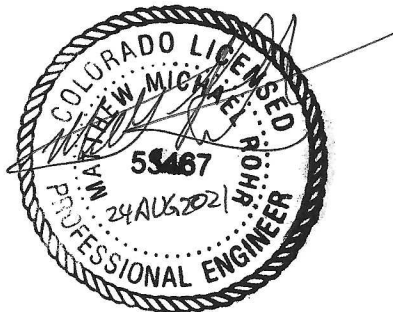
I hereby certify to the best of my knowledge the accuracy of the information contained in this memorandum and that this alternative source demonstration for the Comanche Landfill was prepared under my supervision and is in accordance with 40 CFR Part 257.94(e)(2) of the Federal Coal Combustion Residuals (CCR) Rule.

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

Matthew Rohr, PE

Colorado PE License 0053467

License renewal date Oct. 31, 2021



Attachment 1

Sample I.D.		COM-SF-BAPB	COM-SF-BAPI	COM-SF-BAPT	COM-SF-CPP	COM-SF-PPB	COM-SF-PPI	COM-SF-PPT	COM-SF-SPEB	COM-SF-SPEI	COM-SF-SPET	COM-SF-SPWB	COM-SF-SPWI	COM-SF-SPWT
Analyte	Units	Bottom Ash Pond Bottom	Bottom Ash Pond Inlet	Bottom Ash Pond Top	Coal Pile Pond Grab	Polishing Pond Bottom	Polishing Pond Inlet	Polishing Pond Top	Settling Pond East Bottom	Settling Pond East Inlet	Settling Pond East Top	Settling Pond West Bottom	Settling Pond West Inlet	Settling Pond West Top
Sample Date		7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021	7/28/2021
Alkalinity	mg/l	70	68	71	190	77	80	77	56	110	58	67	68	68
Bicarbonate Alkalinity as CaCO3	mg/l	29	15	30	190	50	57	41	56	63	58	67	41	68
Carbonate Alkalinity as CaCO3	mg/l	40	53	42	<10	27	23	36	<10	52	<10	<10	<10	<10
Total Dissolved Solids (TDS)	mg/l	920	940	910	5100	890	860	860	920	870	890	840	620	820
Total Suspended Solids	mg/l	4.4	13	2.4	16	37	15	110	16	20	46	33	7000	30
Boron	mg/l	0.37	0.38	0.36	0.48	0.27	0.27	0.28	0.34	0.44	0.28	0.2	0.29	0.21
Antimony	mg/l	0.0018	0.0017	0.0017	<0.002	0.0015	0.0015	0.0015	0.0019	0.002	0.0015	0.0012	0.0013	0.0014
Arsenic	mg/l	0.0022	0.0018	0.0018	0.0019	0.0024	0.0025	0.0027	0.0014	0.0036	0.0011	0.0017	0.013	0.0017
Barium	mg/l	0.24	0.23	0.24	0.1	0.23	0.23	0.23	0.21	0.25	0.18	0.2	0.97	0.2
Beryllium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00064	<0.001
Calcium	mg/l	120	120	120	240	110	120	110	120	120	96	110	1200	110
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00063	<0.001
Cobalt	mg/l	0.00021	0.00022	0.00021	0.00053	0.00028	0.00028	0.00039	<0.001	0.00035	<0.001	0.0003	0.0028	0.00032
Chromium	mg/l	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0029	0.0025	0.0036	0.0025	0.0025	0.007	0.0025
Potassium	ug/l	9500	8900	9200	9800	8000	8100	7700	9400	8400	7500	7300	5700	7600
Magnesium	ug/l	30000	27000	30000	350000	33000	33000	31000	34000	27000	28000	35000	110000	35000
Molybdenum	mg/l	0.023	0.022	0.023	0.0073	0.018	0.018	0.017	0.022	0.025	0.016	0.016	0.018	0.017
Lead	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001	<0.001	<0.001	0.0042	<0.001
Selenium	mg/l	0.011	0.011	0.011	0.08	0.012	0.011	0.01	0.0081	0.011	0.0071	0.01	0.012	0.011
Sodium	ug/l	89000	83000	87000	430000	83000	84000	80000	86000	73000	70000	78000	52000	81000
Thallium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.00073	0.00051
Lithium	mg/l	0.048	0.042	0.047	0.36	0.047	0.048	0.046	0.056	0.045	0.046	0.045	0.037	0.046
Mercury	mg/l	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
pH adj. to 25 deg C	su	9.3	9.5	9.4	8.5	8.7	9.1	9.1	8.4	9.2	8.4	8.6	8.8	8.4
Chloride	mg/l	46	46	46	86	53	52	52	53	45	52	49	26	50
Fluoride	mg/l	1	1.1	1.1	0.68	1	1	1	0.72	1.1	0.7	0.9	0.49	0.88
Sulfate	mg/l	540	560	540	3100	480	500	490	510	510	520	480	360	460

Comanche Station Surface Soil and Boring Sample SPLP Leachate Quality

	Sample I.D.	Lithology	SPLP Leachate Results					
			Boron	Cadmium	Calcium	Cobalt	Molybdenum	Selenium
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Surface Soil SPLP	COM-SS-1	Surface Soil	0.33	<.005	85	<.01	0.0032	0.018
	COM-SS-2	Surface Soil	0.91	<.005	520	<.01	0.0099	0.039
	COM-SS-3	Surface Soil	0.82	<.005	63	<.01	0.0056	0.015
	COM-SS-4	Surface Soil	1.9	<.005	100	<.01	0.016	0.012
	COM-SS-5	Surface Soil	1.6	<.005	61	<.01	0.018	0.017
	COM-SS-6	Surface Soil	1	<.005	100	<.01	0.0057	0.017
	COM-SS-7	Surface Soil	0.45	<.005	170	<.01	0.0067	0.016
	COM-SS-8	Surface Soil	0.87	<.005	72	<.01	0.0039	<0.02
Boring Sample SPLP	W-10-20-25	Weathered shale	0.094	<.005	75	0.00076	0.0041	0.03
	W-11-9-10	Weathered shale	0.11	<.005	550	<.01	0.0042	0.08
	W-12-11-12	Residuum (Clay)	0.12	<.005	570	<.01	0.021	0.049
	W-12-5-6	Colluvium	0.099	<.005	600	<.01	0.023	0.023
	W-13-10-11	Alluvium	0.039	<.005	9.7	<.01	0.023	<0.02
	W-13-24-25	Weathered shale	0.048	0.00079	520	<.01	0.0061	0.038
	W-5B-14-15	Residuum (Clay)	0.15	<.005	560	<.01	0.011	<0.02
	W-5B-3-4	Colluvium	0.14	<.005	430	<.01	0.0075	0.018
	W-9-11-12	Alluvium	0.061	<.005	12	<.01	0.011	0.013
	W-9-15-16	Colluvium	0.097	<.005	8.9	<.01	0.049	0.012
	W-9-21-22	Alluvium	0.046	<.005	46	<.01	0.024	<0.02
	W-9-22-27	Residuum (Clay)	0.11	<.005	3.7	0.00019	0.026	0.014
	W-9-33-34	Weathered shale	0.066	<.005	77	0.00079	0.014	0.05
	W-9-5-8	Alluvium	0.45	<.005	590	<.01	0.033	0.0064

Attachment 2

ANALYTICAL REPORT

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

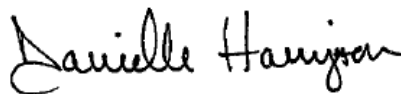
Laboratory Job ID: 280-151157-1

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

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
8/11/2021 8:05:16 AM

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

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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 - Comanche

Job ID: 280-151157-1

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.
B	Compound was found in the blank and sample.
H	Sample was prepped or analyzed beyond the specified holding time
H3	Sample was received and analyzed past holding time.
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.

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 - Comanche

Job ID: 280-151157-1

Job ID: 280-151157-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-151157-1

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 07/26/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 23.9 C.

Please note, the following samples were received outside of holding time for SPLP Metals : W-9-5-8 (280-151157-1), W-9-22-27 (280-151157-2), W-13-10-11 (280-151157-3), W-13-24-25 (280-151157-4), W-10-20-25 (280-151157-5), W-12-11-12 (280-151157-6), W-9-21-22 (280-151157-7), W-5B-14-15 (280-151157-8), W-12-5-6 (280-151157-9), W-9-15-16 (280-151157-10), W-9-33-34 (280-151157-11), W-9-11-12 (280-151157-12), W-11-9-10 (280-151157-13) and W-5B-3-4 (280-151157-14).

SPLP METALS- Method 6010C

The following samples were received outside of holding time for SPLP Metals : W-9-5-8 (280-151157-1), W-9-22-27 (280-151157-2), W-13-10-11 (280-151157-3), W-13-24-25 (280-151157-4), W-10-20-25 (280-151157-5), W-12-11-12 (280-151157-6), W-9-21-22 (280-151157-7), W-5B-14-15 (280-151157-8), W-12-5-6 (280-151157-9), W-9-15-16 (280-151157-10), W-9-33-34 (280-151157-11), W-9-11-12 (280-151157-12), W-11-9-10 (280-151157-13) and W-5B-3-4 (280-151157-14). Please note that the sample results should be considered estimated.

Low levels of Boron and Calcium present in the method blank associated with QC batch 280-545330. 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 Boron, Calcium, Cobalt, and Selenium present in the method blank associated with QC batch 280-545330. 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 Calcium, Boron, and Cobalt present in the method blank associated with QC batch 280-545613. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The accuracy and precision of the Calcium MS/MSD performed on a sample W-9-5-8 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.

CORROSIVITY (PH)- METHOD 9045D

Case Narrative

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

Job ID: 280-151157-1

Job ID: 280-151157-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

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Detection Summary

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

Job ID: 280-151157-1

Client Sample ID: W-9-5-8

Lab Sample ID: 280-151157-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450	H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	590000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	33	H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	6.4	J H H3	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	7.8	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-9-22-27

Lab Sample ID: 280-151157-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	110	H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	3700	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Cobalt	0.19	J H H3 B	10	0.12	ug/L	1		6010C	SPLP West
Molybdenum	26	H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	14	J H H3	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	7.9	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-13-10-11

Lab Sample ID: 280-151157-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	39	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	9700	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	23	H H3	20	1.0	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	9.0	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-13-24-25

Lab Sample ID: 280-151157-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	48	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Cadmium	0.79	J H H3	5.0	0.45	ug/L	1		6010C	SPLP West
Calcium	520000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	6.1	J H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	38	H H3	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	7.9	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-10-20-25

Lab Sample ID: 280-151157-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	94	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	75000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Cobalt	0.76	J H H3	10	0.12	ug/L	1		6010C	SPLP West
Molybdenum	4.1	J H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	30	H H3	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	7.5	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-12-11-12

Lab Sample ID: 280-151157-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	120	H H3 B	100	1.6	ug/L	1		6010C	SPLP West

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

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

Job ID: 280-151157-1

Client Sample ID: W-12-11-12 (Continued)

Lab Sample ID: 280-151157-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	570000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	21	H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	49	H H3	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.1	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-9-21-22

Lab Sample ID: 280-151157-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	46	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	46000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	24	H H3	20	1.0	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.6	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-5B-14-15

Lab Sample ID: 280-151157-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	150	H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	560000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	11	J H H3	20	1.0	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.0	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-12-5-6

Lab Sample ID: 280-151157-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	99	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	600000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	23	H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	23	H H3	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.0	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-9-15-16

Lab Sample ID: 280-151157-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	97	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	8900	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	49	H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	12	J H H3 B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.5	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-9-33-34

Lab Sample ID: 280-151157-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	66	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	77000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Cobalt	0.79	J H H3 B	10	0.12	ug/L	1		6010C	SPLP West
Molybdenum	14	J H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	50	H H3 B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	7.6	HF	0.1	0.1	SU	1		9045D	Soluble

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

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

Job ID: 280-151157-1

Client Sample ID: W-9-33-34 (Continued)

Lab Sample ID: 280-151157-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-9-11-12

Lab Sample ID: 280-151157-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	61	J H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	12000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	11	J H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	13	J H H3 B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.8	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	22.2	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-11-9-10

Lab Sample ID: 280-151157-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	110	H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	550000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	4.2	J H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	80	H H3 B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: W-5B-3-4

Lab Sample ID: 280-151157-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	140	H H3 B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	430000	H H3 B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	7.5	J H H3	20	1.0	ug/L	1		6010C	SPLP West
Selenium	18	J H H3 B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: COM-SS-1

Lab Sample ID: 280-151157-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	330	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	85000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	3.2	J	20	1.0	ug/L	1		6010C	SPLP West
Selenium	18	J B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.4	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	22.1	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: COM-SS-2

Lab Sample ID: 280-151157-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	910	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	520000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	9.9	J	20	1.0	ug/L	1		6010C	SPLP West
Selenium	39	B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	7.7	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.9	HF	1.0	1.0	Degrees C	1		9045D	Soluble

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

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

Job ID: 280-151157-1

Client Sample ID: COM-SS-3

Lab Sample ID: 280-151157-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	820	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	63000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	5.6	J	20	1.0	ug/L	1		6010C	SPLP West
Selenium	15	J B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.1	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: COM-SS-4

Lab Sample ID: 280-151157-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1900	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	100000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	16	J	20	1.0	ug/L	1		6010C	SPLP West
Selenium	12	J B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	9.6	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.6	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: COM-SS-5

Lab Sample ID: 280-151157-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1600	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	61000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	18	J	20	1.0	ug/L	1		6010C	SPLP West
Selenium	17	J B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	22.0	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: COM-SS-6

Lab Sample ID: 280-151157-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1000	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	100000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	5.7	J	20	1.0	ug/L	1		6010C	SPLP West
Selenium	17	J B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.0	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: COM-SS-7

Lab Sample ID: 280-151157-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	170000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	6.7	J	20	1.0	ug/L	1		6010C	SPLP West
Selenium	16	J B	20	6.3	ug/L	1		6010C	SPLP West
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1		9045D	Soluble
Temperature	21.9	HF	1.0	1.0	Degrees C	1		9045D	Soluble

Client Sample ID: COM-SS-8

Lab Sample ID: 280-151157-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	870	B	100	1.6	ug/L	1		6010C	SPLP West
Calcium	72000	B	2000	78	ug/L	1		6010C	SPLP West
Molybdenum	3.9	J	20	1.0	ug/L	1		6010C	SPLP West

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

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

Job ID: 280-151157-1

Client Sample ID: COM-SS-8 (Continued)

Lab Sample ID: 280-151157-22

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		9045D	Soluble
Temperature	21.7	HF	1.0	1.0	Degrees C	1		9045D	Soluble

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc

Job ID: 280-151157-1

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN
9045D	pH	SW846	TAL DEN
1312	SPLP Extraction	SW846	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL DEN

Protocol References:

ASTM = ASTM International

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

Laboratory References:

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 - Comanche

Job ID: 280-151157-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-151157-1	W-9-5-8	Solid	12/03/20 13:17	07/26/21 11:45
280-151157-2	W-9-22-27	Solid	12/03/20 14:35	07/26/21 11:45
280-151157-3	W-13-10-11	Solid	12/10/20 08:55	07/26/21 11:45
280-151157-4	W-13-24-25	Solid	12/10/20 10:05	07/26/21 11:45
280-151157-5	W-10-20-25	Solid	12/07/20 14:10	07/26/21 11:45
280-151157-6	W-12-11-12	Solid	12/09/20 12:25	07/26/21 11:45
280-151157-7	W-9-21-22	Solid	12/03/20 14:35	07/26/21 11:45
280-151157-8	W-5B-14-15	Solid	12/11/20 11:50	07/26/21 11:45
280-151157-9	W-12-5-6	Solid	12/09/20 12:03	07/26/21 11:45
280-151157-10	W-9-15-16	Solid	12/03/20 14:05	07/26/21 11:45
280-151157-11	W-9-33-34	Solid	12/03/20 10:05	07/26/21 11:45
280-151157-12	W-9-11-12	Solid	12/03/20 13:43	07/26/21 11:45
280-151157-13	W-11-9-10	Solid	12/08/20 12:50	07/26/21 11:45
280-151157-14	W-5B-3-4	Solid	12/11/20 11:31	07/26/21 11:45
280-151157-15	COM-SS-1	Solid	07/23/21 12:39	07/26/21 11:45
280-151157-16	COM-SS-2	Solid	07/23/21 12:48	07/26/21 11:45
280-151157-17	COM-SS-3	Solid	07/23/21 12:58	07/26/21 11:45
280-151157-18	COM-SS-4	Solid	07/23/21 13:13	07/26/21 11:45
280-151157-19	COM-SS-5	Solid	07/23/21 13:20	07/26/21 11:45
280-151157-20	COM-SS-6	Solid	07/23/21 13:26	07/26/21 11:45
280-151157-21	COM-SS-7	Solid	07/23/21 13:32	07/26/21 11:45
280-151157-22	COM-SS-8	Solid	07/23/21 13:36	07/26/21 11:45

Client Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP) - SPLP West

Client Sample ID: W-9-5-8
Date Collected: 12/03/20 13:17
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450	H H3 B	100	1.6	ug/L		08/02/21 07:12	08/03/21 14:32	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 07:12	08/03/21 14:32	1
Calcium	590000	H H3 B	2000	78	ug/L		08/02/21 07:12	08/03/21 14:32	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 07:12	08/03/21 14:32	1
Molybdenum	33	H H3	20	1.0	ug/L		08/02/21 07:12	08/03/21 14:32	1
Selenium	6.4	J H H3	20	6.3	ug/L		08/02/21 07:12	08/03/21 14:32	1

Client Sample ID: W-9-22-27
Date Collected: 12/03/20 14:35
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	110	H H3 B	100	1.6	ug/L		08/04/21 14:37	08/05/21 17:38	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/04/21 14:37	08/05/21 17:38	1
Calcium	3700	H H3 B	2000	78	ug/L		08/04/21 14:37	08/05/21 17:38	1
Cobalt	0.19	J H H3 B	10	0.12	ug/L		08/04/21 14:37	08/05/21 17:38	1
Molybdenum	26	H H3	20	1.0	ug/L		08/04/21 14:37	08/05/21 17:38	1
Selenium	14	J H H3	20	6.3	ug/L		08/04/21 14:37	08/05/21 17:38	1

Client Sample ID: W-13-10-11
Date Collected: 12/10/20 08:55
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	39	J H H3 B	100	1.6	ug/L		08/04/21 14:37	08/05/21 17:52	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/04/21 14:37	08/05/21 17:52	1
Calcium	9700	H H3 B	2000	78	ug/L		08/04/21 14:37	08/05/21 17:52	1
Cobalt	ND	H H3	10	0.12	ug/L		08/04/21 14:37	08/05/21 17:52	1
Molybdenum	23	H H3	20	1.0	ug/L		08/04/21 14:37	08/05/21 17:52	1
Selenium	ND	H H3	20	6.3	ug/L		08/04/21 14:37	08/05/21 17:52	1

Client Sample ID: W-13-24-25
Date Collected: 12/10/20 10:05
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	48	J H H3 B	100	1.6	ug/L		08/02/21 07:12	08/03/21 14:46	1
Cadmium	0.79	J H H3	5.0	0.45	ug/L		08/02/21 07:12	08/03/21 14:46	1
Calcium	520000	H H3 B	2000	78	ug/L		08/02/21 07:12	08/03/21 14:46	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 07:12	08/03/21 14:46	1
Molybdenum	6.1	J H H3	20	1.0	ug/L		08/02/21 07:12	08/03/21 14:46	1
Selenium	38	H H3	20	6.3	ug/L		08/02/21 07:12	08/03/21 14:46	1

Client Sample ID: W-10-20-25
Date Collected: 12/07/20 14:10
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	94	J H H3 B	100	1.6	ug/L		08/02/21 07:12	08/03/21 15:03	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 07:12	08/03/21 15:03	1
Calcium	75000	H H3 B	2000	78	ug/L		08/02/21 07:12	08/03/21 15:03	1
Cobalt	0.76	J H H3	10	0.12	ug/L		08/02/21 07:12	08/03/21 15:03	1
Molybdenum	4.1	J H H3	20	1.0	ug/L		08/02/21 07:12	08/03/21 15:03	1
Selenium	30	H H3	20	6.3	ug/L		08/02/21 07:12	08/03/21 15:03	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP) - SPLP West

Client Sample ID: W-12-11-12
Date Collected: 12/09/20 12:25
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	120	H H3 B	100	1.6	ug/L		08/02/21 07:12	08/03/21 15:07	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 07:12	08/03/21 15:07	1
Calcium	570000	H H3 B	2000	78	ug/L		08/02/21 07:12	08/03/21 15:07	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 07:12	08/03/21 15:07	1
Molybdenum	21	H H3	20	1.0	ug/L		08/02/21 07:12	08/03/21 15:07	1
Selenium	49	H H3	20	6.3	ug/L		08/02/21 07:12	08/03/21 15:07	1

Client Sample ID: W-9-21-22
Date Collected: 12/03/20 14:35
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	46	J H H3 B	100	1.6	ug/L		08/02/21 07:12	08/03/21 15:10	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 07:12	08/03/21 15:10	1
Calcium	46000	H H3 B	2000	78	ug/L		08/02/21 07:12	08/03/21 15:10	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 07:12	08/03/21 15:10	1
Molybdenum	24	H H3	20	1.0	ug/L		08/02/21 07:12	08/03/21 15:10	1
Selenium	ND	H H3	20	6.3	ug/L		08/02/21 07:12	08/03/21 15:10	1

Client Sample ID: W-5B-14-15
Date Collected: 12/11/20 11:50
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	150	H H3 B	100	1.6	ug/L		08/02/21 07:12	08/03/21 15:14	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 07:12	08/03/21 15:14	1
Calcium	560000	H H3 B	2000	78	ug/L		08/02/21 07:12	08/03/21 15:14	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 07:12	08/03/21 15:14	1
Molybdenum	11	J H H3	20	1.0	ug/L		08/02/21 07:12	08/03/21 15:14	1
Selenium	ND	H H3	20	6.3	ug/L		08/02/21 07:12	08/03/21 15:14	1

Client Sample ID: W-12-5-6
Date Collected: 12/09/20 12:03
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	99	J H H3 B	100	1.6	ug/L		08/02/21 07:12	08/03/21 15:18	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 07:12	08/03/21 15:18	1
Calcium	600000	H H3 B	2000	78	ug/L		08/02/21 07:12	08/03/21 15:18	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 07:12	08/03/21 15:18	1
Molybdenum	23	H H3	20	1.0	ug/L		08/02/21 07:12	08/03/21 15:18	1
Selenium	23	H H3	20	6.3	ug/L		08/02/21 07:12	08/03/21 15:18	1

Client Sample ID: W-9-15-16
Date Collected: 12/03/20 14:05
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	97	J H H3 B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:03	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:03	1
Calcium	8900	H H3 B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:03	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 14:38	08/03/21 13:03	1
Molybdenum	49	H H3	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:03	1
Selenium	12	J H H3 B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:03	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP) - SPLP West

Client Sample ID: W-9-33-34
Date Collected: 12/03/20 10:05
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	66	J H H3 B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:18	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:18	1
Calcium	77000	H H3 B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:18	1
Cobalt	0.79	J H H3 B	10	0.12	ug/L		08/02/21 14:38	08/03/21 13:18	1
Molybdenum	14	J H H3	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:18	1
Selenium	50	H H3 B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:18	1

Client Sample ID: W-9-11-12
Date Collected: 12/03/20 13:43
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	61	J H H3 B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:21	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:21	1
Calcium	12000	H H3 B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:21	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 14:38	08/03/21 13:21	1
Molybdenum	11	J H H3	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:21	1
Selenium	13	J H H3 B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:21	1

Client Sample ID: W-11-9-10
Date Collected: 12/08/20 12:50
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	110	H H3 B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:39	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:39	1
Calcium	550000	H H3 B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:39	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 14:38	08/03/21 13:39	1
Molybdenum	4.2	J H H3	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:39	1
Selenium	80	H H3 B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:39	1

Client Sample ID: W-5B-3-4
Date Collected: 12/11/20 11:31
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	140	H H3 B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:43	1
Cadmium	ND	H H3	5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:43	1
Calcium	430000	H H3 B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:43	1
Cobalt	ND	H H3	10	0.12	ug/L		08/02/21 14:38	08/03/21 13:43	1
Molybdenum	7.5	J H H3	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:43	1
Selenium	18	J H H3 B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:43	1

Client Sample ID: COM-SS-1
Date Collected: 07/23/21 12:39
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	330	B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:46	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:46	1
Calcium	85000	B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:46	1
Cobalt	ND		10	0.12	ug/L		08/02/21 14:38	08/03/21 13:46	1
Molybdenum	3.2	J	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:46	1
Selenium	18	J B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:46	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP) - SPLP West

Client Sample ID: COM-SS-2
Date Collected: 07/23/21 12:48
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	910	B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:50	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:50	1
Calcium	520000	B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:50	1
Cobalt	ND		10	0.12	ug/L		08/02/21 14:38	08/03/21 13:50	1
Molybdenum	9.9	J	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:50	1
Selenium	39	B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:50	1

Client Sample ID: COM-SS-3
Date Collected: 07/23/21 12:58
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	820	B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:53	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:53	1
Calcium	63000	B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:53	1
Cobalt	ND		10	0.12	ug/L		08/02/21 14:38	08/03/21 13:53	1
Molybdenum	5.6	J	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:53	1
Selenium	15	J B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:53	1

Client Sample ID: COM-SS-4
Date Collected: 07/23/21 13:13
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1900	B	100	1.6	ug/L		08/02/21 14:38	08/03/21 13:57	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 13:57	1
Calcium	100000	B	2000	78	ug/L		08/02/21 14:38	08/03/21 13:57	1
Cobalt	ND		10	0.12	ug/L		08/02/21 14:38	08/03/21 13:57	1
Molybdenum	16	J	20	1.0	ug/L		08/02/21 14:38	08/03/21 13:57	1
Selenium	12	J B	20	6.3	ug/L		08/02/21 14:38	08/03/21 13:57	1

Client Sample ID: COM-SS-5
Date Collected: 07/23/21 13:20
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-19
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1600	B	100	1.6	ug/L		08/02/21 14:38	08/03/21 14:00	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 14:00	1
Calcium	61000	B	2000	78	ug/L		08/02/21 14:38	08/03/21 14:00	1
Cobalt	ND		10	0.12	ug/L		08/02/21 14:38	08/03/21 14:00	1
Molybdenum	18	J	20	1.0	ug/L		08/02/21 14:38	08/03/21 14:00	1
Selenium	17	J B	20	6.3	ug/L		08/02/21 14:38	08/03/21 14:00	1

Client Sample ID: COM-SS-6
Date Collected: 07/23/21 13:26
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-20
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1000	B	100	1.6	ug/L		08/02/21 14:38	08/03/21 14:04	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 14:04	1
Calcium	100000	B	2000	78	ug/L		08/02/21 14:38	08/03/21 14:04	1
Cobalt	ND		10	0.12	ug/L		08/02/21 14:38	08/03/21 14:04	1
Molybdenum	5.7	J	20	1.0	ug/L		08/02/21 14:38	08/03/21 14:04	1
Selenium	17	J B	20	6.3	ug/L		08/02/21 14:38	08/03/21 14:04	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP) - SPLP West

Client Sample ID: COM-SS-7
Date Collected: 07/23/21 13:32
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-21
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450	B	100	1.6	ug/L		08/02/21 14:38	08/03/21 14:08	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 14:08	1
Calcium	170000	B	2000	78	ug/L		08/02/21 14:38	08/03/21 14:08	1
Cobalt	ND		10	0.12	ug/L		08/02/21 14:38	08/03/21 14:08	1
Molybdenum	6.7	J	20	1.0	ug/L		08/02/21 14:38	08/03/21 14:08	1
Selenium	16	J B	20	6.3	ug/L		08/02/21 14:38	08/03/21 14:08	1

Client Sample ID: COM-SS-8
Date Collected: 07/23/21 13:36
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-22
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	870	B	100	1.6	ug/L		08/04/21 14:37	08/05/21 17:56	1
Cadmium	ND		5.0	0.45	ug/L		08/04/21 14:37	08/05/21 17:56	1
Calcium	72000	B	2000	78	ug/L		08/04/21 14:37	08/05/21 17:56	1
Cobalt	ND		10	0.12	ug/L		08/04/21 14:37	08/05/21 17:56	1
Molybdenum	3.9	J	20	1.0	ug/L		08/04/21 14:37	08/05/21 17:56	1
Selenium	ND		20	6.3	ug/L		08/04/21 14:37	08/05/21 17:56	1

General Chemistry - Soluble

Client Sample ID: W-9-5-8
Date Collected: 12/03/20 13:17
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-1
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.7	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-9-22-27
Date Collected: 12/03/20 14:35
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-2
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.8	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-13-10-11
Date Collected: 12/10/20 08:55
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.0	HF	0.1	0.1	SU			07/27/21 14:36	1
Temperature	21.8	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-13-24-25
Date Collected: 12/10/20 10:05
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-4
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.7	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample Results

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

Job ID: 280-151157-1

General Chemistry - Soluble

Client Sample ID: W-10-20-25
Date Collected: 12/07/20 14:10
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-5
Matrix: Solid

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			07/27/21 14:57	1
Temperature	21.8	HF	1.0	1.0	Degrees C			07/27/21 14:57	1

Client Sample ID: W-12-11-12
Date Collected: 12/09/20 12:25
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-6
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.7	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-9-21-22
Date Collected: 12/03/20 14:35
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.6	HF	0.1	0.1	SU			07/27/21 14:36	1
Temperature	21.7	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-5B-14-15
Date Collected: 12/11/20 11:50
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-8
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.6	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-12-5-6
Date Collected: 12/09/20 12:03
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-9
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.8	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-9-15-16
Date Collected: 12/03/20 14:05
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.5	HF	0.1	0.1	SU			07/27/21 14:36	1
Temperature	21.6	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-9-33-34
Date Collected: 12/03/20 10:05
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-11
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.6	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-9-11-12
Date Collected: 12/03/20 13:43
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.8	HF	0.1	0.1	SU			07/27/21 14:36	1
Temperature	22.2	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

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Client Sample Results

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

Job ID: 280-151157-1

General Chemistry - Soluble

Client Sample ID: W-11-9-10
Date Collected: 12/08/20 12:50
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-13
Matrix: Solid

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			07/27/21 14:36	1
Temperature	22.0	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: W-5B-3-4
Date Collected: 12/11/20 11:31
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-14
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.6	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: COM-SS-1
Date Collected: 07/23/21 12:39
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-15
Matrix: Solid

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			07/27/21 14:36	1
Temperature	22.1	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: COM-SS-2
Date Collected: 07/23/21 12:48
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-16
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.9	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: COM-SS-3
Date Collected: 07/23/21 12:58
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-17
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.8	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: COM-SS-4
Date Collected: 07/23/21 13:13
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.6	HF	0.1	0.1	SU			07/27/21 14:36	1
Temperature	21.6	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: COM-SS-5
Date Collected: 07/23/21 13:20
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-19
Matrix: Solid

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			07/27/21 14:36	1
Temperature	22.0	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: COM-SS-6
Date Collected: 07/23/21 13:26
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-20
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.8	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

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Client Sample Results

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

Job ID: 280-151157-1

General Chemistry - Soluble

Client Sample ID: COM-SS-7
Date Collected: 07/23/21 13:32
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-21
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.9	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

Client Sample ID: COM-SS-8
Date Collected: 07/23/21 13:36
Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-22
Matrix: Solid

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			07/27/21 14:36	1
Temperature	21.7	HF	1.0	1.0	Degrees C			07/27/21 14:36	1

QC Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP)

Lab Sample ID: LB2 280-544653/1-B
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 544831

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	17.9	J	100	1.6	ug/L		08/02/21 07:12	08/03/21 14:25	1
Cadmium	ND		5.0	0.45	ug/L		08/02/21 07:12	08/03/21 14:25	1
Calcium	189	J	2000	78	ug/L		08/02/21 07:12	08/03/21 14:25	1
Cobalt	ND		10	0.12	ug/L		08/02/21 07:12	08/03/21 14:25	1
Molybdenum	ND		20	1.0	ug/L		08/02/21 07:12	08/03/21 14:25	1
Selenium	ND		20	6.3	ug/L		08/02/21 07:12	08/03/21 14:25	1

Lab Sample ID: LCS 280-544653/2-B
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 544831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1040		ug/L		104	86 - 110
Cadmium	2000	2080		ug/L		104	88 - 111
Calcium	50000	50800		ug/L		102	90 - 111
Cobalt	1000	996		ug/L		100	89 - 111
Molybdenum	1000	1030		ug/L		103	90 - 110
Selenium	3000	3050		ug/L		102	85 - 112

Lab Sample ID: 280-151157-1 MS
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: W-9-5-8
Prep Type: SPLP West
Prep Batch: 544831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	450	H H3 B	1000	1540		ug/L		109	87 - 113
Cadmium	ND	H H3	2000	2010		ug/L		101	82 - 119
Calcium	590000	H H3 B	50000	655000	4	ug/L		122	75 - 125
Cobalt	ND	H H3	1000	994		ug/L		99	82 - 119
Molybdenum	33	H H3	1000	1060		ug/L		103	83 - 109
Selenium	6.4	J H H3	3000	3160		ug/L		105	75 - 125

Lab Sample ID: 280-151157-1 MSD
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: W-9-5-8
Prep Type: SPLP West
Prep Batch: 544831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	450	H H3 B	1000	1500		ug/L		105	87 - 113	2	20
Cadmium	ND	H H3	2000	1990		ug/L		100	82 - 119	1	20
Calcium	590000	H H3 B	50000	631000	4	ug/L		75	75 - 125	4	20
Cobalt	ND	H H3	1000	993		ug/L		99	82 - 119	0	20
Molybdenum	33	H H3	1000	1060		ug/L		103	83 - 109	0	20
Selenium	6.4	J H H3	3000	3110		ug/L		104	75 - 125	1	20

Lab Sample ID: LB2 280-544654/1-B
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 545026

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	14.5	J	100	1.6	ug/L		08/02/21 14:38	08/03/21 12:56	1

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QC Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB2 280-544654/1-B
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 545026

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		08/02/21 14:38	08/03/21 12:56	1
Calcium	113	J	2000	78	ug/L		08/02/21 14:38	08/03/21 12:56	1
Cobalt	0.172	J	10	0.12	ug/L		08/02/21 14:38	08/03/21 12:56	1
Molybdenum	ND		20	1.0	ug/L		08/02/21 14:38	08/03/21 12:56	1
Selenium	7.38	J	20	6.3	ug/L		08/02/21 14:38	08/03/21 12:56	1

Lab Sample ID: LCS 280-544654/2-B
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 545026

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1030		ug/L		103	86 - 110
Cadmium	2000	2070		ug/L		104	88 - 111
Calcium	50000	51000		ug/L		102	90 - 111
Cobalt	1000	1010		ug/L		101	89 - 111
Molybdenum	1000	1030		ug/L		103	90 - 110
Selenium	3000	3340		ug/L		111	85 - 112

Lab Sample ID: 280-151157-10 MS
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: W-9-15-16
Prep Type: SPLP West
Prep Batch: 545026

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	97	J H H3 B	1000	1110		ug/L		102	87 - 113
Cadmium	ND	H H3	2000	2090		ug/L		104	82 - 119
Calcium	8900	H H3 B	50000	60200		ug/L		103	75 - 125
Cobalt	ND	H H3	1000	1010		ug/L		101	82 - 119
Molybdenum	49	H H3	1000	1080		ug/L		103	83 - 109
Selenium	12	J H H3 B	3000	3380		ug/L		112	75 - 125

Lab Sample ID: 280-151157-10 MSD
Matrix: Solid
Analysis Batch: 545330

Client Sample ID: W-9-15-16
Prep Type: SPLP West
Prep Batch: 545026

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	97	J H H3 B	1000	1120		ug/L		103	87 - 113	1	20
Cadmium	ND	H H3	2000	2070		ug/L		104	82 - 119	1	20
Calcium	8900	H H3 B	50000	60400		ug/L		103	75 - 125	0	20
Cobalt	ND	H H3	1000	1010		ug/L		101	82 - 119	0	20
Molybdenum	49	H H3	1000	1090		ug/L		104	83 - 109	0	20
Selenium	12	J H H3 B	3000	3270		ug/L		109	75 - 125	3	20

Lab Sample ID: LB2 280-545104/1-B
Matrix: Solid
Analysis Batch: 545613

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 545296

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	16.0	J	100	1.6	ug/L		08/04/21 14:37	08/05/21 17:31	1
Cadmium	ND		5.0	0.45	ug/L		08/04/21 14:37	08/05/21 17:31	1
Calcium	511	J	2000	78	ug/L		08/04/21 14:37	08/05/21 17:31	1

Eurofins TestAmerica, Denver

QC Sample Results

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

Job ID: 280-151157-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB2 280-545104/1-B
Matrix: Solid
Analysis Batch: 545613

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 545296

Analyte	LB2 Result	LB2 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.396	J	10	0.12	ug/L		08/04/21 14:37	08/05/21 17:31	1
Molybdenum	ND		20	1.0	ug/L		08/04/21 14:37	08/05/21 17:31	1
Selenium	ND		20	6.3	ug/L		08/04/21 14:37	08/05/21 17:31	1

Lab Sample ID: LCS 280-545104/2-B
Matrix: Solid
Analysis Batch: 545613

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 545296

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1020		ug/L		102	86 - 110
Cadmium	2000	2090		ug/L		105	88 - 111
Calcium	50000	51400		ug/L		103	90 - 111
Cobalt	1000	1020		ug/L		102	89 - 111
Molybdenum	1000	1040		ug/L		104	90 - 110
Selenium	3000	3070		ug/L		102	85 - 112

Lab Sample ID: 280-151157-2 MS
Matrix: Solid
Analysis Batch: 545613

Client Sample ID: W-9-22-27
Prep Type: SPLP West
Prep Batch: 545296

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	110	H H3 B	1000	1120		ug/L		101	87 - 113
Cadmium	ND	H H3	2000	2080		ug/L		104	82 - 119
Calcium	3700	H H3 B	50000	54200		ug/L		101	75 - 125
Cobalt	0.19	J H H3 B	1000	1020		ug/L		102	82 - 119
Molybdenum	26	H H3	1000	1050		ug/L		103	83 - 109
Selenium	14	J H H3	3000	3060		ug/L		102	75 - 125

Lab Sample ID: 280-151157-2 MSD
Matrix: Solid
Analysis Batch: 545613

Client Sample ID: W-9-22-27
Prep Type: SPLP West
Prep Batch: 545296

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	110	H H3 B	1000	1130		ug/L		101	87 - 113	0	20
Cadmium	ND	H H3	2000	2100		ug/L		105	82 - 119	1	20
Calcium	3700	H H3 B	50000	54200		ug/L		101	75 - 125	0	20
Cobalt	0.19	J H H3 B	1000	1030		ug/L		103	82 - 119	1	20
Molybdenum	26	H H3	1000	1060		ug/L		103	83 - 109	1	20
Selenium	14	J H H3	3000	3100		ug/L		103	75 - 125	1	20

Method: 9045D - pH

Lab Sample ID: LCS 280-544492/4
Matrix: Solid
Analysis Batch: 544492

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 - Comanche

Job ID: 280-151157-1

Method: 9045D - pH (Continued)

Lab Sample ID: LCSD 280-544492/5

Matrix: Solid

Analysis Batch: 544492

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
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101	0	5

Lab Sample ID: 280-151157-22 DU

Matrix: Solid

Analysis Batch: 544492

Client Sample ID: COM-SS-8

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	8.2	HF	8.1		SU		0.5	5
Temperature	21.7	HF	21.8		Degrees C		0.5	5

QC Association Summary

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

Job ID: 280-151157-1

Metals

Leach Batch: 544653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-1	W-9-5-8	SPLP West	Solid	1312	
280-151157-4	W-13-24-25	SPLP West	Solid	1312	
280-151157-5	W-10-20-25	SPLP West	Solid	1312	
280-151157-6	W-12-11-12	SPLP West	Solid	1312	
280-151157-7	W-9-21-22	SPLP West	Solid	1312	
280-151157-8	W-5B-14-15	SPLP West	Solid	1312	
280-151157-9	W-12-5-6	SPLP West	Solid	1312	
LB2 280-544653/1-B	Method Blank	SPLP West	Solid	1312	
LCS 280-544653/2-B	Lab Control Sample	SPLP West	Solid	1312	
280-151157-1 MS	W-9-5-8	SPLP West	Solid	1312	
280-151157-1 MSD	W-9-5-8	SPLP West	Solid	1312	

Leach Batch: 544654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-10	W-9-15-16	SPLP West	Solid	1312	
280-151157-11	W-9-33-34	SPLP West	Solid	1312	
280-151157-12	W-9-11-12	SPLP West	Solid	1312	
280-151157-13	W-11-9-10	SPLP West	Solid	1312	
280-151157-14	W-5B-3-4	SPLP West	Solid	1312	
280-151157-15	COM-SS-1	SPLP West	Solid	1312	
280-151157-16	COM-SS-2	SPLP West	Solid	1312	
280-151157-17	COM-SS-3	SPLP West	Solid	1312	
280-151157-18	COM-SS-4	SPLP West	Solid	1312	
280-151157-19	COM-SS-5	SPLP West	Solid	1312	
280-151157-20	COM-SS-6	SPLP West	Solid	1312	
280-151157-21	COM-SS-7	SPLP West	Solid	1312	
LB2 280-544654/1-B	Method Blank	SPLP West	Solid	1312	
LCS 280-544654/2-B	Lab Control Sample	SPLP West	Solid	1312	
280-151157-10 MS	W-9-15-16	SPLP West	Solid	1312	
280-151157-10 MSD	W-9-15-16	SPLP West	Solid	1312	

Prep Batch: 544831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-1	W-9-5-8	SPLP West	Solid	3010A	544653
280-151157-4	W-13-24-25	SPLP West	Solid	3010A	544653
280-151157-5	W-10-20-25	SPLP West	Solid	3010A	544653
280-151157-6	W-12-11-12	SPLP West	Solid	3010A	544653
280-151157-7	W-9-21-22	SPLP West	Solid	3010A	544653
280-151157-8	W-5B-14-15	SPLP West	Solid	3010A	544653
280-151157-9	W-12-5-6	SPLP West	Solid	3010A	544653
LB2 280-544653/1-B	Method Blank	SPLP West	Solid	3010A	544653
LCS 280-544653/2-B	Lab Control Sample	SPLP West	Solid	3010A	544653
280-151157-1 MS	W-9-5-8	SPLP West	Solid	3010A	544653
280-151157-1 MSD	W-9-5-8	SPLP West	Solid	3010A	544653

Prep Batch: 545026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-10	W-9-15-16	SPLP West	Solid	3010A	544654
280-151157-11	W-9-33-34	SPLP West	Solid	3010A	544654
280-151157-12	W-9-11-12	SPLP West	Solid	3010A	544654
280-151157-13	W-11-9-10	SPLP West	Solid	3010A	544654

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QC Association Summary

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

Job ID: 280-151157-1

Metals (Continued)

Prep Batch: 545026 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-14	W-5B-3-4	SPLP West	Solid	3010A	544654
280-151157-15	COM-SS-1	SPLP West	Solid	3010A	544654
280-151157-16	COM-SS-2	SPLP West	Solid	3010A	544654
280-151157-17	COM-SS-3	SPLP West	Solid	3010A	544654
280-151157-18	COM-SS-4	SPLP West	Solid	3010A	544654
280-151157-19	COM-SS-5	SPLP West	Solid	3010A	544654
280-151157-20	COM-SS-6	SPLP West	Solid	3010A	544654
280-151157-21	COM-SS-7	SPLP West	Solid	3010A	544654
LB2 280-544654/1-B	Method Blank	SPLP West	Solid	3010A	544654
LCS 280-544654/2-B	Lab Control Sample	SPLP West	Solid	3010A	544654
280-151157-10 MS	W-9-15-16	SPLP West	Solid	3010A	544654
280-151157-10 MSD	W-9-15-16	SPLP West	Solid	3010A	544654

Leach Batch: 545104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-2	W-9-22-27	SPLP West	Solid	1312	
280-151157-3	W-13-10-11	SPLP West	Solid	1312	
280-151157-22	COM-SS-8	SPLP West	Solid	1312	
LB2 280-545104/1-B	Method Blank	SPLP West	Solid	1312	
LCS 280-545104/2-B	Lab Control Sample	SPLP West	Solid	1312	
280-151157-2 MS	W-9-22-27	SPLP West	Solid	1312	
280-151157-2 MSD	W-9-22-27	SPLP West	Solid	1312	

Prep Batch: 545296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-2	W-9-22-27	SPLP West	Solid	3010A	545104
280-151157-3	W-13-10-11	SPLP West	Solid	3010A	545104
280-151157-22	COM-SS-8	SPLP West	Solid	3010A	545104
LB2 280-545104/1-B	Method Blank	SPLP West	Solid	3010A	545104
LCS 280-545104/2-B	Lab Control Sample	SPLP West	Solid	3010A	545104
280-151157-2 MS	W-9-22-27	SPLP West	Solid	3010A	545104
280-151157-2 MSD	W-9-22-27	SPLP West	Solid	3010A	545104

Analysis Batch: 545330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-1	W-9-5-8	SPLP West	Solid	6010C	544831
280-151157-4	W-13-24-25	SPLP West	Solid	6010C	544831
280-151157-5	W-10-20-25	SPLP West	Solid	6010C	544831
280-151157-6	W-12-11-12	SPLP West	Solid	6010C	544831
280-151157-7	W-9-21-22	SPLP West	Solid	6010C	544831
280-151157-8	W-5B-14-15	SPLP West	Solid	6010C	544831
280-151157-9	W-12-5-6	SPLP West	Solid	6010C	544831
280-151157-10	W-9-15-16	SPLP West	Solid	6010C	545026
280-151157-11	W-9-33-34	SPLP West	Solid	6010C	545026
280-151157-12	W-9-11-12	SPLP West	Solid	6010C	545026
280-151157-13	W-11-9-10	SPLP West	Solid	6010C	545026
280-151157-14	W-5B-3-4	SPLP West	Solid	6010C	545026
280-151157-15	COM-SS-1	SPLP West	Solid	6010C	545026
280-151157-16	COM-SS-2	SPLP West	Solid	6010C	545026
280-151157-17	COM-SS-3	SPLP West	Solid	6010C	545026
280-151157-18	COM-SS-4	SPLP West	Solid	6010C	545026

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QC Association Summary

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

Job ID: 280-151157-1

Metals (Continued)

Analysis Batch: 545330 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-19	COM-SS-5	SPLP West	Solid	6010C	545026
280-151157-20	COM-SS-6	SPLP West	Solid	6010C	545026
280-151157-21	COM-SS-7	SPLP West	Solid	6010C	545026
LB2 280-544653/1-B	Method Blank	SPLP West	Solid	6010C	544831
LB2 280-544654/1-B	Method Blank	SPLP West	Solid	6010C	545026
LCS 280-544653/2-B	Lab Control Sample	SPLP West	Solid	6010C	544831
LCS 280-544654/2-B	Lab Control Sample	SPLP West	Solid	6010C	545026
280-151157-1 MS	W-9-5-8	SPLP West	Solid	6010C	544831
280-151157-1 MSD	W-9-5-8	SPLP West	Solid	6010C	544831
280-151157-10 MS	W-9-15-16	SPLP West	Solid	6010C	545026
280-151157-10 MSD	W-9-15-16	SPLP West	Solid	6010C	545026

Analysis Batch: 545613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-2	W-9-22-27	SPLP West	Solid	6010C	545296
280-151157-3	W-13-10-11	SPLP West	Solid	6010C	545296
280-151157-22	COM-SS-8	SPLP West	Solid	6010C	545296
LB2 280-545104/1-B	Method Blank	SPLP West	Solid	6010C	545296
LCS 280-545104/2-B	Lab Control Sample	SPLP West	Solid	6010C	545296
280-151157-2 MS	W-9-22-27	SPLP West	Solid	6010C	545296
280-151157-2 MSD	W-9-22-27	SPLP West	Solid	6010C	545296

General Chemistry

Leach Batch: 544456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-1	W-9-5-8	Soluble	Solid	DI Leach	
280-151157-2	W-9-22-27	Soluble	Solid	DI Leach	
280-151157-3	W-13-10-11	Soluble	Solid	DI Leach	
280-151157-4	W-13-24-25	Soluble	Solid	DI Leach	
280-151157-5	W-10-20-25	Soluble	Solid	DI Leach	
280-151157-6	W-12-11-12	Soluble	Solid	DI Leach	
280-151157-7	W-9-21-22	Soluble	Solid	DI Leach	
280-151157-8	W-5B-14-15	Soluble	Solid	DI Leach	
280-151157-9	W-12-5-6	Soluble	Solid	DI Leach	
280-151157-10	W-9-15-16	Soluble	Solid	DI Leach	
280-151157-11	W-9-33-34	Soluble	Solid	DI Leach	
280-151157-12	W-9-11-12	Soluble	Solid	DI Leach	
280-151157-13	W-11-9-10	Soluble	Solid	DI Leach	
280-151157-14	W-5B-3-4	Soluble	Solid	DI Leach	
280-151157-15	COM-SS-1	Soluble	Solid	DI Leach	
280-151157-16	COM-SS-2	Soluble	Solid	DI Leach	
280-151157-17	COM-SS-3	Soluble	Solid	DI Leach	
280-151157-18	COM-SS-4	Soluble	Solid	DI Leach	
280-151157-19	COM-SS-5	Soluble	Solid	DI Leach	
280-151157-20	COM-SS-6	Soluble	Solid	DI Leach	
280-151157-21	COM-SS-7	Soluble	Solid	DI Leach	
280-151157-22	COM-SS-8	Soluble	Solid	DI Leach	
280-151157-22 DU	COM-SS-8	Soluble	Solid	DI Leach	

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QC Association Summary

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

Job ID: 280-151157-1

General Chemistry

Analysis Batch: 544492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151157-1	W-9-5-8	Soluble	Solid	9045D	544456
280-151157-2	W-9-22-27	Soluble	Solid	9045D	544456
280-151157-3	W-13-10-11	Soluble	Solid	9045D	544456
280-151157-4	W-13-24-25	Soluble	Solid	9045D	544456
280-151157-5	W-10-20-25	Soluble	Solid	9045D	544456
280-151157-6	W-12-11-12	Soluble	Solid	9045D	544456
280-151157-7	W-9-21-22	Soluble	Solid	9045D	544456
280-151157-8	W-5B-14-15	Soluble	Solid	9045D	544456
280-151157-9	W-12-5-6	Soluble	Solid	9045D	544456
280-151157-10	W-9-15-16	Soluble	Solid	9045D	544456
280-151157-11	W-9-33-34	Soluble	Solid	9045D	544456
280-151157-12	W-9-11-12	Soluble	Solid	9045D	544456
280-151157-13	W-11-9-10	Soluble	Solid	9045D	544456
280-151157-14	W-5B-3-4	Soluble	Solid	9045D	544456
280-151157-15	COM-SS-1	Soluble	Solid	9045D	544456
280-151157-16	COM-SS-2	Soluble	Solid	9045D	544456
280-151157-17	COM-SS-3	Soluble	Solid	9045D	544456
280-151157-18	COM-SS-4	Soluble	Solid	9045D	544456
280-151157-19	COM-SS-5	Soluble	Solid	9045D	544456
280-151157-20	COM-SS-6	Soluble	Solid	9045D	544456
280-151157-21	COM-SS-7	Soluble	Solid	9045D	544456
280-151157-22	COM-SS-8	Soluble	Solid	9045D	544456
LCS 280-544492/4	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 280-544492/5	Lab Control Sample Dup	Total/NA	Solid	9045D	
280-151157-22 DU	COM-SS-8	Soluble	Solid	9045D	544456

Lab Chronicle

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

Job ID: 280-151157-1

Client Sample ID: W-9-5-8

Lab Sample ID: 280-151157-1

Date Collected: 12/03/20 13:17

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544653	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	544831	08/02/21 07:12	MAB	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 14:32	LMT	TAL DEN
Soluble	Leach	DI Leach			40.10 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-9-22-27

Lab Sample ID: 280-151157-2

Date Collected: 12/03/20 14:35

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	545104	08/02/21 18:01	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545296	08/04/21 14:37	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545613	08/05/21 17:38	LMT	TAL DEN
Soluble	Leach	DI Leach			40.14 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-13-10-11

Lab Sample ID: 280-151157-3

Date Collected: 12/10/20 08:55

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	545104	08/02/21 18:01	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545296	08/04/21 14:37	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545613	08/05/21 17:52	LMT	TAL DEN
Soluble	Leach	DI Leach			40.35 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-13-24-25

Lab Sample ID: 280-151157-4

Date Collected: 12/10/20 10:05

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544653	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	544831	08/02/21 07:12	MAB	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 14:46	LMT	TAL DEN
Soluble	Leach	DI Leach			40.02 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Lab Chronicle

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

Job ID: 280-151157-1

Client Sample ID: W-10-20-25

Lab Sample ID: 280-151157-5

Date Collected: 12/07/20 14:10

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544653	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	544831	08/02/21 07:12	MAB	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 15:03	LMT	TAL DEN
Soluble	Leach	DI Leach			40.44 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:57	ECC	TAL DEN

Client Sample ID: W-12-11-12

Lab Sample ID: 280-151157-6

Date Collected: 12/09/20 12:25

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544653	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	544831	08/02/21 07:12	MAB	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 15:07	LMT	TAL DEN
Soluble	Leach	DI Leach			40.47 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-9-21-22

Lab Sample ID: 280-151157-7

Date Collected: 12/03/20 14:35

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544653	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	544831	08/02/21 07:12	MAB	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 15:10	LMT	TAL DEN
Soluble	Leach	DI Leach			40.02 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-5B-14-15

Lab Sample ID: 280-151157-8

Date Collected: 12/11/20 11:50

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544653	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	544831	08/02/21 07:12	MAB	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 15:14	LMT	TAL DEN
Soluble	Leach	DI Leach			40.12 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Lab Chronicle

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

Job ID: 280-151157-1

Client Sample ID: W-12-5-6

Lab Sample ID: 280-151157-9

Date Collected: 12/09/20 12:03

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544653	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	544831	08/02/21 07:12	MAB	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 15:18	LMT	TAL DEN
Soluble	Leach	DI Leach			40.12 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-9-15-16

Lab Sample ID: 280-151157-10

Date Collected: 12/03/20 14:05

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:03	LMT	TAL DEN
Soluble	Leach	DI Leach			40.06 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-9-33-34

Lab Sample ID: 280-151157-11

Date Collected: 12/03/20 10:05

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:18	LMT	TAL DEN
Soluble	Leach	DI Leach			40.01 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-9-11-12

Lab Sample ID: 280-151157-12

Date Collected: 12/03/20 13:43

Matrix: Solid

Date Received: 07/26/21 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:21	LMT	TAL DEN
Soluble	Leach	DI Leach			40.38 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Lab Chronicle

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

Job ID: 280-151157-1

Client Sample ID: W-11-9-10

Date Collected: 12/08/20 12:50

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:39	LMT	TAL DEN
Soluble	Leach	DI Leach			40.20 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: W-5B-3-4

Date Collected: 12/11/20 11:31

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:43	LMT	TAL DEN
Soluble	Leach	DI Leach			40.38 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: COM-SS-1

Date Collected: 07/23/21 12:39

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:46	LMT	TAL DEN
Soluble	Leach	DI Leach			40.13 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: COM-SS-2

Date Collected: 07/23/21 12:48

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:50	LMT	TAL DEN
Soluble	Leach	DI Leach			40.08 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Lab Chronicle

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

Job ID: 280-151157-1

Client Sample ID: COM-SS-3

Date Collected: 07/23/21 12:58

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:53	LMT	TAL DEN
Soluble	Leach	DI Leach			40.18 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: COM-SS-4

Date Collected: 07/23/21 13:13

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 13:57	LMT	TAL DEN
Soluble	Leach	DI Leach			40.19 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: COM-SS-5

Date Collected: 07/23/21 13:20

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 14:00	LMT	TAL DEN
Soluble	Leach	DI Leach			40.26 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: COM-SS-6

Date Collected: 07/23/21 13:26

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 14:04	LMT	TAL DEN
Soluble	Leach	DI Leach			40.09 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Lab Chronicle

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

Job ID: 280-151157-1

Client Sample ID: COM-SS-7

Date Collected: 07/23/21 13:32

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-21

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	544654	07/28/21 19:34	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545026	08/02/21 14:38	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545330	08/03/21 14:08	LMT	TAL DEN
Soluble	Leach	DI Leach			40.31 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Client Sample ID: COM-SS-8

Date Collected: 07/23/21 13:36

Date Received: 07/26/21 11:45

Lab Sample ID: 280-151157-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP West	Leach	1312			1.0 g	1.0 mL	545104	08/02/21 18:01	DFB1	TAL DEN
SPLP West	Prep	3010A			50 mL	50 mL	545296	08/04/21 14:37	CEH	TAL DEN
SPLP West	Analysis	6010C		1			545613	08/05/21 17:56	LMT	TAL DEN
Soluble	Leach	DI Leach			40.01 g	40 mL	544456	07/27/21 12:07	ECC	TAL DEN
Soluble	Analysis	9045D		1			544492	07/27/21 14:36	ECC	TAL DEN

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 280-151157-1

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
9045D		Solid	pH adj. to 25 deg C
9045D		Solid	Temperature

[illegible]

Chain of Custody Record

Denver #280

Client Information Client Contact: Molly Reeves Company: HDR Inc		Sampler: Emily Monoz Phone: 720-273-3436 Lab PM: Harrington, Danielle M E-Mail: Danielle.Harrington@Eurofinset.com		Carrier Tracking No(s): 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		Due Date Requested: TAT Requested (days): ASAP PO #: DEN-018 WO #: Project #: 28014379 SOW #: Project Name: Xcel Energy GW-S&W-Monrmy Valmet Comanche Site: Colorado Groundwater App III & App IV		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: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - H2SO4 S - TSP Dodecahydrate T - Acetone U - DI Water V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification W-9-11-12 W-11-9-10 W-5B-3-4 COM-SS-1 COM-SS-2 COM-SS-3 COM-SS-4 COM-SS-5 COM-SS-6 COM-SS-7 COM-SS-8		Sample Date 12/3/20 12/8/20 12/11/20 7/23/21 7/23/21 7/23/21 7/23/21 7/23/21 7/23/21 7/23/21 7/23/21		Sample Time 1343 1250 1131 1239 1248 1258 1313 1320 1326 1332 1336	
Matrix (W=Water, S=solid, O=soil, BT=Tissue, A=Air)		Sample Type (C=Comp, G=grab)		Preservation Code:	
Field Filtered Sample (Yes or No)		Perform MSD (Yes or No)		Dissolved Metals Lab Filtered (If Required)	
Total Number of Containers		Analysis Requested Co, Mo, Se, Pb SPLR for B, Ca, Cd		Special Instructions/Note: Do Not Dispose of Samples	
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: 7-26-21 1139		Company:	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-151157-1

Login Number: 151157

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Kramer, Julieann 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.	False	Thermal preservation not required.
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

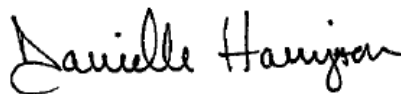
Laboratory Job ID: 280-151273-1

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

For:

HDR Inc
1670 Broadway
Suite 3400
Denver, Colorado 80202

Attn: Molly Reeves



Authorized for release by:
8/9/2021 1:04:38 PM

Danielle Harrington, Project Manager II
(303)736-0176
Danielle.Harrington@Eurofinset.com

LINKS

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

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

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

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Definitions/Glossary

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

Job ID: 280-151273-1

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
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
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.
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 - Comanche

Job ID: 280-151273-1

Job ID: 280-151273-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-151273-1

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 07/28/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 3.7°C, 3.7°C, 5.2°C, 5.2°C and 5.7°C.

Please note, the radioactive analyses are reported separately under 280-151273-2.

TOTAL RECOVERABLE METALS- 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 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 were required to be prepped at a dilution or analyzed dilution prior to analysis for various analyses. The reporting limits have been adjusted accordingly.

Alkalinity was detected in method blank MB 280-545602/33 and MB 280-545602/6 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.

MS/MSD analyses were performed on sample COM-SF-SPWT. The MS/MSD for 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.

The Total Suspended Solids sample duplicate analysis data performed on sample COM-SF-SPEB 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 - Comanche

Job ID: 280-151273-1

Job ID: 280-151273-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

The continuing calibration verification (CCV) associated with batch 280-544862 recovered above the upper control limit for Alkalinity. The Method Blank associated with this CCV was non-detects for the affected analytes and LCS/LCSD recovery was within acceptance limits; therefore, corrective action was 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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPWI

Lab Sample ID: 280-151273-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.29		0.10	0.057	mg/L	1		6010C	Total
Antimony	0.0013	J	0.0020	0.00057	mg/L	1		6020A	Recoverable Total
Arsenic	0.013		0.0050	0.00075	mg/L	1		6020A	Recoverable Total
Barium	0.97		0.0050	0.0022	mg/L	1		6020A	Recoverable Total
Beryllium	0.00064	J	0.0010	0.00062	mg/L	1		6020A	Recoverable Total
Calcium	1200		1.0	0.58	mg/L	1		6020A	Recoverable Total
Cadmium	0.00063	J	0.0010	0.00020	mg/L	1		6020A	Recoverable Total
Cobalt	0.0028		0.0010	0.00019	mg/L	1		6020A	Recoverable Total
Chromium	0.0070		0.0025	0.0025	mg/L	1		6020A	Recoverable Total
Potassium	5700		1000	220	ug/L	1		6020A	Recoverable Total
Magnesium	110000		1000	200	ug/L	1		6020A	Recoverable Total
Molybdenum	0.018		0.010	0.0011	mg/L	1		6020A	Recoverable Total
Lead	0.0042		0.0010	0.00045	mg/L	1		6020A	Recoverable Total
Selenium	0.012		0.0050	0.00089	mg/L	1		6020A	Recoverable Total
Sodium	52000		1000	330	ug/L	1		6020A	Recoverable Total
Thallium	0.00073	J	0.0010	0.00020	mg/L	1		6020A	Recoverable Total
Lithium	0.037		0.0080	0.0017	mg/L	1		6020A	Recoverable Total
pH adj. to 25 deg C	8.8	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	26		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.49	J	0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	360		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	41		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	41		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	620		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	7000		100	28	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-SPWT

Lab Sample ID: 280-151273-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.21		0.10	0.057	mg/L	1		6010C	Total
Antimony	0.0014	J	0.0020	0.00057	mg/L	1		6020A	Recoverable Total
Arsenic	0.0017	J	0.0050	0.00075	mg/L	1		6020A	Recoverable Total
Barium	0.20		0.0050	0.0022	mg/L	1		6020A	Recoverable Total
Calcium	110		1.0	0.58	mg/L	1		6020A	Recoverable Total

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Detection Summary

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

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPWT (Continued)

Lab Sample ID: 280-151273-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.00032	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Potassium	7600		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	35000		1000	200	ug/L	1		6020A	Total
									Recoverable
Molybdenum	0.017		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	81000		1000	330	ug/L	1		6020A	Total
									Recoverable
Thallium	0.00051	J	0.0010	0.00020	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	8.4	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.1	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	50		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.88		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	460	F1	25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	68		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	68		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	820		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	30		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-SPWB

Lab Sample ID: 280-151273-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.20		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Antimony	0.0012	J	0.0020	0.00057	mg/L	1		6020A	Total
									Recoverable
Arsenic	0.0017	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.20		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	110		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00030	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Potassium	7300		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	35000		1000	200	ug/L	1		6020A	Total
									Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.010		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	78000		1000	330	ug/L	1		6020A	Total
									Recoverable
Thallium	0.00030	J	0.0010	0.00020	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	8.6	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	22.1	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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPWB (Continued)

Lab Sample ID: 280-151273-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	49		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.90		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	480		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	67		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	67		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	840		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	33		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-SPEI

Lab Sample ID: 280-151273-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.44		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.0020		0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0036	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.25		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00035	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Chromium	0.0036		0.0025	0.0025	mg/L	1		6020A	Total Recoverable
Potassium	8400		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	27000		1000	200	ug/L	1		6020A	Total Recoverable
Molybdenum	0.025		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	73000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.045		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	9.2	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	20.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	45		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.1		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	510		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	110		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	63		10	3.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	52		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	870		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	20		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-SPET

Lab Sample ID: 280-151273-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.28		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.0015	J	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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPET (Continued)

Lab Sample ID: 280-151273-5

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
Barium	0.18		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	96		1.0	0.58	mg/L	1		6020A	Total Recoverable
Potassium	7500		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	28000		1000	200	ug/L	1		6020A	Total Recoverable
Molybdenum	0.016		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0071		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	70000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.046		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	8.4	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	52		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.70		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	520		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	58		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	58		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	890		20	9.4	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	46		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-SPEB

Lab Sample ID: 280-151273-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.34		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.0019	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0014	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.21		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total Recoverable
Potassium	9400		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	34000		1000	200	ug/L	1		6020A	Total Recoverable
Molybdenum	0.022		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.0081		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	86000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.056		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	8.4	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	53		3.0	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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPEB (Continued)

Lab Sample ID: 280-151273-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.72		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	510		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	56		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	56		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	920		20	9.4	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	16		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-BAPI

Lab Sample ID: 280-151273-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.38		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.0017	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.23		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00022	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Potassium	8900		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	27000		1000	200	ug/L	1		6020A	Total Recoverable
Molybdenum	0.022		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	83000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.042		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	9.5	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.8	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	46		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.1		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	560		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	68		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	15		10	3.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	53		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	940		20	9.4	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	13		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-BAPT

Lab Sample ID: 280-151273-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.36		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.0017	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0018	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.24		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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-BAPT (Continued)

Lab Sample ID: 280-151273-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	120		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00021	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Potassium	9200		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	30000		1000	200	ug/L	1		6020A	Total
									Recoverable
Molybdenum	0.023		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	87000		1000	330	ug/L	1		6020A	Total
									Recoverable
Lithium	0.047		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
pH adj. to 25 deg C	9.4	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	46		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.1		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	540		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	71		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	30		10	3.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	42		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	910		20	9.4	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	2.4	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-BAPB

Lab Sample ID: 280-151273-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.37		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Antimony	0.0018	J	0.0020	0.00057	mg/L	1		6020A	Total
									Recoverable
Arsenic	0.0022	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.24		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00021	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Potassium	9500		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	30000		1000	200	ug/L	1		6020A	Total
									Recoverable
Molybdenum	0.023		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	89000		1000	330	ug/L	1		6020A	Total
									Recoverable
Lithium	0.048		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
pH adj. to 25 deg C	9.3	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.6	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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-BAPB (Continued)

Lab Sample ID: 280-151273-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	46		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.0		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	540		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	70		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	29		10	3.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	40		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	920		20	9.4	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	4.4		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-PPI

Lab Sample ID: 280-151273-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.27		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.0015	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0025	J	0.0050	0.00075	mg/L	1		6020A	Total Recoverable
Barium	0.23		0.0050	0.0022	mg/L	1		6020A	Total Recoverable
Calcium	120		1.0	0.58	mg/L	1		6020A	Total Recoverable
Cobalt	0.00028	J	0.0010	0.00019	mg/L	1		6020A	Total Recoverable
Potassium	8100		1000	220	ug/L	1		6020A	Total Recoverable
Magnesium	33000		1000	200	ug/L	1		6020A	Total Recoverable
Molybdenum	0.018		0.010	0.0011	mg/L	1		6020A	Total Recoverable
Selenium	0.011		0.0050	0.00089	mg/L	1		6020A	Total Recoverable
Sodium	84000		1000	330	ug/L	1		6020A	Total Recoverable
Lithium	0.048		0.0080	0.0017	mg/L	1		6020A	Total Recoverable
pH adj. to 25 deg C	9.1	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	52		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.0		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	500		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	80		10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	57		10	3.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	23		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	860		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	15		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-PPT

Lab Sample ID: 280-151273-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.28		0.10	0.057	mg/L	1		6010C	Total Recoverable
Antimony	0.0015	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Arsenic	0.0027	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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-PPT (Continued)

Lab Sample ID: 280-151273-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.23		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	110		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	0.0029		0.0025	0.0025	mg/L	1		6020A	Total
									Recoverable
Potassium	7700		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	31000		1000	200	ug/L	1		6020A	Total
									Recoverable
Molybdenum	0.017		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	0.010		0.0050	0.00089	mg/L	1		6020A	Total
									Recoverable
Sodium	80000		1000	330	ug/L	1		6020A	Total
									Recoverable
Lithium	0.046		0.0080	0.0017	mg/L	1		6020A	Total
									Recoverable
pH adj. to 25 deg C	9.1	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	52		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.0		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	490		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	77	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	41		10	3.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	36		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	860		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	110		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-PPB

Lab Sample ID: 280-151273-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.27		0.10	0.057	mg/L	1		6010C	Total
									Recoverable
Antimony	0.0015	J	0.0020	0.00057	mg/L	1		6020A	Total
									Recoverable
Arsenic	0.0024	J	0.0050	0.00075	mg/L	1		6020A	Total
									Recoverable
Barium	0.23		0.0050	0.0022	mg/L	1		6020A	Total
									Recoverable
Calcium	110		1.0	0.58	mg/L	1		6020A	Total
									Recoverable
Cobalt	0.00028	J	0.0010	0.00019	mg/L	1		6020A	Total
									Recoverable
Potassium	8000		1000	220	ug/L	1		6020A	Total
									Recoverable
Magnesium	33000		1000	200	ug/L	1		6020A	Total
									Recoverable
Molybdenum	0.018		0.010	0.0011	mg/L	1		6020A	Total
									Recoverable
Selenium	0.012		0.0050	0.00089	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 - Comanche

Job ID: 280-151273-1

Client Sample ID: COM-SF-PPB (Continued)

Lab Sample ID: 280-151273-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	83000		1000	330	ug/L	1		6020A	Total
Lithium	0.047		0.0080	0.0017	mg/L	1		6020A	Recoverable
pH adj. to 25 deg C	8.7	HF	0.1	0.1	SU	1		9040B	Total/NA
Temperature	21.3	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	53		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.0		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	480		25	5.2	mg/L	5		9056A	Total/NA
Alkalinity	77	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	50		10	3.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	27		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	890		20	9.4	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	37		4.0	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: COM-SF-CPP

Lab Sample ID: 280-151273-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.48		0.10	0.057	mg/L	1		6010C	Total
Arsenic	0.0019	J	0.0050	0.00075	mg/L	1		6020A	Recoverable
Barium	0.10		0.0050	0.0022	mg/L	1		6020A	Total
Calcium	240		1.0	0.58	mg/L	1		6020A	Recoverable
Cobalt	0.00053	J	0.0010	0.00019	mg/L	1		6020A	Total
Potassium	9800		1000	220	ug/L	1		6020A	Recoverable
Magnesium	350000		1000	200	ug/L	1		6020A	Total
Molybdenum	0.0073	J	0.010	0.0011	mg/L	1		6020A	Recoverable
Selenium	0.080		0.0050	0.00089	mg/L	1		6020A	Total
Sodium	430000		1000	330	ug/L	1		6020A	Recoverable
Lithium	0.36		0.0080	0.0017	mg/L	1		6020A	Total
pH adj. to 25 deg C	8.5	HF	0.1	0.1	SU	1		9040B	Recoverable
Temperature	22.4	HF	1.0	1.0	Degrees C	1		9040B	Total/NA
Chloride	86		3.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	0.68		0.50	0.17	mg/L	1		9056A	Total/NA
Sulfate	3100		100	21	mg/L	20		9056A	Total/NA
Alkalinity	190	B	10	3.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	190		10	3.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	5100		40	19	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	16		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Method Summary

Client: HDR Inc

Job ID: 280-151273-1

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

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

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

Laboratory References:

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

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

Sample Summary

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

Job ID: 280-151273-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-151273-1	COM-SF-SPWI	Water	07/28/21 07:50	07/28/21 18:15
280-151273-2	COM-SF-SPWT	Water	07/28/21 08:15	07/28/21 18:15
280-151273-3	COM-SF-SPWB	Water	07/28/21 08:40	07/28/21 18:15
280-151273-4	COM-SF-SPEI	Water	07/28/21 09:00	07/28/21 18:15
280-151273-5	COM-SF-SPET	Water	07/28/21 09:20	07/28/21 18:15
280-151273-6	COM-SF-SPEB	Water	07/28/21 09:35	07/28/21 18:15
280-151273-7	COM-SF-BAPI	Water	07/28/21 10:45	07/28/21 18:15
280-151273-8	COM-SF-BAPT	Water	07/28/21 11:10	07/28/21 18:15
280-151273-9	COM-SF-BAPB	Water	07/28/21 11:30	07/28/21 18:15
280-151273-10	COM-SF-PPI	Water	07/28/21 10:00	07/28/21 18:15
280-151273-11	COM-SF-PPT	Water	07/28/21 10:15	07/28/21 18:15
280-151273-12	COM-SF-PPB	Water	07/28/21 10:30	07/28/21 18:15
280-151273-13	COM-SF-CPP	Water	07/28/21 11:45	07/28/21 18:15

Client Sample Results

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

Job ID: 280-151273-1

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

Client Sample ID: COM-SF-SPWI

Date Collected: 07/28/21 07:50

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.29		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 17:57	1

Client Sample ID: COM-SF-SPWT

Date Collected: 07/28/21 08:15

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.21		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 17:23	1

Client Sample ID: COM-SF-SPWB

Date Collected: 07/28/21 08:40

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.20		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:02	1

Client Sample ID: COM-SF-SPEI

Date Collected: 07/28/21 09:00

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.44		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:06	1

Client Sample ID: COM-SF-SPET

Date Collected: 07/28/21 09:20

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.28		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:11	1

Client Sample ID: COM-SF-SPEB

Date Collected: 07/28/21 09:35

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.34		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:15	1

Client Sample ID: COM-SF-BAPI

Date Collected: 07/28/21 10:45

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.38		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:19	1

Client Sample ID: COM-SF-BAPT

Date Collected: 07/28/21 11:10

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.36		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:24	1

Client Sample ID: COM-SF-BAPB

Date Collected: 07/28/21 11:30

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.37		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:28	1

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Client Sample Results

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

Job ID: 280-151273-1

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

Client Sample ID: COM-SF-PPI
Date Collected: 07/28/21 10:00
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.27		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:32	1

Client Sample ID: COM-SF-PPT
Date Collected: 07/28/21 10:15
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.28		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:45	1

Client Sample ID: COM-SF-PPB
Date Collected: 07/28/21 10:30
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.27		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:50	1

Client Sample ID: COM-SF-CPP
Date Collected: 07/28/21 11:45
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.48		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 18:54	1

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

Client Sample ID: COM-SF-SPWI
Date Collected: 07/28/21 07:50
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:06	1
Arsenic	0.013		0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:06	1
Barium	0.97		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:06	1
Beryllium	0.00064	J	0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:06	1
Calcium	1200		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:06	1
Cadmium	0.00063	J	0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:06	1
Cobalt	0.0028		0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:06	1
Chromium	0.0070		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:06	1
Potassium	5700		1000	220	ug/L		08/02/21 14:00	08/04/21 18:06	1
Magnesium	110000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:06	1
Molybdenum	0.018		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:06	1
Lead	0.0042		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:06	1
Selenium	0.012		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:06	1
Sodium	52000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:06	1
Thallium	0.00073	J	0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:06	1
Lithium	0.037		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:06	1

Client Sample ID: COM-SF-SPWT
Date Collected: 07/28/21 08:15
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0014	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 17:51	1
Arsenic	0.0017	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 17:51	1
Barium	0.20		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 17:51	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 17:51	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

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

Client Sample ID: COM-SF-SPWT

Date Collected: 07/28/21 08:15

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 17:51	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 17:51	1
Cobalt	0.00032	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 17:51	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 17:51	1
Potassium	7600		1000	220	ug/L		08/02/21 14:00	08/04/21 17:51	1
Magnesium	35000		1000	200	ug/L		08/02/21 14:00	08/04/21 17:51	1
Molybdenum	0.017		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 17:51	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 17:51	1
Selenium	0.011		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 17:51	1
Sodium	81000		1000	330	ug/L		08/02/21 14:00	08/04/21 17:51	1
Thallium	0.00051	J	0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 17:51	1
Lithium	0.046		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 17:51	1

Client Sample ID: COM-SF-SPWB

Date Collected: 07/28/21 08:40

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0012	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:08	1
Arsenic	0.0017	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:08	1
Barium	0.20		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:08	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:08	1
Calcium	110		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:08	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:08	1
Cobalt	0.00030	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:08	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:08	1
Potassium	7300		1000	220	ug/L		08/02/21 14:00	08/04/21 18:08	1
Magnesium	35000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:08	1
Molybdenum	0.016		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:08	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:08	1
Selenium	0.010		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:08	1
Sodium	78000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:08	1
Thallium	0.00030	J	0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:08	1
Lithium	0.045		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:08	1

Client Sample ID: COM-SF-SPEI

Date Collected: 07/28/21 09:00

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0020		0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:15	1
Arsenic	0.0036	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:15	1
Barium	0.25		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:15	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:15	1
Calcium	120		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:15	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:15	1
Cobalt	0.00035	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:15	1
Chromium	0.0036		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:15	1
Potassium	8400		1000	220	ug/L		08/02/21 14:00	08/04/21 18:15	1
Magnesium	27000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:15	1
Molybdenum	0.025		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:15	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:15	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

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

Client Sample ID: COM-SF-SPEI
Date Collected: 07/28/21 09:00
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.011		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:15	1
Sodium	73000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:15	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:15	1
Lithium	0.045		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:15	1

Client Sample ID: COM-SF-SPET
Date Collected: 07/28/21 09:20
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0015	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:18	1
Arsenic	0.0011	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:18	1
Barium	0.18		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:18	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:18	1
Calcium	96		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:18	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:18	1
Cobalt	ND		0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:18	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:18	1
Potassium	7500		1000	220	ug/L		08/02/21 14:00	08/04/21 18:18	1
Magnesium	28000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:18	1
Molybdenum	0.016		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:18	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:18	1
Selenium	0.0071		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:18	1
Sodium	70000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:18	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:18	1
Lithium	0.046		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:18	1

Client Sample ID: COM-SF-SPEB
Date Collected: 07/28/21 09:35
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0019	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:20	1
Arsenic	0.0014	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:20	1
Barium	0.21		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:20	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:20	1
Calcium	120		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:20	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:20	1
Cobalt	ND		0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:20	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:20	1
Potassium	9400		1000	220	ug/L		08/02/21 14:00	08/04/21 18:20	1
Magnesium	34000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:20	1
Molybdenum	0.022		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:20	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:20	1
Selenium	0.0081		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:20	1
Sodium	86000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:20	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:20	1
Lithium	0.056		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:20	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

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

Client Sample ID: COM-SF-BAPI

Date Collected: 07/28/21 10:45

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0017	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:23	1
Arsenic	0.0018	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:23	1
Barium	0.23		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:23	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:23	1
Calcium	120		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:23	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:23	1
Cobalt	0.00022	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:23	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:23	1
Potassium	8900		1000	220	ug/L		08/02/21 14:00	08/04/21 18:23	1
Magnesium	27000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:23	1
Molybdenum	0.022		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:23	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:23	1
Selenium	0.011		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:23	1
Sodium	83000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:23	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:23	1
Lithium	0.042		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:23	1

Client Sample ID: COM-SF-BAPT

Date Collected: 07/28/21 11:10

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0017	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:25	1
Arsenic	0.0018	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:25	1
Barium	0.24		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:25	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:25	1
Calcium	120		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:25	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:25	1
Cobalt	0.00021	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:25	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:25	1
Potassium	9200		1000	220	ug/L		08/02/21 14:00	08/04/21 18:25	1
Magnesium	30000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:25	1
Molybdenum	0.023		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:25	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:25	1
Selenium	0.011		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:25	1
Sodium	87000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:25	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:25	1
Lithium	0.047		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:25	1

Client Sample ID: COM-SF-BAPB

Date Collected: 07/28/21 11:30

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0018	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:28	1
Arsenic	0.0022	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:28	1
Barium	0.24		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:28	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:28	1
Calcium	120		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:28	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:28	1
Cobalt	0.00021	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:28	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:28	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

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

Client Sample ID: COM-SF-BAPB

Date Collected: 07/28/21 11:30

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	9500		1000	220	ug/L		08/02/21 14:00	08/04/21 18:28	1
Magnesium	30000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:28	1
Molybdenum	0.023		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:28	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:28	1
Selenium	0.011		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:28	1
Sodium	89000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:28	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:28	1
Lithium	0.048		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:28	1

Client Sample ID: COM-SF-PPI

Date Collected: 07/28/21 10:00

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0015	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:30	1
Arsenic	0.0025	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:30	1
Barium	0.23		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:30	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:30	1
Calcium	120		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:30	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:30	1
Cobalt	0.00028	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:30	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:30	1
Potassium	8100		1000	220	ug/L		08/02/21 14:00	08/04/21 18:30	1
Magnesium	33000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:30	1
Molybdenum	0.018		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:30	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:30	1
Selenium	0.011		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:30	1
Sodium	84000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:30	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:30	1
Lithium	0.048		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:30	1

Client Sample ID: COM-SF-PPT

Date Collected: 07/28/21 10:15

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0015	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:33	1
Arsenic	0.0027	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:33	1
Barium	0.23		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:33	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:33	1
Calcium	110		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:33	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:33	1
Cobalt	0.00039	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:33	1
Chromium	0.0029		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:33	1
Potassium	7700		1000	220	ug/L		08/02/21 14:00	08/04/21 18:33	1
Magnesium	31000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:33	1
Molybdenum	0.017		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:33	1
Lead	0.00050	J	0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:33	1
Selenium	0.010		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:33	1
Sodium	80000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:33	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:33	1
Lithium	0.046		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:33	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

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

Client Sample ID: COM-SF-PPB
Date Collected: 07/28/21 10:30
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0015	J	0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:35	1
Arsenic	0.0024	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:35	1
Barium	0.23		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:35	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:35	1
Calcium	110		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:35	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:35	1
Cobalt	0.00028	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:35	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:35	1
Potassium	8000		1000	220	ug/L		08/02/21 14:00	08/04/21 18:35	1
Magnesium	33000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:35	1
Molybdenum	0.018		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:35	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:35	1
Selenium	0.012		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:35	1
Sodium	83000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:35	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:35	1
Lithium	0.047		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:35	1

Client Sample ID: COM-SF-CPP
Date Collected: 07/28/21 11:45
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 18:38	1
Arsenic	0.0019	J	0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 18:38	1
Barium	0.10		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 18:38	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 18:38	1
Calcium	240		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 18:38	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:38	1
Cobalt	0.00053	J	0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 18:38	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 18:38	1
Potassium	9800		1000	220	ug/L		08/02/21 14:00	08/04/21 18:38	1
Magnesium	350000		1000	200	ug/L		08/02/21 14:00	08/04/21 18:38	1
Molybdenum	0.0073	J	0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 18:38	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 18:38	1
Selenium	0.080		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 18:38	1
Sodium	430000		1000	330	ug/L		08/02/21 14:00	08/04/21 18:38	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 18:38	1
Lithium	0.36		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 18:38	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: COM-SF-SPWI
Date Collected: 07/28/21 07:50
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 11:58	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: COM-SF-SPWT
Date Collected: 07/28/21 08:15
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 11:44	1

Client Sample ID: COM-SF-SPWB
Date Collected: 07/28/21 08:40
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:00	1

Client Sample ID: COM-SF-SPEI
Date Collected: 07/28/21 09:00
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:02	1

Client Sample ID: COM-SF-SPET
Date Collected: 07/28/21 09:20
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:04	1

Client Sample ID: COM-SF-SPEB
Date Collected: 07/28/21 09:35
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:06	1

Client Sample ID: COM-SF-BAPI
Date Collected: 07/28/21 10:45
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:08	1

Client Sample ID: COM-SF-BAPT
Date Collected: 07/28/21 11:10
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:10	1

Client Sample ID: COM-SF-BAPB
Date Collected: 07/28/21 11:30
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:12	1

Client Sample ID: COM-SF-PPI
Date Collected: 07/28/21 10:00
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:19	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: COM-SF-PPT
Date Collected: 07/28/21 10:15
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:21	1

Client Sample ID: COM-SF-PPB
Date Collected: 07/28/21 10:30
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:23	1

Client Sample ID: COM-SF-CPD
Date Collected: 07/28/21 11:45
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 12:25	1

General Chemistry

Client Sample ID: COM-SF-SPWI
Date Collected: 07/28/21 07:50
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.8	HF	0.1	0.1	SU			07/29/21 18:17	1
Temperature	20.9	HF	1.0	1.0	Degrees C			07/29/21 18:17	1
Chloride	26		3.0	1.0	mg/L			07/31/21 17:57	1
Fluoride	0.49	J	0.50	0.17	mg/L			07/31/21 17:57	1
Sulfate	360		25	5.2	mg/L			07/31/21 18:11	5
Alkalinity	41		10	3.1	mg/L			07/30/21 00:17	1
Bicarbonate Alkalinity as CaCO3	41		10	3.1	mg/L			07/30/21 00:17	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			07/30/21 00:17	1
Total Dissolved Solids (TDS)	620		10	4.7	mg/L			07/29/21 10:40	1
Total Suspended Solids	7000		100	28	mg/L			07/30/21 15:08	1

Client Sample ID: COM-SF-SPWT
Date Collected: 07/28/21 08:15
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-2
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			07/29/21 18:05	1
Temperature	22.1	HF	1.0	1.0	Degrees C			07/29/21 18:05	1
Chloride	50		3.0	1.0	mg/L			07/31/21 18:25	1
Fluoride	0.88		0.50	0.17	mg/L			07/31/21 18:25	1
Sulfate	460	F1	25	5.2	mg/L			07/31/21 19:21	5
Alkalinity	68		10	3.1	mg/L			07/29/21 23:44	1
Bicarbonate Alkalinity as CaCO3	68		10	3.1	mg/L			07/29/21 23:44	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			07/29/21 23:44	1
Total Dissolved Solids (TDS)	820		10	4.7	mg/L			07/29/21 10:40	1
Total Suspended Solids	30		4.0	1.1	mg/L			07/30/21 15:08	1

Client Sample ID: COM-SF-SPWB
Date Collected: 07/28/21 08:40
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.6	HF	0.1	0.1	SU			07/30/21 18:29	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

General Chemistry (Continued)

Client Sample ID: COM-SF-SPWB

Date Collected: 07/28/21 08:40

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Temperature	22.1	HF	1.0	1.0	Degrees C			07/30/21 18:29	1
Chloride	49		3.0	1.0	mg/L			07/31/21 20:46	1
Fluoride	0.90		0.50	0.17	mg/L			07/31/21 20:46	1
Sulfate	480		25	5.2	mg/L			07/31/21 21:00	5
Alkalinity	67		10	3.1	mg/L			07/30/21 00:11	1
Bicarbonate Alkalinity as CaCO3	67		10	3.1	mg/L			07/30/21 00:11	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			07/30/21 00:11	1
Total Dissolved Solids (TDS)	840		10	4.7	mg/L			07/29/21 10:40	1
Total Suspended Solids	33		4.0	1.1	mg/L			07/30/21 15:08	1

Client Sample ID: COM-SF-SPEI

Date Collected: 07/28/21 09:00

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.2	HF	0.1	0.1	SU			07/29/21 18:20	1
Temperature	20.8	HF	1.0	1.0	Degrees C			07/29/21 18:20	1
Chloride	45		3.0	1.0	mg/L			07/31/21 21:14	1
Fluoride	1.1		0.50	0.17	mg/L			07/31/21 21:14	1
Sulfate	510		25	5.2	mg/L			07/31/21 21:28	5
Alkalinity	110		10	3.1	mg/L			07/29/21 23:51	1
Bicarbonate Alkalinity as CaCO3	63		10	3.1	mg/L			07/29/21 23:51	1
Carbonate Alkalinity as CaCO3	52		10	3.1	mg/L			07/29/21 23:51	1
Total Dissolved Solids (TDS)	870		10	4.7	mg/L			07/29/21 10:40	1
Total Suspended Solids	20		4.0	1.1	mg/L			07/30/21 15:08	1

Client Sample ID: COM-SF-SPET

Date Collected: 07/28/21 09:20

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-5

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			07/29/21 18:09	1
Temperature	21.5	HF	1.0	1.0	Degrees C			07/29/21 18:09	1
Chloride	52		3.0	1.0	mg/L			07/31/21 21:42	1
Fluoride	0.70		0.50	0.17	mg/L			07/31/21 21:42	1
Sulfate	520		25	5.2	mg/L			07/31/21 21:56	5
Alkalinity	58		10	3.1	mg/L			07/29/21 23:32	1
Bicarbonate Alkalinity as CaCO3	58		10	3.1	mg/L			07/29/21 23:32	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			07/29/21 23:32	1
Total Dissolved Solids (TDS)	890		20	9.4	mg/L			07/29/21 10:40	1
Total Suspended Solids	46		4.0	1.1	mg/L			07/30/21 15:08	1

Client Sample ID: COM-SF-SPEB

Date Collected: 07/28/21 09:35

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-6

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			07/29/21 18:13	1
Temperature	21.0	HF	1.0	1.0	Degrees C			07/29/21 18:13	1
Chloride	53		3.0	1.0	mg/L			07/31/21 22:10	1
Fluoride	0.72		0.50	0.17	mg/L			07/31/21 22:10	1
Sulfate	510		25	5.2	mg/L			07/31/21 22:52	5
Alkalinity	56		10	3.1	mg/L			07/29/21 23:19	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

General Chemistry (Continued)

Client Sample ID: COM-SF-SPEB

Date Collected: 07/28/21 09:35

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO ₃	56		10	3.1	mg/L			07/29/21 23:19	1
Carbonate Alkalinity as CaCO ₃	ND		10	3.1	mg/L			07/29/21 23:19	1
Total Dissolved Solids (TDS)	920		20	9.4	mg/L			07/31/21 15:42	1
Total Suspended Solids	16		4.0	1.1	mg/L			07/31/21 10:37	1

Client Sample ID: COM-SF-BAPI

Date Collected: 07/28/21 10:45

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.5	HF	0.1	0.1	SU			07/29/21 18:32	1
Temperature	21.8	HF	1.0	1.0	Degrees C			07/29/21 18:32	1
Chloride	46		3.0	1.0	mg/L			07/31/21 23:06	1
Fluoride	1.1		0.50	0.17	mg/L			07/31/21 23:06	1
Sulfate	560		25	5.2	mg/L			07/31/21 23:20	5
Alkalinity	68		10	3.1	mg/L			07/30/21 00:05	1
Bicarbonate Alkalinity as CaCO ₃	15		10	3.1	mg/L			07/30/21 00:05	1
Carbonate Alkalinity as CaCO ₃	53		10	3.1	mg/L			07/30/21 00:05	1
Total Dissolved Solids (TDS)	940		20	9.4	mg/L			07/31/21 15:42	1
Total Suspended Solids	13		4.0	1.1	mg/L			07/31/21 10:37	1

Client Sample ID: COM-SF-BAPT

Date Collected: 07/28/21 11:10

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.4	HF	0.1	0.1	SU			07/29/21 18:35	1
Temperature	21.3	HF	1.0	1.0	Degrees C			07/29/21 18:35	1
Chloride	46		3.0	1.0	mg/L			07/31/21 23:33	1
Fluoride	1.1		0.50	0.17	mg/L			07/31/21 23:33	1
Sulfate	540		25	5.2	mg/L			07/31/21 23:47	5
Alkalinity	71		10	3.1	mg/L			07/29/21 23:58	1
Bicarbonate Alkalinity as CaCO ₃	30		10	3.1	mg/L			07/29/21 23:58	1
Carbonate Alkalinity as CaCO ₃	42		10	3.1	mg/L			07/29/21 23:58	1
Total Dissolved Solids (TDS)	910		20	9.4	mg/L			07/31/21 15:42	1
Total Suspended Solids	2.4	J	4.0	1.1	mg/L			07/31/21 10:37	1

Client Sample ID: COM-SF-BAPB

Date Collected: 07/28/21 11:30

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.3	HF	0.1	0.1	SU			07/29/21 18:28	1
Temperature	21.6	HF	1.0	1.0	Degrees C			07/29/21 18:28	1
Chloride	46		3.0	1.0	mg/L			08/01/21 00:01	1
Fluoride	1.0		0.50	0.17	mg/L			08/01/21 00:01	1
Sulfate	540		25	5.2	mg/L			08/01/21 00:15	5
Alkalinity	70		10	3.1	mg/L			07/29/21 23:26	1
Bicarbonate Alkalinity as CaCO ₃	29		10	3.1	mg/L			07/29/21 23:26	1
Carbonate Alkalinity as CaCO ₃	40		10	3.1	mg/L			07/29/21 23:26	1
Total Dissolved Solids (TDS)	920		20	9.4	mg/L			07/31/21 15:42	1
Total Suspended Solids	4.4		4.0	1.1	mg/L			07/31/21 10:37	1

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

General Chemistry

Client Sample ID: COM-SF-PPI
Date Collected: 07/28/21 10:00
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.1	HF	0.1	0.1	SU			07/29/21 18:24	1
Temperature	21.1	HF	1.0	1.0	Degrees C			07/29/21 18:24	1
Chloride	52		3.0	1.0	mg/L			08/01/21 00:29	1
Fluoride	1.0		0.50	0.17	mg/L			08/01/21 00:29	1
Sulfate	500		25	5.2	mg/L			08/01/21 00:43	5
Alkalinity	80		10	3.1	mg/L			07/29/21 23:38	1
Bicarbonate Alkalinity as CaCO3	57		10	3.1	mg/L			07/29/21 23:38	1
Carbonate Alkalinity as CaCO3	23		10	3.1	mg/L			07/29/21 23:38	1
Total Dissolved Solids (TDS)	860		10	4.7	mg/L			07/31/21 15:42	1
Total Suspended Solids	15		4.0	1.1	mg/L			07/31/21 10:37	1

Client Sample ID: COM-SF-PPT
Date Collected: 07/28/21 10:15
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	9.1	HF	0.1	0.1	SU			07/29/21 18:56	1
Temperature	22.0	HF	1.0	1.0	Degrees C			07/29/21 18:56	1
Chloride	52		3.0	1.0	mg/L			08/01/21 00:58	1
Fluoride	1.0		0.50	0.17	mg/L			08/01/21 00:58	1
Sulfate	490		25	5.2	mg/L			08/01/21 01:40	5
Alkalinity	77	B	10	3.1	mg/L			08/05/21 17:26	1
Bicarbonate Alkalinity as CaCO3	41		10	3.1	mg/L			08/05/21 17:26	1
Carbonate Alkalinity as CaCO3	36		10	3.1	mg/L			08/05/21 17:26	1
Total Dissolved Solids (TDS)	860		10	4.7	mg/L			07/31/21 15:42	1
Total Suspended Solids	110		4.0	1.1	mg/L			07/31/21 10:37	1

Client Sample ID: COM-SF-PPB
Date Collected: 07/28/21 10:30
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.7	HF	0.1	0.1	SU			07/29/21 18:49	1
Temperature	21.3	HF	1.0	1.0	Degrees C			07/29/21 18:49	1
Chloride	53		3.0	1.0	mg/L			08/01/21 01:54	1
Fluoride	1.0		0.50	0.17	mg/L			08/01/21 01:54	1
Sulfate	480		25	5.2	mg/L			08/01/21 02:08	5
Alkalinity	77	B	10	3.1	mg/L			08/05/21 17:19	1
Bicarbonate Alkalinity as CaCO3	50		10	3.1	mg/L			08/05/21 17:19	1
Carbonate Alkalinity as CaCO3	27		10	3.1	mg/L			08/05/21 17:19	1
Total Dissolved Solids (TDS)	890		20	9.4	mg/L			07/31/21 15:42	1
Total Suspended Solids	37		4.0	1.1	mg/L			07/31/21 10:37	1

Client Sample ID: COM-SF-CPP
Date Collected: 07/28/21 11:45
Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH adj. to 25 deg C	8.5	HF	0.1	0.1	SU			07/29/21 19:00	1
Temperature	22.4	HF	1.0	1.0	Degrees C			07/29/21 19:00	1
Chloride	86		3.0	1.0	mg/L			08/01/21 02:22	1
Fluoride	0.68		0.50	0.17	mg/L			08/01/21 02:22	1
Sulfate	3100		100	21	mg/L			08/01/21 02:50	20

Eurofins TestAmerica, Denver

Client Sample Results

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

Job ID: 280-151273-1

General Chemistry (Continued)

Client Sample ID: COM-SF-CPP

Date Collected: 07/28/21 11:45

Date Received: 07/28/21 18:15

Lab Sample ID: 280-151273-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	190	B	10	3.1	mg/L			08/05/21 17:12	1
Bicarbonate Alkalinity as CaCO3	190		10	3.1	mg/L			08/05/21 17:12	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			08/05/21 17:12	1
Total Dissolved Solids (TDS)	5100		40	19	mg/L			07/31/21 15:42	1
Total Suspended Solids	16		4.0	1.1	mg/L			07/31/21 10:37	1

QC Sample Results

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

Job ID: 280-151273-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-497674/1-A
Matrix: Water
Analysis Batch: 497841

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 497674

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		08/02/21 14:00	08/03/21 17:11	1

Lab Sample ID: LCS 240-497674/2-A
Matrix: Water
Analysis Batch: 497841

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 497674

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.982		mg/L		98	80 - 120

Lab Sample ID: 280-151273-2 MS
Matrix: Water
Analysis Batch: 497841

Client Sample ID: COM-SF-SPWT
Prep Type: Total Recoverable
Prep Batch: 497674

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.21		1.00	1.24		mg/L		103	75 - 125

Lab Sample ID: 280-151273-2 MSD
Matrix: Water
Analysis Batch: 497841

Client Sample ID: COM-SF-SPWT
Prep Type: Total Recoverable
Prep Batch: 497674

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.21		1.00	1.22		mg/L		101	75 - 125	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-497674/1-A
Matrix: Water
Analysis Batch: 498206

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 497674

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		08/02/21 14:00	08/04/21 17:47	1
Arsenic	ND		0.0050	0.00075	mg/L		08/02/21 14:00	08/04/21 17:47	1
Barium	ND		0.0050	0.0022	mg/L		08/02/21 14:00	08/04/21 17:47	1
Beryllium	ND		0.0010	0.00062	mg/L		08/02/21 14:00	08/04/21 17:47	1
Calcium	ND		1.0	0.58	mg/L		08/02/21 14:00	08/04/21 17:47	1
Cadmium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 17:47	1
Cobalt	ND		0.0010	0.00019	mg/L		08/02/21 14:00	08/04/21 17:47	1
Chromium	ND		0.0025	0.0025	mg/L		08/02/21 14:00	08/04/21 17:47	1
Potassium	ND		1000	220	ug/L		08/02/21 14:00	08/04/21 17:47	1
Magnesium	ND		1000	200	ug/L		08/02/21 14:00	08/04/21 17:47	1
Molybdenum	ND		0.010	0.0011	mg/L		08/02/21 14:00	08/04/21 17:47	1
Lead	ND		0.0010	0.00045	mg/L		08/02/21 14:00	08/04/21 17:47	1
Selenium	ND		0.0050	0.00089	mg/L		08/02/21 14:00	08/04/21 17:47	1
Sodium	ND		1000	330	ug/L		08/02/21 14:00	08/04/21 17:47	1
Thallium	ND		0.0010	0.00020	mg/L		08/02/21 14:00	08/04/21 17:47	1
Lithium	ND		0.0080	0.0017	mg/L		08/02/21 14:00	08/04/21 17:47	1

Eurofins TestAmerica, Denver

QC Sample Results

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

Job ID: 280-151273-1

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

Lab Sample ID: LCS 240-497674/3-A

Matrix: Water

Analysis Batch: 498206

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 497674

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0935		mg/L		93	80 - 120
Arsenic	1.00	0.897		mg/L		90	80 - 120
Barium	1.00	0.918		mg/L		92	80 - 120
Beryllium	0.500	0.453		mg/L		91	80 - 120
Calcium	25.0	23.1		mg/L		92	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	0.455		mg/L		91	80 - 120
Potassium	25000	22600		ug/L		90	80 - 120
Magnesium	25000	23000		ug/L		92	80 - 120
Molybdenum	0.500	0.440		mg/L		88	80 - 120
Lead	0.500	0.473		mg/L		95	80 - 120
Selenium	1.00	0.861		mg/L		86	80 - 120
Sodium	25000	22700		ug/L		91	80 - 120
Thallium	1.00	0.887		mg/L		89	80 - 120
Lithium	0.500	0.454		mg/L		91	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-497675/1-A

Matrix: Water

Analysis Batch: 498069

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 497675

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/02/21 14:00	08/03/21 11:40	1

Lab Sample ID: LCS 240-497675/2-A

Matrix: Water

Analysis Batch: 498069

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 497675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00471		mg/L		94	80 - 120

Lab Sample ID: 280-151273-2 MS

Matrix: Water

Analysis Batch: 498069

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Prep Batch: 497675

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00100	0.000992		mg/L		99	80 - 120

Lab Sample ID: 280-151273-2 MSD

Matrix: Water

Analysis Batch: 498069

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Prep Batch: 497675

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00100		mg/L		100	80 - 120	1	20

Eurofins TestAmerica, Denver

QC Sample Results

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

Job ID: 280-151273-1

Method: 9040B - pH

Lab Sample ID: LCS 280-544864/16

Matrix: Water

Analysis Batch: 544864

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 280-544864/28

Matrix: Water

Analysis Batch: 544864

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: 280-151273-12 DU

Matrix: Water

Analysis Batch: 544864

Client Sample ID: COM-SF-PPB

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH adj. to 25 deg C	8.7	HF	9.1		SU		4	5
Temperature	21.3	HF	21.5		Degrees C		1	10

Lab Sample ID: LCS 280-545157/16

Matrix: Water

Analysis Batch: 545157

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 280-545157/4

Matrix: Water

Analysis Batch: 545157

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 280-544972/6

Matrix: Water

Analysis Batch: 544972

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			07/31/21 13:18	1
Fluoride	ND		0.50	0.17	mg/L			07/31/21 13:18	1
Sulfate	ND		5.0	1.0	mg/L			07/31/21 13:18	1

Lab Sample ID: LCS 280-544972/4

Matrix: Water

Analysis Batch: 544972

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	4.84		mg/L		97	90 - 110
Sulfate	100	91.4		mg/L		91	90 - 110

Eurofins TestAmerica, Denver

QC Sample Results

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

Job ID: 280-151273-1

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

Lab Sample ID: LCSD 280-544972/5

Matrix: Water

Analysis Batch: 544972

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	91.7		mg/L		92	90 - 110	0	10

Lab Sample ID: MRL 280-544972/3

Matrix: Water

Analysis Batch: 544972

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	4.66		mg/L		93	50 - 150		
Fluoride	0.500	0.472	J	mg/L		94	50 - 150		
Sulfate	5.00	4.46	J	mg/L		89	50 - 150		

Lab Sample ID: 280-151273-2 MS

Matrix: Water

Analysis Batch: 544972

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50		50.0	100		mg/L		100	80 - 120		
Fluoride	0.88		5.00	5.01		mg/L		82	80 - 120		

Lab Sample ID: 280-151273-2 MS

Matrix: Water

Analysis Batch: 544972

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	460	F1	250	724		mg/L		104	80 - 120		

Lab Sample ID: 280-151273-2 MSD

Matrix: Water

Analysis Batch: 544972

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50		50.0	99.9		mg/L		99	80 - 120	0	20
Fluoride	0.88		5.00	4.96		mg/L		82	80 - 120	1	20

Lab Sample ID: 280-151273-2 MSD

Matrix: Water

Analysis Batch: 544972

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	460	F1	250	804	F1	mg/L		136	80 - 120	11	20

Lab Sample ID: 280-151273-2 DU

Matrix: Water

Analysis Batch: 544972

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50		50.5		mg/L				0.2	15
Fluoride	0.88		0.915		mg/L				3	15

Eurofins TestAmerica, Denver

QC Sample Results

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

Job ID: 280-151273-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 280-151273-2 DU

Matrix: Water

Analysis Batch: 544972

Client Sample ID: COM-SF-SPWT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	460	F1	498		mg/L		7	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-544862/33

Matrix: Water

Analysis Batch: 544862

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND	^+	10	3.1	mg/L			07/29/21 20:24	1

Lab Sample ID: LCS 280-544862/31

Matrix: Water

Analysis Batch: 544862

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	212	^+	mg/L		106	89 - 109

Lab Sample ID: LCSD 280-544862/32

Matrix: Water

Analysis Batch: 544862

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	212	^+	mg/L		106	89 - 109	0	10

Lab Sample ID: MB 280-545602/33

Matrix: Water

Analysis Batch: 545602

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.29	J	10	3.1	mg/L			08/05/21 16:35	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			08/05/21 16:35	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			08/05/21 16:35	1

Lab Sample ID: MB 280-545602/6

Matrix: Water

Analysis Batch: 545602

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.90	J	10	3.1	mg/L			08/05/21 12:55	1
Bicarbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			08/05/21 12:55	1
Carbonate Alkalinity as CaCO3	ND		10	3.1	mg/L			08/05/21 12:55	1

Lab Sample ID: LCS 280-545602/31

Matrix: Water

Analysis Batch: 545602

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	210		mg/L		105	89 - 109

Eurofins TestAmerica, Denver

QC Sample Results

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

Job ID: 280-151273-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 280-545602/32

Matrix: Water

Analysis Batch: 545602

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	213		mg/L		107	89 - 109	2	10

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

Lab Sample ID: MB 280-544728/1

Matrix: Water

Analysis Batch: 544728

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			07/29/21 10:40	1

Lab Sample ID: LCS 280-544728/2

Matrix: Water

Analysis Batch: 544728

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)	509	522		mg/L		103	88 - 114		

Lab Sample ID: 280-151273-5 DU

Matrix: Water

Analysis Batch: 544728

Client Sample ID: COM-SF-SPET

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	890		916		mg/L				

Lab Sample ID: MB 280-544988/1

Matrix: Water

Analysis Batch: 544988

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			07/31/21 15:42	1

Lab Sample ID: LCS 280-544988/2

Matrix: Water

Analysis Batch: 544988

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)	509	484		mg/L		95	88 - 114		

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

Lab Sample ID: MB 280-544927/3

Matrix: Water

Analysis Batch: 544927

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			07/30/21 15:08	1

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QC Sample Results

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

Job ID: 280-151273-1

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

Lab Sample ID: LCS 280-544927/1

Matrix: Water

Analysis Batch: 544927

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: LCSD 280-544927/2

Matrix: Water

Analysis Batch: 544927

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	84.8		mg/L		85	79 - 114	5	20

Lab Sample ID: MB 280-544966/1

Matrix: Water

Analysis Batch: 544966

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			07/31/21 10:37	1

Lab Sample ID: LCS 280-544966/2

Matrix: Water

Analysis Batch: 544966

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	101		mg/L		101	79 - 114

Lab Sample ID: 280-151273-6 DU

Matrix: Water

Analysis Batch: 544966

Client Sample ID: COM-SF-SPEB

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	16		13.6	F5	mg/L		14	10

QC Association Summary

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

Job ID: 280-151273-1

Metals

Prep Batch: 497674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total Recoverable	Water	3005A	
280-151273-2	COM-SF-SPWT	Total Recoverable	Water	3005A	
280-151273-3	COM-SF-SPWB	Total Recoverable	Water	3005A	
280-151273-4	COM-SF-SPEI	Total Recoverable	Water	3005A	
280-151273-5	COM-SF-SPET	Total Recoverable	Water	3005A	
280-151273-6	COM-SF-SPEB	Total Recoverable	Water	3005A	
280-151273-7	COM-SF-BAPI	Total Recoverable	Water	3005A	
280-151273-8	COM-SF-BAPT	Total Recoverable	Water	3005A	
280-151273-9	COM-SF-BAPB	Total Recoverable	Water	3005A	
280-151273-10	COM-SF-PPI	Total Recoverable	Water	3005A	
280-151273-11	COM-SF-PPT	Total Recoverable	Water	3005A	
280-151273-12	COM-SF-PPB	Total Recoverable	Water	3005A	
280-151273-13	COM-SF-CPP	Total Recoverable	Water	3005A	
MB 240-497674/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-497674/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-497674/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-151273-2 MS	COM-SF-SPWT	Total Recoverable	Water	3005A	
280-151273-2 MSD	COM-SF-SPWT	Total Recoverable	Water	3005A	

Prep Batch: 497675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total/NA	Water	7470A	
280-151273-2	COM-SF-SPWT	Total/NA	Water	7470A	
280-151273-3	COM-SF-SPWB	Total/NA	Water	7470A	
280-151273-4	COM-SF-SPEI	Total/NA	Water	7470A	
280-151273-5	COM-SF-SPET	Total/NA	Water	7470A	
280-151273-6	COM-SF-SPEB	Total/NA	Water	7470A	
280-151273-7	COM-SF-BAPI	Total/NA	Water	7470A	
280-151273-8	COM-SF-BAPT	Total/NA	Water	7470A	
280-151273-9	COM-SF-BAPB	Total/NA	Water	7470A	
280-151273-10	COM-SF-PPI	Total/NA	Water	7470A	
280-151273-11	COM-SF-PPT	Total/NA	Water	7470A	
280-151273-12	COM-SF-PPB	Total/NA	Water	7470A	
280-151273-13	COM-SF-CPP	Total/NA	Water	7470A	
MB 240-497675/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-497675/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-151273-2 MS	COM-SF-SPWT	Total/NA	Water	7470A	
280-151273-2 MSD	COM-SF-SPWT	Total/NA	Water	7470A	

Analysis Batch: 497841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total Recoverable	Water	6010C	497674
280-151273-2	COM-SF-SPWT	Total Recoverable	Water	6010C	497674
280-151273-3	COM-SF-SPWB	Total Recoverable	Water	6010C	497674
280-151273-4	COM-SF-SPEI	Total Recoverable	Water	6010C	497674
280-151273-5	COM-SF-SPET	Total Recoverable	Water	6010C	497674
280-151273-6	COM-SF-SPEB	Total Recoverable	Water	6010C	497674
280-151273-7	COM-SF-BAPI	Total Recoverable	Water	6010C	497674
280-151273-8	COM-SF-BAPT	Total Recoverable	Water	6010C	497674
280-151273-9	COM-SF-BAPB	Total Recoverable	Water	6010C	497674
280-151273-10	COM-SF-PPI	Total Recoverable	Water	6010C	497674

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QC Association Summary

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

Job ID: 280-151273-1

Metals (Continued)

Analysis Batch: 497841 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-11	COM-SF-PPT	Total Recoverable	Water	6010C	497674
280-151273-12	COM-SF-PPB	Total Recoverable	Water	6010C	497674
280-151273-13	COM-SF-CPP	Total Recoverable	Water	6010C	497674
MB 240-497674/1-A	Method Blank	Total Recoverable	Water	6010C	497674
LCS 240-497674/2-A	Lab Control Sample	Total Recoverable	Water	6010C	497674
280-151273-2 MS	COM-SF-SPWT	Total Recoverable	Water	6010C	497674
280-151273-2 MSD	COM-SF-SPWT	Total Recoverable	Water	6010C	497674

Analysis Batch: 498069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total/NA	Water	7470A	497675
280-151273-2	COM-SF-SPWT	Total/NA	Water	7470A	497675
280-151273-3	COM-SF-SPWB	Total/NA	Water	7470A	497675
280-151273-4	COM-SF-SPEI	Total/NA	Water	7470A	497675
280-151273-5	COM-SF-SPET	Total/NA	Water	7470A	497675
280-151273-6	COM-SF-SPEB	Total/NA	Water	7470A	497675
280-151273-7	COM-SF-BAPI	Total/NA	Water	7470A	497675
280-151273-8	COM-SF-BAPT	Total/NA	Water	7470A	497675
280-151273-9	COM-SF-BAPB	Total/NA	Water	7470A	497675
280-151273-10	COM-SF-PPI	Total/NA	Water	7470A	497675
280-151273-11	COM-SF-PPT	Total/NA	Water	7470A	497675
280-151273-12	COM-SF-PPB	Total/NA	Water	7470A	497675
280-151273-13	COM-SF-CPP	Total/NA	Water	7470A	497675
MB 240-497675/1-A	Method Blank	Total/NA	Water	7470A	497675
LCS 240-497675/2-A	Lab Control Sample	Total/NA	Water	7470A	497675
280-151273-2 MS	COM-SF-SPWT	Total/NA	Water	7470A	497675
280-151273-2 MSD	COM-SF-SPWT	Total/NA	Water	7470A	497675

Analysis Batch: 498206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total Recoverable	Water	6020A	497674
280-151273-2	COM-SF-SPWT	Total Recoverable	Water	6020A	497674
280-151273-3	COM-SF-SPWB	Total Recoverable	Water	6020A	497674
280-151273-4	COM-SF-SPEI	Total Recoverable	Water	6020A	497674
280-151273-5	COM-SF-SPET	Total Recoverable	Water	6020A	497674
280-151273-6	COM-SF-SPEB	Total Recoverable	Water	6020A	497674
280-151273-7	COM-SF-BAPI	Total Recoverable	Water	6020A	497674
280-151273-8	COM-SF-BAPT	Total Recoverable	Water	6020A	497674
280-151273-9	COM-SF-BAPB	Total Recoverable	Water	6020A	497674
280-151273-10	COM-SF-PPI	Total Recoverable	Water	6020A	497674
280-151273-11	COM-SF-PPT	Total Recoverable	Water	6020A	497674
280-151273-12	COM-SF-PPB	Total Recoverable	Water	6020A	497674
280-151273-13	COM-SF-CPP	Total Recoverable	Water	6020A	497674
MB 240-497674/1-A	Method Blank	Total Recoverable	Water	6020A	497674
LCS 240-497674/3-A	Lab Control Sample	Total Recoverable	Water	6020A	497674

General Chemistry

Analysis Batch: 544728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total/NA	Water	SM 2540C	

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QC Association Summary

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

Job ID: 280-151273-1

General Chemistry (Continued)

Analysis Batch: 544728 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-2	COM-SF-SPWT	Total/NA	Water	SM 2540C	
280-151273-3	COM-SF-SPWB	Total/NA	Water	SM 2540C	
280-151273-4	COM-SF-SPEI	Total/NA	Water	SM 2540C	
280-151273-5	COM-SF-SPET	Total/NA	Water	SM 2540C	
MB 280-544728/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-544728/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-151273-5 DU	COM-SF-SPET	Total/NA	Water	SM 2540C	

Analysis Batch: 544862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total/NA	Water	SM 2320B	
280-151273-2	COM-SF-SPWT	Total/NA	Water	SM 2320B	
280-151273-3	COM-SF-SPWB	Total/NA	Water	SM 2320B	
280-151273-4	COM-SF-SPEI	Total/NA	Water	SM 2320B	
280-151273-5	COM-SF-SPET	Total/NA	Water	SM 2320B	
280-151273-6	COM-SF-SPEB	Total/NA	Water	SM 2320B	
280-151273-7	COM-SF-BAPI	Total/NA	Water	SM 2320B	
280-151273-8	COM-SF-BAPT	Total/NA	Water	SM 2320B	
280-151273-9	COM-SF-BAPB	Total/NA	Water	SM 2320B	
280-151273-10	COM-SF-PPI	Total/NA	Water	SM 2320B	
MB 280-544862/33	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-544862/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-544862/32	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 544864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total/NA	Water	9040B	
280-151273-2	COM-SF-SPWT	Total/NA	Water	9040B	
280-151273-4	COM-SF-SPEI	Total/NA	Water	9040B	
280-151273-5	COM-SF-SPET	Total/NA	Water	9040B	
280-151273-6	COM-SF-SPEB	Total/NA	Water	9040B	
280-151273-7	COM-SF-BAPI	Total/NA	Water	9040B	
280-151273-8	COM-SF-BAPT	Total/NA	Water	9040B	
280-151273-9	COM-SF-BAPB	Total/NA	Water	9040B	
280-151273-10	COM-SF-PPI	Total/NA	Water	9040B	
280-151273-11	COM-SF-PPT	Total/NA	Water	9040B	
280-151273-12	COM-SF-PPB	Total/NA	Water	9040B	
280-151273-13	COM-SF-CPP	Total/NA	Water	9040B	
LCS 280-544864/16	Lab Control Sample	Total/NA	Water	9040B	
LCS 280-544864/28	Lab Control Sample	Total/NA	Water	9040B	
280-151273-12 DU	COM-SF-PPB	Total/NA	Water	9040B	

Analysis Batch: 544927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total/NA	Water	SM 2540D	
280-151273-2	COM-SF-SPWT	Total/NA	Water	SM 2540D	
280-151273-3	COM-SF-SPWB	Total/NA	Water	SM 2540D	
280-151273-4	COM-SF-SPEI	Total/NA	Water	SM 2540D	
280-151273-5	COM-SF-SPET	Total/NA	Water	SM 2540D	
MB 280-544927/3	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-544927/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Eurofins TestAmerica, Denver

QC Association Summary

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

Job ID: 280-151273-1

General Chemistry (Continued)

Analysis Batch: 544927 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-544927/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 544966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-6	COM-SF-SPEB	Total/NA	Water	SM 2540D	
280-151273-7	COM-SF-BAPI	Total/NA	Water	SM 2540D	
280-151273-8	COM-SF-BAPT	Total/NA	Water	SM 2540D	
280-151273-9	COM-SF-BAPB	Total/NA	Water	SM 2540D	
280-151273-10	COM-SF-PPI	Total/NA	Water	SM 2540D	
280-151273-11	COM-SF-PPT	Total/NA	Water	SM 2540D	
280-151273-12	COM-SF-PPB	Total/NA	Water	SM 2540D	
280-151273-13	COM-SF-CPP	Total/NA	Water	SM 2540D	
MB 280-544966/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-544966/2	Lab Control Sample	Total/NA	Water	SM 2540D	
280-151273-6 DU	COM-SF-SPEB	Total/NA	Water	SM 2540D	

Analysis Batch: 544972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-1	COM-SF-SPWI	Total/NA	Water	9056A	
280-151273-1	COM-SF-SPWI	Total/NA	Water	9056A	
280-151273-2	COM-SF-SPWT	Total/NA	Water	9056A	
280-151273-2	COM-SF-SPWT	Total/NA	Water	9056A	
280-151273-3	COM-SF-SPWB	Total/NA	Water	9056A	
280-151273-3	COM-SF-SPWB	Total/NA	Water	9056A	
280-151273-4	COM-SF-SPEI	Total/NA	Water	9056A	
280-151273-4	COM-SF-SPEI	Total/NA	Water	9056A	
280-151273-5	COM-SF-SPET	Total/NA	Water	9056A	
280-151273-5	COM-SF-SPET	Total/NA	Water	9056A	
280-151273-6	COM-SF-SPEB	Total/NA	Water	9056A	
280-151273-6	COM-SF-SPEB	Total/NA	Water	9056A	
280-151273-7	COM-SF-BAPI	Total/NA	Water	9056A	
280-151273-7	COM-SF-BAPI	Total/NA	Water	9056A	
280-151273-8	COM-SF-BAPT	Total/NA	Water	9056A	
280-151273-8	COM-SF-BAPT	Total/NA	Water	9056A	
280-151273-9	COM-SF-BAPB	Total/NA	Water	9056A	
280-151273-9	COM-SF-BAPB	Total/NA	Water	9056A	
280-151273-10	COM-SF-PPI	Total/NA	Water	9056A	
280-151273-10	COM-SF-PPI	Total/NA	Water	9056A	
280-151273-11	COM-SF-PPT	Total/NA	Water	9056A	
280-151273-11	COM-SF-PPT	Total/NA	Water	9056A	
280-151273-12	COM-SF-PPB	Total/NA	Water	9056A	
280-151273-12	COM-SF-PPB	Total/NA	Water	9056A	
280-151273-13	COM-SF-CPP	Total/NA	Water	9056A	
280-151273-13	COM-SF-CPP	Total/NA	Water	9056A	
MB 280-544972/6	Method Blank	Total/NA	Water	9056A	
LCS 280-544972/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-544972/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-544972/3	Lab Control Sample	Total/NA	Water	9056A	
280-151273-2 MS	COM-SF-SPWT	Total/NA	Water	9056A	
280-151273-2 MS	COM-SF-SPWT	Total/NA	Water	9056A	
280-151273-2 MSD	COM-SF-SPWT	Total/NA	Water	9056A	

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QC Association Summary

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

Job ID: 280-151273-1

General Chemistry (Continued)

Analysis Batch: 544972 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-2 MSD	COM-SF-SPWT	Total/NA	Water	9056A	
280-151273-2 DU	COM-SF-SPWT	Total/NA	Water	9056A	
280-151273-2 DU	COM-SF-SPWT	Total/NA	Water	9056A	

Analysis Batch: 544988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-6	COM-SF-SPEB	Total/NA	Water	SM 2540C	
280-151273-7	COM-SF-BAPI	Total/NA	Water	SM 2540C	
280-151273-8	COM-SF-BAPT	Total/NA	Water	SM 2540C	
280-151273-9	COM-SF-BAPB	Total/NA	Water	SM 2540C	
280-151273-10	COM-SF-PPI	Total/NA	Water	SM 2540C	
280-151273-11	COM-SF-PPT	Total/NA	Water	SM 2540C	
280-151273-12	COM-SF-PPB	Total/NA	Water	SM 2540C	
280-151273-13	COM-SF-CPP	Total/NA	Water	SM 2540C	
MB 280-544988/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-544988/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 545157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-3	COM-SF-SPWB	Total/NA	Water	9040B	
LCS 280-545157/16	Lab Control Sample	Total/NA	Water	9040B	
LCS 280-545157/4	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 545602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151273-11	COM-SF-PPT	Total/NA	Water	SM 2320B	
280-151273-12	COM-SF-PPB	Total/NA	Water	SM 2320B	
280-151273-13	COM-SF-CPP	Total/NA	Water	SM 2320B	
MB 280-545602/33	Method Blank	Total/NA	Water	SM 2320B	
MB 280-545602/6	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-545602/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-545602/32	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Lab Chronicle

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

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPWI

Lab Sample ID: 280-151273-1

Date Collected: 07/28/21 07:50

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 17:57	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:06	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 11:58	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:17	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	07/31/21 17:57	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 18:11	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/30/21 00:17	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	544728	07/29/21 10:40	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	10 mL	250 mL	544927	07/30/21 15:08	LRB	TAL DEN

Client Sample ID: COM-SF-SPWT

Lab Sample ID: 280-151273-2

Date Collected: 07/28/21 08:15

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 17:23	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 17:51	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 11:44	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:05	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	07/31/21 18:25	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 19:21	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/29/21 23:44	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	544728	07/29/21 10:40	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544927	07/30/21 15:08	LRB	TAL DEN

Client Sample ID: COM-SF-SPWB

Lab Sample ID: 280-151273-3

Date Collected: 07/28/21 08:40

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:02	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:08	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:00	MRL	TAL CAN
Total/NA	Analysis	9040B		1			545157	07/30/21 18:29	ECC	TAL DEN

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Lab Chronicle

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

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPWB

Lab Sample ID: 280-151273-3

Date Collected: 07/28/21 08:40

Matrix: Water

Date Received: 07/28/21 18:15

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	544972	07/31/21 20:46	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 21:00	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/30/21 00:11	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	544728	07/29/21 10:40	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544927	07/30/21 15:08	LRB	TAL DEN

Client Sample ID: COM-SF-SPEI

Lab Sample ID: 280-151273-4

Date Collected: 07/28/21 09:00

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:06	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:15	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:02	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:20	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	07/31/21 21:14	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 21:28	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/29/21 23:51	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	544728	07/29/21 10:40	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544927	07/30/21 15:08	LRB	TAL DEN

Client Sample ID: COM-SF-SPET

Lab Sample ID: 280-151273-5

Date Collected: 07/28/21 09:20

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:11	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:18	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:04	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:09	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	07/31/21 21:42	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 21:56	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/29/21 23:32	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	544728	07/29/21 10:40	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544927	07/30/21 15:08	LRB	TAL DEN

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Lab Chronicle

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

Job ID: 280-151273-1

Client Sample ID: COM-SF-SPEB

Lab Sample ID: 280-151273-6

Date Collected: 07/28/21 09:35

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:15	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:20	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:06	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:13	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	07/31/21 22:10	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 22:52	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/29/21 23:19	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	TAL DEN

Client Sample ID: COM-SF-BAPI

Lab Sample ID: 280-151273-7

Date Collected: 07/28/21 10:45

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:19	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:23	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:08	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:32	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	07/31/21 23:06	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 23:20	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/30/21 00:05	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	TAL DEN

Client Sample ID: COM-SF-BAPT

Lab Sample ID: 280-151273-8

Date Collected: 07/28/21 11:10

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:24	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:25	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:10	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:35	ECC	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

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

Job ID: 280-151273-1

Client Sample ID: COM-SF-BAPT

Lab Sample ID: 280-151273-8

Date Collected: 07/28/21 11:10

Matrix: Water

Date Received: 07/28/21 18:15

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	544972	07/31/21 23:33	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	07/31/21 23:47	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/29/21 23:58	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	TAL DEN

Client Sample ID: COM-SF-BAPB

Lab Sample ID: 280-151273-9

Date Collected: 07/28/21 11:30

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:28	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:28	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:12	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:28	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	08/01/21 00:01	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	08/01/21 00:15	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/29/21 23:26	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	TAL DEN

Client Sample ID: COM-SF-PPI

Lab Sample ID: 280-151273-10

Date Collected: 07/28/21 10:00

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:32	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:30	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:19	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:24	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	08/01/21 00:29	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	08/01/21 00:43	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			544862	07/29/21 23:38	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

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

Job ID: 280-151273-1

Client Sample ID: COM-SF-PPT

Lab Sample ID: 280-151273-11

Date Collected: 07/28/21 10:15

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:45	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:33	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:21	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:56	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	08/01/21 00:58	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	08/01/21 01:40	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			545602	08/05/21 17:26	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	TAL DEN

Client Sample ID: COM-SF-PPB

Lab Sample ID: 280-151273-12

Date Collected: 07/28/21 10:30

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:50	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:35	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:23	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 18:49	ECC	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	544972	08/01/21 01:54	JMB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	544972	08/01/21 02:08	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			545602	08/05/21 17:19	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	TAL DEN

Client Sample ID: COM-SF-CPP

Lab Sample ID: 280-151273-13

Date Collected: 07/28/21 11:45

Matrix: Water

Date Received: 07/28/21 18:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010C		1			497841	08/03/21 18:54	KLC	TAL CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	497674	08/02/21 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020A		1			498206	08/04/21 18:38	RKT	TAL CAN
Total/NA	Prep	7470A			50 mL	50 mL	497675	08/02/21 14:00	MRL	TAL CAN
Total/NA	Analysis	7470A		1			498069	08/03/21 12:25	MRL	TAL CAN
Total/NA	Analysis	9040B		1			544864	07/29/21 19:00	ECC	TAL DEN

Eurofins TestAmerica, Denver

Lab Chronicle

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

Job ID: 280-151273-1

Client Sample ID: COM-SF-CPP

Lab Sample ID: 280-151273-13

Date Collected: 07/28/21 11:45

Matrix: Water

Date Received: 07/28/21 18:15

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	544972	08/01/21 02:22	JMB	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	544972	08/01/21 02:50	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			545602	08/05/21 17:12	ECC	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	544988	07/31/21 15:42	LRB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	544966	07/31/21 10:37	LRB	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 - Comanche

Job ID: 280-151273-1

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	08-31-21
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

Chain of Custody Record



Environment Testing
America

Client Information		Lab PM: Harrington, Danielle M		Carrier Tracking No(s):		COC No: 280-110862-32017.1	
Client Contact: Molly Reeves		Phone: 720-469-0861		State of Origin:		Page: Page 1 of 2	
Company: HDR Inc		PWSID		E-Mail: Danielle.Harrington@Eurofinset.com		Job #:	
Address: 1670 Broadway Suite 3400		Due Date Requested: ASAP		Analysis Requested		Preservation Codes:	
City: Denver		TAT Requested (days): 5				A - HCL M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - DI Water W - MCAA X - EDTA Y - EDA Z - other (specify)	
State, Zip: CO, 80202		Compliance Project: Δ Yes Δ No					
Phone: 734-263-7138(Tel)		PO #: DEN-021					
Email: Molly.Reeves@hdrinc.com		WO #:					
Project Name: Xcel Energy GW CCR Monitoring - Comanche		Project #: 28014376					
Site: Colorado		SSOW#:					
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
COM-SF-SPIWT		7/28/21		750		Water	
COM-SF-SPTUT		7/28/21		815		Water	
COM-SF-SP6NB		7/28/21		840		Water	
COM-SF-SPEI		7/28/21		900		Water	
COM-SF-SPET		7/28/21		920		Water	
COM-SF-SPEB		7/28/21		935		Water	
COM-SF-BAPI		7/28/21		1045		Water	
COM-SF-BAPT		7/28/21		1110		Water	
COM-SF-BAPB		7/28/21		1130		Water	
COM-SF-PPI		7/28/21		1000		Water	
COM-SF-PPT		7/28/21		1015		Water	
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:		Time:		Special Instructions/QC Requirements:	
Relinquished by: [Signature]		Date/Time: 7/28/21		Company: HDR		Method of Shipment:	
Relinquished by:		Date/Time:		Company:		Date/Time: 5/12/2021 1635	
Relinquished by:		Date/Time:		Company:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 7.1, 4.6, 5.1, 4.6, 3.1		CFA 0.6 TRG2	

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

Environment Testing
America

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		Harrington, Danielle M		280-578726.1		280-578726.1	
Shipping/Receiving		E-Mail:		State of Origin:		Page:		Page 1 of 2	
Company:		TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #		280-151273-1	
Address:		4101 Shuffel Street NW		DoD - A2LA		Preservation Codes:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:	
City:		North Canton		Due Date Requested:		Analysis Requested		Total Number of Containers	
State, Zip:		OH, 44720		TAT Requested (days):				535	
Phone:		330-497-9396(Tel) 330-497-0772(Fax)		PO #:				Special Instructions/Note:	
Email:				WO #:					
Project Name:		Xcel Energy GW CCR Monitoring - Comanche		Project #:					
Site:		Xcel Energy CCR - Comanche Station		SSOW#:					
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, Q=wateroil, BT=Tissue, A=Air)	
COM-SF-SPWI (280-151273-1)		7/28/21		07:50 Mountain		Water		Field Filtered Sample (Yes or No)	
COM-SF-SPWT (280-151273-2)		7/28/21		08:15 Mountain		Water		Perform MS/MSD (Yes or No)	
COM-SF-SPWB (280-151273-3)		7/28/21		08:40 Mountain		Water		6020A/3005A (MOD) 13 Total Metals (w/collision cell)	
COM-SF-SPEI (280-151273-4)		7/28/21		09:00 Mountain		Water		6010C/3005A (MOD) Boron	
COM-SF-SPET (280-151273-5)		7/28/21		09:20 Mountain		Water		7470A/7470A Prep Mercury	
COM-SF-SPEB (280-151273-6)		7/28/21		09:35 Mountain		Water			
COM-SF-BAPI (280-151273-7)		7/28/21		10:45 Mountain		Water			
COM-SF-BAPT (280-151273-8)		7/28/21		11:10 Mountain		Water			
COM-SF-BAPB (280-151273-9)		7/28/21		11:30 Mountain		Water			
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analysis & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica									
Possible Hazard Identification									
Unconfirmed									
Deliverable Requested: I, II, III, IV, Other (specify)									
Primary Deliverable Rank: 2									
Empty Kit Relinquished by:									
Date:									
Relinquished by: <i>Wm. A.</i>									
Date/Time: 7/29/21 13:49									
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/OC Requirements:									
Method of Shipment Date/Time: 7/30/21 14:00 Company: ETA Date/Time: Company: Date/Time: Company:									

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : _____

Canton Facility

Client ETA Site Name _____ Cooler unpacked by: Tammy Berger

Cooler Received on 7-30-21 Opened on 7-30-21

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

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt 42 °C ☐ See Multiple Cooler Form 43 °C
 IR GUN# IR-11 (CF +0.1 °C) Observed Cooler Temp. 42 °C Corrected Cooler Temp. 43 °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
 -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 TR
 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# HC033897
 14. Were VOAs on the COC? Yes No HL157842
 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: 280-151273-1

Login Number: 151273

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	

Attachment 3

Comanche Pond Water Quality (July 2021) and Groundwater (Dec 2020)

EXPLANATION

- BAP Bottom
- BAP Inlet
- BAP Surface
- Coal Pile Pond
- PP Bottom
- PP Inlet
- PP Surface
- SPE Bottom
- SPE Inlet
- SPE Surface
- SPW Bottom
- SPW Inlet
- SPW Surface
- W-1
- W-2A (Background)
- W-2B
- W-3
- W-4
- W-5
- W-6
- W-7
- MW-1B
- MW-2B

